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"TREATMENTS IN PSYCHIATRY: A NEW UPDATE"

April 1-4, 2009
Florence, Italy

ABSTRACTS

ELSEVIER

The World Psychiatric Association (WPA)

The WPA is an association of national psychiatric societies aimed to increase knowledge and skills necessary for work in the field of mental health and the care for the mentally ill. Its member societies are presently 134, spanning 122 different countries and representing more than 200,000 psychiatrists.

The WPA organizes the World Congress of Psychiatry every three years. It also organizes international and regional congresses and meetings, and thematic conferences. It has 65 scientific sections, aimed to disseminate information and promote collaborative work in specific domains of psychiatry. It has produced several educational programmes and series of books. It has developed ethical guidelines for psychiatric practice, including the Madrid Declaration (1996).

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Office of the Editor – Department of Psychiatry, University of Naples SUN, Largo Madonna delle Grazie, 80138 Naples, Italy. Phone: +390815666502; Fax: +390815666523; E-mail: majmario@tin.it.

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INTERNATIONAL CONGRESS

"TREATMENTS IN PSYCHIATRY: A NEW UPDATE"

April 1-4, 2009

Florence, Italy

PRESIDENT OF THE CONGRESS

Mario Maj

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ESI[SM] TOP-CITED SCIENTIST LECTURES

TL1.
THE TREATMENT GAP IN PSYCHIATRY

R.C. Kessler
Department of Health Care Policy, Harvard Medical School, Boston, MA, USA

Data are presented on patterns, self-reported reasons for, and socio-demographic correlates of unmet need for treatment of mental disorders in 23 countries around the world. The data come from general population surveys carried out as part of the World Health Organization's World Mental Health (WMH) Survey Initiative. Results show that a high proportion of people with DSM-IV mental disorders in all countries' surveys fail to receive any form of professional treatment for their mental disorders. The data also show that many patients receive treatments that fail to meet even the most minimal acceptable standards of treatment quality. Unmet need for treatment is lower for more severely impairing than less severe cases, but is quite high even in more severe cases. Reason analysis shows that lack of perceived need, predisposing factors, and enabling factors all play separate roles in accounting for this treatment gap. Important insights into the causal processes that lead to associations between socio-demographic sources of health care disparities and unmet need for treatment emerge by including these factors in the reason analysis.

TL2.
PSYCHIATRIC GENETICS: A CURRENT PERSPECTIVE

K. Kendler
Virginia Institute of Psychiatric and Behavioral Genetics, Medical College of Virginia/Virginia Commonwealth University, Richmond, VA, USA

This paper will first review the four major paradigms currently active in psychiatric genetics: simple genetic epidemiology, advanced genetic epidemiology, gene-finding methods and molecular genetics. It will then review selectively advances in each of these areas, trying to illustrate the methodological strengths and limitations of each approach. In the area of advanced genetic epidemiology, we will review examples of genetic models of development, sex-modification of genetic effects, gene by environment interaction, and gene by environmental correlation. In the section on gene finding methods, we will review candidate gene association and linkage but focus on gene-wide association methods. We will provide an up to the minute assessment of progress in this very rapidly moving area. We will also briefly touch on genomic approaches, especially copy number variants and the challenges posed by allelic heterogeneity and the rare variant common disease model for psychiatric disorders.

TL3.
BIPOLARITY: A BROAD SPECTRUM (SPECTRA) IN SEARCH OF TREATMENT

H.S. Akiskal
University of California at San Diego, La Jolla, CA, USA

"Bipolar spectrum" first appeared in the psychiatric literature in a 1977 paper on a prospective follow-up of cyclothymic individuals: most developed depression or bipolar II, fewer developed full blown manic-depressive illness and, significantly, nearly half the sample treated with antidepressants developed increased cycling. Much of the evidence for this broadened bipolar concept has come during the past few years. Subthreshold bipolar conditions have been identified in the community and several epidemiological studies, in both Europe and the United States, showing an average population prevalence of 5%. Prospective follow-up has shown progression of subthreshold bipolarity to full-blown bipolar disorders. There has been great momentum in the clinical literature to study the various forms of the bipolar spectrum, which, in addition to the well-known types I and II in the DSM-IV and ICD-10 terminology, include depressions with shorter hypomanias, hypomanias elicited by antidepressant treatment, depressions arising from various bipolar temperaments such as the cyclothymic and the hyperthymic, as well as depressions with intra-episode hypomania (depressive mixed state). Despite criticism from some quarters, bipolar validation has been achieved for most of these forms in rigorously conducted studies coming from various clinics in the world, particularly the United States, Italy, Germany, Switzerland and Hungary, as well as two national studies from Poland and France. Other proposed bipolar concepts refer to issues that have to do with "unipolar" depressions with high recurrence, atypical depression, seasonality, early age at onset, depressive and dysthymic states with bipolar family history, and affective states occurring in the setting of multiple anxiety disorders, as well as those in the post-partum period. In addition, controversial proposals have been made to hypothesize that borderline personality disorder, dissociate states, polysubstance abuse, particularly cocaine and stimulant abuse, might be related to the bipolar spectrum. Other "candidates" for the bipolar spectrum include affective comorbidity with migraine, eating disorders, gambling and a variety of impulse-control disorders. This is a large terrain and beyond the conventional literature, but of major significance for public health, clinical psychiatry, psychiatric theory and research methodology, including genetics. Thus, the field has progressed to the point of proposing some "soft" bipolar conditions as behavioral endophenotypes for bipolar disorder, for which genetic loci have been proposed in preliminary studies. While uncritical acceptance of such a broad spectrum (or spectra) is not justified, criticisms of the bipolar spectrum without adequate familiarity of the entire literature are equally unwarranted. Much of what has driven treatment in practice has involved applying what works for the hard spectrum to the soft spectrum and beyond. Such therapeutic application, currently largely the domain of clinical judgment, should move to rigorous therapeutic trials in the service of public health, as it is happening in such fields as diabetes and hypertension. Primary and secondary prevention, including that of suicidal behavior, is an eloquent driving force to address the spectrum of therapeutic challenges in psychiatry in this broad domain – challenges which are no less in magnitude than those in medicine at large.

TL4.
PHARMACOTHERAPY OF BINGE EATING DISORDER

S.L. McElroy
Lindner Center of HOPE, Mason, OH; University of Cincinnati College of Medicine, Cincinnati, OH, USA

Binge eating disorder (BED) is the most common eating disorder. Patients with BED engage in frequent, recurrent episodes of binge eating without the compensatory weight-loss behaviors of bulimia nervosa or anorexia nervosa. Many of these patients suffer from mood symptoms or disorders and/or obesity. A growing number of pharma-

cologic treatment options are now available to treat BED. These agents include selective serotonin reuptake inhibitors, the anti-obesity agent sibutramine, and the anticonvulsant topiramate. This paper reviews the current clinical evidence for these and other medications in the treatment of BED.

TL5.
ENVIRONMENTAL CAUSES OF MENTAL DISORDER

M. Rutter
Institute of Psychiatry, London, UK

Half a century ago, there was a general acceptance of the view that environmental causes of mental disorder were strong and determinative. That view has been seriously challenged and it has become clear that the strong and deterministic notion of environmental causation was extremely misleading. Nevertheless, powerful research strategies have demonstrated the reality and importance of environmental causation. This paper reviews the challenges and how they have been met; summarises the ways in which the early views have had to be modified; and indicates the current state of the art and the challenges that remain. Six issues constitute the main focus: a) the identification of key elements of risk, together with the appreciation that the casual effects may be prenatal as well as postnatal, and include both physical and psychosocial hazards; b) the recognition that with multifactorial disorders there cannot be any single "basic" cause; rather the need is to identify key individual causal components and the direct and indirect pathways involved in the causal process; c) the reality of reverse causation, as exemplified by child effects on parenting; d) the need to consider possible genetic mediation of risks associated with specific environments; e) the role of "natural experiments" in testing causal inferences; f) the heterogeneity of response to environmental risk, the reality of resilience and the importance of the effects of environments on biology and the need to consider how "environments get under the skin".

TL6.
THE CAUSES OF SCHIZOPHRENIA: THE STRIATUM AND THE STREET

R.M. Murray
Institute of Psychiatry, London, UK

Much evidence suggests that the final common pathway to at least the positive symptoms of schizophrenia is dopamine dysregulation in the striatum. It is clear that an individual can develop this dysregulation consequent upon a number of different aetiological factors. Firstly, we have known for many years that inheritance contributes, and the evidence from the plethora of molecular studies over the last 6 years suggests that in most cases this operates through the interaction of a number of genes of small effect. However, in a small proportion of cases, a copy number variation may play a major role possibly through impairing neurodevelopment. Certainly, some pre-schizophrenic children have cognitive and neuromotor impairments, and at first presentation, many individuals with schizophrenia have obvious brain structural and neuropsychological abnormalities. Furthermore, the risk-increasing effect of obstetric complications has been demonstrated for schizophrenia, and these are known to be associated with both structural brain and cognitive abnormalities and with dopamine dysregulation. Thus, a second aetiological pathway implicates deviant neurodevelopment. The excessive use of stimulant drugs and cannabis also increases risk of schizophrenia, and once again this appears to be via their effect on striatal dopamine. Finally, there is increasing evidence implicating exposure to a number of social factors, including migration, urbanisation, and possibly childhood maltreatment. Of course, in many patients, more than one of these risk pathways is involved, and a combination of genetic, developmental and social factors project the individual over the threshold into illness.

TL7.
LONG-TERM MANAGEMENT OF DEPRESSION: THE ROLE OF PHARMACOTHERAPY AND PSYCHOTHERAPIES

M.E. Thase
University of Pennsylvania School of Medicine and Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA

This paper deals with the treatment of recurrent major depressive disorder, focusing on strategies for prevention. There is broad consensus in practice guidelines that virtually all patients who respond to antidepressant medications should receive a 6 to 9 month course of continuation phase therapy to reduce the risk of relapse and that patients who have experienced three or more lifetime depressive episodes should receive a longer course of maintenance phase therapy to prevent recurrent illness. For those who do not obtain a full remission during acute phase therapy, there is increasing evidence that simply continuing the incompletely effective strategy is not sufficient to offset the risk of relapse. With respect to maintenance phase therapy, there are surprisingly few studies of truly long-term courses of pharmacotherapy (i.e., across 2 or more years). It does appear that all medications with established short-term efficacy are also significantly more effective than placebo for prevention of relapse or recurrence. There is also evidence that various forms of cognitive behavior therapy (CBT) have some degree of enduring prophylactic efficacy and may reduce the risk of recurrent illness following withdrawal of antidepressant medications. Although studies of interpersonal psychotherapy (IPT) have yielded mixed results, the value for ongoing monthly sessions of IPT – in lieu of pharmacotherapy – has been shown in studies of adults under the age of 70, particularly when therapeutic focus is maintained on key areas of interpersonal vulnerability. Areas of controversy are also discussed, including questions pertaining to tachyphylaxis and whether or not the benefit-risk profile of longer-term antidepressant therapy has been exaggerated.

TL8.
WHAT IS A MOOD STABILIZER?

P.E. Keck, Jr.
Lindner Center of HOPE and University of Cincinnati College of Medicine, Cincinnati, OH, USA

The term "mood stabilizer" first entered the scientific lexicon in 1960, and did not refer to lithium, but rather to an obscure first generation antipsychotic agent then in development. This may have been prescient, however, as pharmacologic agents from different classes and different therapeutic designations have increasingly come to be described as mood stabilizers. Mood stabilizers have, in turn, been conceptualized as treatments for bipolar disorder, although the course of major depressive disorder for many patients suggests that this latter illness could benefit from mood stabilizing concepts as well. This paper considers the question of what a mood stabilizer is in the context of definitions formulated by investigators in the field of bipolar disorder, and in the light of evidence from randomized, con-

trolled trials of treatments for the three acute mood episodes of bipolar disorder – mania, mixed states, and depression – and the prevention of symptomatic and syndromic relapses and recurrences of these mood states.

TL9.
MEDICAL BURDEN IN BIPOLAR DISORDER

D.J. Kupfer
Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

From a world public health perspective, bipolar disorder is one of the ten most disabling conditions. In the last decade, several important issues have emerged: a) The increasing awareness that bipolar disorder is associated with a medical burden from both concurrent medical disease and the adverse potential effect of the treatments used for bipolar disorder; routine medical screening needs to be implemented. b) The ongoing lack of complete recovery and full restorative and functioning is associated with increased medical and psychiatric comorbidity; the regular use of psychosocial approaches is needed. c) The presence of risk factors including obesity, nicotine, and drug use accelerate an overall increase in morbidity and mortality. d) New comprehensive and integrated psychiatric/medical treatment approaches are needed. These recommendations are supported by data demonstrating that the increased medical comorbidity leads to slower treatment response of bipolar episode, especially depression, as well as earlier recurrence. The presence of the metabolic syndrome necessitates an integrated care model for bipolar disorder which seeks to positively influence modifiable medical risk factors, medical and psychiatric diseases, as well as to improve sleep/wake and social rhythms, and overall functioning. These customized treatment strategies include monitoring medical disease outcomes and medical risk factors. The following research and clinical questions emerge from current studies. How do we prevent acute illness from becoming chronic? Can early intervention prevent "comorbid accumulation"? And finally, how can we identify subgroups with circadian fragility or vulnerability as well as subgroups most "prone" to develop high metabolic risk profiles?

TL10.
GETTING THE EVIDENCE FOR EVIDENCE BASED CARE OF DEPRESSION: HOW TO NARROW THE KNOWLEDGE GAP

A.J. Rush
Department of Psychiatry, University of Texas Southwestern Medical Center, Dallas, TX, USA

Clinicians and their depressed patients make treatment decisions everyday, which rest on the answers to critical clinical questions based more on "best guesses" than on empirical evidence in many instances. For example, how long should a patient be treated to determine that remission will not occur? Which clinical features, if any, recommend one treatment over another? Yet, answers to these critical questions profoundly affect both how treatment is delivered and its outcomes. This paper highlights and prioritizes these clinical questions and the available evidence to address them. The limitations both in what we know now and in how we gather evidence to answer better these questions in the future are discussed. Changes in how we report research results to better inform clinicians are also suggested. In addition, suggestions to revise our current practice procedures in order to get more valid answers to these questions in more rapid and effective ways are provided. The potential value of widely implementing measurement-based care, a uniform outcome recording system, and in establishing simple patient registries to address several of these issues is discussed. Finally, new clinically useful and "patient friendly" study designs illustrate potential ways to gather the evidence that we so desperately need to put valid evidence into evidence-based care.

UPDATE LECTURES

UL1.
HOW DO WE CHOOSE MEDICATIONS FOR PSYCHIATRIC PATIENTS?

R.J. Baldessarini
Harvard Medical School and McLean Hospital, Belmont, MA, USA

Most psychotropic drugs are palliative and not highly selective for particular disorders: "antipsychotics" are excellent antimanics, most "antidepressants" could as well been labeled "anxiolytics", and drugs for epilepsy are used for mood disorders. Most are selected by a mix of addressing syndromes and symptoms. Research findings have a limited impact on practice. Current clinical research is highly industrial, oriented more toward licensing and marketing than questions of interest to clinicians and patients, and innovation plus marketing strongly influence drug choice. Clinical consideration of specific treatments typically focuses first on what is relatively simple to use and acceptable to patients: a need for regular medical monitoring or blood tests is a potent disincentive, given simpler or safer options. As examples, tricyclic antidepressants were displaced by the easier-to-use, but not more effective, selective serotonin reuptake inhibitors; lithium nearly disappeared in the US as seemingly simpler, safer anticonvulsants and antipsychotics became available, and easily-used valproate displaced lithium even without long-term research support or regulatory approval for prophylaxis. Regional and national differences in drug choices suggest effects of culture or training, including marketing influences of "thought leadership", and even fads. Confusion also is generated by plastic, market-oriented terms such as "major depression", "antidepressant", and mood stabilizer. Notably, depressive features of bipolar disorder are commonly conflated with unipolar major depressive disorder, even though the syndromes are very different and require dissimilar treatments, although they are very commonly treated with "antidepressants".

UL2.
PSYCHOTHERAPIES: WHAT WORKS FOR WHOM?

P. Fonagy
University College London, London, UK

Sixty years of research have established psychological therapies as an effective part of our therapeutic armamentarium of psychiatry in work with most mental disorders. This paper reviews the indications for specific types of psychological therapy for all common mental disorders including the psychoses, non-psychotic disorders and Axis II disorders. There is also an accumulating body of evidence that suggests psychological interventions in the context of prevention of mental disorder. However, while there appears to be no shortage of potentially effective interventions, we are not much closer to being able to answer the question: "What is most likely to work for whom?" in

relation to particular treatments and models of disorder. The question of the effectiveness of psychotherapy has shifted from the issue of outcome to the issue of mechanism. A range of treatments work, but do they work as well as they could? This question cannot be answered unless we understand more about the process of psychological disorder and the way "disease process" interfaces with therapeutic mechanism. This paper identifies some examples where this reframing of the outcomes question has been helpful in improving the efficacy and generalisability of psychological treatment.

UL3.
VALUES-BASED PRACTICE AND PSYCHIATRIC DIAGNOSIS: BRINGING VALUES AND EVIDENCE TOGETHER IN POLICY, TRAINING AND RESEARCH

K.W.M. Fulford
Universities of Oxford and Warwick, Department of Health, UK

In the current climate of dramatic advances in the neurosciences, it has been widely assumed that the diagnosis of mental disorder is a matter exclusively for value-free science. Using a case history, this paper shows how, to the contrary, values come into the diagnosis of mental disorders directly through the criteria at the heart of psychiatry's most scientifically-grounded classification, the American Psychiatric Association's DSM. Various possible interpretations of the importance of values in psychiatric diagnosis are outlined. Drawing on work in the Oxford analytic tradition of philosophy, it is shown that, properly understood, diagnostic values in psychiatry are complementary to evidence-based science. This interpretation opens up psychiatric diagnostic assessment to the resources of a new skills-based approach to working with complex and conflicting values called "values-based practice". The principles of values-based practice are briefly introduced and then illustrated with a number of recent developments in policy and service development in the UK's Department of Health and internationally. In particular, a current Department of Health programme on best practice in diagnostic assessment is outlined. This programme illustrates how person-centred diagnostic assessment depends crucially on combining evidence-based with values-based approaches.

UL4.
RECOVERY AND POSITIVE PSYCHOLOGY: EMPIRICISM OR ATTITUDE?

S.G. Resnick
VA Connecticut Healthcare System, West Haven, CT, USA

Recovery is a grass-roots movement derived from the personal narratives of those living with a mental illness. Despite the increasing pressure to provide "recovery-oriented" services and "recovery-informed" research, the meaning of the word recovery is still unclear. We do not have consensus on the definition of recovery, we have yet to identify factors that promote it, and we lack well-validated measurement tools that help us know when we have achieved it. Fortunately, the positive psychology movement may provide us with some guidance in addressing these unknowns. Positive psychology seeks to answer the same basic question as the recovery movement, namely, how can we learn to live happy, gratifying, and meaningful lives? But, unlike the recovery movement, positive psychology was founded by academics, its concepts are derived through quantitative research, and the movement keeps empiricism at its core. Thus, the positive psychology movement is poised to offer a complementary view to the grass-roots perspective of the recovery movement. Yet, despite their increasing popularity and prominence, these two complementary movements continue to develop independently of one another, with minimal awareness of the other's existence. This paper briefly reviews the state of the research in the recovery movement, followed by a focus on potential areas of synergy between the two movements for research and practice.

UL5.
STEPS, CHALLENGES AND MISTAKES TO AVOID IN THE DEVELOPMENT OF COMMUNITY MENTAL HEALTH CARE: A FRAMEWORK FROM EXPERIENCE

G. Thornicroft, M. Tansella
Health Service and Population Research Department, Institute of Psychiatry, King's College London, UK; Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, University of Verona, Italy

This paper summarises our own accumulated experience from developing community-orientated mental health services in England and Italy over the last 20-30 years. From this we have provisionally concluded that the following issues are central to the development of balanced mental health services: a) services need to reflect the priorities of service users and carers; b) evidence supports the need for both hospital and community services; c) services need to be provided close to home; d) some services need to be mobile rather than static; e) interventions need to address both symptoms and disabilities; and f) treatment has to be specific to individual needs. In this paper we consider ten key challenges that often face those trying to develop community-based mental health services: a) dealing with anxiety and uncertainty; b) compensating for a possible lack of structure in community services; c) learning how to initiate new developments; d) managing opposition to change within the mental health system; e) responding to opposition from neighbours; f) negotiating financial obstacles; g) avoiding system rigidities; h) bridging boundaries and barriers; i) maintaining staff morale; and j) creating locally relevant services rather than seeking "the right answer" from elsewhere.

UL6
EARLY INTERVENTION IN PSYCHIATRY

P.D. McGorry
ORYGEN Youth Health Research Centre, University of Melbourne, Australia

Mental and substance use disorders are among the most important health issues facing society. They are by far the key health issue for young people in the teenage years and early twenties and, if they persist, they constrain, distress and disable for decades. Epidemiological data indicate that 75% of people suffering from an adult-type psychiatric disorder have an age of onset by 24 years of age, with the onset for most of these disorders – notably psychotic, mood, personality, eating and substance use disorders – mainly falling into a relatively discrete time band from the early teens up until the mid 20s, reaching a peak in the early twenties. In recent years, a worldwide focus on the early stages of psychotic disorders has improved the prospects for understanding these complex disorders and improving their short- and longer-term outcomes. This reform paradigm has also illustrated how a staging model may assist in interpreting and utilising biological data and refining diagnosis and treatment selection. There may be

broader lessons for psychiatric research and treatment, particularly in the field of mood and substance use disorders. Furthermore, the crucial developmental needs of this age group are poorly met by existing service models and approaches. Young people need a different style and range of service provision in order to engage with and benefit from interventions. The need for structural reform and a long term research agenda is clear.

UL7.
IMPROVING COGNITIVE PERFORMANCE AND REAL-WORLD FUNCTIONING IN PEOPLE WITH SCHIZOPHRENIA

M.F. Green
Semel Institute for Neuroscience and Human Behavior, UCLA, Los Angeles, CA, USA

Considerable efforts are underway to find new treatments for cognitive impairment in schizophrenia. These efforts have been stimulated by activities from the US National Institute of Mental Health (e.g., MATRICS and TURNS Initiatives) that have provided a pathway for approval of cognition-enhancing drugs. We present data on new pharmacological and behavioral interventions that are designed to enhance cognition and improve daily functioning. For pharmacological interventions, the cognitive effects of second-generation antipsychotic medications and anti-dementia drugs in schizophrenia have been inconsistent and relatively disappointing. This situation has led to careful consideration of newer types of drugs. Proof of concept trials of drugs that act on novel mechanisms (e.g., alpha 7 nicotinic receptor, AMPA receptor, neural protective agents, glycinergic agents) are starting to emerge and are showing mixed results as cognitive enhancers. Several behavioral training interventions have been implemented, including cognitive remediation and errorless learning. These are showing success in improving outcomes when combined with vocational rehabilitation. Social cognitive deficits in schizophrenia have become a relatively new target for intervention. Recently developed training programs for social cognition are showing promise. Overall, this is a time of considerable innovation in both the pharmacological and behavioral treatments for schizophrenia.

UL8.
EVIDENCE-BASED COMPREHENSIVE MANAGEMENT OF BIPOLAR DISORDER

E. Vieta
Bipolar Disorder Program, University of Barcelona, Spain

The successful treatment of bipolar disorder heavily depends on having a medical model of the disease in mind. The cornerstones of such treatment are evidence-based psychopharmacology and psychoeducation. The treatment of mania can be addressed with antipsychotics, as all of them have antimanic properties and may have a faster onset of action than lithium or anticonvulsants such as valproate or carbamazepine. The choice of the antipsychotic should rather rely on the safety/tolerability profile and on the availability of long-term data for that specific compound. As far as possible, compounds with low extrapyramidal and metabolic side effects liability should be preferred. The treatment of bipolar depression may be addressed with a more heterogeneous range of medications, including quetiapine, lamotrigine, the combination of olanzapine and fluoxetine, and other combinations of drugs. The long-term treatment of bipolar disorder is crucial for a good clinical outcome and to prevent cognitive and functional impairment, and may involve lithium, lamotrigine, valproate, carbamazepine, quetiapine, aripiprazole, olanzapine, and combinations of these and other agents. Long-acting risperidone may be used in highly relapsing patients, and electroconvulsive therapy or clozapine may be a good choice in treatment-resistant cases. Education on the disease aimed at the patient and also at the family, caregivers, and significant others is also essential for a good outcome. Enhancing illness awareness improves treatment adherence and helps to cope with stigma; teaching patients on the recognition of early warning signs of relapse and on effective seek for help may be particularly effective to prevent relapse into mania; helping patients to understand the potential impact of legal and illegal drugs on the course of their condition, promoting healthy sleep and eating habits, and reinforcing resilience may be very useful to decrease their vulnerability to stressors and to keep them well.

UL9.
MANAGEMENT OF PATIENTS WITH CO-OCCURRING SUBSTANCE ABUSE AND SEVERE MENTAL DISORDER

R.E. Drake
Dartmouth Psychiatric Research Center, Dartmouth Medical School, Lebanon, NH, USA

This paper discusses the clinical implications of past and current research on co-occurring substance abuse and severe mental disorder. Past research findings include: a) co-occurring disorders are modal; b) co-occurring disorders are costly; c) parallel treatments are ineffective; d) integrated treatment are more effective; e) integrated dual diagnosis treatment fidelity is important. These findings suggest that all mental health clinicians need to be skilled in assessing and treating co-occurring disorders and that all mental health programs need to be co-occurring disorders programs. Recent research points to several new findings: a) recovery is multi-dimensional; b) types of interventions have specific effects; c) group interventions and residential programs are the most effective modalities for addressing co-occurring substance abuse; d) relapse prevention is correlated with safe housing, employment, relationships, and maintenance treatment; e) supported employment effectively provides a critical recovery component: structured and meaningful activity; f) subtypes of co-occurring disorders patients have different treatment needs and different trajectories of recovery. These findings support using client preferences for a variety of interventions; long-term programs; emphasizing groups, residential services, and supported employment; and developing person-centered algorithms for interventions. Several other research findings, related to families, trauma treatments, and other aspects of co-occurring disorders, are less clear.

UL10.
COMPREHENSIVE MANAGEMENT OF BORDERLINE PERSONALITY DISORDER IN ORDINARY CLINICAL PRACTICE

M.H. Stone
Department of Clinical Psychiatry, Columbia College of Physicians and Surgeons, New York, NY, USA

Within the past decade, manuals containing treatment guidelines have been developed for a number of the different, and currently popular, approaches to the therapy of borderline personality disorder (BPD). Among these are manuals of transference-focused psy-

chotherapy (TFP), an outgrowth of past works on psychoanalytically-oriented forms of therapy for this patient group; the closely related mentalization-based therapy (MBT) promulgated by Fonagy and his colleagues; dialectic behavior therapy (DBT), cognitive-behavior therapy (CBT), schema-based therapy (SBT), and supportive therapy. These different approaches have proven about equally effective in reducing the tendency to self-destructive behaviors (including suicide gestures) within about 8 to 12 months, in those BPD patients who manifest such behaviors. Long-term outcomes (5 or 10 years or more) have not been assessed for the various approaches, so we cannot claim that one method is superior across the board, with respect to the more important parameters of love, friendship, work, and hobbies. Furthermore, the symptom improvement (fewer self-destructive acts, less depression, etc.) cannot be ascribed solely to the verbal psychotherapy approach, since antidepressant, mood-stabilizing, and other medications often play a decisive role, especially in the early phases of treatment, in reducing the "Axis-I" symptoms that invariably accompany cases of BPD. The typical BPD patient has problems in many spheres, and needs help in skill-building (DBT), in modifying unrealistic core-beliefs (SBT), in developing more adaptive relationships with others (TFP), in improving the capacity for self-relection (TFP and MBT), and in changing behavior along more adaptive and realistic lines (CBT). Limit-setting and crisis-intervention will be important modalities, especially at the outset (supportive therapy). What is called for is, ideally, an integrated form of therapy, along the lines advocated by Livesley, where one is trained in a particular therapeutic approach, but remains open to the advantages offered by the others, depending on the moment-to-moment needs of each BPD patient. Judicious shifting from one modality to another, as the occasion demands, while remaining firmly anchored in one's original training and specialty, is the ideal strategy. This involves flexibility and respect for the other main approaches, besides the one in which therapists had their main training and early experience. Knowledge of, and respect for, the different psychopharmacological agents that may be effective in working with BPD patients are also crucial to the full and complete treatment of patients with this disorder.

UL11.
COMPARATIVE EFFICACY, EFFECTIVENESS AND COST-EFFECTIVENESS OF ANTIPSYCHOTICS IN THE TREATMENT OF SCHIZOPHRENIA

W.W. Fleischhacker
Department of Biological Psychiatry, Medical University of Innsbruck, Austria

The tremendous success of clozapine in the treatment of schizophrenia has fostered the development of a number of second generation antipsychotics. These include amisulpride, aripiprazole, olanzapine, paliperidone, quetiapine, risperidone, sertindole, ziprasidone and zotepine. The advent of these drugs has refueled the interest in the pharmacological treatment of schizophrenia, where little progress had been made since the early 1970s. Next to control of positive symptoms comparable to the classical neuroleptic haloperidol, these new antipsychotics have opened new vistas into treatment areas that had been basically unresponsive to traditional neuroleptics, such as negative and depressive symptoms as well as cognitive dysfunctions. Safety concerns, traditionally focused on extrapyramidal motor symptoms, have shifted to other previously neglected areas, such as endocrine and sexual dysfunctions as well as disturbances in glucose and lipid metabolism. As these new medications are available at a considerably higher cost than their classical counterparts, a discussion about cost-effectiveness arose. Health care providers, supported by critical scientists, who claim that the advantages of the new drugs over the older ones are too small to recommend them as first line treatments, are still restricting reimbursement of second generation antipsychotics in some countries. Taken all evidence together, it appears fair to say that the new medications have a considerable advantage over traditional antipsychotics with respect to the risk for both acute and chronic extrapyramidal motor side effects. This has been substantiated by almost every clinical trial available. On the other hand, one needs to consider the fact that some of the newer drugs have a significant risk to induce weight gain as well as disturbances of glucose and lipid metabolism, although there is recent evidence that this may also hold true for some of the older antipsychotics, especially in younger patients. With respect to efficacy, the most up-to-date meta-analysis suggests a slight advantage of some of the newer generation antipsychotics over older drugs, with respect to both positive and negative symptoms, although some large scale pragmatic studies do not support this. This advantage seems to be particularly relevant in first episode schizophrenia patients. As most of the cost-effectiveness studies have focused on direct treatment costs, we still await pharmacoeconomic comparisons between older and newer antipsychotics that include indirect costs, which largely drive the overall economic impact of schizophrenia. Lastly, subjective reports of patients' well being and acceptance of medication also appear to favor the newer drugs. This should also be an important constituent of choice of treatment.

UL12.
THE ART AND SCIENCE OF SWITCHING ANTIPSYCHOTIC MEDICATIONS

P.J. Weiden
Center for Cognitive Medicine, University of Illinois Medical Center, Chicago, IL, USA

The introduction of the newer atypical antipsychotic medications in the 1990s was the first major change in the psychopharmacologic treatment of schizophrenia in many years. Many patients previously treated with conventional antipsychotics showed marked improvement when switched to a new antipsychotic. It soon became apparent that there were certain barriers to making a successful switch between antipsychotics, with many patients becoming unstable and relapsing during switches. Now, over a decade has passed since the newer medications have become available, and basic switching techniques are better understood. However, new challenges have emerged as more antipsychotics become available, and the range of pharmacologic treatment options continues to expand. Rates of switching antipsychotics in United States outpatient practice settings have jumped from about 10% a year to over 30% a year. This paper focuses on recent developments in switching between the newer antipsychotics, in the light of new understanding from effectiveness trials such as the CATIE, and the potential exacerbation of medical risk factors associated with some, but not all, of the newer medications. To address the problem of high rates of "failed" switches, this paper also reviews how differences in the pharmacologic and clinical profiles of newer antipsychotics influence switch strategy techniques.

UL13.
COMBINED AND SEQUENTIAL TREATMENT STRATEGIES IN DEPRESSION AND ANXIETY DISORDERS

G.A. Fava
Affective Disorders Program, Department of Psychology, University of Bologna, Italy

There is increasing awareness that monotherapy (whether pharmacotherapy or psychotherapy) is unlikely to yield full remission in mood and anxiety disorders. The joint use of psychotherapeutic and pharmacological strategies has produced limited benefits when the two treatments have been administered simultaneously. More promising results have been obtained with their sequential combination, particularly when psychotherapeutic approaches have followed the administration of pharmacotherapy. In unipolar depression, there is substantial evidence that decreasing residual symptoms and/or increasing psychological well-being and coping skills in remitted patients may decrease relapse rate during follow-up up to 6 years. The sequential strategy does not fall within the realm of maintenance treatments. It is an intensive, 2-stage approach, which is based on the fact that addressing one dimension of illness after an earlier feature has improved can increase the likelihood of more complete and lasting remission. The planning of treatment in mood and anxiety disorders requires determination of the first line approach (e.g., pharmacotherapy) and tentative identification of other areas of concern to be addressed by concomitant or subsequent treatment.

UL14.
MULTIMODAL MANAGEMENT OF ANOREXIA AND BULIMIA NERVOSA

K.A. Halmi
Weill Medical College, Cornell University, New York, NY, USA

The allostatic model is useful to conceptualize the development of the multimodal management of anorexia and bulimia nervosa. Allostasis is a dysregulation of brain reward circuits in response to the failure of homeostasis, a self-regulating process for multi system coordination of an organism's response to an acute challenge, starvation in anorexia nervosa (AN) and binge/purge behavior in bulimia nervosa (BN). The state of allostasis reflects both genetic and environmental factors and the allostatic load represents the presence of excessive demand on regulatory systems. Multiple brain mechanisms could contribute to produce the allostatic state that underlies the severe psychopathology in anorexia and bulimia nervosa. Evidence exists for biological vulnerabilities and genetic factors leading to an allostatic state in these disorders. Dysfunction of neurotransmitters (serotonin, dopamine and norepinephrine) regulating eating behavior are present, as well as aberrations of neuropeptides (NYP, opioids, leptin, CCK, ghreline, melanocortins, adiponectin, agouti-related protein and BDNF) which affect eating. Genetic studies show significant linkage on chromosome 1 for restricting AN and on chromosome 10 for BN. The key multimodal elements in the treatment of AN and BN are commensurate with the allostatic model. Medical management requires weight restoration with nutritional rehabilitation, rehydration and correction of serum electrolytes. The core eating disorder psychopathology requires specific cognitive-behavioral therapy. Adolescents with eating disorders require family therapy. Comorbidities and severe impairment of function require pharmacotherapy. Few randomized controlled treatment trials exist to provide guidelines for treatment of AN. In the past 5 years, additional family therapy studies and an olanzapine-placebo controlled trial have provided evidence for treatment of AN. In a recent trial, adolescents with BN were effectively treated with family therapy. Innovative treatments are especially needed for adults with chronic AN. Attention must be focused on resistance to treatment and extremely high dropout rates.

UPDATE SYMPOSIA

US1.
THE EVOLVING SCIENCE AND PRACTICE OF PSYCHOSOCIAL REHABILITATION

US1.1.
DEVELOPMENTS IN PSYCHOSOCIAL REHABILITATION: INNOVATION OR RE-INVENTION?

R. Warner
Department of Psychiatry, University of Colorado Health Sciences Center, Denver, CO, USA

Since the Second World War, we have seen tremendous changes in psychosocial rehabilitation methods. The development of the therapeutic community, dramatic reforms in hospital care and early discharge to the community have led to the dissolution of large psychiatric institutions across the developed world. The psychosocial clubhouse has proven useful in tackling the powerlessness, boredom and social exclusion that many people with mental illness experience when they achieve a stable existence in the community. Supported employment and social firms have helped address the problem of unemployment. Cognitive behavioral therapy seeks to decrease the discomfort created by persistent psychotic symptoms, and cognitive remediation aims to reduce the handicap caused by the cognitive symptoms of psychosis. Which of these developments are truly an innovation and which are a reformulation of an earlier approach? What social, political and economic factors drive the emergence of new rehabilitation methods? What are the next barriers we must confront?

US1.2.
VOCATIONAL REHABILITATION IN EUROPE: LESSONS FROM THE EQOLISE TRIAL

T. Burns
University of Oxford, UK

The severely mentally ill invariably have low rates of employment despite extensive rehabilitation efforts. Recently there has been a shift in vocational rehabilitation in mental health, away from the more traditional structured rehabilitation programmes (often referred to as "train-and-place") to more direct "place and train" approaches. The most widely researched of these approaches is independent placement and support (IPS) and several US randomized controlled trials have demonstrated very significant advantages over high-quality traditional rehabilitation measured as obtaining open employment. However, we have learnt from bitter experience that complex community interventions do not always work as well when translated to different social contexts, and the European employment situation is very different to that in the US. We conducted a multisite trial of IPS in Europe. The trial involved a random allocation of 302 psychotic subjects, 50 from within each of six European countries, to either IPS or local standard vocational rehabilitation. Subjects were followed up for 18 months by independent researchers. Primary outcome was

obtaining open employment. Secondary measures included duration of employment and social and clinical outcomes. IPS was significantly more successful in all employment outcomes: obtaining open employment, duration of employment and speed to employment. A unique finding of EQOLISE was that readmission rates were reduced, not increased as feared, in the employed group. The effect size of IPS varied across the sites and demonstrates the importance of context in understanding and predicting outcomes. The EQOLISE study is an example of how variation in healthcare systems, far from being just a potential confounding problem in a randomized controlled trial, can be exploited to obtain greater understanding.

US1.3.
COGNITIVE REMEDIATION IN PSYCHOSIS

T. Wykes
Institute of Psychiatry, King's College, London, UK

Cognitive difficulties are prevalent in people with a diagnosis of schizophrenia and are associated with poor long-term functioning. They also interfere with the rehabilitation process, so that people with more severe deficits have difficulty taking advantage of rehabilitation techniques. Despite being a rate limiter to recovery, cognitive deficits have only recently become a specific target for intervention. Three approaches to improving outcomes for people with deficits are possible: target cognition, adapt rehabilitation programmes or adapt the environment. Most recently a number of psychological therapies have been developed that target cognition. The therapies have a common link to cognitive deficits, but they differ significantly from one another. The form of the therapy might be in groups, individual or solely computer presentation. They may be based on a clear theory about the deficits in schizophrenia or they may have borrowed from work on brain injury. They can last for a few sessions to two years and use different types of teaching, such as practice or strategic problem solving. Despite all these differences, 28 randomised controlled trials have shown that they can produce modest improvements in cognition and a recent meta-analysis showed that there was generally homogeneity of effects across different therapies. Studies are now also showing that improvements in cognition do have benefits for rehabilitation, as both work rehabilitation and social functioning have also shown improvements, but mostly in the context of adding cognitive remediation to other rehabilitation programmes.

US2.
ANXIETY DISORDERS: FROM DIMENSIONS TO TARGETED TREATMENTS

US2.1.
BRAIN MECHANISMS OF SYMPTOM GENERATION IN ANXIETY DISORDERS: POTENTIAL IMPLICATIONS FOR TREATMENT

D.J. Nutt
Psychopharmacology Unit, University of Bristol, UK

Anxiety disorders are a major source of distress and morbidity, with a wide and often prolonged social and personal impact, secondary morbidity and mortality and much psychiatric comorbidity. Current treatments, especially selective serotonin reuptake inhibitors (SSRIs) and benzodiazepines, have broad therapeutic impact in the majority of patients, but a significant minority do not respond fully or at all. Moreover, both classes of drugs can have problematic adverse effects; the SSRIs may worsen anxiety at the start of treatment, and the benzodiazepines are associated with significant withdrawal and dependence problems. Current work to develop new improved treatments is focusing on dissecting the symptom profile of the different anxiety disorders and determining the brain regions and neurotransmitter processes involved in each. This paper illustrates how this approach is progressing in relation to two key neurotransmitters, GABA and serotonin, and gives examples of how such insights can lead to new understandings of the neurobiology of anxiety as well as new approaches to treatment. We demonstrate how the emerging neuroscience of the GABA-A receptor can help explain the origins of anxiety disorders and give insights into the reasons for benzodiazepine therapeutic and adverse effects, as well as giving pointers to new more selective GABA-A enhancers as treatment targets. In addition, we discuss new research findings that reveal a failure of serotonin inhibition mediated through 5HT1A receptors may explain various forms of anxiety and how serotonin acting drugs may serve to remedy these.

US2.2.
SOCIAL FEARS AND SOCIAL PHOBIA: FROM DIMENSIONS TO TARGETED TREATMENTS

M.B. Stein
Department of Psychiatry, University of California, San Diego, CA, USA

Anxiety disorders are the most prevalent category of mental disorders. From the perspective of prevalence and impairment, they are to be viewed as a serious public health problem. Clinicians often fail to recognize anxiety disorders, and fail to appreciate that they can be tremendously disabling. This paper focuses on the most common of the anxiety disorders, social phobia. Dimensionally, social phobia shares features with the somewhat overlapping personality traits of shyness, introversion, and neuroticism. Some of these characteristics are shared with other anxiety disorders, and with major depression, but social phobia has features that distinguish it from these disorders, both cross-sectionally and longitudinally. In population-based studies, the number of social fears is linearly related to the extent of functional impairment, highlighting the dimensional nature of social fears and their link to social phobia as a disabling disorder. Pharmacological treatments for social phobia overlap substantially with those for major depression and other anxiety disorders, though some noteworthy differences are thought to exist that should influence prescribing practices. These are discussed, in addition to possible predictors of treatment response in social phobia.

US2.3.
TESTING THE BOUNDARIES OF OBSESSIVE-COMPULSIVE DISORDER

J. Zohar
Division of Psychiatry, Chaim Sheba Medical Center, Tel Hashomer, Israel

It is becoming apparent that obsessive-compulsive disorder (OCD), despite its current classification as an anxiety disorder, often encompasses features not included within the boundaries of anxiety disorders, such as tics, impulsivity, etc. One possible approach for future diagnostic systems is to introduce dimensional components. Once the individual passes a threshold of obsessive thoughts and compulsive behavior (based, more or less, on the current criteria), he/she would be examined along eight dimensions, which include insight, impulsive, tic (either motor, sensory or both), reward sensitivity, attention, mood, anxiety and social functioning. This step would be an integral part of the diagnostic procedure. In this vein, the diagno-

sis would not just be OCD with poor insight (the only subtype of OCD currently recognized in the DSM-IV), but would also include OCD with high motor symptoms (for OCD patients with tics) or OCD with a high impulsive component (which might include compulsive shopping, compulsive gambling or trichotillomania). Utilizing the dimensional approach will help to ensure that, from the onset, an OCD with high unstable mood (i.e., OCD with comorbid bipolar disorder) would be diagnosed and treated appropriately (with anti-obsessive and mood stabilizers). Combining the threshold system with dimensional components would extend the diagnostic procedure from a one-step categorical approach (either having OCD or not) to a two-step procedure, the second step being the "profile" of the particular patient, based on the dimensions. The idea is to look for alternative tools to use dimensions as a potential scheme for improving diagnosis and treatment in OCD.

US3.
TREATMENT ADVANCES IN CHILD PSYCHIATRY

US3.1.
TREATMENTS IN CHILD AND ADOLESCENT PSYCHIATRY: UPDATE 2009

J.L. Rapoport
Child Psychiatry Branch, National Institute of Mental Health, Bethesda, MD, USA

Landmark studies over the past few decades have established the importance of an evidence based approach in child and adolescent psychiatry. For example, the Isle of Wight epidemiological studies, utilizing standardized ratings, randomized assignment, and contrast groups, placebo controlled trials and long-term prospective follow-up studies advanced the field remarkably. In this highly selective review, three examples of important treatment findings are highlighted because of both their practical implications and heuristic importance. First, placebo controlled trials of mood stabilizers in "bipolar spectrum" are reviewed. These studies support great caution in the use of mood stabilizers in bipolar "spectrum" children. Secondly, a successful school based training trial of executive function in preschool children is discussed as an inexpensive and possibly preventive approach. Finally, important advances in a treatment trial leading to substantial prevention of cerebral palsy are covered. Since half of cerebral palsy children have psychiatric disorders, this study has major implications for preventive pharmacological intervention in child psychiatry.

US3.2.
TREATMENTS OF AUTISM SPECTRUM DISORDERS: AN UPDATE

B.L. Leventhal
Institute for Juvenile Research, University of Illinois, Chicago, IL, USA

Extensive studies in recent years have dramatically changed the outlook and perspectives on autistic disorder. First of all, international collaborative studies have developed standard diagnostic tools and the only agreement between DSM and ICD for the diagnostic criteria for a disorder. The agreement on phenotype has lead to an understanding that autistic disorder is one of a group of conditions now considered under the rubric of autism spectrum disorders (ASD) and to extensive epidemiologic studies that now allow for the appreciation of ASD as relatively common conditions, affecting some 0.6-0.7% of the population. This perspective has added new gravity to the importance of understanding the etiology and development of evidence-based treatments for ASD. While the etiology of autism still remains unclear (and there are many competing, often non-evidence based theories), it is becoming increasingly clear that ASD have a strong biological substrate, with genetics playing a key role in the pathophysiologic processes that lead to very early (possibly prenatal) disruptions in brain development. As the genetics and pathophysiology are being sorted out, studies now suggest that there are safe and effective, evidence-based treatments that can meaningfully alter the course of the disorder. While most of these interventions are environmental (language therapy, education, behavior therapy, social skills training, etc.), there is also growing evidence of the utility of psychopharmacology as at least an adjunctive treatment for the symptoms of ASD. The development of animal models and a developing understanding of the pathophysiology of ASD is leading to new treatments, some now in clinical trials, and others that will be available in the very near future.

US3.3.
RECENT ADVANCES IN TREATMENT OF UNIPOLAR DEPRESSION AND BIPOLAR DISORDER IN CHILDREN AND ADOLESCENTS

N.D. Ryan
Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

The research and clinical experience from past five years has provided many new insights to the pharmacological and psychological treatment of child psychiatric disorders. Recent clinical studies and important clinical data have further clarified and changed our approaches to both unipolar disorder and bipolar disorder in children and adolescents. In the treatment of unipolar depression, large scale studies, including the Treatment for Adolescents with Depression Study (TADS) and the Treatment of Resistant Depression in Adolescents (TORDIA), have taught us more about how to use both medications and psychotherapy in the initial treatment of these disorders and in the treatment of refractory depression. Over the same time, multiple studies have shed at least partial light on the vexing question of whether or not antidepressants overall increase or decrease the ultimate risk for suicide. In the treatment of bipolar disorder, much more data is now available on the safe and efficacious use of atypical antipsychotics as well as other mood stabilizers and we are starting to see studies of psychotherapeutic approaches useful in combination with medications for bipolar disorder. At the same time, some studies have suggested a place for first-generation antipsychotics in the treatment of children.

US4.
OUTCOME IN BIPOLAR DISORDERS: NEW FINDINGS AND METHODOLOGICAL CHALLENGES

US4.1.
AN ARRAY OF OUTCOMES: RECENT FINDINGS ON PREDICTION

W. Coryell
University of Iowa Carver College of Medicine, Iowa City, IA, USA

Recent years have seen a rapid increase in new knowledge of the short- and long-term course of bipolar affective disorders. Outcome measures have moved beyond simple times to recovery and relapse and the quantification of excess mortality to include such outcomes as switching, chronic psychosis and diagnostic revisions, the examina-

tion of diagnosis-specific suicide risk factors, sub-threshold symptoms, differing facets of psychosocial impairment, and overall symptom burden across multiple episodes. This paper emphasizes recent findings, both published and unpublished, pertaining to these measures to answer a number of questions of practical significance for clinicians and their patients. What are the risk factors for treatment-emergent manic symptoms, diagnostic change and polar switching? What is the prognostic significance of mixed states, of psychotic features and of rapid cycling? How do age and age of onset affect long-term symptom load? What are the risk factors for suicidal behaviors or cardiovascular mortality that are specific to the bipolar disorders? Some conclusions will challenge existing assumptions and reconciliation will raise methodological issues important for the design of future studies.

US4.2.
STRATIFYING RECURRENCE RISK: PROSPECTIVE OUTCOMES FROM THE STEP-BD STUDY

R.H. Perlis
Department of Psychiatry, Massachusetts General Hospital and Harvard Medical School, Boston, MA, USA

Randomized clinical trials and effectiveness studies indicate that up to half of patients with bipolar I and II disorder experience recurrence of a mood episode within 2 years despite receiving evidence-based treatment. However, these figures obscure a wide variation in outcomes, indicating that some patients might benefit from more aggressive treatment strategies while others could remain well on simple treatment regimens. Strategies to stratify recurrence risk following recovery would allow clinicians to better tailor treatments to match individual patients' risk. In the STEP-BD study, nearly 4,000 bipolar I and II patients were followed prospectively for up to 2 years while receiving evidence-based treatment. We discuss clinical as well as genetic predictors of recurrence risk identified in this cohort, as well as challenges in translating risk stratification algorithms into clinical practice.

US4.3.
THE MCLEAN/HARVARD FIRST-EPISODE MANIA PROJECT

M. Tohen
Lilly Research Laboratories, Indianapolis, IN; McLean Hospital, Harvard Medical School, Belmont, MA, USA

The McLean/Harvard First-Episode Mania Project aimed to determine predictors of recovery and relapse among first-episode manic patients. Patients hospitalized with a first episode of mania were followed during recovery and for at least 2 additional years. Syndromal recovery and relapse were defined using DSM-IV criteria and assessed by survival analysis. Symptomatic recovery was defined as a Young Mania Rating Scale total score ≤5, and functional recovery as gaining vocational and residential status at or superior to baseline. Clinical and demographic factors were identified by bivariate and multivariate regression. At the 24 month follow-up, 98.9% and 93.6% of subjects achieved symptomatic and syndromal recovery, respectively. Time to syndromal recovery was shorter in patients who were married, discharged sooner, aged 30 at onset, or female. Functional recovery was attained by only 34.9% of the patients, and predictors included short lengths of stay, married, and aged >30. Predictors of relapse/recurrence to depression were psychotic features, mixed episode, comorbidity, high vocational status and aged >30. Predictors of relapse/recurrence to mania included longer hospital stay, psychotic features, and low vocational status. In summary, most patients reached symptomatic and syndromal recovery within 24 months; however, only slightly more than one third attained functional recovery by 2 years. Predictors varied depending on the specified outcome.

US5.
MANAGEMENT OF MEDICALLY UNEXPLAINED SOMATIC SYMPTOMS

US5.1.
THE ROLE OF PSYCHOSOMATIC ASSESSMENT IN THE MANAGEMENT OF MEDICALLY UNEXPLAINED SYMPTOMS

G.A. Fava
Department of Psychology, University of Bologna, Italy

Medically unexplained symptoms occur in up to 30-40% of medical patients and increase medical utilization and costs. The traditional medical specialities, based mostly on organ systems (e.g., cardiology, gastroenterology), appear to be more and more inadequate in dealing with symptoms and problems with cut across organ system subdivisions and require a holistic approach. The psychiatric contribution has often been influenced by the misleading and dangerous assumption that if organic factors cannot be identified, there should be psychiatric reasons which may be able to fully explain the somatic symptomatology. Psychosomatic literature provides an endless series of examples of investigations where psychological factors could only account for part of the unexplained medical disorders. Current psychosomatic assessment takes into consideration the complex interplay between biological factors, psychological clusters (such as those included in the Diagnostic Criteria for Psychosomatic Research), and interindividual variability in illness behaviour and health priorities. This assessment allows the attainment of individualized treatment plans, with the setting of specific priorities and sequential strategies with both biological and nonbiological factors.

US5.2.
ANTIDEPRESSANTS OR PSYCHOLOGICAL TREATMENT FOR MEDICALLY UNEXPLAINED SYMPTOMS?

F. Creed
School of Community Based Medicine, University of Manchester, UK

Systematic reviews have shown that both antidepressants and psychological treatments may be effective in patients with medically unexplained symptoms. The improvement in outcome appears to be independent of the improvement in anxiety and depression, however, indicating that these treatments do not act primarily through improvement in mood. There may be several modes of action as psychological therapies and antidepressants may act primarily on cognitions, coping, pain, mood or behaviours. A group of patients with medically unexplained symptoms is likely to be heterogeneous and several of these mechanisms may be responsible for change in different subgroups. This notion is illustrated by close examination of the effects of psychotherapy and antidepressants in a randomised controlled trial of patients with severe irritable bowel syndrome. The sample (n=257) included 82 patients with depressive disorder, 65 with marked somatisation and 64 with neurasthenia. The effects of antidepressants and psychotherapy are considered in relation to each of these diagnoses. Path analysis demonstrates that, in the short-term, both treatments were associated with improved depression but only the selective serotonin reuptake inhibitor antidepressant acted direct-

ly on pain. In the longer term, somatisation is an important predictor of health status, but even patients with marked somatisation show improved health status and reduced costs.

US5.3.
CONSIDERING CONTEXTUAL FACTORS IN THE MANAGEMENT OF UNEXPLAINED SOMATIC SYMPTOMS

O. Gureje
Department of Psychiatry, University of Ibadan, Nigeria

The management of medically unexplained somatic symptoms is challenging. Results of intervention trials have been mixed, making the development of efficacious guidelines problematic. The difficulty in designing effective treatment may reflect our poor understanding of the etiology of the symptoms. In this paper, data from large cross-national studies are used to highlight the possible role of treatment settings and of pattern of comorbidity in the profile of unexplained somatic symptoms. The point is made that developing effective management for these symptoms requires a consideration of the contextual factors in their evolution.

US6.
THE FUTURE OF PSYCHOTHERAPIES FOR PSYCHOSES

US6.1.
THE FUTURE OF COGNITIVE-BEHAVIOURAL THERAPY IN PSYCHOSIS: WHAT MAKES IT WORK?

P. Bebbington, G. Dunn, D. Fowler, P. Garety, D. Freeman, E. Kuipers
Institute of Psychiatry, London; University of Manchester; University of East Anglia, Norwich, UK

Our Psychosis Research Partnership (PRP) conducted a large multicentre randomized controlled trial (RCT) of the effectiveness of cognitive-behavioral therapy (CBT) in preventing psychotic relapse. Over 300 people with a recent relapse of positive psychotic symptoms were randomized. Those with consenting carers were allocated to receive CBT, family intervention or treatment as usual; those who lacked carers or whose carers declined were randomized to CBT or treatment as usual. The CBT and family intervention had no effects on rates of remission and relapse or on days in hospital at 12 or 24 months. For secondary outcomes, CBT showed a beneficial effect on depression at 24 months, but there were no effects for family intervention. In people with carers, CBT significantly improved delusional distress and social functioning. These results suggest that generic CBT for psychosis is not indicated for routine relapse prevention in people recovering from a recent relapse of psychosis and should currently be reserved for those with distressing medication-unresponsive positive symptoms. Secondary analyses of RCTs require very careful consideration, as approaches such as per protocol analyses lose the benefits of randomisation and lead to impermissible inferences. Nevertheless, techniques are now available that enable the effects of moderating variables such as therapeutic alliance and treatment quality to be modelled in a valid manner. Applying these techniques to our data, it became clear that CBT, *if effectively delivered*, as it was in a third of cases, reduced Positive and Negative Syndrome Scale (PANSS) scores by 24 and 13 (12 month and 24 month follow-up respectively). The equivalent results for depression as measured by Beck Depression Inventory (BDI) score were 4 and 12.

US6.2.
THE FUTURE OF COGNITIVE-BEHAVIOURAL THERAPY IN PSYCHOSIS: FOCUSSING ON SOCIAL RECOVERY

D. Fowler
School of Medicine, Health Policy and Practice, University of East Anglia, Norwich, UK

The development of cognitive-behavioural therapy (CBT) for psychosis has now reached a critical juncture. Recent meta-analyses provide now firm evidence for the efficacy of CBT for treatment resistant psychosis. On the other hand, the effect sizes on symptoms are relatively modest and the results from some recent large scale trials appear equivocal. One way forward is to focus on more specific subgroups. Another way forward is refocusing the target of CBT toward social recovery rather than on symptom management. A focus on social recovery would fit well into a growing agenda which highlights the importance of addressing outcomes which have the greatest relevance for users, and wider interest in understanding social capital as well as traditional clinical outcomes. Recent meta-analyses have already shown that CBT has a consistent effect on social outcomes where these have been measured as secondary outcomes. We have recently undertaken a trial of a new approach to CBT which directly addresses social recovery in psychosis as a primary outcome. This trial has shown substantive gains in improving time spent in constructive and social activity and in clinical outcomes at post treatment, and in promoting time in employment at 2 years. It suggests that CBT could provide a useful adjunct to existing interventions to improve social functioning such as supported employment.

US6.3.
FAMILY-BASED PSYCHOSOCIAL INTERVENTIONS FOR PSYCHOSIS: AN UPDATE

W.R. McFarlane
Maine Medical Center, Portland, ME, USA

As emphasis in treatment of schizophrenia shifts increasingly to early identification and intervention in, or prior to, the first episode of psychosis, the design and implementation of psychosocial treatment has become crucial. Within this preventive orientation, emphasis has also moved beyond prevention of psychosis to promoting recovery to the level of functioning that most closely resembles that of the previous or potential level. It has become clear that therapeutic drugs alone are inadequate to achieving goals pertaining to cognition and psychosocial functioning. At the same time, it has also become clear that family-based psychosocial therapies not only promote improved functioning and restoration of personality, but also contribute independently to prevention of psychotic episodes, whether they are relapses or the first. These treatment approaches have been developed by independent teams in several nations, leading to a broad consensus of effective elements and practices, lending additional credibility to their results. They share the core strategy of helping the patient and the immediate social network to enhance their knowledge and to develop coping skills to compensate for, or even reverse, core neurocognitive deficits. Unlike psychiatric drugs, they have not been implemented widely, even in their countries of origin. Starting from biosocial theory, this presentation describes proven and currently developing family-based psychosocial interventions, their distinctive features and differences and published or available interim results. Particular emphasis is given to those based on cognitive-behavioral precepts, including family psychoeducation, supported education and employment, and assertive community treatment. Also reviewed is their combination: family-aided assertive community treatment.

US7.
ADVANCES IN THE MANAGEMENT OF TREATMENT-RESISTANT DEPRESSION

US7.1.
MONOTHERAPY AND AUGMENTATION STRATEGIES FOR TREATMENT-RESISTANT DEPRESSION

S. Montgomery
Imperial College, London, UK

Resistant depression is difficult to manage. The best predictors of treatment resistance are comorbid anxiety disorder and previous treatment failure, followed by melancholic features severity and current suicidal risk. Currently no monotherapy antidepressant is licensed for treatment resistant depression, so that monotherapy strategies need to focus on antidepressants with demonstrable superior efficacy. Only three antidepressants currently meet criteria of significant superiority against another antidepressant in at least two fair comparator studies. These are escitalopram, venlafaxine and clomipramine. The first strategy in treatment non-response would be to switch to one of these treatments. The strategy of switching to alternate classes of medications in treatment resistant depression is often suggested, but the recent prospective study of the Group for the Study of Resistant Depression (GSRD) shows no advantage to switching between selective serotonin reuptake inhibitor and norepinephrine reuptake inhibitor actions. A better strategy would be to augment. The best data are about adding an atypical antipsychotic to the existing antidepressant. The most convincing data comes from blinded augmentation studies of aripiprazole, quetiapine and olanzapine in either bipolar depression or major depressive disorder.

US7.2.
RESULTS OF THE EUROPEAN STUDY GROUP OF TREATMENT-RESISTANT DEPRESSION

J. Zohar
Division of Psychiatry, Chaim Sheba Medical Center, Tel Hashomer, Israel

Patients for whom the diagnosis of depression was established and who did not respond to adequate treatment are defined as suffering from treatment resistant depression (TRD). It has been estimated that 30-40% of depressed patients do not respond to an adequate treatment attempt. Those patients occupy more and more of psychiatrists' time, since for many depressed patients the first line of treatment is provided by their general practitioners. In addition, since there is as yet no way of predicting who will respond to treatment with selective serotonin reuptake inhibitors (SSRIs) and who will not, the patient must suffer from depression for the duration of failed or inadequate trials before the diagnosis of TRD is made and alternative treatment options explored. The European Study Group of Treatment-Resistant Depression set a primary aim of identifying specific clinical and demographic factors associated with treatment resistant depression, with the intention that such information would offer patients at risk of not responding to first-line antidepressant treatment the opportunity to embark on alternative modes of treatment without having to endure two failed trials of antidepressants. This multicenter study enrolled 356 patients who were treatment resistant, as defined by failure of two consecutive adequate antidepressant trials. These patients were compared with 346 non-resistant patients. Eleven clinical features were found associated with TRD, the strongest of which was comorbid anxiety. The study results are presented and discussed, along with an overview of the various options currently open to the clinician for treating TRD, and future treatment avenues.

US7.3.
SECOND GENERATION ANTIPSYCHOTICS IN TREATMENT-RESISTANT DEPRESSION

S. Kasper
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Although antipsychotics are used mainly in schizophrenia and bipolar disorder, it soon emerged that they are helpful also for treatment of depression. Typical neuroleptics have been used in clinical practice as an add-on therapy for unipolar depression. However, the emergence of extrapyramidal symptoms and subsequently tardive dyskinesia during this treatment indicated them as a problematic choice. With the introduction of the so-called atypical antipsychotics (second generation antipsychotics, SGA) it soon was apparent that they are also helpful for treatment refractory depression. On a pharmacodynamic level, this clinical observation is backed up by the notion that SGA exert also antidepressant mechanisms of action, such as 5-HT_{2C} blocking and some of them additionally also serotonin or norepinephrine reuptake inhibition. The few studies carried out in this field indicated that the addition of an SGA, like risperidone or olanzapine, results in a significantly higher proportion of treatment responders. A number of studies also documented the therapeutic properties of the combination therapy of antipsychotics and antidepressants in unipolar depression with psychotic features. Interestingly, similar dosages as have been used for treatment of schizophrenia should be used for this indication. Antidepressant properties of SGA are recently also substantiated by the findings that these compounds (like quetiapine and olanzapine) are of therapeutic benefit in bipolar depression. Altogether, SGA can be considered as a valuable addition for treatment refractory and psychotic unipolar depression.

US8.
ICD-11 AND DSM-V: WORK IN PROGRESS

US8.1.
THE CLASSIFICATION OF MENTAL DISORDERS: SUBSTANTIVE PROBLEMS AND GLOBAL INVOLVEMENT

N. Sartorius
Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

The forthcoming revision of the International Classification of Diseases and of the Diagnostic and Statistical Manual of the American Psychiatric Association present a most welcome opportunity to review the evidence relevant to the classification of mental disorders that has been accumulated over the past twenty years, so as to be able to decide whether any change of the classification is necessary. There are numerous meta-effects of this review, including the perennial question of ensuring that the review of evidence does not stop at results of research presented in the English language literature; the question of examining not only evidence from research but also the clinical experience of the many using the classifications (or providing care to persons with mental illness without much knowledge about the current form of the classifications of mental disorders); the problems of satisfying the many users of the classification, ranging from neuroscientists to primary health care workers and workers in social

services other than health; the question of how best to prevent the abuse of the classification of mental disorders; and many others. We present these and other issues and problems and describe what has been done to resolve them.

US8.2.
TOWARDS MENTAL AND BEHAVIOURAL DISORDERS IN ICD-11: WHO´S VISION AND PLANS

S. Saxena, G.M. Reed
Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland

The World Health Organization (WHO) is revising the International Statistical Classification of Diseases and Related Health Problems (ICD-10), accepted by the World Health Assembly in 1990. The inclusion of mental disorders alongside other diagnostic entities is an important feature of the ICD, facilitating the search for related mechanisms of etiology, pathophysiology, and comorbidity, and providing a basis for parity of mental disorders in clinical, administrative, and financial policies and functions in health care. Over the past two decades, research in genetics, neuroscience, epidemiology, and cognitive and behavioural sciences has made critical advances in understanding the nature and treatment of mental disorders. The revision of ICD-10 Chapter V: Mental and Behavioural Disorders must use this new knowledge to address systemic limitations. At the same time, the classification must be responsive to WHO's public health mission and its three core constituencies: member states, multidisciplinary health professionals, and users of mental health services. The revision process is focusing attention on usability and usefulness of the classification within primary health care settings, where the vast majority of all care for people with mental disorders is provided. The simultaneous requirements of scientific validity and clinical utility have led WHO to establish a multidisciplinary revision process that focuses on global scientific evidence, worldwide clinical utility, and cross-cultural applicability. A web-based revision platform for receiving suggestions is functioning and plans for field trial are being developed. The ICD revision is also being harmonized with DSM revision being undertaken simultaneously by the American Psychiatric Association.

US8.3.
ON THE ROAD TO DSM-V AND ICD-11

D.J. Kupfer
Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

Many scientific and methodological advances made in the last two decades could play an important role in the DSM-V and ICD-11. In order to facilitate their inclusion in the next nomenclature, a research agenda developed in concert with the American Psychiatric Association, National Institutes of Health, and World Health Organization is providing new approaches and stimulating the empirical research toward that end. The goals of this effort include: a) ensuring greater clinical utility and relevance; b) utilizing a developmental approach across the life span; c) incorporating new knowledge from the neurosciences and the behavioral sciences in elucidating risk factors and prodromal features of disorders; and 4) adopting methodological strategies utilizing both dimensional and categorical approaches. We provide a brief review of the recommendations developed from the thirteen international planning conferences held between 2003 and 2008. As the Task Force for DSM and specific disorder Workgroups begin their activities, specific cross-cutting issues are being addressed. These issues include the following topics: a) life span developmental approaches; b) diagnostic spectra; c) psychiatric/general medical interface; and d) gender and cross-cultural expression. Other important concepts and strategies for alignment with ICD-11 activities will also be discussed that seek to promote international collaboration among members of the scientific and clinical communities.

US9.
GENDER-RELATED ISSUES IN PSYCHIATRIC TREATMENTS

US9.1.
TREATMENT OF DEPRESSION IN PERIMENOPAUSAL WOMEN

D.E. Stewart
University Health Network, University of Toronto, Canada

Depression is approximately twice as common in women between the ages of puberty and menopause as in men. Although most epidemiologic studies do not show a spike in depression rates in women at midlife, it is now evident that certain women are at greater risk of depression during perimenopause (the transitional years). Risk factors for depression in perimenopause include previous depression, premenstrual dysphoric disorder and possibly postnatal depression and rapid hormonal changes. The menopausal transitional stages have been defined by STRAW (Stages of Reproductive Aging in Women). The associated physical, psychological (including mood and anxiety) and cognitive symptoms of perimenopause have multifactorial etiologies, including biological, hormonal and psychosocial cultural factors. Biologic mechanisms for the symptoms of perimenopause include ovarian aging and subsequent reductions in estradiol. Theories on the pathophysiology of thermoregulation and its dysfunction are changing. The effects of neuromodulators on the hypothalamus and other parts of the central nervous system play a major role in psychological symptoms. The effects of estrogen on the serotonergic and noradrenergic systems and the resulting effects on mood and anxiety during perimenopause are greater when changes occur rapidly. The socio-cultural context of the menopausal transition and aging are backdrops of all biological mechanisms and should not be overlooked. Recommendations for the assessment and management of depressive symptoms and depression during perimenopause will be based on recent studies. In summary, antidepressants and evidence based psychotherapies remain the treatments of choice, but estradiol supplementation may be efficacious in perimenopausal women with treatment resistant depression.

US9.2.
TREATING A WOMAN WITH AN UNWANTED PREGNANCY

N.L. Stotland
Rush Medical Center, Chicago, IL, USA

Helping women making decisions about problem pregnancies requires therapeutic neutrality and a personal review by the patient of her values, religion, circumstances, and expectations. The psychiatrist may have strong personal feelings about the suitability of a patient for motherhood and must take care not to impose these on the patient. Mental illness, in and of itself, is not a contraindication to parenting, but may call for specialized social supports. Should a patient contemplate terminating the pregnancy, it is important to counter widely held public misconceptions, and inform her that negative physical and psychological sequelae of abortion are far less common than

those following birth. Very little is known about the sequelae for the mother of relinquishing a child for adoption by another family. Treating women who have had abortions requires a review of the circumstances that led to the abortion, the experience of the abortion, and the reactions of friends and relatives. Women who have borne children of unwanted pregnancies may need psychotherapeutic help to resolve the feelings inherent in that situation.

US9.3.
GENDER DIFFERENCES IN TREATMENT SEEKING FOR MENTAL DISORDERS IN THREE COUNTRIES WITH DIFFERENT SOCIOECONOMIC STATUS

M.B. Rondon
Department of Psychiatry and Mental Health, Universidad Peruana Cayetano Heredia, Lima, Peru

Health seeking is a complex process, the dynamics of which depend on a series of socio-demographic and socio-cultural factors. Race and gender have been found to influence help seeking behavior, in addition to social economic status and educational level. A study comparing gender sensitive mental health indicators in Canada, Colombia and Peru found that women that perceive their mental health is poor are less likely than other women to seek treatment. Men in Colombia, who have surprisingly high rates of depression and anxiety, are more prone to seek treatment than women under the same circumstances. These findings prompt us to reconsider the usual determinants of treatment seeking behavior and to give consideration to inequities determined by the submissive position of women in each of these countries. Consideration should be given to the existence of stigma towards mental illness, as well the common perceptions that there are no effective treatments for mental diseases and that available health services are of poor quality.

US10.
SUICIDE PREVENTION: INTEGRATION OF PUBLIC HEALTH AND CLINICAL ACTIONS

US10.1.
SUICIDE CAN BE PREVENTED THROUGH CLINICAL AND PUBLIC HEALTH APPROACHES

D. Wasserman
National Prevention of Suicide and Mental Ill-Health (NASP) at Karolinska Institute, Stockholm, Sweden

Suicide prevention strategies can be directed at the general population or the health care services. For maximum overall impact, it is advisable for a public health approach to go hand in hand with a health care approach. Suicide-preventive effects of treatment with antidepressants, lithium, antipsychotics, dialectical behavioural therapy and cognitive behavioural therapy to date are encouraging. Suicide risk is high among psychiatric patients and suicide attempters, particularly after their discharge from hospital. Careful follow-up and rehabilitation plans should be provided. Adequate treatment of psychiatric disorders and improved detection of psychiatric illnesses in the general population are also essential. Successful public health preventative measures to reduce the number of suicides also include programmes which restrict access to guns, agricultural chemicals, pesticides, and raticides. Perestroika in the former USSR was history's most effective suicide-preventive programme for men, where strict alcohol limitations were imposed and reduced consumption was actively promoted. An example of an effective strategy for combating mental illness and associated suicides in young people is the WPA/WHO initiative "Global Child Mental Health", which aims to increase mental health awareness amongst students, teachers and other school staff, and parents, as well as to promote early diagnosis and treatment of psychiatric diseases and psychological problems. We outline how this initiative is to be used in the European Union research program SAYLE (SAving Young Lives in Europe).

US10.2.
THE ROLE OF HEALTH CARE WORKERS IN SUICIDE PREVENTION: FOCUS ON MOOD DISORDERS

Z. Rihmer
Department of Clinical and Theoretical Mental Health, Faculty of Medicine, Semmelweis University, Budapest, Hungary

Suicidal behaviour is a relatively rare event in the community, but it is quite common among psychiatric patients, who contact different levels of health care services some weeks or months before the suicidal event. Over 90 percent of suicide victims have at least one current Axis I mental disorder, most frequently severe major depressive episode (56-87%), which, in the majority of cases, is unrecognized or untreated. As up to 66% of suicide victims (two-thirds of them with current depression) contact their general practitioner or psychiatrist 4 weeks before their death, health care workers play a priority role in suicide prediction and prevention. Following the pioneering Swedish Gotland Study, some large-scale community studies (like the Nuremberg Alliance Against Depression, the Swedish Jamtland Study and the recent Hungarian Kiskunhalas Suicide Prevention Study) demonstrated that education of general practitioners on the diagnosis and treatment of depression, particularly in combination with psychosocial interventions and public education, improved the correct identification and treatment of depressive disorders and reduced the frequency of suicidal behaviour in the areas served by trained practitioners. Clinical follow-up studies on severely ill formerly hospitalized patients with unipolar and bipolar major mood disorders, performed in the frame of outpatient psychiatry, also have shown that long-term pharmacotherapy with antidepressants and/or mood stabilizers markedly reduced the risk of attempted and completed suicide in this high-risk population. Although appropriate pharmacotherapy of mood disorders is essential for suicide prevention, the importance of comorbid substance-related and personality disorders as well as other psychiatric and psychosocial suicide risk factors should be also considered.

US10.3.
FROM THE NUREMBERG TO THE EUROPEAN ALLIANCE AGAINST DEPRESSION: PREVENTING SUICIDALITY BY COMMUNITY BASED INTERVENTIONS

U. Hegerl, and the European Alliance Against Depression team
Department of Psychiatry, University Hospital, Leipzig, Germany

Improving the care of depressed patients, reducing access to lethal means and avoiding the Werther effect (imitation suicide) are the most promising means to reduce suicide rates. The Nuremberg Alliance against Depression has provided evidence for the effectiveness of a four-level community based intervention concept. The four-level intervention comprised cooperation with general practitioners, a public relations campaign, cooperation with community facilitators and local media, and support of self help activities. Careful evaluation with respect to both a baseline year and a control region revealed a significant effect concerning the number of suicidal acts (completed +

attempted suicides, primary outcome) with a decrease in Nuremberg (500,000 inhabitants) of 24% after two intervention years and a further decrease in the follow-up years. This concept and the intervention materials have been adopted and refined by many regions in 17 countries within the European Alliance against Depression, funded by the European Commission.

US11.
BRAIN IMAGING IN PSYCHIATRY: RECENT PROGRESS AND CLINICAL IMPLICATIONS

US11.1.
ADVANCEMENTS IN MOLECULAR POSITRON EMISSION TOMOGRAPHY IMAGING FOR PSYCHIATRIC RESEARCH

L. Farde
Department of Clinical Neuroscience, Karolinska Institutet, Stockholm; AstraZeneca R&D, Södertalje, Sweden

The imaging technology positron emission tomography (PET) is used to trace radiolabeled molecules in the human brain. Molecular imaging is based on the development of suitable radioligands for neuroreceptors, enzymes or transport proteins. The radioligand can then be used in research on the pathophysiology of brain disorders or in clinical pharmacology to measure the occupancy of drug treatments. A related approach is to develop radioligands that bind to biomarkers for pathophysiology, such as amyloid in Alzheimer's disease. Work on new proteins is a particular challenge in neuroscience, because approximately half of the human genes are expressed in brain. This availability of numerous new proteins provides vast opportunities for new drug treatment. However, using the suitable radioligands so far developed for molecular imaging, only about 25 central nervous system proteins can be examined by PET. The field benefits from the present industrial investments in PET imaging and access to chemistry resources, which facilitates more effective developments of new radioligands. Interestingly, these efforts may in addition provide academia with new tools to reveal the functional role of recently discovered proteins in the human brain. Such research benefits from the advancements of the PET technology. The high resolution research tomography (HRRT) and recent implementation of improved image reconstruction software provides brain imaging at a resolution of about 1.6 mm. This high resolution allows for detailed mapping of proteins and disease biomarkers in the human brain. Moreover, advanced image analysis, including statistical methods for recognition of patterns of protein distribution in brain, are now developed to take benefit of the vast amount of information generated by a single PET measurement. Taken together, these methodological advancements pave the way for a new era of PET imaging in psychiatric research.

US11.2.
ADVANCES IN WHITE MATTER IMAGING AND THEIR APPLICATION TO SCHIZOPHRENIA

M.E. Shenton, M. Kubicki, T. Kawashima, D. Markant, T. Ngo, R.W. McCarley, C.-F. Westin
Departments of Psychiatry and Radiology, Brigham and Women's Hospital and Harvard Medical School, Boston, MA; Department of Psychiatry, Veterans Affairs Boston Healthcare System and Harvard Medical School, Brockton, MA, USA

While a great deal of progress has been made over the last two decades in identifying gray matter abnormalities in schizophrenia, only recently has the same level of scrutiny been applied to white matter. Moreover, recent longitudinal magnetic resonance imaging (MRI) studies demonstrate progressive changes in gray matter in both temporal and frontal cortices, following illness onset. In contrast, far less is known about the evolution and progression of white matter abnormalities, or about the integrity of white matter connections, particularly those that connect the frontal and temporal lobes, tracts that have long been thought to be abnormal in schizophrenia. With the development of diffusion tensor imaging, we are now able to investigate white matter abnormalities. Here, we report recent findings using region of interest and tractography methods that show fronto-temporal abnormalities in chronic schizophrenia, including uncinate fasciculus, fornix, and cingulum bundle. We also present findings in schizotypal personality disorder (SPD), first episode patients diagnosed with schizophrenia (FESZ), and first episode patients diagnosed with bipolar disorder with psychotic features (FEBP). For SPD and first episode patients, we report uncinate but not cingulum bundle abnormalities. These findings suggest that cingulum bundle abnormalities are not present in SPD or at first episode, but are evident in chronic schizophrenia. In addition, findings suggest that uncinate fasciculus abnormalities may not specific to schizophrenia or to SPD, as they are evident in FEBP and FESZ. Further studies are needed that follow changes over time in order to further characterize white matter abnormalities in schizophrenia and bipolar disorder.

US11.3.
NEUROIMAGING IN PSYCHOSIS: INTEGRATION OF DATA ACROSS MODALITIES

P. McGuire
Institute of Psychiatry and OASIS, London, UK

Recent neuroimaging studies have provided new information about the mechanisms underlying the development of psychosis. Volumetric magnetic resonance imaging (MRI) and diffusion tensor imaging (DTI) studies have clarified the extent to which grey and white matter abnormalities are evident before and after the onset of psychosis, while the application of functional MRI (fMRI) has indicated the neural basis of impaired executive functions, memory and salience processing in the early phase of the disorder. Similarly, studies using positron emission tomography (PET) and MR spectroscopy have revealed how dopamine and glutamate transmission are altered in the prodromal phase of psychosis. However, these studies have been conducted separately, and the relationship between the structural, functional and neurochemical findings they have identified is unclear. Using different neuroimaging techniques in the same subjects provides a means of addressing this issue. We have employed this approach in subjects with prodromal signs of psychosis. In a study combining F-dopa PET with fMRI, there was a significant correlation between elevated striatal dopamine function in prodromal subjects and altered prefrontal activation during a verbal fluency task. In a second study that combined volumetric MRI and MR spectroscopy, reduced medial temporal and prefrontal grey matter volume in prodromal subjects was correlated with the degree to which glutamate levels in the thalamus were reduced. These initial results suggest that, although logistically difficult, multi-modal neuroimaging has the potential to advance our understanding of the pathophysiology of psychiatric disorders.

US12.
ADVANCES IN THE MANAGEMENT OF TREATMENT-RESISTANT BIPOLAR DISORDER

US12.1.
PREDICTORS OF NON-RESPONSE TO LITHIUM AND THE ROLE OF ATYPICAL ANTIPSYCHOTICS IN TREATMENT-RESISTANT BIPOLAR MANIA

M. Tohen
Lilly Research Laboratories, Indianapolis, IN; McLean Hospital, Harvard Medical School, Belmont, MA, USA

Bipolar disorder is a long-term hard-to-treat condition with a global prevalence of 1-2%. There are, however, no clear estimates of the prevalence of treatment-resistant bipolar mania. A major challenge has been the lack of a widely accepted definition of treatment-resistant mania. Furthermore, commonly used terms such as response, remission, recovery, relapse and recurrence have varying definitions that further complicate data interpretation. Observational studies can be helpful in identifying clinical and demographic predictors of non-response under naturalistic conditions. Clinical trials complement observational studies under controlled conditions. A number of studies have identified predictors of non-response to lithium, including a history of rapid cycling course, mixed symptoms, psychotic symptoms and a greater symptom severity. Close to 20% of all bipolar patients have a history of rapid cycling and it has been estimated that 3/4 of these patients have a poor response to lithium and only 1/3 of mixed episode patients respond to lithium. Some anticonvulsants and atypical antipsychotic agents may represent an alternative treatment in lithium non-responding patients. Many patients do not respond to lithium monotherapy and require combination treatments. For clinicians it is of major importance to be able to predict who will be able to achieve clinically meaningful remission after starting a specific pharmacological treatment. Statistical approaches such as positive predictive value and negative predictive value may represent a helpful tool for clinicians to achieve this goal.

US12.2.
THE ROLE OF DRUG COMBINATIONS IN THE MANAGEMENT OF TREATMENT-RESISTANT BIPOLAR DISORDER

R.W. Licht
Mood Disorders Clinic and Research Unit, Aarhus University Hospital, Risskov, Denmark

From clinical practice and randomised clinical trials, it is well known that a substantial proportion of both acutely manic and acutely depressed bipolar patients receiving any first-line drug does not show an adequate and clinically meaningful response within the first few weeks of treatment. A commonly used strategy when this takes place is adding a second drug. The pharmacological reasoning behind adding a second drug is based on the assumption that drugs given together may act additively or synergistically in terms of efficacy. Additionally, this strategy, as opposed to replacing the first drug with the second, can be justified as maximizing the likelihood of effect, since the first-line drug still may have a chance to work on its own over time. Unfortunately, the guidance that can be derived in this respect from randomised clinical trials is very poor. Even though a vast number of trials have demonstrated that most of the available atypical antipsychotics (and haloperidol) are superior to placebo as add-ons to lithium or valproate in manic patients insufficiently responding to lithium or valproate, the obtainable clinical information is limited. Firstly, there is no distinction between subjects responding insufficiently to an acute antimanic treatment with lithium or valproate and subjects suffering from a breakthrough-prophylaxis mania. Secondly, clear and valid definitions and assessments of insufficient response are often lacking. In the field of bipolar depression, the evidence on this issue is even more limited. However, it could be argued that the evidence on management of treatment-resistant unipolar depression to some extent can be transferable to the management of bipolar depression. A strategy of adding a second drug is also frequently used in the long-term management of bipolar disorder for improving prophylaxis. This may occur after several months, when euthymia cannot be maintained on any given first-line prophylactic drug treatment. Despite the fact that such a strategy has never been properly evaluated in randomised trials, it may still be justified through sound reasoning, on condition that a systematic and careful follow-up on wanted and unwanted drug effects is provided.

US12.3.
THE ROLE OF PSYCHOSOCIAL TREATMENTS IN THE MANAGEMENT OF "TREATMENT-RESISTANT" BIPOLAR DISORDER

E. Frank, H.A. Swartz, D.J. Miklowitz, S. Hlastala, A.M. Fagiolini, D.J. Kupfer
Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

If the goal of treatment is full remission of acute episodes and extended periods of symptom-free recovery with return of pre-morbid functioning, then almost all bipolar disorder can be considered "treatment-resistant". Most individuals with bipolar disorders spend a majority of their lives in subsyndromal depressive states, with full-blown episodes occurring with unacceptable frequency. Recent data suggest that this kind of outcome is even more common among individuals with bipolar II and various NOS conditions than among those with bipolar I disorder. Children and adolescents with bipolar disorders seem to be particularly vulnerable to these poor outcomes. Furthermore, adults with bipolar disorders suffer at a much higher frequency than the general population from medical conditions that may lead to additional functional impairment. This paper reviews the role of psychoeducation and psychotherapy in achieving more rapid and sustained remission among adolescent and adult patients with bipolar disorders, focusing in particular on recent data regarding the role of psychosocial treatment in ameliorating the functional impairment associated with bipolar disorder. Included in this review is a description of a) new data on outcomes for adolescents treated with family-focused treatment and with interpersonal and social rhythm therapy (IPSRT); b) data on outcomes for individuals with bipolar II disorder treated with IPSRT, as well at data on improvements in functional capacities associated with these treatments in adult patients and c) pilot data on a psychosocial and behavioral intervention aimed at reducing medical risks in individuals with bipolar disorder.

US13.
PARTNERSHIPS IN MENTAL HEALTH CARE

US13.1.
SOCIETY AT LARGE AS A PARTNER IN MENTAL HEALTH CARE

B. Saraceno
Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland

Reality shows that no agent, however well positioned in society, could propel mental health forward on its own. To make a difference, every-

one has to act. Governments have to allocate adequate resources, and support programmes and services. Empowered service users must assume an active role in advocacy, service planning and care delivery. Mental health professionals have to continue seeking the improvement of care by anchoring it on solid scientific, human rights driven evidence. Managers of services have to eliminate human rights' abuses. Families, heads of communities, schools, labour, religious institutions must assume an active role in advocacy, care and rehabilitation. Parliamentarians have to promote the adoption and implementation of progressive legislation. Health insurers have to establish parity in care provision. The media have to help in the creation of a mental health-friendly culture. The Global Forum for Community Mental Health brings together diverse constituencies with a real interest in better promoting mental health, preventing and treating mental disorders. Based on their different perspectives and bringing specific points of view from their own environments, these constituencies stimulate and lend support to action aimed at raising awareness in countries around the world on the burden of the mental and substance abuse problems, the community based interventions available to reduce them, and the pervasive effects of stigma and discrimination that affect persons with mental disorders and their families.

US13.2.
POWER IN NUMBERS: DEVELOPING PARTNERSHIPS FOR MENTAL HEALTH

C. Underhill
BasicNeeds, Warwickshire, UK

For nearly a decade, BasicNeeds has been building partnerships at grassroots level with the goal of enabling poor people with mental disorders to live and work in their community. Across Africa, Asia and Latin America, we have trained 55 partner organisations to implement the Model for Mental Health and Development, enabling 54,076 people with mental disorders to access services. We also enter into partnerships with our service users, whom we have supported to form over 200 self-help groups that, in some cases, are being structured into national movements. Based on this rich experience of local partnerships, we are building a knowledge base in support of international partnerships and networks, such as the Global Forum for Community Mental Health and the Movement for Global Mental Health. This paper gives examples of the process of partnership development and highlights benefits to working in partnership, namely: achieving service coverage in a context of resource gaps; making expedient progress in human rights at local and district levels; and mainstreaming people with mental disorders outside the field of health.

US13.3.
PARTNERSHIP OR PRETENSE: CAN PARTNERSHIPS BETWEEN USERS AND SERVICE PROVIDERS WORK?

M. Salie
Cape Town, South Africa

Janet Meagher, a long-time consumer organiser from Australia, wrote a book entitled "Partnership or Pretense". This paper addresses the issue of partnerships between service providers and service user/survivor (hereafter referred to as user) groups in the light of this title. Is it possible to engage in partnerships if there remains inherent power inequalities between these two groups and what are the requirements for meaningful partnerships? An attempt will be made to find answers to these questions. Also what needs to be discussed are an analysis of existing models of user/provider engagement and whether they are reflective of good or bad partnerships. There has also been confusion regarding family groups and user groups. Are these groups concerned with the same interests or do they in fact represent different concerns and where do they fit-in in the larger picture of user/provider interaction? We argue for a strong and independent user movement and for engagement with providers and user groups on the basis of equality and respect for our human rights. Human rights abuse have been the idiosyncratic methodology of psychiatric institutions in the past and still continues in many places. However, harmful practices implicit in treatment modalities still continues even in this enlightened period. Therefore, partnerships in mental health can only truly be addressed if users, providers and family groups are on the same page regarding what constitutes respect for human rights. This is especially true in this present age in which the Convention on the Rights of Persons with Disabilities (CRPD) has become international law. The users, as persons with psychosocial disabilities, now have the protection of the CRPD and psychiatry has to start paying attention.

US14.
GENOMICS AND PROTEOMICS IN PSYCHIATRY: AN UPDATE

US14.1.
RETHINKING PSYCHOSIS

N. Craddock
Department of Psychological Medicine, School of Medicine, University of Cardiff, UK

It has been conventional for psychiatric research, including the search for predisposing genes, to proceed under the assumption that schizophrenia and bipolar disorder are separate disease entities with different underlying etiologies. This represents the traditional dichotomous classification of the so-called ''functional'' psychoses and forms the basis of modern psychiatric diagnostic practice. Recently, positive findings have been emerging in molecular genetic studies of psychoses. However, the pattern of findings shows increasing evidence for an overlap in genetic susceptibility across the traditional classification categories, including association findings at DISC1 and NRG1. Genome-wide association studies (GWAS) now provide greater power to explore the relationship between mood and psychotic illness. Within the context of the Wellcome Trust Case Control Consortium (WTCCC), we have studied 2700 mood-psychosis cases and 3000 controls, and several other large-scale studies have been undertaken, including studies of structural genomic variation. The emerging evidence suggests the existence of relatively specific relationships between genotype and psychopathology. For example, in our dataset, variation at $GABA_A$ receptor genes is associated with susceptibility to a form of illness with mixed features of schizophrenia and bipolar disorder. Genome-wide significant associations at CACNA1C in bipolar disorder and ZNF804A in schizophrenia show evidence for a contribution to susceptibility across the traditional diagnostic boundaries. The elucidation of genotype-phenotype relationships is at an early stage, but current findings highlight the need to consider alternative approaches to classification and conceptualization for psychiatric research rather than continuing to rely heavily on the traditional dichotomy. As psychosis susceptibility genes are identified and characterized over the next few years, this will have a major impact on our understanding of disease pathophysiology and will lead to changes in classification and the clinical practice of psychiatry.

US14.2.
COMMON AND RARE GENETIC VARIANTS IN THE AETIOLOGY OF PSYCHIATRIC DISORDERS

M. Rietschel
Department of Genetic Epidemiology in Psychiatry, Central Institute of Mental Health, Mannheim, Germany

Psychiatric disorders such as schizophrenia, affective disorders and addiction are phenotypically heterogeneous diseases which run in families and which have a high genetic loading. Twin and adoption studies have shown that more than 50% of the inter-individual phenotypic variance is accounted for, on average, by genetic factors. On a molecular level, vulnerability to these disorders is thought to be mediated by many genetic loci of small to modest effects, and/or by few genetic loci with substantial effects, though identification of such loci has proven difficult. Despite intensive efforts, only a few candidates had been identified over past decades, since systematic genome screening of samples large enough to provide sufficient statistical power has only recently become possible. The development of systematic genome-wide association studies (GWAS), combined with the willingness of international researchers to share their data, has allowed the identification of new variants, including frequent variants with small effects and rare variants with large effects. Using the example of our data from candidate gene and GWA studies in schizophrenia, bipolar disorder and alcohol addiction, we illustrate how large samples, sample homogeneity and sub-phenotyping all help to identify the genetic variants that contribute to disorders. We also illustrate how a convergent approach using gene expression data from animal studies can guide the selection of candidates in GWA studies.

US14.3.
DISEASES OF THE SYNAPSE PROTEOME

S.G.N. Grant
Wellcome Trust Sanger Institute, Cambridge, UK

Synapses are a fundamental structure responsible for connecting neural networks and processing of information. The proteome of the synapse comprises 1-2000 proteins organised into multiprotein complexes with modular molecular network architecture. Proteomics reveals that postsynaptic neurotransmitter receptors are organised with 100-200 proteins embedded within the postsynaptic density (PSD). Synapse phospho-proteomics shows that the activation of glutamate and dopamine receptors drive networks of hundreds of proteins and phosphorylation sites that orchestrate the output on many classes of proteins. The combinations of outputs is driven by different patterns of synaptic activity and is responsible for forms of plasticity such as long-term potentiation and depression. These postsynaptic phosphoproteome networks include switching and regulatory components that result in a postsynaptic "computational" system of extraordinary complexity and informational processing capacity. We have studied the origins and evolution of synapses and found that an ancestral protosynapse originating in unicellular animals predated the neuronal synapse of metazoans. The protosynapse was elaborated upon by the addition of specific classes of signaling proteins in metazoans and a further increase in complexity in chordates. The evolutionary expansion in synapse proteome complexity has contributed to the signaling networks and forms of plasticity found in higher species. Importantly, this complexity, which predated the evolution of the large regionalised brain of vertebrates, was exploited to provide novel neuronal types and synapses in different brain regions. Thus, synapse proteome evolution are a template for the origins and complexity of nervous systems. The synapse proteome networks are a substrate for a wide variety of brain diseases. Disruption of individual genes and combinations of genes disrupt the organisation and signaling of postsynaptic complexes and networks. The networks are also a potential substrate for new therapeutic approaches.

US15.
PATTERNS OF COLLABORATION BETWEEN PRIMARY CARE AND MENTAL HEALTH SERVICES

US15.1.
A REALIST REVIEW OF WAYS OF WORKING AT THE INTERFACE BETWEEN PRIMARY AND SECONDARY CARE WITHIN MENTAL HEALTH CARE SETTINGS

L. Gask, T. Khanna
School of Community Based Medicine, National Primary Care Research and Development Centre, University of Manchester, UK

There is variable evidence available as to the effectiveness of ways of working at the interface between primary and secondary care within mental health care settings. Traditional methods of review often fail to provide the information that is required to assist both clinicians and policy makers in the design and implementation of new services. A "realist review" provides a model of synthesizing research which is aimed at discerning what works for whom, and aims to be of use when planning and implementing programmes. The aims of the present review are to provide a comparison of ways of working at the interface between primary and specialist mental healthcare, and to particularly consider the impact of these "ways of working" on the role of the psychiatrist. We systematically searched databases, and obtained further references from an expert panel. Data was extracted, using a theoretically based evaluation framework, from 119 papers. Seven models emerged from the literature, labelled as: attached professionals, community mental health team, consultation-liaison, collaborative care, stepped care, triage and "gateway" models, and "primary care mental health teams". Themes emerging from the synthesis of the data were: impact on the clinician-patient encounter, impact on the wider professional network, implications for the workforce (especially psychiatrists) and implementation in the health care system. Key factors in implementing models include the target population, availability of well-trained staff and cost. Psychiatric training will need to adapt to incorporate knowledge of these new models of working in the community.

US15.2.
TASK SHIFTING IN PRIMARY CARE: A PRACTICAL STRATEGY FOR SCALING UP MENTAL HEALTH CARE IN DEVELOPING COUNTRIES

V. Patel
London School of Hygiene and Tropical Medicine, London, UK; Sangath Centre, Goa, India

Task shifting is a term used to describe the strategy of rational redistribution of tasks among health workforce teams, which has become a popular method to address specialist health human resource shortages. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health. A Cochrane systematic review has reported that lay health workers show promising benefits in promoting immunisation uptake and improving outcomes for acute respiratory infections and malaria, when compared to usual care. The World

Health Organization has recently released global recommendations and guidelines on task shifting for scaling up HIV care and proposes the "adoption or expansion of a task shifting approach as one method of strengthening and expanding the health workforce to rapidly increase access to HIV and other health services". The scarcity of specialist mental health human resources in developing countries, compounded by their inequitable distribution and inefficient utilization, has been well documented. This human resource gap will remain large for the foreseeable future, and is likely to be worsened as populations grow in many countries and as specialists emigrate. We present a perspective on the role of task shifting to scale up mental health care, by empowering community and primary health workers to deliver specific tasks, the evidence base which supports the effectiveness of task shifting interventions in mental health care, the role of mental health specialists in such intervention programs, and future research and program opportunities.

US15.3.
THE INTERFACE BETWEEN PRIMARY CARE AND SPECIALIZED MENTAL HEALTH SERVICES: IS IT LOSING IMPETUS?

R. Araya
University of Bristol, UK

There was great interest in the 1980s and 1990s to propose and test a variety of working models for the interface between primary care and mental health services. There is some evidence to suggest that gradually this interest may have diminished. Some reasons that may explain this situation include the preferential attention given to research and development on models to improve the resolution of selected priority health problems in primary care or the difficulties to break the existing formal and informal boundaries between primary care and psychiatry. The situation is rather different in countries with different levels of development. In some low-income countries there are few psychiatrists but there are other forms of specialized mental health services. Unsurprisingly in those countries psychiatrists may not be at the centre of this interface. In other more resourceful middle-income countries with a reasonable number of psychiatrists, other members of the team – often psychologists – play a much more active role in this interface. In some high-income countries, some people have argued that perhaps the central role of the psychiatrist in this interface should be scrutinized more carefully. Several successful experiences with nurse specialists and psychologists are worth a more careful evaluation. There is some evidence to suggest that some treatment practices deeply established in developed countries may have little empirical support for their existence. Some have argued that disinvesting in some of these costly practices may be an option.

US16.
EFFECTIVENESS AND COST-EFFECTIVENESS OF PHARMACOLOGICAL TREATMENTS IN PSYCHIATRY: EVIDENCE FROM PRAGMATIC TRIALS

US16.1.
UTILIZING THE RESULTS OF PRACTICAL CLINICAL TRIALS TO OPTIMIZE TREATMENT FOR INDIVIDUAL PATIENTS

J.A. Lieberman
Columbia University College of Physicians and Surgeons, New York State Psychiatric Institute, New York, NY, USA

There is a saying that doctors should "use a new treatment fast while it still works". This is because clinicians have grown accustomed to the fact that new drugs are approved based on their testing in rigorous clinical trials with great fanfare and high expectations, which they rarely live up to when used in routine clinical settings. This disconnect reflects the so-called "efficacy-effectiveness gap". This gap refers to the reasons why the results of randomized clinical trials designed largely to gain regulatory approval for new drugs or additional indications for the marketed drugs do not accurately reflect how drugs work when they are applied to broad patient populations in real world settings and can best be filled by the conduct of practical clinical trials which aim to determine treatment effectiveness in representative patient populations in ecologically valid clinical settings. Consequently, there is an increasing recognition of the urgent need for more practical clinical trials that will evaluate the comparative effectiveness of currently marketed treatments, so that we know how best to utilize them and whether they justify their cost. This paper describes the role of the various types of studies in the course of drug development and then emphasizes the unique features and information that practical trials can provide. In this context the recently published CATIE, CUTLASS, EUFEST and TEOSS trials are reviewed and analyzed.

US16.2.
EFFECTIVENESS OF SECOND-GENERATION ANTIPSYCHOTICS IN FIRST EPISODE SCHIZOPHRENIA: THE EUFEST STUDY

R.S. Kahn
Department of Psychiatry, Rudolf Magnus Institute of Neuroscience, University Medical Centre Utrecht, The Netherlands

Second-generation antipsychotic drugs were introduced over a decade ago for the treatment of schizophrenia; however, their purported clinical effectiveness compared with first-generation antipsychotic drugs is still debated. We aimed to compare the effectiveness of second-generation antipsychotic drugs with that of a low dose of haloperidol, in first-episode schizophrenia. We did an open randomised controlled trial of haloperidol vs. second-generation antipsychotic drugs in 50 sites, in 14 countries. Eligible patients were aged 18-40 years, and met diagnostic criteria for schizophrenia, schizophreniform disorder, or schizoaffective disorder. 498 patients were randomly assigned by a web-based online system to haloperidol (1-4 mg/day; n=103), amisulpride (200-800 mg/day; n=104), olanzapine (5-20 mg/day; n=105), quetiapine (200-750 mg/day; n=104), or ziprasidone (40-160 mg/day; n=82). Follow-up was at one year. The primary outcome measure was all-cause treatment discontinuation. Patients and their treating physicians were not blinded to the assigned treatment. Analysis was by intention to treat. The number of patients who discontinued treatment for any

cause within 12 months was 63 (Kaplan-Meier estimate 72%) for haloperidol, 32 (40%) for amisulpride, 30 (33%) for olanzapine, 51 (53%) for quetiapine, and 31 (45%) for ziprasidone. Comparisons with haloperidol showed lower risks for any-cause discontinuation with amisulpride (HR 0.37, 95% CI 0.24-0.57), olanzapine (HR 0.28, 95% CI 0.18-0.43), quetiapine (HR 0.52, 95% CI 0.35-0.76), and ziprasidone (HR 0.51, 95% CI 0.32-0.81). However, symptom reductions were virtually the same in all the groups, at around 60%. This pragmatic trial suggests that clinically meaningful antipsychotic treatment of first-episode of schizophrenia is achievable, for at least one year. However, we cannot conclude that second-generation drugs are more efficacious than is haloperidol, since discontinuation rates are not necessarily consistent with symptomatic improvement.

US16.3.
EFFECTIVENESS AND COST-EFFECTIVENESS OF PHARMACOLOGICAL TREATMENTS IN DEPRESSION: EVIDENCE FROM PRAGMATIC TRIALS

M. Fava
Department of Psychiatry, Massachusetts General Hospital, Boston, MA, USA

The significant economic and societal impact of major depressive disorder (MDD) is related to several factors. The high prevalence, early onset, course of illness, and the consequences of symptoms of depression all contribute to substantial costs for individuals, families, and society. A large number of pharmacological treatments of MDD are available to clinicians, who need to be informed about the usefulness and the limitations of these interventions so that informed decisions can be made in treating depressed patients. Although their efficacy has been well established through hundreds of randomized clinical trials, their effectiveness in "real world" populations has not been evaluated adequately. In an effort to investigate the effectiveness of antidepressant therapies in MDD as first-line and second- or third-line treatments, the Sequenced Treatment Alternatives to relieve Depression (STAR*D) study was conducted across a large number of primary care and specialty care sites in the US. This paper reviews the findings of the STAR*D study and of other effectiveness trials in MDD, and presents the evidence for the cost-effectiveness of antidepressant treatments. Since treatment resistance plays a significant role in the economic burden of depressive illness, as this subset of patients uses more services than other depressed patients and may be responsible for the majority of increased health care costs associated with depression, the results of the STAR*D study may shed some light on the cost-effectiveness of next-step therapies in MDD.

US17.
COGNITIVE IMPAIRMENT: SHOULD IT BE PART OF THE DIAGNOSTIC CRITERIA FOR SCHIZOPHRENIA?

US17.1.
A PROPOSAL FOR THE INCLUSION OF COGNITIVE IMPAIRMENT IN THE DSM-V AND ICD-11 DIAGNOSTIC CRITERIA FOR SCHIZOPHRENIA

R. Keefe
Department of Psychiatry, Duke University Medical Center, Durham, NC, USA

Neurocognitive impairment is considered a core component of schizophrenia. On average, cognitive impairment is severe to moderately severe compared to healthy controls, and almost all patients with schizophrenia demonstrate cognitive decrements compared to their expected level if they had not developed the illness. Compared to patients with affective disorders, cognitive impairment in schizophrenia appears earlier, is more severe, and is more independent of clinical symptoms. Although the DSM-IV-TR and ICD-10 descriptions of schizophrenia include several references to cognitive impairment, neither the diagnostic criteria nor the subtypology of schizophrenia include a requirement of cognitive impairment. We discuss a proposal that DSM-V and ICD-11 diagnostic criteria for schizophrenia include a specific criterion of "a level of cognitive functioning suggesting a consistent severe impairment and/or a significant decline from premorbid levels considering the patient's educational, familial, and socioeconomic background" or similar dimensional determination. The inclusion of cognitive impairment in the diagnosis of schizophrenia may increase the "point of rarity" with affective psychoses and may increase clinicians' awareness of cognitive impairment, potentially leading to more accurate prognosis, better treatment outcomes, and a clearer diagnostic signal for genetic and biological studies. Future research will need to address the validity of these possibilities. The reliable determination of cognitive impairment as part of a standard diagnostic evaluation will present challenges to diagnosticians with limited resources or insufficient expertise. However, given the current emphasis on the development of cognitive treatments, the evaluation of cognition in schizophrenia should be considered an essential component of mental health education.

US17.2.
HOW FEASIBLE IS A COGNITIVE ASSESSMENT AS PART OF THE PROCESS OF DIAGNOSIS OF SCHIZOPHRENIA?

P.D. Harvey
Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Atlanta, GA, USA

The current diagnostic criteria for schizophrenia do not require the presence of impairments in cognitive performance for diagnosis. These criteria result in a group of patients who arguably manifest cognitive impairments across multiple domains. Adding cognitive impairment to the diagnostic criteria would, superficially, seem redundant because the current criteria produce a high-prevalence group. Given the correlation between disability and cognitive impairment across diagnostic conditions, the presence of disability in the present criteria is a likely driver in the diagnosis of a cognitively impaired population. Assessment of cognition is an important, and widely ignored, part of a reasonable treatment plan for the illness, because of the relationship between disability and cognitive impairments. Methods for the assessment of cognitive impairment in schizophrenia are variably valid. Patients with schizophrenia are impaired in self-reporting cognitive impairments, leading to minimally useful information, and it can be difficult to locate informants. Psychiatrists are not trained to perform detailed neuropsychological assessments and these can be time consuming. There are efficient abbreviated cognitive and functional assessment tools that provide scores that are highly correlated with the results from longer assessments. Further, methods for obtaining accurate reports of cognitive and functional disability from informants have recently been refined to increase their accuracy. The importance of cognitive assessment in schizophrenia for purposes of treatment planning in inarguable. Many of the practical concerns surrounding cognitive and functional assessment in the psychiatric treatment of schizophrenia are not insurmountable and these assessments are within the reach of practicing clinicians across the world.

US17.3.
IS COGNITIVE IMPAIRMENT IN SCHIZOPHRENIA A REALISTIC TARGET FOR PHARMACOLOGICAL INTERVENTION?

M. Davidson
Department of Psychiatry, University of Tel Aviv, Israel

Because of its impact on social and vocational functioning, cognitive impairment has been at the forefront of schizophrenia research for the last two decades. Cognitive impairment precedes the onset of psychosis, persists after psychosis remits and is occasionally detected in non-psychotic first-degree relatives of patients. The prevailing clinical impression is that individuals who meet criteria for schizophrenia suffer from easy observable and at times severe cognitive impairment. However, when large populations of schizophrenics undergo classic psychological testing, the normal distribution of their composite scores is "shifted to the left" only moderately, indicating that large proportions of the general population perform similar to the schizophrenic patients. Furthermore, up to 3% of the general population have psychotic experiences. Since there exists no putative biological substrate for psychosis or for the cognitive impairment, it could be hypothesized that the presence of both in the same individual indicates independent comorbidities and not a common biological substrate. If this hypothesis is correct, then the same pharmacological intervention should be effective in cognitively impaired psychotic and non-psychotic (normal) individuals. Because any trial in schizophrenia patients is burdened by a large number of confounders, a rational approach would suggest that proof-of-concept trials of compounds hypothesized to enhance cognitive performance in schizophrenia should first be tested in non-psychotic individuals. Only those compounds for which a signal can be detected should be tried in schizophrenia patients.

US18.
CULTURAL ISSUES IN MENTAL HEALTH CARE

US18.1.
THE IMPACT OF CULTURE AND MIGRATION ON MENTAL HEALTH

P. Ruiz
Department of Psychiatry and Behavioral Sciences, University of Texas Medical School at Houston, TX, USA

Psychiatry has always been influenced by culture. The cultural identity of both mental health professionals and mental health patients, their cultural perception of mental illness, their understanding of the most appropriate treatments for psychiatric disorders, their psychosocial and socioeconomic status, they all, indeed, have a major implication in the diagnosis and the response to the psychiatric treatment recommended. We discuss the current understanding of psychiatric disorders and conditions from a cultural and ethnic point of view. Additionally, we address the impact of the migration process, particularly the acculturation stress. Acculturative stress can lead to maladaption on the part of the migrant groups with respect to their integration into the majority or host culture. This maladaption or lack of integration can lead to several behavioral outcomes with serious negatives consequences from a mental health point of view: among them, suicide, homicide, accidents, substance use and abuse and alcoholism. The prominent role of culture vis-à-vis psychiatric diagnosis and classification is clearly depicted in the DSM-IV, and it is already envisaged that it will also have major implications in the forthcoming DSM-V.

US18.2.
CAUSES OF THE EPIDEMIC OF PSYCHOSES IN AFRICAN-CARIBBEANS IN THE UK

J. Leff
Institute of Psychiatry, King's College, London, UK

Since the 1960s, studies of schizophrenia in African-Caribbeans in the UK have found rates several times higher than UK whites. A recent large-scale epidemiological study in three UK cities (AESOP) has found the incidence rate in African-Caribbeans to be 9 times higher than the rate in whites for schizophrenia and 8 times higher for manic psychosis. Causal hypotheses for this remarkable excess based on biological differences between the ethnic groups are not supported by a range of exploratory studies. On the other hand, possible causal factors of a psychosocial nature have been identified in a smaller epidemiological study of African-Caribbeans, South Asians and whites in London. South Asians were found to have a slightly higher incidence rate of schizophrenia than whites, but not the dramatic excess shown by African-Caribbeans. Hence they provide a useful comparison group for testing causal hypotheses. The psychosocial factors identified as contributing to the difference in incidence rates between the three ethnic groups include unemployment, living alone, early separation from one or both parents, and cultural marginalisation. The latter was measured with the Culture and Identity Schedule, which revealed that South Asian patients with schizophrenia were deeply embedded in their own culture, while African-Caribbean patients aspired to live with, work with and spend leisure time with white people, and were distanced from their own families. Each of these psychosocial factors can be formulated as leading to social isolation.

US18.3.
CULTURE AND MENTAL HEALTH CARE: A PERSPECTIVE ON DEPRESSION

V. Patel
London School of Hygiene and Tropical Medicine, London, UK; Sangath Centre, Goa, India

The debate on the role of culture on mental disorders has evolved considerably in the past two decades. There is now a general consensus that the integration of the universalist and culturally relativist approaches, and their methodologies, is required to generate a truly international psychiatric epidemiology. The large body of research investigating the influence of culture on the epidemiology of depression based on these approaches has produced a number of key findings: the clinical presentation of depression is associated with multiple somatic symptoms of chronic duration; psychological symptoms, however, are important for diagnosis and can be easily elicited. The diagnostic differentiation between depression and anxiety, at least in general health care settings, is not clinically valid. Culturally appropriate terminology for depression can be identified and its use may improve levels of recognition and treatment compliance. It is also evident that culture is only one factor in the difference between, and within, human societies which has a bearing on the epidemiology of depression. Other factors, which may interact with culture, such as gender and income inequality, are major risk factors for depression. We consider the practical implications of this evidence on the care of persons with depression in developing countries. We highlight how these factors influence the methods for detection of depression, psychoeducation of patients with depression, and provision of specific treatments for depression.

US19.
ADVANCES IN THE MANAGEMENT OF TREATMENT-RESISTANT PSYCHOTIC DISORDERS

US19.1.
NEW APPROACHES IN THE TREATMENT OF REFRACTORY SCHIZOPHRENIA

H.-J. Möller
Department of Psychiatry, University of Munich, Germany

About 10-30% of patients with schizophrenia have little or no response to antipsychotic medication and up to an additional 30% have partial response. Reasons for treatment resistance are amongst others wrong diagnosis, suboptimal dose and duration of antipsychotic treatment, poor or non-adherence, unresponsiveness to a special antipsychotic in the individual case, neurobiological factors, comorbidity. Since long time clozapine has been the treatment of choice for patients with drug refractory schizophrenia. Other second generation antipsychotics (SGAs) have not proved to be as effective in refractory patients as clozapine, a view which was also supported by the respective phase of the CATIE trial. There is very limited evidence for the efficacy of combining antipsychotics in refractory schizophrenia, although this seems to be theoretically meaningful under certain pharmacological considerations: e.g., the combination of a multi-receptor SGA with a soft D2 receptor blocker. There is also limited evidence of the usefulness of augmentation with mood stabilizers. Possibly the best data are available for lamotrigine as an adjunctive treatment. Patients with excited, anxious and catatonic features might profit from the adjunctive use of benzodiazepines. Patients with persistent negative symptoms may benefit by a comedication with antidepressants. Also glutamatergic drugs have proven, however inconsistently, to be beneficial. As far as cognitive disturbances are concerned, comedication with cognitive enhancers/antidementia drugs appears meaningful. However, the results of several randomised studies are inconsistent. In very severe cases of drug refractory schizophrenia, electroconvulsive therapy is applied in some clinical settings, although there is only limited evidence in this respect. Based on the available evidence, the treatment programme has to be tailored to the needs of the individual patient. Pharmacogenetics might support this individual tailoring in the future. Although there are several new antipsychotics in the pipeline, there are currently no hints whether this problem will be overcome.

US19.2.
POTENTIAL FOR ENHANCING OUTCOMES IN TREATMENT-RESISTANT SCHIZOPHRENIA PATIENTS: THE ROLE OF ADJUNCTIVE MEDICATIONS

W.W. Fleischhacker
Department of Biological Psychiatry, Medical University of Innsbruck, Austria

Managing treatment-resistant schizophrenia patients remains a huge challenge to the field. Among the various treatment options, polypharmacy is the most commonly used and least well researched strategy. The choice of adjunctive medication will depend on the target: patients whose positive symptoms do not adequately respond to antipsychotic monotherapy will most likely be managed differently than those for whom additional improvement in negative symptoms or cognitive function is sought. The spectrum of add-on medications ranges from adding benzodiazepines, antidepressants and mood stabilizers to combining two or three different antipsychotics. The available evidence supporting any of these options is very weak. Recently experimental agents, such as glutamatergic and nicotinergic drugs, have been explored in an attempt to establish a rational polypharmacy. As major breakthroughs have not been made, the clinician is still left with the responsibility to choose among the available options, often on a trial and error basis.

US19.3.
RELEVANCE AND TREATMENT OF NEGATIVE SYMPTOMS IN SCHIZOPHRENIA

A.C. Altamura, G. Colombini, B. Dell'Osso
Department of Psychiatry, University of Milan, Italy

Among the different dimensions of schizophrenia, negative symptoms represent core features of the illness and reflect a reduction or loss of normal cognitive and emotional functioning that includes flattened affect, impoverished speech, apathy, avolition, anhedonia, asociality, psychomotor retardation and impaired attention. Biopathogenetic hypotheses in relation to negative symptoms stem from neuromorphological, neurochemical, neuroendocrinological and neuroimmune data. Even though positive symptoms of schizophrenia may be expected to improve with optimal medication management, this may not be the case for negative symptoms, that have historically been less responsive to pharmacological treatment and associated with a great impact on functional outcome. With respect to the pharmacological treatment of negative symptoms in schizophrenia, the efficacy of standard antipsychotics has been frequently reported, but these compounds have several limitations in term of side effects. The introduction of novel antipsychotics has been accompanied by reports suggesting their great efficacy in reducing negative symptoms. However, it has been suggested that improvements may be related to decreases in positive symptoms and reduced sedation or extrapyramidal side effects. In addition, most studies with novel antipsychotics have been focused on the acute treatment and short-term outcome and reliable data on the long-term outcome are lacking. Besides atypical antipsychotics, other classes of compounds have been assessed for negative symptoms, including selective serotonin reuptake inhibitors (SSRIs) and other antidepressants, NMDA agonists and anticholinergic agents. However, with respect to the use of augmentative antidepressants, published studies yielded inconclusive results, being characterized by small samples and methodological limitations (e.g., no control for change in secondary negative symptoms). Preliminary studies with the NMDA agonist glycine and D-serine, in augmentation to an antipsychotic, found significant reduction in persistent negative symptoms. Positive results, however, have not been replicated in larger subsequent studies. Novel agents such as selegiline, naltrexone, dehydro-epiandrosterone, galantamine, nitric oxide, L-deprenyl and pergolide have recently shown positive effects on general negative symptoms but remain untested against primary negative symptoms. The perspective to rationalize the pharmacological treatment of negative symptoms of schizophrenia needs a specific diagnostic preliminary approach and a particular attention in considering atypical antipsychotics and novel compounds as specific effective treatments.

US20.
VIOLENCE, TRAUMA AND VICTIMIZATION

US20.1.
THE CUMULATIVE LONG-TERM EFFECTS OF EXPOSURE TO TRAUMATIC EVENTS: THE COST AND CHALLENGE FOR TREATMENT SERVICES

A.C. McFarlane
University of Adelaide Node, Centre of Military and Veterans Health, Adelaide, Australia

Increasingly evidence suggests that there is a lifetime cumulative risk for psychiatric disorders following exposure to repeated traumatic events. Previously, the focus on post-traumatic stress disorder (PTSD) has led to an underestimation of the public health significance of traumatic stress, because the role of these events in the onset of other disorders such as major depression and substance abuse has been underappreciated. Epidemiological and long-term cohort studies are providing valuable insights into how individuals become progressively sensitized to adverse health outcomes following trauma exposure. These findings have major implications for understanding the underlying neurobiological mechanisms that contribute to symptom formation. The progressive disruption of the homeostatic mechanisms controlling arousal appears to be a central aetiological process. Furthermore, it appears that traumatic memories are far more common than full-blown psychiatric syndrome is following exposure to these events and represent an important marker of risk. These findings have practical significance for a number of areas, particularly in the military and emergency services, highlighting the need to monitor populations and manage their cumulative stress exposure. To date, the treatment literature for PTSD has focused on single incident traumas and has demonstrated the effectiveness of both psychological and pharmacological interventions. However, the major challenge, which needs to be confronted in clinical practice, is how to optimally treat individuals who have a chronic disorder arising from repeated trauma exposure. In particular, there is a frequent comorbidity of physical disorders, such as irritable bowel syndrome, fibromyalgia and musculoskeletal pain, which need to be addressed simultaneously with the related psychological disorders.

US20.2.
PREVENTION OF POST-TRAUMATIC STRESS DISORDER BY EARLY TREATMENT

A.Y. Shalev
Department of Psychiatry, Hadassah University Hospital, Jerusalem, Israel

The effectiveness of early interventions is limited by the accuracy of case identification, barriers to using mental health services and treatment efficacy. Several early interventions for post-traumatic stress disorder (PTSD) have been evaluated. Some have failed altogether (e.g., debriefing, minor tranquilizers). Others were efficient in small samples (trauma-focused cognitive behavioral therapy, CBT), and others (theory-driven pharmacological preventions) are in an experimental stage. The effectiveness of early interventions for PTSD has not been studied. The Jerusalem Trauma Outreach and Prevention Study (J-TOPS) evaluated the accuracy of case identification, the desirability of early clinical contacts and the relative efficacy of cognitive behavioral and pharmacological interventions in a comprehensive sample of 5470 adult survivors of traumatic events. More than half of those at high risk for developing PTSD declined an offer of assessment and treatment. Clinical assessment within a month after the traumatic event optimally identified survivors at risk. CBT with or without exposure effectively reduced the prevalence of PTSD among survivors. The effect of a selective serotonin reuptake inhibitor, escitalopram, did not differ from that of placebo. Early and delayed CBT had similar long-term effects. Survivors with partial PTSD recovered as well with or without treatment. Declining early assessment and treatment were associated with smaller reduction in PTSD symptoms. Barriers to accepting early interventions should be addressed in future planning of preventive strategies.

US20.3.
ACCESS TO CARE IN POST-TRAUMATIC STRESS DISORDER

R.C. Kessler
Department of Health Care Policy, Harvard Medical School, Boston, MA, USA

We present data on patterns, self-reported reasons for, and sociodemographic correlates of unmet need for treatment of post-traumatic stress disorder in the wake of Hurricane Katrina. The data come from an epidemiological survey carried out in the representative general population sample of nearly 3000 people who lived in the areas affected by Katrina in Alabama, Louisiana, and Mississippi in the United States and who participated in the Hurricane Katrina Community Advisory Group. The data show that, although structural barriers were major determinants of unmet need for treatment shortly after the hurricane, psychological barriers became increasingly important as objective access to care increased over time. We discuss innovative strategies needed to document the magnitude of unmet need for treatment, modifiable determinants of this unmet need, and the success of intervention efforts to address unmet need in future disaster situations.

US21.
THE CHALLENGE OF BIPOLAR DEPRESSION

US21.1.
ADVANCES IN THE SHORT-TERM MANAGEMENT OF BIPOLAR DEPRESSION

J. Calabrese
Case Western Reserve University School of Medicine, Cleveland, OH, USA

It is now widely recognized that patients with bipolar disorder spend the majority of their symptomatic lives in the depressed phase of the illness. Despite the absence of an evidence base, antidepressant monotherapy continues to be the most commonly prescribed initial treatment for bipolar disorder. Used this way, the traditional antidepressants carry a marked risk of inducing mania. Lamotrigine delays time to re-emergence of mood episodes, but only 2 of 6 studies support its acute efficacy. Pilot data support the use of divalproex in mood stabilizer naïve patients with bipolar depression. Like the anticonvulsants, the atypical antipsychotics were initially studied in mania, but what separates members of this class is efficacy in bipolar depression. Olanzapine-fluoxetine combination and, to a lesser extent, olanzapine have been shown to effectively reduce depressive symptoms. Two studies of aripiprazole monotherapy failed to show acute efficacy in bipolar I depression. The results from four acute 8-week bipolar I or II depression studies (BOLDER I and II, EMBOLDEN I and II) support the use of quetiapine monotherapy in type I and II presentations, rapid cycling and non-rapid cycling, anxious and non-anxious pre-

sentations, and the onset of efficacy is usually seen as early as week 1. The active comparators in the EMBOLDEN studies, lithium or paroxetine, were no better than placebo. Collectively, these studies suggest sedation or somnolence appears in 30-50% of quetiapine-treated patients and that clinically significant weight appears in 5-10%. Changes in glucose regulation have been observed with quetiapine and the other atypical antipsychotics; guidelines recommend glucose monitoring.

US21.2. BIPOLAR DEPRESSION: EVALUATING ANTIDEPRESSANTS AND ALTERNATIVE THERAPEUTIC OPTIONS

M.E. Thase
University of Pennsylvania School of Medicine and Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA

This paper focuses on the treatment of bipolar depression, with specific attention given to the roles of mood stabilizers, atypical antipsychotics, antidepressant medications, and focused psychotherapies. After decades of neglect, in recent years there has been increasing interest in the general topic of bipolar depression, which reflects both recognition of the chronicity, morbidity, and disability associated with this phase of illness and the dearth of evidence from the well-controlled treatment studies. We highlight the rationale for using mood stabilizers as first line therapies for bipolar depression, review the evidence for and against considering the atypical antipsychotics as alternatives to mood stabilizers, and carefully review the indications for using of antidepressants, including the evidence pertaining to efficacy and the risk of inducing mania or rapid cycling, the lack of consensus about the optimal duration of antidepressant efficacy, and the potentially important distinction between the type I and type II forms of the disorder. Lastly, recent conflicting evidence on the value of focused psychotherapies as an alternative to antidepressants is examined.

US21.3. EVIDENCE BASED PHARMACOLOGICAL TREATMENT OF BIPOLAR I AND BIPOLAR II DEPRESSION

S. Kasper
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Bipolar disorder is a severe, long-term illness with a lifetime prevalence of approximately 2% and is characterised by cyclical episodes of mania and depression. The degree of disability associated with episodes of bipolar depression is disproportionally greater compared with episodes of bipolar mania and patients with bipolar depression experience significantly greater psychosocial impairment. This is insofar important since bipolar depression is approximately three times more frequent than bipolar mania. Furthermore, beyond the high frequency of episodes, bipolar depression is a major cause of suicide such that a life prevalence of suicide attempt is approximately 29% in these patients. There are several national as well as international sets of recommendations for bipolar depression. The most recent one has been summarised by an international group of opinion leaders in bipolar disorders using categories of evidence with standardised definitions. The summary of the classification of pharmacological treatments for bipolar I depression based on the level of available clinical evidence shows that the highest category 1 can be reached by lithium, lamotrigine as well as quetiapine, whereas category 2 is reached by olanzapine and lamotrigine, and category 3 by divalproex, carbamazepine, some selective serotonin reuptake inhibitors as well as buproprion and modafinil. The principles of treatment for patients with bipolar depression include to select first-line treatment based on the patient´s symptom profile, course of illness, prior history of response, family history of response and tolerability issues. If no response is obtained, augment/switch treatment with another first-line treatment. If there is no response, a second-line treatment should be considered. Further research is needed on bipolar II depression; in children, adolescents and older adults; on specific combinations of pharmacological treatments, as well as on predictors of response to individual agents. Large studies are needed on the prevention of suicide.

US22. NOVEL BIOLOGICAL TARGETS OF PHARMACOLOGICAL TREATMENT IN MENTAL DISORDERS

US22.1. NOVEL MOLECULAR TARGETS OF PHARMACOLOGICAL TREATMENT IN DEPRESSIVE DISORDERS

J. Mendlewicz
School of Medicine, Free University of Brussels, Belgium

Mood disorders constitute a major public health issue and are estimated by the World Health Organization to rank in second position among all diseases by the year 2010, thus contributing heavily to the global burden of diseases in man. Despite obvious benefits of antidepressant treatments, most experts agree today that there are a number of limitations in terms of efficacy and tolerability of these medications. Therefore, research advances in the treatment of mood disorders are to be considered a major challenge for the medical community and for the society at large in the years to come. Human genome mapping and the advent of large-scale genetic screening has made it possible to scan large number of people (patients) for a great number of genetic differences. This paper critically reviews how this new knowledge can be applied to linking vulnerability genes to phenotypes of mood disorders and how gene variants can be operational in modulating therapeutic response to antidepressants and lead to the identification of novel molecular targets for drug discovery.

US22.2. THE GLUTAMATE SYNAPSE: A NEW TARGET FOR ANTIDEPRESSANTS AND ANTIPSYCHOTICS

G. Racagni, M.A. Riva, M. Popoli
Center of Neuropharmacology, Department of Pharmacological Sciences, University of Milan, Italy

Glutamate is the major excitatory neurotransmitter in the central nervous system and exerts a primary role in the control of many functions altered in psychiatric diseases. Preclinical/clinical studies showed that glutamate transmission is increased in some cortical/limbic regions in depressed patients. Conversely, antidepressants can modify glutamate transmission, including down-regulation of NMDA receptors (NMDAR) and reduction of glutamate release. Compounds that modulate glutamate transmission at various levels are currently in development; redistribution of AMPA/NMDAR-mediated transmission was suggested as a rapid antidepressant mechanism. Other compounds dampen release and/or transmission when glutamate levels become too high, owing to stress. We have recently shown that chronic antidepressant treatments reduce glutamate

release in hippocampus. We now report that acute stress (footshock) induces a marked increase of glutamate release in prefrontal/frontal cortex, while antidepressants completely abolish this stress-induced increase. We suggest that this is a component of the therapeutic action of these drugs, particularly the anxiolytic effect. Schizophrenia is also characterized by marked alterations in glutamate system. Further support came recently from genetic studies showing a link between this system and several susceptibility genes. Although mainly affecting D2 and other monoamine receptors, it has been shown that antipsychotic drugs may regulate the expression and synaptic localization of NMDA/AMPAR. Glutamate compounds are currently in development, including allosteric modulators of NMDAR (glycine site), inhibitors of glycine reuptake, positive modulators of AMPAR (AMPAkines) and agonists of type II metabotropic receptors. A recent phase 2 clinical study showed that LY2140023, an mGluR2/3 agonist, displays short-term antipsychotic properties similar to olanzapine, suggesting that glutamate drugs could represent a viable alternative for treatment of schizophrenia.

US22.3.
GABAERGIC GENE PROMOTER HYPERMETHYLATION DOMINATES PSYCHOSIS PATHOPHYSIOLOGY AND COULD BE A TARGET FOR TREATMENT

A. Guidotti, E. Dong, D.R. Grayson, E. Costa
Department of Psychiatry, University of Illinois at Chicago, IL, USA

Post-mortem brain studies of schizophrenia (SZ) and bipolar (BP) disorder show a downregulation of GAD67 and reelin expression in specific populations of GABAergic neurons, very probably associated with promoter hypermethylation mediated by an overexpression of DNA methyltrasferase-1 (DNMT1). This is supported by clinical studies with methionine. Administered for 2-3 weeks in doses of 10-20g/day, this amino acid increases the brain levels of the methyl donor S-adenosyl-methionine and exacerbates psychotic symptoms in 40-50% of SZ patients. In addition to an increase of DNMT1, the hypermethylation of reelin and GAD67 promoters may be related to a decrease of a putative DNA-methyl-CpG demethylase (DNA-demethylase). The nature and kinetics of this process remain a pressing concern in the study of psychosis. However, it is now clear that, in the brain, DNA-demethylase activity can be induced by valproate. In order to understand the molecular nature of the benefits elicited by a combination of valproate and antipsychotics in the treatment of SZ and BP disorder, we studied whether this beneficial action is dependent upon the induction of a DNA-demethylase activity that targets GAD67 and reelin promoters. In mice receiving clinically relevant doses of clozapine, both GAD67 and reelin promoters are demethylated in a manner that is facilitated by valproate. In contrast, even in the presence of valproate, haloperidol does not share these properties. This probably explains the greater antipsychotic efficacy of clozapine compared to haloperidol in association with valproate. The data suggest that drugs which downregulate promoter hypermethylation in GABAergic neurons may offer a new approach to treatment for SZ and related psychiatric disorders.

US23.
INTERMEDIATE PHENOTYPES IN PSYCHIATRY

US23.1.
INTERMEDIATE PHENOTYPES IN SCHIZOPHRENIA GENETICS

D.R. Weinberger
Genes, Cognition and Psychosis Program, Intramural Research Program, National Institute of Mental Health, Bethesda, MD, USA

It is a given that genes related to psychopathology are *not* about psychiatric diagnoses *per se*, but are likely related to the development and function of brain circuits involved in the processing of cognitive and emotional information. This has encouraged interest in characterizing so-called intermediate phenotypes or endophenotypes related to genetic risk for schizophrenia, which are expected to show greater penetrance of genetic risk factors. A similar approach has been employed in the investigation of other complex genetic disorders, such as adult onset diabetes, in which multiple genes each account for only a very small share of risk but show stronger effects on related intermediate phenotypes even in normal subjects – e.g., body mass index or glucose induced insulin release. Potential biologic intermediate phenotypes related to genetic risk for schizophrenia have included abnormalities in hippocampal and prefrontal cortices, which are consistently reported in patients with schizophrenia and are also found with increased frequency in their healthy relatives. For example, schizophrenia patients and their healthy relatives show impairments in multiple measures of hippocampal function and biology, and in prefrontal cortical function and biology. Various physiologic investigations of cortical activity reveal abnormal activation in hippocampus and prefrontal cortex within schizophrenia patients and their healthy relatives. Thus, it follows that genes associated with susceptibility for schizophrenia might show relatively robust effects on prefrontal and hippocampal function in risk-allele carrying populations, even in healthy subjects. Examples of the greater effect size of potential schizophrenia susceptibility genes on variability in the expression of these biological phenotypes related to schizophrenia are reviewed, including COMT, NRG1, DISC1, GRM3, DAARP, KCNH2, and AKT1.

US23.2.
INTERMEDIATE PHENOTYPES OR ENDOPHENOTYPES IN PSYCHOSIS: DATA FROM THE MAUDSLEY STUDIES

R.M. Murray
Institute of Psychiatry, London, UK

Data are presented from the Maudsley twin, family and singleton studies, which show: a) that deficits in IQ in schizophrenia are largely determined by the same genetic factors which contribute to the onset of schizophrenia, b) that there is overlap in the white matter diffusion tension imaging (DTI) phenotypes between schizophrenia and bipolar disorder, but that the former, but not the latter, illness is associated with developmental abnormalities and extensive grey matter deficits, and c) that certain psychosis susceptibility genes are associated with differences in brain activation during cognitive challenges. In particular, variations in COMT, DISC 1, dysbindin and neuregulin influence cortical function.

US23.3.
NEUROGENETIC MECHANISMS OF AFFECT REGULATION AND SOCIAL DYSFUNCTION

A. Meyer-Lindenberg
Central Institute of Mental Health, University of Heidelberg, Mannheim, Germany

Social dysfunction is a major contributor to morbidity and mortality in several of the most severe neuropsychiatric disorders, such as schizophrenia and autism, and adverse social interactions have been identified as chief environmental stressors contributing to the precipitation and perpetuation of psychopathology. Understanding neural mechanisms underlying social behavior is therefore of great relevance for psychiatry. Since aspects of social behavior are highly heritable and are impaired in psychiatric disorders that themselves have a strong genetic component, a neurogenetic approach to social function appears promising and has very recently been pursued. We discuss findings from neurogenetic disorders as well as from candidate gene variation in the normal population that begin to delineate neural circuits for social behavior in humans under genetic control, highlighting prefrontal regulation of limbic structures, notably amygdala. These circuits suggest mechanisms for gene-environment interactions in risk for psychiatric disease. Several layers of prefrontal control can be identified, that may correspond to a hierarchy of neural processing of social stimuli, from basic emotional arousal to higher-order functions such as theory of mind. In addition, effector sites of social behavior downstream of these circuits, for example in brainstem, can be isolated. These studies identify targets for experimental interventions aimed at social aspects of behavior which have the potential to improve function in a domain previously largely inaccessible to specific biological therapy. Furthermore, this approach offers the intriguing possibility of a specific synergy with psychotherapy by supporting critical social mediators of successful outcome such as therapist attachment.

US24.
CURRENT MANAGEMENT OF MENTAL DISORDERS IN OLD AGE

US24.1.
CURRENT MANAGEMENT OF DEMENTIA IN LATE LIFE

I. Skoog
Department of Psychiatry, Institute of Neuroscience and Physiology, Sahlgrenska Academy at the University of Göteborg, Sweden

Dementia is common among the elderly. The prevalence is 2% at age 70, 30% at age 85, and 50% at age 95. It is estimated that the number of demented individuals in the world will increase from 37 millions in 2005 to 133 millions in 2050. The most common types of dementia are Alzheimer's disease (AD) and vascular dementia (VaD). AD is characterized by neuronal degeneration, and extensive amounts of beta-amyloid, senile plaques and neurofibrillary tangles in the brain. VaD is caused by cerebrovascular disorders. Concomitant cerebrovascular diseases may increase the possibility that individuals with AD lesions in their brains will express a dementia syndrome. This may be the most common cause of dementia among the elderly. Presently there is no cure for AD. Current treatment with acetylcholinesterase inhibitors and memantine is mainly symptomatic, and is effective in approximately one fifth of cases. Cognitive function should be assessed at regular intervals during treatment. At present, several compounds are tested in clinical trials. These are mainly directed towards modifying levels of beta amyloid in the brain, and include vaccines and gamma-secretase inhibitors. Management of VaD include treatment of hypertension and atrial fibrillation, and prevention of stroke with low dose acetylsalicylates. Management of dementia also includes treatment of concomitant physical disorders. Treatment of behavioural symptoms include acetylcholinesterase inhibitors, selective serotonin reuptake inhibitors and antipsychotics. No prevention trials have so far been successful. However, management of hypertension, hypercholesterolemia, overweight, and diabetes mellitus, as well as physical and intellectual activity and a healthy diet, may prevent dementia, including AD.

US24.2.
CURRENT MANAGEMENT OF AFFECTIVE DISORDERS IN OLD AGE

C. Katona
Department of Mental Health Sciences, University College, London, UK

The evidence base addressing the effectiveness of antidepressants in older people has increased significantly in the past few years. In particular, some recent acute trials have failed to show superiority of active drug over placebo, although there is consistent evidence for the efficacy of continuation antidepressant treatment. There is increasing evidence for the utility of brief psychological treatments for depression in old age, and for the use of stepped-care case management approaches. Fewer studies have evaluated pharmacological and psychological treatments of anxiety disorders in late life. There is some evidence that the effect size may be greater for antidepressants than for cognitive-behavioral approaches. Controlled trial evidence to guide management of late-life bipolar disorder is lacking, although anticonvulsants and atypical antipsychotics are increasingly used. Further research evaluating treatment modalities and approaches for affective disorders is clearly needed, particularly in the areas of refractory depression and bipolar disorder.

US24.3.
CURRENT MANAGEMENT OF PSYCHOSIS IN LATE LIFE

D.V. Jeste
University of California at San Diego and VA San Diego Healthcare System, La Jolla, CA, USA

The usual notion about treatment of psychosis in late life is that antipsychotics are the most effective and safe treatment, while psychosocial interventions have little role. Yet, studies in the past few years have raised questions about these assumptions, especially in psychosis of dementia. Atypical antipsychotics are still the pharmacologic treatment of choice in older patients with schizophrenia. However, the Food and Drug Administration (FDA) in the USA has not yet approved any antipsychotic or other medication for treatment of psychosis in dementia patients. Furthermore, the FDA's black-box warnings about strokes and mortality with atypical antipsychotics in elderly patients with dementia have led to considerable confusion with respect to optimal treatment of these patients. A number of psychosocial interventions have been reported to have positive results in dementia patients with behavioral problems; however, methodological shortcomings limit the generalizability of these findings. On the other hand, among middle-aged and elderly people with schizophrenia, our group has demonstrated the efficacy of several manualized

psychosocial interventions in randomized controlled trials. Such interventions include cognitive behavioral social skills training, functional adaptation skills training, diabetes awareness and rehabilitation training, work rehabilitation, and an intervention specifically focused on Latino patients. The results show that psychosocial interventions are efficacious, practical, and acceptable to older patients with schizophrenia being treated with medications. Shared decision making involving patients and caregivers is necessary for choosing specific treatments for specific patients.

US25.
PREVENTION AND EARLY INTERVENTION STRATEGIES IN COMMUNITY MENTAL HEALTH SETTINGS

US25.1.
PREVENTION AND EARLY INTERVENTION STRATEGIES FOR MENTAL DISORDERS: THE PREVENTION GAP

S. Saxena
Department of Mental Health and Substance Abuse, World Health Organization, Geneva, Switzerland

Prevention of mental and behavioral disorders is likely to be the most effective strategy to reduce the growing burden of these disorders in the long term. While scientific knowledge in this area has increased substantially in the last decade, only a small fraction of it is being used in practice, leading to a large prevention gap. This paper focuses on two aspects of prevention: a) the practical applicability of knowledge on social and macro-economic factors in causation of mental disorders and b) feasible preventive interventions within primary and secondary health care in low and middle income countries. Reference is made to the recent publications of WHO Commission on Social Determinants of Health and other sources relevant to prevention of mental disorders at policy as well as health care levels. Attempts to evaluate the effectiveness and feasibility of prevention strategies within primary and secondary care and to integrate these within the WHO essential package for mental, neurological and substance use disorders are also described. Issues related to responsibilities for prevention and funding of prevention programmes are enumerated. Conclusions are drawn on the steps needed to narrow the prevention gap.

US25.2.
EARLY COMMUNITY INTERVENTION FOR YOUNG PEOPLE WITH EMERGING MENTAL DISORDERS

P.D. McGorry
ORYGEN Youth Health Research Centre, University of Melbourne, Australia

Preventively-oriented clinical care is a realistic and achievable goal in developed countries and a potentially cost-effective strategy for low- and middle-income countries and developing economies. The frontier for mental health promotion, prevention and early intervention is located at the community level, where an enhanced primary care model can offer a low stigma gateway for multidisciplinary evidence-based interventions. This is particularly relevant for young people with emerging mental disorders where help-seeking and engagement are especially dependent on the setting and the culture of care. The headspace program developed with the support of the Australian government has created 30 new "communities of youth services" or "one-stop shops" across the nation over the past 2 years and many thousands of young people are gaining better access to multidisciplinary mental health care as a result. Initial experiences and data are featured and broader lessons for preventive community care drawn.

US25.3.
PORTLAND IDENTIFICATION AND EARLY REFERRAL (PIER): CONVERSION AND INCIDENCE OUTCOMES IN A CATCHMENT-AREA-WIDE PSYCHOSIS PREVENTION PROGRAM, 1994-2008

W.R. McFarlane, W. Cook, D. Downing, A. Maloney
Maine Medical Center, Portland, Maine, USA

Portland Identification and Early Referral (PIER) is a population-based system of early detection and treatment for the prodrome to psychosis in people aged 12-35. The goal is to reduce the incidence of psychotic disorders in Portland, Maine, USA (population 330,000). Treated cases receive comprehensive evidence-based treatment and rehabilitation. PIER has educated the community-at-large and trained over 5000 health, education and youth-related professionals to identify young people at ultra-high-risk of psychosis. Eligibility for treatment is established by Structured Interview of Prodromal Syndromes (SIPS)/Scale of Prodromal Symptoms (SOPS) criteria. The treatment is a prodrome-specific combination of psychoeducational multifamily group, supported education/employment, assertive community treatment and psychotropic medication. Over seven years, there were 966 referrals, of which 259 (37.0%) were assessed and 149 were admitted to study. Of those with currently available one-year outcomes (n=93), 9 (9.7%) experienced psychosis meeting SOPS criteria. The mean Global Assessment of Functioning (GAF) score was 38.1 at baseline and 54.5 at 12 months (pre-post t (92)=8.02). First hospitalizations for a psychotic disorder were compared between experimental and control geographic areas and between control (1994-2000) and experimental (2001-2006) time periods. The net pre-post difference between control and experimental area was 29.7/100,000. The control area experienced a 2.4-fold increase in incident cases during the test period (2001-2006), in contrast to a stable rate in the experimental area. These data suggest that community-wide early detection and treatment is feasible and achieves low conversion rates. The relative difference in incidence between treatment and control catchment areas is consistent with a community-wide treatment effect, in the absence of confounding factors.

US26.
MANAGING COMORBIDITY OF MENTAL AND PHYSICAL ILLNESS

US26.1.
COMORBIDITY OF MENTAL AND PHYSICAL DISORDERS: A CENTRAL CHALLENGE FOR MEDICINE OF THE 21ST CENTURY

N. Sartorius
Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

The recognition and treatment of the simultaneous presence of mental and physical disorders has become a central challenge for health care systems worldwide. The comorbidity of mental and physical disorders is frequent and its consequences for the persons who have both types of disorders are numerous – ranging from a worsening of the prognosis of both disorders (and a more severe impairment and consequent disability) to the exposure to risks of inappropriate or insufficient treatment. The management of the comorbidity of mental

and physical disorders meets problems resulting from the traditional separation of psychiatry from general medicine and from the attitudes of psychiatrists and other medical specialists who have been trained in a manner reflecting similar attitudes of their teachers. It also meets problems due to insufficient knowledge about the pathogenesis of comorbidity and the impact that comorbidity may have on the reaction to treatment of either or both disorders that are present. We refer to epidemiological findings concerning comorbidity of mental and physical disorders and enumerate problems that arise in care as well as possible solutions to them.

US26.2. MANAGEMENT OF COMORBID PHYSICAL DISEASES IN PERSONS WITH SCHIZOPHRENIA

M. De Hert, J. Peuskens
Universitair Psychiatrisch Centrum K.U. Leuven, Campus Kortenberg, Belgium

People with severe mental illnesses, such as schizophrenia or bipolar disorder, have worse physical health and reduced life expectancy compared to the general population. Evidence shows that they have a 2-3 fold increased risk of dying and that the mortality gap associated with mental illness compared to the general population has widened in recent decades. They are more likely to be overweight, to smoke and to have diabetes, hypertension and dyslipidaemia. Antipsychotic medication can further increase their risk of adverse metabolic effects and cardiovascular disease. Apart from cardiovascular disease, other medical comorbid illnesses are highly prevalent. Despite this high risk for comorbid disorders, many of these patients have limited access to general health care, with less opportunity for cardiovascular risk screening, medical care in general and prevention specifically than would be expected in a non-psychiatric population. Psychiatrists can play a valuable role in ensuring that patients with mental illness are not disadvantaged in this way. Over recent years, several groups have developed screening and monitoring guidelines for somatic illnesses in patients treated with schizophrenia. The psychiatrist should also be responsible for the implementation of the necessary medical screening and referral for treatment of any physical illness. Multidisciplinary assessment of psychiatric and medical conditions is needed. The somatic treatments offered to people with severe and enduring mental illness should be at par with general health care in the non-psychiatrically ill population.

US26.3. MAJOR DEPRESSION AND PHYSICAL ILLNESS: CURRENT RESEARCH ON BIDIRECTIONAL RELATIONSHIPS

M.B. Riba
Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA

The prevalence of major depressive disorder in the United States is approximately 6.6%, similar to the prevalence of diabetes mellitus. It is the second most common condition in general medical practice, next to hypertension, and even more prevalent in patients with chronic medical illnesses. Depression is associated with hyperglycemia and an increased risk for diabetic complications, with relief of depression associated with improved glycemic control. Multiple studies have demonstrated that the presence of diabetes doubles the odds of comorbid depression. In patients with existing cardiovascular disease, depression predicts morbidity and death. There is strong evidence for poor post-myocardial infarction (MI) prognosis in patients with depression or depressive symptoms. Cardiac death risk in the six months after an acute MI is approximately four times greater in patients with depression compared with post-MI nondepressed patients. In patients with cancer, the reported prevalence of major depression is up to 38%, and that of depression spectrum syndromes up to 58%. We discuss current research regarding the bidirectional relationship between major depression and chronic medical illness and opportunities for improved surveillance and therapeutic interventions.

US27. MENTAL HEALTH CARE IN LOW-RESOURCE COUNTRIES

US27.1. THE CRISIS OF MENTAL HEALTH CARE IN LOW-RESOURCE COUNTRIES

M. Parameshvara Deva
Department of Psychiatry, Suri Seri Begawan Hospital, Kuala Belait, Brunei

While medical care and especially primary health care has improved dramatically even in low-resource countries, the same cannot be said of mental health care. The end of colonial rule led to focus on rural development projects that colonial masters had neglected. Vast numbers of midwives and community nurses trained in these low-resource countries rapidly filled the urgent need for ways to reduce infant and maternal mortality. Training of doctors in new medical schools took longer and the training of specialists took even longer. But mental health was the stepchild of the health care profession. Mental hospitals were out of sight and out of mind of the ministries of health, with the lowest number of staff, lowest budgets and worst quality of staff and buildings. Docile psychiatrists towed the ministry of health's archaic policies and left mental health in neglect. The development of allied mental health professions such as psychologists and social workers too have suffered in the years after independence. Even when the economic changes occurred decades after independence, the advance in health care left mental health in the dust. When improvements occurred, they were in the city or simply in the mental hospital. Vast populations were in most cases left with nominal outpatient psychiatric services. General hospital psychiatric services were hardly heard of. As the economic advances of the more affluent countries progressed, the attraction of emigration for the few psychiatrists to countries that trained them increased. Brain drain followed and increased to a brain haemorrhage. Countries such as Fiji produced a single psychiatrist and lost the same in a year or so. There are five Pacific countries and many African countries without a single trained psychiatrist. Quality of care, quality of training of nurses, and quality of physical psychiatric facilities fail miserably when compared with physical health. What indeed can be done? There is little to offset the attractiveness of financial rewards of emigration. The recent WPA Brain Drain report addresses the problem but is lukewarm about solutions. The countries that take what little mental health resources the poorest countries have should bear some responsibility for redressing this problem. Volunteers need to go back to mother countries to help develop mental health care in those countries.

US27.2.
MEETING THE CHALLENGES OF MENTAL HEALTH CARE IN LOW- AND MIDDLE-INCOME COUNTRIES

O. Gureje
Department of Psychiatry, University of Ibadan, Nigeria

Compared to persons with physical health problems, the proportion of persons with mental disorders who receive health care service is small in most countries, developed or developing. However, the gap between need and service is particularly big in low income countries. In some instances, less than 1 in 5 persons with mental illness receive any form of care. Other than ignorance about mental health issues and stigma associated with seeking care for mental disorders, scarcity of resources constitutes the most serious impediment to the receipt of care by persons in need. Health budgets are frequently small and, within health allocations, the proportion devoted to mental health care is even more inadequate. In the face of serious health challenges from communicable diseases, mental health problems tend to receive less attention from policy makers. There is scarcity of trained health manpower in general and mental health manpower is even more deficient because of poor professional status, poor pay, and emigration of mental health specialists to better resourced settings. In Nigeria, for example, there is one psychiatrist to a population of over 1.5 million people. It is clear that the provision of mental health service in such a setting cannot depend solely on specialists. In this paper, the challenges of providing care in an under-resourced setting are reviewed and suggestions made on how to meet those challenges.

US27.3.
DELIVERING MENTAL HEALTH SERVICES IN LOW- AND MIDDLE-INCOME COUNTRIES: CAN DEVELOPED COUNTRIES LEARN ANYTHING FROM LESS DEVELOPED COUNTRIES?

R. Araya
University of Bristol, UK

Scientific knowledge has traditionally travelled from the developed to the developing world. However, it is possible that something could be learned from studies and experiences carried out in low- and middle-income countries (LAMIC). Most of these studies have in common using simple and low-cost interventions delivered with less intensively trained personnel. This strategy challenges some widely held views in the more affluent world in terms of the need of sophisticated and expensive treatment programmes. In the more developed world choice is seen as vital, whereas in LAMIC choice is limited by the lack of resources. There are many treatment practices deeply established in developed countries that have little empirical support for their existence. Some of the evidence stemming from LAMIC may suggest disinvesting in some of these costly practices that have traditionally been offered in more developed countries. Likewise, the evidence from LAMIC also suggests that certain groups may benefit more from modest investments to improve treatment. People in LAMIC may have more motivation to find solutions for their own problems given that governments rarely will come to their rescue.

US28.
PREVENTION OF DRUG ABUSE: AN INTERNATIONAL PERSPECTIVE

US28.1.
DRUG ABUSE: LESSONS FROM EPIDEMIOLOGY, VARIATIONS ACROSS CULTURES

M.E. Medina-Mora
Instituto Nacional de Psiquiatría Ramón de la Fuente, Mexico City, Mexico

According to the World Drug Report, around 208 million people use drugs. The global annual prevalence is estimated to be 5% of the world's population between 15 and 64 years of age, and 0.6% report a problematic drug use. The main drug of abuse is cannabis, with an estimated annual prevalence of 3.9%. Regions vary in the type of drug most commonly used. The main problem in Europe is opiates, in South America cocaine, in North America cannabis, closely followed by cocaine, and in Africa and in Oceania cannabis. Across countries, the prevalence of drug use shows mixed patterns, with stabilizing or declining trends in countries with existing high prevalence, and with trends toward an increase in countries with previous low prevalence rates. This paper provides updated information on global trends and discusses the implications for prevention. It reviews contextual and individual factors that increase the likelihood of use and dependence, including variations in opportunities to use drugs, gender roles, and migration. Comorbidity with mental disorders and antisocial behavior is also addressed.

US28.2.
DRUG ABUSE: LESSONS FROM NEUROSCIENCE AND SOCIO-CULTURAL RESEARCH

G. Gerra
Health and Human Development Section, Division for Operations, United Nations Office on Drugs and Crime, Vienna, Austria

Adverse childhood experiences have been found related to psychiatric disorders and particularly to addictive behaviour. Consequences of abuse and neglect have been reported to persist into middle adulthood. Accordingly, prospective studies demonstrated that physical/emotional abuse predicted poly-substance use, and that this association was mediated by impaired attachment. Stressful environmental factors could affect individual personality traits and mental health, possibly inducing stable changes in hypothalamic-pituitary-adrenal (HPA) axis and brain monoamine function. In particular, previous research evidenced that childhood experience of neglect and poor parent-child attachment may contribute to a complex neurobiological derangement including HPA axis, dopamine and serotonin system dysfunctions, in turn involved in addictive disorders vulnerability. On the other side, gene variants affecting monoamine function in the brain may influence temperament and personality traits of children and parents, contributing to the intensity of parent-child relationship, the strength of bonding to family and childrearing style quality. "Gene X environment" conditions have been investigated, being the genetic pattern possibly associated to attachment level, poor parenting, child behaviour and consequent parents reactivity, all these affective-social factors concurring in the susceptibility to drug experimenting and developing drug dependence. The social environment characterized by poverty, instability, lack of educational opportunities, risk of violence, affectionless control and use of alcohol and drugs in the family appears to be particularly at risk for a vulnerable subgroup of children carrying gene variants affecting

parent-child relationship. A rational policy for selected/indicated prevention should be promoted, with the aim of changing the trajectory of children and adolescents at risk.

US28.3.
DRUG ABUSE: PREVENTION PROGRAMS AND POLICIES AROUND THE WORLD

H. Ghodse
Department of Addictive Behaviour and Psychological Medicine, St. George's Hospital Medical School, London, UK

In the light of our knowledge of the consequences and complications of drug abuse, of the difficulties of treatment, and of the high mortality rate, the old adage that "prevention is best treatment" certainly applies to this condition. Although the need for prevention is clear, the best course of action is not. Because the causes of drug abuse are multiple, interrelated and multidimensional, its prevention is similarly complex. Unlike an infectious disease, there is no single causative factor to be opposed or countered by a single preventive measure, and it has proved very difficult to identify and assess which factors, among many, might be susceptible to preventive intervention. It is not surprising, therefore, that different cultures and societies choose and employ quite different preventive measures, and that these will need to vary in response to new trends in drug abuse. The modern approach is to couple the goal of reducing the supply of drugs with that of reducing demand for them, recognizing that, while neither approach is sufficient on its own, each augments the effectiveness of the other. The importance of demand reduction received international acknowledgement in the 1988 United Nations (UN) Convention against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. The Declaration of Guiding Principles on Demand Reduction adopted by the General Assembly of the UN in 1998 responded to the need for an international instrument for effective demand reduction measures at all levels. There are a wide range of preventative activities, including school-based and community based programmes which inform young people about the dangers of drugs and teach them the skills they need to resist using drugs for non-medical purposes. To achieve the essential goal of prevention, governments have to establish or fine-tune existing mechanisms so that they are flexible and effective. Equally important is international cooperation, as international drug trafficking organizations have never respected nor accepted national boundaries.

REGULAR SYMPOSIA

RS1.
INTERPERSONAL PSYCHOTHERAPY: HISTORY AND UPDATE 2009

RS1.1.
OVERVIEW OF INTERPERSONAL PSYCHOTHERAPY AND ISSUES IN DISSEMINATION

M.M. Weissman
College of Physicians and Surgeons, Columbia University, New York State Psychiatric Institute, New York, NY, USA

Interpersonal psychotherapy (IPT) is a time limited evidence based treatment. It was developed for the treatment of depression in adults. It has been adapted for adolescents and the elderly, for medical patients, pregnant and postpartum women, for bipolar disorder, dysthymia and eating disorders. It has been tested in numerous clinical trials with and without medication, in the United States, Canada, Europe, Asia, the Pacific Rim, Africa and India. IPT manuals have been translated into French, German, Italian, Chinese and Japanese. Despite these developments, there remain problems in the training and dissemination of the treatment. The results of a national survey of a probability sample of all training programs in psychiatry, psychology and social work in the United States are presented. The obstacles to training are described and the methods for carrying out this web based survey in other countries are presented.

RS1.2.
OUTCOMES FOR INTERPERSONAL AND SOCIAL RHYTHM THERAPY: RESULTS IN PATIENTS WITH BIPOLAR I AND II DISORDER

E. Frank, H.A. Swartz, D.J. Miklowitz, S. Hlastalaÿ, A.M. Fagiolini, D.J. Kupfer
University of Pittsburgh School of Medicine, Department of Psychiatry, Pittsburgh, PA; Department of Psychology, University of Colorado, Boulder, CO; Department of Psychiatry, University of Washington, Seattle, WA, USA

Interpersonal and social rhythm therapy (IPSRT) combines elements of Klerman and Weissman's interpersonal psychotherapy with a behavioral intervention aimed at enhancing circadian system integrity through regularizing daily routines. IPSRT has now been tested in a single-site acute and maintenance trial in patients with bipolar I disorder who were suffering from mania, depression or mixed episodes and in a multi-site acute trial in patients with bipolar I and II disorder who were suffering from depression. In the Maintenance Therapies in Bipolar Disorder (MTBD), we found that those participants who received IPSRT in the acute treatment phase survived significantly longer without a new affective episode in the maintenance treatment phase of the trial (p=0.01). Ability to increase the regularity of daily routines during acute treatment was associated with reduced likelihood of recurrence among those treated acutely with IPSRT (p=0.04). Participants assigned to IPSRT in the acute phase also exhibited significantly more rapid improvement of occupational function (p=0.05). The effect was particularly marked in women. In the large, multisite Systematic Treatment Enhancement Program in Bipolar Disorder (STEP-BD) psychosocial treatment pathway, IPSRT, like the other two intensive psychotherapies tested (cognitive therapy and family-focused treatment), was associated with higher probability of achieving "recovered" status (64% vs. 52%), reduced time to remission (p=0.01), more days well (p=0.002) and greater improvement in relational functioning (p=0.01) than a minimal psychosocial intervention control condition. An open trial of IPSRT in adolescents with bipolar disorder, primarily offered in combination with medication, suggests promise for this population. Finally, a small open study of IPSRT offered first as a monotherapy to patients with bipolar II depression indicates that a subset of individuals with this form of the illness can be treated successfully with psychotherapy alone. We conclude that IPSRT represents a useful adjunct to pharmacotherapy in the treatment of individuals with bipolar disorder and may be appropriate as a monotherapy for some patients with bipolar II disorder.

RS1.3.
BRIEF INTERPERSONAL PSYCHOTHERAPY WITH A PRE-TREATMENT ENGAGEMENT SESSION FOR PATIENTS IN ROUTINE PRACTICE SETTINGS

H.A. Swartz, E. Frank, N.K. Grote, A. Zuckoff
University of Pittsburgh School of Medicine, Department of Psychiatry, Pittsburgh, PA; Department of Social Work, University of Washington, Seattle, WA, USA

High rates of mental health treatment dropout and low rates of therapy attendance are common problems in the delivery of effective psychiatric care. These issues are especially prominent among socially disadvantaged and ethnic minority cultural groups. The authors developed a one-session intervention based on principles derived from motivational interviewing and ethnographic interviewing, designed to improve depressed patients' participation in subsequent psychiatric treatment. This "engagement session" focuses on communicating the therapist's understanding of patients' individual and culturally-embedded perspectives, helping patients see how the potential benefits of treatment align with their own priorities and concerns, facilitating identification and resolution of ambivalence, and problem-solving barriers to treatment engagement. When administered in combination with a brief form of IPT (IPT-B), designed for individuals who are unlikely to remain in psychotherapy for longer durations, this approach can be used to treat depression in difficult-to-engage patient populations. In this paper, we describe the intervention itself (engagement session plus IPT-B) and present empirical data supporting its efficacy derived from two clinical trials with non-treatment-seeking patient populations: depressed mothers of children with psychiatric disorders and low-income, depressed, pregnant women receiving treatment in the obstetrics clinic of a large public hospital. We also report on our experiences training a diverse group of community mental health clinicians to deliver the engagement session and IPT-B in routine practice settings.

RS1.4.
ADAPTATION, TESTING AND DISSEMINATION OF GROUP INTERPERSONAL PSYCHOTHERAPY IN SUB-SAHARAN AFRICA

H. Verdeli, K.F. Clougherty, M.M. Weissman
Teachers College, Department of Clinical and Counseling Psychology, Columbia University; New York State Psychiatric Institute, Columbia College of Physicians and Surgeons, Columbia University, New York, NY, USA

Historically interpersonal psychotherapy (IPT) has been developed, adapted, tested, and disseminated in Western academic and community mental health settings. Its use in resource-poor non-Western societies had not been attempted until recently. We adapted group IPT (IPT-G) for depressed adults in southern Uganda and adolescents in internally displaced (IDP) camps in northern Uganda. These adaptations were tested in randomized clinical trials showing efficacy of IPT-G in both sites. The process of adapting and training in IPT for each site is discussed, focusing on how: local communities' expression and experience of depression were taken into account; conceptual and technical adaptation of IPT-G were negotiated, given profound local differences in communication patterns and interpersonal/social roles from western ones; feasible and culturally meaningful IPT training and supervision of local facilitators was set up in each site; and systemic factors, such as partnerships with non-governmental organizations, local sanctioning by traditional healers, and fostering of local IPT training, facilitated the adoption of IPT-G by each local community. Following the termination of the two clinical trials, IPT-G has been disseminated in a number of provinces in Uganda and other sub-Saharan countries. A conclusion is drawn about elements of IPT that "hold constant" across our work in the USA, Europe and sub-Saharan Africa.

RS2.
NEW ADVANCES IN DIFFUSION MAGNETIC RESONANCE IMAGING AND THEIR APPLICATION TO SCHIZOPHRENIA

RS2.1.
TRENDS IN THE ANALYSIS OF DIFFUSION MRI DATA FOR GROUP STUDIES

S. Peled, M. Kubicki, M.E. Shenton
Brigham and Women's Hospital and Harvard Medical School, Boston, MA; Veterans Affairs Boston Healthcare System, Brockton, MA, USA

Diffusion magnetic resonance imaging (dMRI) is an MRI modality that has gained tremendous popularity over the past five years and is especially promising for imaging white matter in the brain. Diffusion imaging is one of the first methods that make it possible to visualize and to quantify the organization of white matter in the human brain *in vivo*. It has the potential to aid in the diagnosis and subsequent treatment of disorders of the central nervous system and is likely to have a major impact on assessment of white matter pathologies. In addition to direct clinical impact, dMRI has the potential to contribute to basic neurosciences, improving our understanding of physiological white matter development, aging, and connectivity. Extracting connectivity information from dMRI, termed "tractography", is an especially active area of research, as it promises to model the pathways of white matter tracts in the brain, by connecting local diffusion measurements into global trace-lines. In this paper, an overview is provided of existing tractography methods, and the strengths and weaknesses of different approaches are discussed. An overview of current methods for group studies based on dMRI are also presented, including the methods of Regions Of Interest (ROI) based statistics, voxel-based morphometry (VBM), tract-based morphometry (TBM), and tract-based spatial statistics (TBSS). In neurological studies of white matter using tractography, it is often important to identify anatomically meaningful fiber bundles. Available technologies for group studies comparing normal controls and subjects with schizophrenia are also discussed.

RS2.2.
NEW METHODS FOR ASSESSING WHOLE BRAIN DTI ABNORMALITIES IN SCHIZOPHRENIA

M. Kubicki, U. Khan, L. Bobrow, L. O'Donnell, S. Pieper, C.-F. Westin, M.E. Shenton
Brigham and Women's Hospital and Harvard Medical School, Boston, MA; Veterans Affairs Boston Healthcare System, Brockton, MA, USA

Diffusion tensor imaging (DTI), particularly new advances in DTI data processing and analysis, makes it possible to conduct a more thorough investigation of anatomical connectivity in schizophrenia. Numerous studies to-date report white matter (WM) abnormalities in schizophrenia. However, findings from these studies have been very inconsistent. Such inconsistencies are at least in part due to the differences in methodological approaches that have been used. More

specifically, these studies have either investigated single fiber tracts (i.e., using region of interest analysis) or they have relied upon error prone DTI normalization to the template space (i.e., voxel based morphometry, VBM analyses). Here the focus is on whole brain analytic approaches, where existing VBM DTI data analyses are presented as well as recent methodological advances in studying WM alterations in schizophrenia. Two new methods of whole brain data analysis, atlas based segmentation and group based spectral clustering, are introduced, and results using these new methods are reported from a dataset that includes 25 chronic schizophrenia subjects and 25 healthy controls. Findings are presented from the two methods and the implications from these studies are discussed, as well as the advantages and disadvantages of using these methods vs. more conventional VBM methods.

RS2.3.
DIFFUSION TENSOR TRACTOGRAPHY IN FIRST-EPISODE SCHIZOPHRENIA

G. Price, M. Cercignani, G. Parker, D. Altmann, T. Barnes, G. Barker, E. Joyce, M. Ron
Institute of Neurology, University College, London, UK; Imperial College Faculty of Medicine, London, UK; Institute of Psychiatry, King's College, London, UK; Santa Lucia Foundation, Rome, Italy; Imaging Science and Biomedical Engineering, University of Manchester, UK; Medical Statistics Unit, London School of Hygiene and Tropical Medicine, London, UK

Disconnectivity abnormalities in the cortex and connecting white matter pathways may explain the symptoms and cognitive abnormalities of schizophrenia. Recently, diffusion imaging tractography has made it possible to study white matter pathways in detail *in vivo* and in this paper a corpus callosum study (18 patients and 21 controls) and an uncinate fasciculus study (19 patients and 23 controls) are presented for a sample of patients with first-episode schizophrenia using a probabilistic tractography algorithm. In the study of the corpus callosum, seed points were placed in the splenium and genu to track fibre tracts crossing these regions. A multi-threshold approach and multiple linear regressions were used to explore group differences. Fractional anisotropy (FA) was reduced in tracts crossing the genu, and to a lesser degree the splenium, in patients compared with controls. In the study of the uncinate fasciculus, two seed points were used to isolate the tract in each hemisphere. FA and probability of connection were obtained for every voxel in the tract and the group means and distributions of these variables were compared. The FA distribution, as measured by the squared coefficient of variance, was reduced in the left uncinate fasciculus in the patient group, indicating that the number of voxels with high FA values was reduced, suggesting abnormalities in the core of the tract. These studies suggest that there are subtle abnormalities in structural connectivity in patients that may involve aberrant connectivity in the core of the white matter tract.

RS2.4.
WHITE MATTER VOLUME, ANISOTROPY, AND TRACT TARGETING QUALITY IN SCHIZOPHRENIA: FIXED OR PROGRESSIVE?

M.S. Buchsbaum, S. Mitelman, E.L. Canfield, J. Schneiderman, K.-W. Chu, J.J. Entis, E.A. Hazlett, M. Haznedar, I. Nenadic, J. Zhang, J. Friedman
Mount Sinai School of Medicine Department of Psychiatry, New York, NY, USA

Several studies have suggested progressive focal gray matter loss in schizophrenia, but longitudinal white matter changes in anisotropy have not yet been systematically assessed regionally. Two studies were conducted: a) diffusion-tensor and structural magnetic resonance imaging in a cohort of 49 schizophrenia patients and 16 controls scanned twice 4 years apart; patients were subdivided into good-outcome (n=23) and poor-outcome; b) 3T-MP-RAGE anatomical and diffusion tensor images on 111 patients with schizophrenia and 222 normals. Placement of images in standard AC-PC position, coregistration of DT images to the anatomical images, computation of anisotropy and tract-angles was done with FSL. White matter and gray matter volumes and fractional anisotropy were parcellated into Brodmann areas and entered into multiway ANCOVA. In the follow-up sample at baseline, anisotropy was lower in patients and they showed larger white matter volume. Over four years, anisotropy declined more in controls bringing normal and schizophrenia levels closer; controls showed small white matter increases, again bringing them closer to patient values. For anisotropy and white matter, patients with good outcome showed a pattern not dissimilar to controls, but gray matter volume loss continued in poor-outcome patients. Tract angles changed little over time. In the cross-sectional sample, lower anisotropy was observed widely in schizophrenia, but most prominently in the frontal and temporal lobes. Both volumetric and anisotropy changes in white matter over time appear to be in the direction of effacement of between-groups differences among schizophrenia patients and controls. Tract angles and total length were reduced in schizophrenia, but less altered over time.

RS3.
CLINICAL FEATURES AND PHARMACOLOGICAL TREATMENT OF BIPOLAR MIXED DEPRESSIONS

RS3.1.
THE "TROUBLED WATER" OF TREATMENT OF BIPOLAR MIXED DEPRESSIONS

F. Benazzi
Hecker Psychiatry Research Center, Forlì, Italy; University of California at San Diego, CA, USA

Bipolar depressions are difficult to treat. Mood stabilising agents are more effective for mania than depression. Only olanzapine/fluoxetine combination and quetiapine are FDA-approved for bipolar (type I) depression, but none of the antidepressants used in unipolar depression. While some controlled studies on bipolar depression have shown that antidepressants are not better than placebo or lithium, some large naturalistic studies (closer to "real-world" patients) have shown effectiveness of antidepressants. As bipolar depression is often mixed (i.e., with concurrent manic/hypomanic symptoms), and most antidepressants studies have not been stratified according to mixed status, the results of these studies are questionable, as bipolar mixed depression may be worsened by antidepressants (statistically wiping out positive

effects on bipolar non-mixed depression). Fluoxetine/olanzapine combination stands out, as it has shown similar efficacy in mixed vs. non-mixed bipolar I depression, in a large controlled study. It is noteworthy that fluoxetine (it cannot be inferred all selective serotonin reuptake inhibitors) added to second-generation antipsychotic olanzapine (it cannot be inferred all second-generation antipsychotics) was effective for mixed depression, while olanzapine alone was less effective (but better than placebo).

RS3.2. BIPOLAR MIXED DEPRESSIONS: CLINICAL FEATURES AND RELATION WITH SUICIDALITY

Z. Rihmer
Department of Clinical and Theoretical Mental Health, Semmelweis University, Budapest, Hungary

Mistreatment of mood disorders is one of the main causes of attempted and completed suicide. Since most mood disorder patients never commit or attempt suicide, investigating the clinical variables related to suicide in depression is a priority. A proximate suicide risk factor is mixed depression (depressive mixed states), i.e., depression plus co-occurring manic/hypomanic symptoms such as irritability, psychomotor agitation, talkativeness, and racing/crowded thoughts. The definitions most commonly used require at least 2 to 3 manic/hypomanic symptoms (not specific symptoms, such as psychomotor agitation). Mixed depression is not included in DSM-IV and ICD-10. Its frequency is higher in bipolar disorders (20 to 70%, depending on several factors), but it is not uncommon in unipolar depression. Suicide attempts and suicidal ideation are more frequent in mixed than in non-mixed (unipolar and bipolar) depression. We have recently found a much higher frequency of mixed (bipolar and unipolar) depression in depressed suicide attempters than in depressed non-suicide attempters. Suicide attempters had mainly a bipolar II mixed depression, explaining, at least in part, why bipolar II disorder carries the highest risk of suicidal behaviour among mood disorders. Diagnosing mixed depression as a possible suicide risk factor has important implications for suicide prevention, since antidepressant monotherapy (i.e., unprotected by mood stabilising agents) in a "missed" mixed depression can worsen its clinical picture by increasing the severity of manic/hypomanic symptoms. Antidepressant monotherapy in bipolar depression, but also in unipolar depression (especially with signs of bipolarity), can also induce the new onset of a mixed depression.

RS3.3. THE DICHOTOMY WITHIN THE BIPOLAR SPECTRUM AND ITS RELATIONSHIP WITH MIXED DEPRESSION

G. Perugi
Department of Psychiatry, University of Pisa, and Institute of Behavioural Sciences G. De Lisio, Pisa, Italy

The bipolar spectrum includes also many clinical, often recurrent, states, such as seasonality, high depression recurrence, recurrent irritability, neuroasthenia, periodical sleep disturbances, episodic obsessive-compulsive disorder, and social phobia followed by pharmacologically-induced hypomania. Impulsive behaviors such as self-aggression or aggression towards others, pathological gambling and paraphilias may also be bipolar spectrum disorders. Mood reactivity of cyclothymic temperament and impulsivity might be related, each characterized by disinhibited thinking and behavior, poor insight, and marked dysphoric and pleasurable mood changes. Eating disorders, bulimia nervosa and binge eating disorder could be related to impulse control disorders. Comorbidity among bipolar spectrum, anxiety and impulse control disorders represents a complex picture, susceptible of different pathogenetic interpretations. Probably, the pathological process underlying bipolar disorders extends beyond euphoric and depressive mood dimensions, including negative arousal affective states, such as anxiety, panic, irritability and impulsivity. Many bipolar spectrum patients, especially when recurrence is high and inter-episodic periods are not free of affective manifestations, may meet DSM-IV criteria for personality disorders. This is particularly true for bipolar patients with cyclothymic temperament, often misclassified as borderline personality disorder because of their extreme mood instability and reactivity. Actually, mood lability of cyclothymic temperament should be considered a core characteristic of a bipolar subtype characterized by early onset, high comorbidity, and more problematic lithium response. Cyclothymic temperament may facilitate the mixture of manic/hypomanic symptoms and depression (mixed depression). The distinction of bipolar disorders with/without cyclothymic temperament could be a more sensitive predictor of outcome, and may enhance clinical practice and research endeavours.

RS3.4. TREATMENT OF BIPOLAR MIXED DEPRESSION WITH ADJUNCTIVE ANTIDEPRESSANTS: HELP OR HINDRANCE?

J. Calabrese, J. Goldberg
Bipolar Disorders Research, Case Western Reserve University, University Hospitals Case Medical Center, Cleveland, OH; Mount Sinai School of Medicine, Affective Disorders Research Program, Silver Hill Hospital, Norwalk, CT, USA

DSM-IV bipolar I "mixed state" requires co-occurrence of full depression and mania syndromes. However, there is less recognition of the prognostic relevance, prevalence, and impact of sub-syndromal symptoms of mania during major depressive episodes (MDE) in bipolar disorders (mixed depression). Most recent treatment guidelines advise against using traditional antidepressants in bipolar mixed depression, despite absence of large-scale, prospective, controlled trials of subjects with bipolar mixed depression. Longitudinal, naturalistic data from NIMH Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD) have recently been analyzed to examine adjunctive antidepressant use in bipolar depressed patients with concurrent sub-syndromal manic symptoms (mixed depression), and to compare times until recovery. In 335 subjects treated with mood stabilizers with or without an antidepressant, adjunctive antidepressant use was associated with significantly higher mania symptom severity after 3 months of follow-up, and probability of recovery was lower among patients with higher baseline depression severity. In 1380 MDE subjects with bipolar I or II disorders, the most common co-occurring symptoms of mania were distractibility, flight of ideas/racing thoughts, and psychomotor agitation. Bipolar mixed depression patients had more prior suicide attempts and rapid cycling, earlier age at onset, and more frequent bipolar I (vs. II) illness subtype as compared to those with "pure" depressed bipolar episodes. Emerging data suggest clinicians should assess all symptoms of depression and mania in every depressed patient at every visit, and recognize the risk that antidepressants may exacerbate concurrent mania symptoms without improving depression symptoms in bipolar mixed depression.

RS3.5.
USING ANTIDEPRESSANTS (PLUS MOOD STABILISING AGENTS) IN MIXED DEPRESSION

H.-J. Möller
Department of Psychiatry, University of Munich, Germany

The prevalence of mixed depression, a combination of depression and manic/hypomanic symptoms, is high in bipolar disorders. Controlled studies are needed to investigate treatment of mixed depression. Antidepressants can worsen manic/hypomanic symptoms, mood stabilising agents might be necessary. Special attention should be paid to clinical features and pharmacological treatment of mixed depression. This paper summarises the results of relevant studies on antidepressants, mood stabilisers, and second-generation antipsychotics for bipolar depression. Based on methodological and clinical considerations, the position of antidepressants and possible alternatives in this indication are reviewed. Regulatory requirements for licensing a drug for the indication "short-term treatment of bipolar depression" are described.

RS4.
TREATMENT OF EATING DISORDERS: AN UPDATE

RS4.1.
ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND BINGE EATING: SHARED PHENOMENOLOGY, GENETICS AND RESPONSE TO TREATMENT

A.S. Kaplan, A.L. Howlett, Z. Yilmaz, R. Levitan
Toronto General Hospital and Center for Addiction and Mental Health; Department of Psychiatry, University of Toronto, Canada

The purpose of this paper is to review the relationship between attention-deficit/hyperactivity disorder (ADHD) and binge eating as seen in bulimia nervosa (BN) and binge eating disorder (BED), including the shared phenomenology, genetics and treatment. There is a significant association between ADHD and binge eating within clinical populations studied. Inattentiveness and impulsivity noted in ADHD are thought to play a role in the preoccupations, urges and impulsive behaviours of those who experience binge-eating episodes. Molecular genetic studies have also identified common genes involved in dopamine transport, suggesting a shared genetic predisposition to binge eating, obesity and ADHD. Case reports on individuals with BN and ADHD suggest benefit from psychostimulant medication. In addition, other anti-ADHD medications such as atomoxetine have been used independently in trials to treat obesity and BED. Individuals with current symptoms or a past history of ADHD are at risk of having coexisting binge eating and obesity. Screening for ADHD in patients with binge-eating behaviours may identify individuals who could benefit from anti-ADHD medication. Further research may help identify shared neurobiological mechanisms and particular risk factors as well as to determine the efficacy and tolerability of certain medications in this population.

RS4.2.
COGNITIVE BEHAVIORAL THERAPY FOR BULIMIA NERVOSA DELIVERED VIA TELEMEDICINE

J.E. Mitchell
Neuropsychiatric Research Institute and University of North Dakota School of Medicine and Health Sciences, Fargo, ND, USA

A problem in the delivery of mental health services is the lack of availability of empirically supported treatment. However, no studies have evaluated the administration of an empirically validated manual-based psychotherapy for a psychiatric condition via telemedicine. This study compared the efficacy and acceptability of a manual-based cognitive behavioral therapy for bulimia nervosa delivered in person vs. via telemedicine. One hundred twenty-eight adults were recruited through referrals from clinicians and media advertisements in the targeted geographical areas. Participants were randomly assigned to receive twenty sessions of manual-based, cognitive behavioral therapy (CBT) for bulimia nervosa over sixteen weeks, delivered face-to-face (FTF-CBT) or via telemedicine (TV-CBT). Retention in treatment was comparable for the two treatments. Abstinence rates at end-of-treatment were generally slightly higher for FTF-CBT compared to TV-CBT, but differences were not statistically significant. The differences on most variables were of no or marginal clinical significance. In conclusion, CBT for bulimia nervosa delivered via telemedicine was both acceptable to participants and roughly equivalent in outcome to therapy delivered in person.

RS4.3.
COST EFFECTIVENESS IN EATING DISORDER TREATMENT

S. Crow
Department of Psychiatry, University of Minnesota, Minneapolis, MN, USA

Eating disorders are widely viewed as difficult and expensive to treat; therefore, examining cost effectiveness of their treatment is a logical area of inquiry. A limited number of cost effectiveness studies in this area have been conducted to date. These have evolved from cost modeling studies to direct cost collection with subsequent cost effectiveness analysis. The existing cost-modeling literature is reviewed. The results of a study examining the cost effectiveness of stepped care treatment vs. cognitive behavioral therapy treatment for bulimia nervosa are reviewed; in this study, the stepped care approach was more effective and cost less. Similarly, the results of a recently conducted study of different levels of group therapy intensity in the treatment of binge eating disorder are presented. Such studies have great potential to guide effective treatment resource deployment and influence health care policy.

RS4.4.
A CRITICAL REVIEW OF THE USE OF ATYPICAL ANTIPSYCHOTICS IN THE TREATMENT OF ANOREXIA NERVOSA

J. Roerig, J. Mitchell, K. Steffen
Department of Neuroscience, University of North Dakota School of Medicine and Health Sciences, and Neuropsychiatric Research Institute, Fargo, ND, USA

This paper reviews the current state of use of atypical antipsychotics in the treatment of individuals with anorexia nervosa (AN). Receptor profiles of these agents provide potential interfaces with the pathophysiology of this type of eating disorder, which includes alterations in dopamine and serotonin systems in the CNS. Current data regarding the symptom profile influenced by the atypical agents includes core eating disorder symptoms as well as direct effects on appetite. Beneficial and adverse reactions are reviewed and contrasts and comparisons of this class of drugs are made to provide the practitioner with a useful paradigm in which to choose and avoid certain therapies.

RS4.5.
EARLY RESPONSE TO TREATMENT IN ADOLESCENT BULIMIA NERVOSA

D. le Grange, P. Doyle, R.D. Crosby, E. Chen
Department of Psychiatry, University of Chicago, IL; Department of Psychiatry, Feinberg School of Medicine, Northwestern University, Chicago, IL; Neuropsychiatric Research Institute and University of North Dakota School of Medicine and Health Sciences, Department of Clinical Neuroscience, Fargo, ND, USA

The purpose of this study was to determine if early response predicted remission at the end of a controlled trial. 80 adolescents with bulimia nervosa participated in a randomized controlled trial comparing family-based treatment and individual supportive psychotherapy. Response to treatment was assessed via self-report of bingeing and purging. Remission was defined as abstinence from bingeing and purging for the last 28 days and measured by investigator-based interview, i.e., the Eating Disorder Examination. Receiver operating characteristic analyses showed that, regardless of treatment, symptom reduction at session 6 predicted remission at post-treatment [AUC=.814 ($p<0.001$)] and 6-month follow-up [AUC=.811 ($p<0.001$)]. Results suggest that adolescents with bulimia nervosa who do not show early reductions in bulimic symptoms are unlikely to remit at post-treatment or follow-up.

RS5.
NEUROBIOLOGY OF INCIPIENT PSYCHOSIS: RECENT EVIDENCE FROM EARLY RECOGNITION RESEARCH

RS5.1.
NEUROPSYCHOLOGICAL ASSESSMENT IN EARLY STATES OF PSYCHOSIS

M. Wagner, I. Frommann, B.B. Quednow, R. Pukrop, A. Bechdolf, S. Ruhrmann, J. Klosterkötter, J. Brinkmeyer, W. Woelwer, P. Decker, W. Maier
Department of Psychiatry, University of Bonn; Department of Psychiatry, University of Cologne; Department of Psychiatry, University of Duesseldorf; Department of Psychiatry, University of Munich, Germany

Psychosis is preceded by cognitive and physiological alterations. This may be useful in the risk assessment in subjects with putatively prodromal symptoms, and could contribute to better understand the temporal unfolding of the disease. The early recognition and intervention program of the German Research Network on Schizophrenia defines early and late prodromal stages according to psychopathological criteria. For concurrent and prospective validation of these risk stages, subjects undergo neurocognitive, electrophysiological and oculomotor assessments of putative vulnerability markers. About 125 early prodromal subjects (defined by the presence of basic symptoms) and 90 late prodromal subjects (defined by attenuated positive symptoms or by brief occurrences of psychotic symptoms) have been assessed at inclusion and followed over two years. As compared to psychiatrically healthy matched controls, late prodromals had significantly inferior verbal memory, verbal fluency, visual motor skills, and working memory. Impairments were qualitatively similar, but less pronounced in subjects in an early prodromal stage, with deficits of immediate verbal memory, verbal fluency and visuomotor performance being significant. Particularly in early prodromals, memory and executive impairments were related to the occurrence of psychotic symptoms during follow-up. Auditory P300 was reduced in both prodromal groups, and predicted transition to psychosis. Both groups had reduced auditory startle prepulse inhibition, but this was not associated with later psychosis. Neurocognitive and neurophysiological assessments validate and improve psycho-pathological risk assessment, and allow to disentangle stable vulnerability markers from indicators of imminent risk. They may therefore complement psychopathological risk assessment.

The study was funded by the German Federal Ministry for Education and Research.

RS5.2.
BRAIN STRUCTURE AND FUNCTION IN THE AT RISK MENTAL STATE

P. McGuire
Institute of Psychiatry, London, and OASIS, South London and Maudsley Trust, London, UK

People with prodromal symptoms have a very high risk of psychosis. Relatively little is known about alterations in brain structure and function in this group. Subjects meeting Personal Assessment and Crisis Evaluation (PACE) criteria for the at risk mental state were recruited through OASIS and studied using diffusion weighted, volumetric and functional magnetic resonance imaging, magnetic resonance spectroscopy and F-dopa positron emission tomography. Data were also collected from matching groups of controls and patients with first episode psychosis. Subjects with an at risk mental state showed differences relative to both controls and patients with first episode psychosis in white matter integrity, regional grey matter volume, regional activation during tasks of executive functions and memory, glutamate activity and dopamine function. The abnormalities in the at risk group were often qualitatively similar to those evident in first episode psychosis, but less severe. These data suggest that the at risk mental state is associated with significant changes in the structure and function of the brain that are qualitatively similar to those seen in psychotic disorders. These findings may be correlates of an increased vulnerability to psychosis.

RS5.3.
IMAGING, GENETIC AND BEHAVIOURAL DATA FROM THE EDINBURGH HIGH RISK STUDY

S.M. Lawrie
Division of Psychiatry, University of Edinburgh, Royal Edinburgh Hospital, Scotland, UK

In the Edinburgh High Risk Study, we have followed up approximately 200 individuals over 10 years, during which time 20 developed schizophrenia. Memory deficits at baseline predicted psychosis, an average of 2.5 years later, without any apparent change over time. Underactivations on functional magnetic resonance imaging (fMRI) in medial temporal lobe/superior temporal gyrus, anterior cingulate, lingual gyrus and cerebellum predicted the onset of schizophrenia 1–15 months later. In contrast, volumetric reductions in medial temporal lobes and thalamus were comparatively weak predictors, although there were more pronounced reductions in medial and lateral temporal lobe (and cerebellum) over time in those who went on to develop psychosis. Anxiety/depression, stressful major (independent) life events, cannabis use and isolated/transient psychotic symptoms all apparently preceded the hippocampal shrinkage. Pre-frontal and hippocampal deficits on fMRI were associated with polymorphisms in the DAOA gene, while NRG1 was associated with psychotic symptoms and IQ deficit and COMT was predictive of transition to psychosis and was associated with grey matter density and

BOLD signal differences in prefrontal cortex. Overall, therefore, we have found apparent trait effects of verbal memory impairments, hippocampal reductions and hypofrontality in relatives at high risk of schizophrenia, with further deficits in temporal lobe structure and function in the year or two preceding the onset of frank psychosis. Each of these shows differential genetic associations and offers the prospect of early detection.

RS5.4.
BIOMARKERS IN CEREBROSPINAL FLUID AND SERUM IN INITIAL PRODROMAL STATES OF PSYCHOSIS AND EARLY SCHIZOPHRENIA

F.M. Leweke, J.T.-J. Huang, T.M. Tsang, D. Koethe, L. Kranaster, C.W. Gerth, C. Hoyer, S. Ruhrmann, F. Schultze-Lutter, J. Klosterkötter, E. Holmes, S. Bahn
Department of Psychiatry and Psychotherapy, University of Cologne, Germany; Institute of Biotechnology, University of Cambridge, UK; Department of Biomolecular Medicine, Faculty of Medicine, Imperial College, London, UK

The initial prodromal state of psychosis (IPS) is defined as an early disease stage prior to the onset of overt psychosis characterized by subthreshold or more unspecific psychiatric symptoms. Little is known as regard to the biochemical changes during this period. We investigated the metabolic/proteomic profiles of cerebrospinal fluid (CSF) of first-onset drug naïve paranoid schizophrenia patients (n=54) and individuals presenting with initial prodromal symptoms (n=24), alongside healthy volunteers (n=70) using ^{1}H-NMR spectroscopy and surface enhanced laser desorption ionization (SELDI) mass spectrometry, respectively. Partial least square discriminant analysis (PLS-DA) showed that 36%/29% of IPS patients displayed proteomic/metabolic profiles characteristic of first-onset, drug naïve schizophrenia, i.e., changes in levels of glucose and lactate as well as changes in a VGF-derived peptide (VGF23-62) and transthyretin protein concentrations. However, only 29% (n=7) of the investigated IPS patients (who to date have been followed up for up to 3 years) have so far received a diagnosis of schizophrenia. The presence of biochemical alterations in the IPS group did not correlate with the risk to develop schizophrenia. Our results imply that schizophrenia-related biochemical disease processes can be traced in CSF of prodromal patients. However, the biochemical disturbances identified by now in IPS patients, at least when measured at a single time point, may not be sufficient to predict clinical outcome.

RS6.
TREATMENT OF DEPRESSIVE AND ANXIETY DISORDERS IN CHILDREN AND ADOLESCENTS

RS6.1.
THE TREATMENT FOR ADOLESCENTS WITH DEPRESSION STUDY (TADS): IMPLICATIONS FOR PRACTICE

J. March, B. Vitiello, J. Walkup, for the TADS Team
Duke University Medical Center, Durham, NC; National Institute of Mental Health, Bethesda, MD; Johns Hopkins University Hospital, Baltimore, MD, USA

This paper reports on the 36-week clinical outcomes of the Treatment for Adolescents with Depression Study (TADS) and discusses implications of the findings for clinical practice. The TADS was a publicly funded multisite clinical trial that randomized 439 youths (age 12-17 years, 55% female, 74% Caucasian) to receive fluoxetine (FLX), cognitive-behavioral therapy (CBT), a combination of these two treatments (COMB), or clinical management with pill placebo for 12 weeks. A consolidation phase, from week 12 to 18, was followed by maintenance treatment through week 36. Patients were then referred for community treatment, and a follow-up assessment was conducted 12 months later. Based on random assignment, 327 adolescents with major depressive disorder were treated with FLX, CBT, or COMB for 36 weeks. The primary outcome measures were the Children's Depression Rating Scale-Revised total score (CDRS-R) and response rate defined by a Clinical Global Impression-Improvement score of much or very much improved. Rates of response were: COMB 73%, FLX 62%, and CBT 48% at week 12; COMB 85%, FLX 69%, and CBT 65% at week 18, and COMB 86%, FLX 81%, and CBT 81% at week 36. Suicidal ideation decreased with treatment, but more so with COMB or CBT than with FLX. More suicidal events occurred in FLX (14.7%) than with COMB (8.4%) or CBT (6.3%). In adolescents with moderate to severe depression, treatment with FLX alone or in combination with CBT accelerates response as compared to CBT monotherapy. Combined treatment presents the most favorable benefit/harm balance.

RS6.2.
ADOLESCENT DEPRESSION ANTIDEPRESSANT AND PSYCHOTHERAPY TRIAL (ADAPT)

I. Goodyer, on behalf of the ADAPT Trial Team
University of Cambridge, UK

The Adolescent Depression Antidepressant and Psychotherapy Trial (ADAPT) was a randomised controlled trial of a selective serotonin reuptake inhibitor (SSRI) and routine specialist care with and without cognitive behaviour therapy (CBT) in adolescents with moderate to severe major depression. It aimed to test whether combined SSRI and CBT together with clinical care are more effective in the short-term than SSRI and clinical care alone. It was a pragmatic randomised controlled superiority trial. Participants were 208 adolescents, aged 11-17, with moderate to severe major or probable major depression who had not responded to a brief initial intervention. Adolescents with suicidality, depressive psychosis or conduct disorder were included. 103 adolescents received an SSRI and routine care; 105 received an SSRI, routine care and CBT. The trial duration was 12 weeks, followed by a 16 week maintenance phase. The primary outcome was change in score on Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA). There was no difference in treatment effectiveness for the primary or secondary outcome measures. On average, there was a decrease in suicidal thoughts and self harm. No protective effect of CBT on suicidal thinking or action was detected. By 28 weeks, 56.7% were much or very much improved, with 20% remaining unimproved. In conclusion, for adolescents with moderate to severe major depression, there is no evidence that the combination of CBT plus an SSRI in the presence of routine clinical care contributes to an improved outcome by 28 weeks compared to the provision of routine clinical care plus an SSRI alone.

RS6.3.
THE TREATMENT OF SSRI-RESISTANT DEPRESSION IN ADOLESCENTS (TORDIA)

G. Emslie, G. Clarke, K. Wagner, J. Asarnow, M. Keller, B. Vitiello, L. Ritz, D. Brent
University of Texas, Southwestern Medical Center, Dallas, TX, USA; Kaiser Foundation, Vancouver, Canada; University of Texas, Galveston, TX, USA; University of California, Los Angeles, CA, USA; Brown University, Providence, RI, USA; National Institute of Mental Health; Bethesda, MD, USA; University of Pittsburgh, PA, USA

The Treatment of SSRI-Resistant Depression in Adolescents (TORDIA) was a multisite clinical trial of treatment interventions for adolescents with major depressive disorder who had not improved after an adequate course of serotonin reuptake inhibitor antidepressant (SSRI). A total of 334 adolescents (age 12-17) were randomized to one of the following four treatments in a 2 by 2 balanced design: switch to another SSRI; switch to another class of medication (venlafaxine); switch to another SSRI + cognitive behavior therapy (CBT); or switch to venlafaxine plus CBT. The primary outcomes were: a rating of much or very much improved on the Clinical Global Impression-Improvement Subscale and a Child Depression Rating Scale-Revised decline over baseline ≥50%, plus a change in CDRS-R over time. Rate of clinical response and improvement in functional status was greater in the CBT cells than on medication alone, without any difference between the SSRI and venlafaxine conditions. In all treatments groups, there was a reduction of CDRS-R, self-reported depression, and suicidal ideation, but without differential treatment effects, nor were there treatment differences with regard to the rate of suicidal adverse events. Thus, in this clinical trial of depressed adolescents who have not shown an adequate clinical response to an SSRI, a combination of a switch in antidepressant and CBT was superior to a medication switch alone, but a switch to a second SSRI was just as efficacious as a switch to venlafaxine, and resulted in fewer side effects. These results have important implications for second step treatment of adolescent depression.

RS6.4.
CHILD/ADOLESCENT ANXIETY MULTIMODAL STUDY (CAMS)

J. Walkup, A.M. Albano, J. March, P. Kendall, B. Birmaher, J. Piacentini, J. Sherrill
Johns Hopkins University Hospital, Baltimore, MD; Columbia University and New York State Psychiatric Institute, New York, NY; Duke University, Durham, NC; Temple University, Philadelphia, PA; University of Pittsburgh, PA; University of California, Los Angeles, CA; National Institute of Mental Health, Bethesda, MA, USA

This paper reviews the study design, method and primary and long-term outcomes of the Child/Adolescent Anxiety Multimodal Study (CAMS). Subjects aged 7-17 (n=488) with separation, social, and generalized anxiety disorders from six sites were randomized (2:2:2:1) to 12-weeks of cognitive behavioral therapy (CBT), sertraline (SRT), combination treatment (COMB) or pill placebo (PBO). Treatment responders received maintenance treatment for 6 months. The relative efficacy of the active treatments to PBO was evaluated using Clinical Global Impression-Improvement (CGI-I) and Pediatric Anxiety Rating Scale (PARS). For the intent-to-treat with last observation carried forward analysis, the response rate based on the CGI-I for combination treatment (81%) was superior to both of the monotherapies (CBT=61%; SRT=56%) and pill placebo (26%). The monotherapies were both superior to placebo, but not significantly different from each other. The week 12 pairwise contrasts of the random regression models of the PARS document the same pattern of response: COMB > CBT = SRT > PBO. Long-term outcome data are currently being analyzed. Thus, the study outcome, regardless of method of assessment (categorical or continuous) documented the same pattern of outcome, with all active treatments significantly better than placebo. Perhaps the greatest challenge at this point in the dissemination of these findings is the improved recognition of these very common, but often underdiagnosed conditions.

RS7.
EVIDENCE-BASED PSYCHOTHERAPIES FOR PERSONALITY DISORDERS

RS7.1.
LEVELS OF CHANGE IN THE TREATMENT OF PERSONALITY DISORDERS

C. Maffei
Vita-Salute San Raffaele University, Milan, Italy

Empirical research shows that personality disorders are treatable diagnostic entities and that both psychological and biological interventions can be useful. However, important questions are still open and consequent problems are unresolved. The most basic ones concern the level of improvement. Indeed, personality pathology and its effects on people can be described at different levels: a) symptoms and reactions (state-related dysfunctional mental and behavioural phenomena); b) personality traits (dysfunctional dispositions stable over time); c) social adjustment (relational, affective, economic adaptation); d) quality of life (objective and subjective existential satisfaction). Up to now studies on the effectiveness of treatment of personality disorders seem more interested in the first and third level: for instance, if subjects reduce their self-aggressive behaviours and consequently the number of hospitalizations decreases, does it depend on change of dysfunctional personality traits? This is controversial. What seems clear is that treatment can improve quality of life only marginally. Precise data is still unavailable; however, it seems that it is very difficult to help patients with personality disorders to achieve an acceptable feeling of satisfaction about the meaningfulness and fullness of experience of their lives.

RS7.2.
MENTALIZATION BASED THERAPY FOR BORDERLINE PERSONALITY DISORDER: RECENT DEVELOPMENTS

A.W. Bateman
Halliwick Unit, St. Ann's Hospital, London, UK

Mentalization is the process by which we implicitly and explicitly interpret the actions of ourselves and others as meaningful on the basis of intentional mental states (e.g., desires, needs, feelings, beliefs, and reasons). We mentalize interactively and emotionally when with others. Each person has the other person's mind in mind (as well as his/her own), leading to self-awareness and other awareness. We have to be able to continue to do this in the midst of emotional states, but borderline personality disorder (BPD) is characterised by a loss of capacity to mentalize when emotionally charged attachment relationships are stimulated. The aim of mentalization based therapy (MBT) is to increase this capacity in order to ensure better regulation of

affective states and to increase interpersonal and social function, all of which are impaired in BPD in the long term. MBT was initially shown to be more effective than treatment as usual at reducing the acute symptoms of BPD in the context of a partial hospital programme over 18-months treatment and after 36 months follow-up. Patients from the partial hospital programme have now been followed up for 8 years after entry into treatment. MBT offered in an outpatient context has also recently been studied in a randomised controlled trial. Replication of results is needed and some data from independent researchers studying MBT are presented.

RS7.3.
TRANSFERENCE-FOCUSED PSYCHOTHERAPY FOR BORDERLINE PERSONALITY ORGANIZATION: CLINICAL AND STRUCTURAL CHANGE

M.H. Stone, J.F. Clarkin
Department of Clinical Psychiatry, Columbia College of Physicians and Surgeons, New York, NY; Weill Medical College of Cornell University, White Plains, NY, USA

Transference-focused psychotherapy (TFP) is an empirically supported long-term (1 year) individual treatment for those diagnosed with borderline personality disorder (BPD). This structured treatment has been constructed and described utilizing an object relations conception of the borderline pathology. An object relation consists of a particular affect state linked to an image of a specific interaction between the self and another person. Object relations are integrated and hierarchically organized to form the higher-order structures that motivate personality and personality functioning. Whereas fully consolidated identity – subjective experience of a stable and realistic sense of self and others – is the hallmark of normal personality, identity diffusion is at the core of severe personality pathology. The focus and target of treatment for severe personality disorder such as BPD is an in depth exploration of the patients' internalized object relations as manifested in interpersonal behavior between patient and therapist. From this conceptualization, it is hypothesized that successful treatment of borderline patients with TFP would result in not only symptom change (e.g., reduction of depression and anxiety, reduction in suicidal ideation and behavior), but also conceptions of self and others that are more positive in affective tone and integrated. Our empirical findings suggest that TFP results in significant clinical changes, and in positive changes in the conceptions of self and others, as measured by a reflective functioning scale obtained from the Adult Attachment Interview.

RS8.
CLASSIFICATION OF PSYCHOSES: ARE DISEASE SPECTRA AND DIMENSIONS MORE USEFUL FOR RESEARCH AND TREATMENT PURPOSES?

RS8.1.
THE PSYCHOTIC CONTINUUM: FIVE SYNDROMES REQUIRE TWO BRAIN DIMENSIONS

T.J. Crow, R. Gimenes
Warneford Hospital, Oxford, UK

Since the formulation of the type 1 and type 2 syndrome hypothesis, there has been continued interest in dimensional approaches to schizophrenia. But these need to take account also of the continuum concept that schizophrenia is not a discrete entity. From a review of the literature on syndromes and precursors, we conclude that five syndromes (positive, negative, incoherence, depression, mania) are necessary, and each can be related to the components of language. We now propose that these syndromes can be understood in terms of the four quadrants of association cortex that are defined by the cerebral torque, the bias from right frontal to left occipital across the anteroposterior axis. The torque constitutes relative thinning of the cortex on one side compared to the other, an anatomical change that gives directionality to inter-hemispheric connections and separates thought, the precursor of speech, from speech production, and meaning from speech perception. According to this concept, the syndromes of psychosis are the extremes of variation in brain structure related to the species faculty for language. This faculty depends upon the language circuit created by the torque, an anatomical feature that has its genetic origin in the Homo sapiens speciation event.

RS8.2.
CATEGORICAL VERSUS DIMENSIONAL DIAGNOSTICS IN PSYCHIATRY

M. Musalek
Anton Proksch Institute, Vienna, Austria

One of the main reasons for the dragging progress in treatment and research strategies in psychiatry are the differing standpoints of leading psychiatrists to classify major psychiatric disorders. The analysis of the historical development of the currently used classification systems indicates that sticking to established terms and methodologies more and more develops to an obstacle in research and treatment. In the light of the development of DSM-V and ICD-11, the urgent question is raised: can we overcome this dilemma? Is the concept of a psychotic continuum really incompatibly opposed to the concept of different diseases or is there a not yet known link between them? Should we focus research and treatment better on well defined psychopathological syndromes than on distinct diagnoses? Is the differentiation of disease spectra and dimensions of more heuristic value for modern research methodologies than to stick on established disease entities like bipolar (affective) disorders and schizophrenic disorders? The prerequisites for the development of a new generation of classification systems are going back to clinical ground and empirical realities and leaving dogmatic ideation aside.

RS8.3.
CYCLOID PSYCHOSES FILL THE GAP BETWEEN SCHIZOPHRENIC AND (BIPOLAR) AFFECTIVE DISORDERS

E.J. Franzek
Bouman Mental Health Care, Rotterdam, The Netherlands

The concept of cycloid psychoses is traced back to the beginning of the 20th century, and since then many scientists and clinical psychiatrists have been dealing with these "atypical psychoses". There is a body of research showing that cycloid psychoses have a low heritability and are mainly caused by neurodevelopmental disturbances. There are no prodromal negative symptoms before the onset of the disease and there is a liability of developing psychotic symptoms triggered by stress, life events and stimulating drugs. The onset is acute, within days or within a few weeks; the course is mostly bipolar, with depressive and manic features and remittent in the long run. There are no long lasting positive and negative symptoms. However, after several psychotic episodes, strategies of coping with stress are often diminished and little or even normal psychosocial stress situations can provoke psychotic relapse. Operational criteria to distinguish cycloid psychoses from schizophrenia and bipolar affective psychoses are presented. Recent research points out that it is worthwhile to

carry on studying these psychoses with modern strategies and technologies. Cycloid psychoses are hypothesised as being a spectrum of neurodevelopmental disorders placed between the (bipolar) affective and the schizophrenic spectrum of psychoses.

RS9.
RECENT ADVANCES IN PSYCHIATRIC GENETICS

RS9.1.
GENETIC PREDICTORS OF ILLNESS AND TREATMENT RESPONSE

A. Serretti
Institute of Psychiatry, University of Bologna, Italy

The recent rapid developments in psychiatric genetic research produced more confusion than clarity in many researchers even in the same field. The supposed effect of gene variants in psychiatric disorders changed during the last couple of decades. Initial findings suggested that single gene variants could be a sufficient cause of bipolar disorder or schizophrenia. The following disillusionment leaded to the hypothesis of genes as at least a cause of a subtype of each disease. Also this hypothesis was not confirmed, and during the last few years the huge technical advances flooded journals with a large number of scattered associations in many different directions. For schizophrenia, a few susceptibility genes (including dysbindin, neuroregulin-1, DAOA, DISC-1) have been consistently replicated across different samples. A similar situation exists for bipolar disorder (BDNF, DAOA, FAT, HTTLPR among the others). Depression, anxiety, and the rest of adult and child disorders, as well as personality disorders, are much less informative. Focusing on pharmacogenetics, again a large number of studies have been performed, both in schizophrenia and mood disorders. Globally, results are not so strong and universally replicated to be applied in clinical practice; however, they are so frequently reported that cannot be due to chance. In conclusion, gene variants influence human behavior, liability to disorders and treatment response. Many of them are supposed to do so in a subtle, interconnected and environment modulated way. The final stage of research will be an individualized profile of susceptibilities to be used in clinical practice.

RS9.2.
GENETICS OF MOOD DISORDERS

N. Craddock
University of Cardiff, UK

The enormous public health importance of mood disorders, when considered alongside their substantial heritability, has stimulated much work, predominantly in bipolar disorder but increasingly also in unipolar depression, aimed at identifying susceptibility genes using both positional and functional molecular genetic approaches. The advent of powerful molecular genetic tools, such as genome-wide association studies of single nucleotide polymorphisms and measurement of copy number variation, has made a major impact on understanding of common non-psychiatric diseases and is starting to produce replicable findings in psychiatric phenotypes, including mood disorders. Very large samples (thousands or tens of thousands of samples) are needed and, hence, collaborations are crucial. In bipolar disorder, genes implicated at genome-wide levels of statistical significance include CACNA1C and ANK3. The product of both genes is involved in ion channel function, suggesting a key mechanism of importance in the pathogenesis of bipolar disorder.

RS9.3.
GENETICS OF SCHIZOPHRENIA

M. Gennarelli
Department of Biomedical Sciences and Biotechnology, University of Brescia, and Genetic Unit, IRCCS Fatebenefratelli, Brescia, Italy

Schizophrenia is a neurodevelopment disorder with a strong genetic component and the heritability was estimated approximately at 80%. The current working hypothesis for genetic influences in schizophrenia is the "common disease-common allele" model, in which the illness is caused by a combination of common alleles, each contributing a modest effect. On this basis, several candidate genes have been identified, using linkage and association analysis approach in families and case control studies in small samples of different ethnic groups. However, replication in large samples and preliminary results of genome-wide association studies fail to identify any specific risk variant. These results are probably due to genetic heterogeneity. This is confirmed, at least in part, by the recent identification of high prevalence structural genome variants in sporadic cases of schizophrenia, suggesting that rare "de novo" germline mutations contribute to disorder susceptibility.

RS9.4.
GENETICS OF ANXIETY DISORDERS

K. Domschke
Department of Psychiatry, University of Muenster, Germany

Twin studies propose a strong genetic contribution to the pathogenesis of panic disorder, with a heritability of about 48%. The present paper provides an overview of results from linkage and cytogenetic studies in panic disorder, and of association studies yielding support for several candidate genes contributing to the genetic risk for panic disorder, such as the adenosine A2A receptor, the catechol-O-methyltransferase (COMT), the monoamine oxidase A (MAO-A) and the serotonin receptor 1A ($5\text{-}HT_{1A}$) genes. Additionally, evidence for a gene-environment interaction between A2A variants and caffeine consumption is presented. Finally, functional magnetic resonance activation in brain regions critical for emotional and learning processes has been proposed as a promising intermediate phenotype for genetic studies in psychiatric disorders. Thus, applying an imaging genetics approach, recent findings with respect to the genetic influence of COMT and $5\text{-}HT_{1A}$ variants on neuronal activation correlates of emotional processing in panic disorder are reported.

RS10.
ARE WE WORKING WITH THE RIGHT CONCEPTS IN ALZHEIMER'S DISEASE?

RS10.1.
IS ALZHEIMER'S DISEASE A REAL DISEASE ENTITY?

I. Skoog
University of Gothenburg, Sweden

Since being described in 1907, Alzheimer's disease has been characterised by the presence of plaques and tangles and associated with a profound memory and language disorder that leads to a progressive dementia, loss of activities of daily living and death. It was initially used to describe a dementia in younger patients, but for many years now includes the more common late onset form which is said to

account for over fifty per cent of dementia cases in the elderly. However, there has always been a close relationship with vascular deterioration in the brain and indeed the risk factors for Alzheimer's disease are exactly the same as those for vascular and cerebrovascular disease. This paper looks at epidemiological data bases from Sweden, UK and USA to explore the relationship between the risk factors and the cognitive decline we classically describe and highlight the role that common vascular risk factors play in contributing to the clinical condition we describe. It also looks at how the presence of plaques and tangles relates to the clinical phenotype and argue that the finding that significant pathology can exist with no clinical symptoms suggests pathology is not a diagnostic gold standard. Plaques and tangles may not be sufficient to explain the dementia in Alzheimer's disease and other mechanisms are required to lead to clinical dementia.

RS10.2.
COGNITIVE DECLINE AS A PROCESS OF FRAILTY

K. Rockwood
Dalhousie University, Halifax, Canada

On average, cognition declines with age, but this average declines masks considerable heterogeneity. While many people decline, in others cognition is largely stable, and in yet others, improvement occurs. The chances of improvement becomes less likely as overall cognitive performance worsens, but can clearly be detected especially in the earlier stages of dementia. How to model the heterogeneity of cognitive decline in older people is a question of interest to clinicians, population health planners and providers of interventions used to treat dementia. Even so, it has been comparatively under-studied, with the "bucket" metaphor (we start with a bucket of cognitive reserve, which drains out over time) still dominating. This paper contrasts that approach with a dynamic model of changes in cognition. The model is based on a stochastic theory of ageing as the accumulation of deficits, and borrows from work done to evaluate deficit accumulation in relation to frailty. Four parameters can be estimated from the model, and have intrinsic sense in relation to the usual probabilistic reasoning applied by clinicians. They also offer new targets for understanding how changes in the brain in old age are shaped by events throughout the life course, and where the impact of preventive manoeuvres might reside.

RS10.3.
IMMUNITY, INFLAMMATION AND THE NEED FOR EARLY INTERVENTION IN ALZHEIMER'S DISEASE

R. Bullock
Kingshill Research Centre, Swindon, UK

The current research on amyloid treatments in Alzheimer's disease is producing unexpected results. Amyloid imaging shows that the protein builds up in the pre-dementia phases but plateaus at the time of the clinical presentation. The first follow-up studies of immunotherapy show plaque clearance, but little direct clinical benefit. This suggests amyloid is not as directly involved in clinical Alzheimer's disease as once was thought. However, the genetics would dictate that it is, as the only genes isolated to date are mutations concerned with amyloid and its processing. Perhaps the amyloid cascade we should be considering is actually a three stage process where age/genetic/risk factor related failure of amyloid clearance leads to plaque formation and then to inflammatory response. The consequences of neuroinflammation seem to explain the clinical findings and natural history in a more coherent way than the current models. This paper explores the evidence for this position and looks at how research needs to develop in the future. If moderate to severe Alzheimer's disease is caused through a different process, we should be looking at doing studies in non-demented Alzheimer's disease patients (formerly called amnestic mild cognitive impairment) and possibly mild Alzheimer's disease, as these represent a potentially more homologous "amyloid/Alzheimer's disease" group, who are likely to be younger with less vascular contamination. Current clinical descriptions, licensing arrangements and study designs may be misdirecting the development of effective interventions that are needed with the increasing prevalence of this condition.

RS11.
REACTIONS OF CHILDREN AND ADOLESCENTS TO TRAUMA: FROM COPING STRATEGIES TO PTSD

RS11.1.
RECENT DEVELOPMENTS IN RESEARCH ON CHILD TRAUMA

E. Caffo
Mother and Child Department, University of Modena and Reggio Emilia, Modena, Italy

Mental health professionals are increasingly asked to address the needs of children and adolescents exposed to traumatic events, either as individuals (e.g., sexual and physical abuse, road traffic accidents) or in groups (e.g., war, terrorism, natural disasters). Studies on a wide range of age groups, populations and types of trauma showed that traumatised children and adolescents are at high risk of developing different behavioural, psychological and neurobiological effects. Several recent studies analyse a wide range of early traumatic events, which can be directly or indirectly experienced (including the exposure through mass media). These studies raise many fundamental questions about the validity of current diagnostic criteria for post-traumatic stress disorder. A common problem in trauma research with children is the presence of many limitations: studies are often retrospective, use self-reports questionnaires and results may not be generalized (i.e., they are trauma or population specific). There is a lack of well designed studies, in particular addressing treatment of post-traumatic symptoms in children and adolescents. Moreover, much of the current research remains pathology driven, with a few studies focusing on youth resilience and protective factors.

RS11.2.
UNDERSTANDING AND INTERVENING WITH CHILDREN, FAMILIES AND COMMUNITIES EXPOSED TO DISASTERS

N. Laor
Community Mental Health Center, Sackler School of Medicine, Tel-Aviv University, Tel-Aviv, Israel

Mass disasters are a serious threat to both the existence and the identity of individuals and communities, which expresses itself in general confusion, social disarray, intra- and inter-group conflict, competition for limited resources and the collapse of regulative ideologies. Similar phenomena can be observed in the community of child mental health professionals. This paper focuses on some psycho-sociological processes that take place in the child mental health community under mass disaster situations. We describe the important role mental health professionals could play for the community at large (with children and families as well as with schools and whole communities) in the various phases of the disaster. Further, we describe how reactive, adaptive, and meta-adaptive social systems cope with the threat and

the actual effects of mass disasters. We propose basic principles to guide the integration of mental health professionals with other social agents active in the community, and underscore the importance of empowering mediators in the process of community recovery after disaster. Finally, we describe a teacher-mediated model of post-disaster clinical intervention in schools, which focused on the psychological reactivation of students and teachers.

RS11.3.
PROTECTIVE FACTORS IN LONG-TERM OUTCOME FOLLOWING A DISASTER IN CHILDHOOD

A.C. McFarlane
University of Adelaide Node, Centre of Military and Veterans Health, Adelaide, Australia

In a longitudinal study of 1,014 individuals who were exposed to a major bushfire disaster in childhood, the role of protective factors in adult mental health outcomes was explored. Within this cohort and the comparison group, there were large numbers of individuals exposed to traumatic events other than the disaster. By comparing individuals who had high levels of trauma exposure who did and did not develop post-traumatic stress disorder, a series of indices of resilience were identified, including patterns of childhood behaviour and attachment behaviours in the family environment.

RS11.4.
RISK AND PROTECTIVE FACTORS IN DEVELOPMENT OF POST-TRAUMATIC STRESS DISORDER

Y. Yazgan
Marmara University, Istanbul, Turkey; Yale Child Study Center, New Haven, CT, USA

Environmental (e.g., degree of exposure, mother's responses) and personal (e.g., past trauma, previous functioning) factors may influence the child's long-term response to a trauma, either "man-made" or "natural". For example, more severe symptoms following exposure to a missile attack were associated with physical displacement, living in a family with inadequate cohesion, and having a mother with poor psychological functioning. Family factors have received a well deserved attention in data based and observational studies of Turkish earthquakes. Parental somatization was identified as a predictor of acute child distress, accounting for 11.2% of the total variance. A significant relation was demonstrated between the diagnosis of post-traumatic stress disorder (PTSD) and the loss of family members and neighbors in another study of the Marmara earthquake. In the face of a great number of deaths following the Marmara earthquake, the traditionally well-established pattern of coming together and dealing with loss, and increased social cohesion in response to the collective loss, have been suggested as a "protective" factor, while empirical support is not yet available. In a longitudinal study conducted during the 4 year period following the Marmara earthquake, a composite index of potential risk factors such as stressful/traumatic episodes before and after the earthquake and degree of exposure to the earthquake, as well as frequently associated factors such as age and gender, were not related to symptom decrease. However, when daily functioning in academic, behavioral and social domains was taken as the outcome measure, higher levels of functioning before the earthquake, participating in the school reactivation program and having fewer post-traumatic symptoms at three years post-disaster were associated with better daily functioning three and a half years after the earthquake. Measures of daily functioning, beyond symptomatology, should be further utilized for understanding the role of risk and protective factors in development of or resilience against PTSD.

RS12.
DELAY IN TREATMENT OF FIRST EPISODE OF PSYCHOSIS: PATHWAYS TO CARE AND IMPACT OF INTERVENTIONS

RS12.1.
THE POTENTIAL SIGNIFICANCE OF TREATMENT DELAY IN PSYCHOTIC DISORDERS

R. Norman
Departments of Psychiatry and Epidemiology and Biostatistics, University of Western Ontario, London, Ontario, Canada

Recent interest in early intervention for psychotic disorders has been partially predicated on the possible significance of treatment delay, particularly duration of untreated psychosis, as an influence on clinical and functional outcomes once treatment is initiated. This paper provides an overview of research on treatment delay and outcomes and a critical examination of the extent to which the current evidence supports the hypothesis that a longer period of treatment delay compromises the potential for recovery. At this point, there is substantial, although not consistent, evidence that greater delay between the onset of psychotic symptoms and obtaining treatment is associated with poorer clinical outcomes. This relationship does not appear to result entirely from confounding with other prognostic indicators. The mechanism by which treatment delay influences outcomes is uncertain. Given the potential importance of treatment delay, it is essential that the field address challenges in reliably assessing components of duration of untreated psychosis and pathways to care.

RS12.2.
THE PATHWAYS TO MENTAL HEALTH CARE OF FIRST-EPISODE PSYCHOSIS PATIENTS: A SYSTEMATIC REVIEW

K. Anderson, R. Fuhrer, A. Malla
Department of Epidemiology and Biostatistics, McGill University, Montreal, Canada

The pathways to care of patients suffering from a first psychotic episode are complex, and involve such diverse contacts as general practitioners, psychiatrists, emergency services, educational counselors, social services and the criminal justice system. We conducted a systematic review of the literature on the nature and determinants of the pathways to care of patients experiencing a first episode of psychosis. Four databases (MEDLINE, Healthstar, EMBASE, PsycINFO) were searched to identify articles published between 1985 and 2008. We also conducted a manual search of reference lists, relevant journals, and the ISI Web of Knowledge. Studies were included in the review if they used an observational design and assessed the pathways to care taken by patients with a first episode of psychosis. The included studies (n=23) explored the first contact in the pathway to care and/or the final referral source that led to successful treatment. In ten of the fifteen studies that provided data on the first contact in the pathway, the point of contact for the majority of patients was a physician. However, in seven of the fifteen studies that used the referral source as a measure of care pathways, the majority of patients used emergency services as the source of referral. Very few studies (n=8) explored the sex, socioeconomic, ethnic or geographic determinants of the pathway. Further research is needed to understand the

sequencing of the pathway to care of patients experiencing a first episode of psychosis and the determinants of these pathways to better inform the provision of mental health services.

RS12.3. PATHWAYS TO CARE AND DURATION OF UNTREATED PSYCHOSIS: THE IMPACT OF CULTURE AND ETHNICITY

S.P. Singh
Health Sciences Research Institute, University of Warwick, Coventry, UK

Ethnic minority patients in the UK experience adverse pathways into care in early psychosis. This has been attributed to "institutional racism" in psychiatry, despite lack of evidence to substantiate this charge. Early intervention services aim to deliver effective intervention as close as possible to the emergence of psychosis, thereby reducing duration of untreated psychosis (DUP) and promoting early and enduring recovery. Early intervention services are therefore ideally placed to explore ethnic and cultural factors that contribute to such delays and identify service response to reduce or eliminate ethnic differences. Two literature reviews of structured measurement tools in early psychosis were conducted: one for measuring pathways to care and the other for measuring DUP. In 15 studies of pathways to care in early psychosis, six different measures have been used. While ethnic minority status is associated with adverse pathways in UK studies, most pathways measures do not include ethnic and cultural variables which determine help-seeking behaviours. The DUP literature shows a reported mean DUP ranging from 25 weeks to 166 weeks. The relationship between long DUP and poor outcome is confounded by an interaction between premorbid dysfunction, insidious onset, and poor clinical course. Cultural variation in explanatory models of illness may be a major determinant of help seeking and hence DUP, but this has received very little attention in published reports. While the conceptual and methodological problems in quantification of pathways to care and DUP have been well documented, the key role of ethnic and cultural variations in help seeking is as yet poorly understood.

RS12.4. INTERVENTIONS TO REDUCE DELAY IN TREATMENT OF PSYCHOSIS: DO THEY WORK?

A. Malla
Department of Psychiatry, McGill University, Montreal, Canada

This paper reviews different strategies, involving intervention at the systemic as well as community level, used to reduce delay in treatment of psychosis. Most such interventions have attempted to reach the entire community through the media, direct mailing, advertising in multiple modalities, contact with primary health care professionals (mostly physicians) and educational professionals, and sometimes case detection teams or screening clinicians for new cases. Studies evaluating the impact of such interventions have used quasi-experimental designs, either parallel or historical control, to study the impact of such interventions. One recent study using a parallel control design conducted in Norway has shown a significant effect of a community focused early case detection intervention on reduction of duration of untreated psychosis (DUP) prior to entry into treatment. Results of a Canadian study using a historical control design of a community wide early case identification intervention have been generally negative. While the latter study failed to produce an overall significant decrease in DUP, patients entering treatment within the first year shifted further to earlier entry into treatment and there was no impact on patients with much longer DUPs. This impact was well sustained for three additional years following the cessation of the active intervention, with minimal maintenance, mostly consumer driven. These differences in results are likely related to differences in composition of base populations, access to primary health care, study design and use of specific components of each intervention. An alternative approach of working directly with potential sources of referral, using the technique of academic detailing, is presented briefly within the context of a recently initiated study.

RS13. MENTAL HEALTH CARE IN EUROPE: PROBLEMS, PERSPECTIVES AND SOLUTIONS

RS13.1. THE CURRENT STATE OF MENTAL HEALTH CARE IN ITALY: PROBLEMS, PERSPECTIVES AND LESSONS TO LEARN

G. de Girolamo
Health Care Research Agency, Emilia Romagna Region, Bologna, Italy

After legislative changes in 1978, Italian psychiatry underwent a thorough overhaul, with the gradual closure of all mental hospitals. A nation-wide network of departments of mental health now deliver outpatient and inpatient care, but also run semi-residential and residential facilities (the latter with 2.9 beds per 10,000 inhabitants). Hospital care is delivered through small psychiatric units (with no more than 15 beds). There are also many private inpatient facilities operating in Italy, and the number of private inpatient beds per 10,000 inhabitants exceeds the number of public beds; overall there are 1.7 acute beds per 10,000 inhabitants, one of Europe's currently lowest numbers. There is marked quantitative and qualitative variation in the provision of out- and inpatient care throughout the country, and service utilization patterns are similarly uneven. Studies examining quality of life report a fairly high degree of patient satisfaction, whereas patients' families frequently bear a heavy burden. In conclusion, the Italian reform law led to the establishment of a broad network of facilities to meet diverse care needs. Further efforts are required to improve quality of care and to develop a more effectively integrated system. Greater attention must be paid to topics such as quality of care and outcomes, public and private sector balance, quality of care, and the coordination of various resources and agencies.

RS13.2. THE CURRENT STATE OF MENTAL HEALTH CARE IN FRANCE

M. Coldefy
Institute for Research and Information in Health Economics, Paris, France

Mental health care in France is a large and important sector of activities, also as compared to other European countries. With 22 psychiatrists and 98 nurses for 100,000 inhabitants, France ranks seventh in the world in terms of number of mental health professionals, and is at the fifteenth place for the number of beds (12 beds per 100,000 inhabitants). Its innovative policy and organisation of public mental health care in "sectors", developed in the 1960s, has made French mental health care qualitatively innovative. However, nearly 50 years after, the implementation of this policy is still incomplete. Strong geographical variations in staffing and logistics have been noted, as well

as a structural imbalance between hospital-based and outpatient care. Available resources are decreasing as the demand is rising (+74% of adult patients treated in the public sector over the last 15 years). The creation of facilities and teams not well integrated in the mental health care system, and the enduring gaps between health care, social care, the educational and juridical systems, are often translated in poor coordination and difficult integration between different roles and functions. Based on this critical evaluation of mental health care in France, in 2005 the government has set up a psychiatric and mental health care plan covering the period 2005-2008. This aims at improving the coordination and integration between different sectors of health and social care; to promote the involvement of patients, families and professionals in decision-making and to launch antistigma programmes; to improve the quality of care and research activities; and to tackle specific disorders or problems presented by specific population groups through the implementation of targeted programmes. However, criticisms about the real functioning of this plan have been expressed by different stakeholders.

RS13.3. DEVELOPMENTS IN ENGLISH MENTAL HEALTH CARE: 1988 TO 2008

G. Glover
University of Durham, UK

Mental health care services in England have developed considerably in the last 20 years. During the late 1980s and early 1990s, the priority was to develop adequate coordination for the non-institutional care approaches for people with severe mental illnesses, which were, by then, becoming the normal approach. Following a major government review in 1998, the focus has been on developing uniform access to home-based care teams for acute mental health crises, early intervention services for psychosis and assertive outreach teams for people with chronic illness at risk of frequent relapse. Since 2000, a number of detailed data sources have been set up documenting their structure and activity. An annual service mapping exercise has been carried out, covering services for mentally ill adults of working-age each year since 2000, and children and adolescents since 2002. A dataset documenting the content and timing of mental health care for working-age and older adults has been in place since April 2003. This paper outlines the principles underlying the developments, attempts to quantify the extent of the changes overall, and touches briefly on the issue of how consistent the changes have been in different parts of England.

RS13.4. MENTAL HEALTH CARE IN GERMANY: CURRENT STATE AND TRENDS

H.J. Salize, W. Rössler, T. Becker
Central Institute of Mental Health, Mannheim, Germany; Psychiatric University Hospital, Zurich, Switzerland; Psychiatric University Hospital, Ulm, Germany

Germany turned towards community-based mental health care in the mid seventies, within a general climate of social and political reform. The continuing deinstitutionalisation process and the implementation of community mental health services was considerably affected by the reunification of East and West Germany in 1990, which required dramatic changes in the structure and quality of the mental health care system of the former German Democratic Republic. Overall, German mental health care is organised as a subsidiary system, where planning and regulating mental health care is the responsibility of the 16 federal states. So, German mental health care provision is spread among many sectors and characterised by considerable regional differences. A key characteristic is the particularly wide gap between inpatient and outpatient services, which are funded separately and staffed by different teams. However, the momentum of the psychiatric reform has been strong enough to assimilate the completely different mental health care system of the former German Democratic Republic and, in the course of a decade, to re-structure mental health services for an additional 17-18 million new inhabitants. In an ongoing struggle to adapt to changing administrative setups, legal frameworks, and financial constraints, psychiatry in Germany is currently facing specific problems and is seriously challenged to defend the considerable achievements of the past. A major obstacle to achieving this aim lies in the fragmented system of mental health care provision and mental health care funding.

RS14. OBSESSIVE-COMPULSIVE DISORDERS: TRANSLATIONAL APPROACHES AND NEW THERAPEUTIC STRATEGIES

RS14.1. BEHAVIORAL ADDICTION, IMPULSIVITY AND OBSESSIVE-COMPULSIVE DISORDER

S. Pallanti, S. Bernardi
Department of Psychiatry, University of Florence, Italy; Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, USA

As part of the research planning agenda for the DSM-V concerning obsessive-compulsive-related disorders, experts from academic medical centers around the world suggest the creation of a new diagnostic category that includes behavioral and substance addictions. Chemical and behavioral addictions, characterized by impulsive choice, reward sensitivity, and involvement of fronto-striatal brain circuitry, with frontal lobe deficits, are conceptualized are as parallel category to obsessive-compulsive disorder (OCD) spectrum. Craving and impulsivity, in fact, are complex phenomena that involve different brain circuitries and neurobiological factors. Both are present in different psychiatric disorders, with different clinical presentations and phenomenologies. One of those forms would be an obsessive-like craving, where craving is experienced as an intrusive thought resulting in impaired control. This obsessive-compulsive subtype of craving might be correlated, similarly to OCD, to serotonin dysfunction. According to this model, the most fully documented neurobiological findings regarding impulse control disorder involve serotonin. Evidence for the involvement of serotonin in pathological gambling comes from challenge study results, such as an increased prolactin response to the serotonergic agonists m-CPP and sumatriptan. Challenge studies analysing growth hormone response to clonidine pointed out also a different noradrenergic role in pathological gambling. An involvement of the prefrontal cortex and an action of lithium on this brain area is hypothesized on the basis of functional neuroimaging data.

RS14.2.
OBSESSIVE-COMPULSIVE DISORDER: CAN TRANSLATIONAL RESEARCH GUIDE TREATMENT DEVELOPMENT?

N. Fineberg
Queen Elizabeth II Hospital, University of Hertfordshire, Welwyn Garden City, UK

Obsessive-compulsive disorder (OCD) is a disabling neuropsychiatric disorder. First-line treatment with selective serotonin reuptake inhibitors (SSRIs) or cognitive-behavioural therapy (CBT) is associated with partial symptomatic improvement and response failure in roughly 40% of cases. Second-line treatment includes raising the dose level, changing to another SSRI or clomipramine or adding an antipsychotic agent, but many cases still fail to improve. SSRI-resistance is associated with co-existent neurological pathology, including tics and attention-deficit/hyperactivity disorder. Novel somatic techniques, such as deep brain stimulation within neural pathways connecting frontal lobes with subcortical structures, have shown signs of promise in small numbers of refractory cases, though the optimal anatomical location for intervention remains uncertain. Translational techniques are advancing our understanding of the neurobiological basis of OCD and may help identify new treatment targets. Impaired response inhibition and cognitive flexibility (set-shifting) have been demonstrated in OCD patients and unaffected family members. They exist in the absence of medication confounds, implying that they represent trait markers for the disease. Their neurochemical basis remains unclear, but studies on animals and human volunteers suggest that noradrenaline and dopamine rather than serotonin receptors are involved. Structural brain imaging in OCD families has identified specific changes in distributed neural systems. Compared with controls, diminished grey matter density was observed in areas of frontal cortex, whereas increased density was found in striatal and parietal zones. These changes correlated with the magnitude of neurocognitive impairment, implying a neurocognitive endophenotype for OCD. They are compatible with theories implicating failure of top-down cortical inhibition of striatally-mediated behaviours. Their clarification may help advance somatic, pharmacological and behavioural therapies.

RS14.3.
THE HAIR-PULLING HABIT: TRANSLATIONAL APPROACHES AND NEW INSIGHTS

I. Pampaloni, S. Chamberlain
Queen Elizabeth II Hospital, University of Hertfordshire, Welwyn Garden City; Addenbrooke's Hospital, University of Cambridge, UK

Trichotillomania is a hidden and neglected neuropsychiatric condition characterised by repetitive hair-pulling, which leads to noticeable hair loss. Although currently classified as an impulse control disorder, it has been suggested that trichotillomania may have more in common with putative obsessive-compulsive spectrum conditions, including obsessive-compulsive disorder. Recent insights have been gleaned into the pathophysiology and neurochemical substrates of this condition, based on animal models and human studies using objective neurocognitive assessment and whole-brain computational morphometry. Animal models of trichotillomania, such as the hoxb8 knockout mouse, have been linked to fronto-striatal developmental abnormalities. Trichotillomania was associated with impaired inhibition of motor responses, a cognitive function dependent on a right-lateralised fronto-striatal network and noradrenaline neurotransmission. In a whole-brain structural analysis, patients with trichotillomania showed grey matter abnormalities in regions such as the frontal lobes, cingulate, putamen, and amygdalo-hippocampal formation. These neural regions mediate top-down cognition, motor habit generation, and affect regulation. Improved understanding of the neural and neurochemical substrates of trichotillomania will inform future diagnostic classification and treatment algorithms, and optimise our understanding of other conditions characterised by repetitive habits.

RS14.4.
AUTISM AND OBSESSIVE-COMPULSIVE DISORDER

E. Hollander
Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, USA

The repetitive behaviors seen in autism and in autism spectrum disorder (ASD: Asperger's syndrome, autism and atypical autism) phenotypically resemble those seen in obsessive-compulsive disorder (OCD) and Tourette's syndrome, disorders in which structural and functional abnormalities of the basal ganglia are present and correspond to the severity of repetitive behaviors. Increased right caudate volume in autism is of interest, since this has also been observed in OCD patients. Increased volume of the right caudate and total putamen positively correlated with greater repetitive behaviors, supporting the hypothesis of basal ganglia dysfunction associated with repetitive behaviors in autistic adults.

RS15.
FIRST AND SECOND GENERATION ANTIPSYCHOTICS: DATA FROM THE EUFEST STUDY

RS15.1.
EFFECTIVENESS OF ANTIPSYCHOTIC DRUGS IN FIRST-EPISODE SCHIZOPHRENIA AND SCHIZOPHRENIFORM DISORDER: AN OPEN RANDOMIZED CLINICAL TRIAL

R.S. Kahn
Department of Psychiatry, Rudolf Magnus Institute of Neuroscience, University Medical Centre, Utrecht, The Netherlands

A second generation of antipsychotics (SGAs) was introduced over a decade ago for the treatment of schizophrenia. However, despite a multitude of studies, their purported clinical superiority is still a matter of debate. This open study, with 50 sites in 14 countries, included 498 first-episode schizophrenia patients with minimal prior antipsychotic treatment. Follow-up was one year with treatment discontinuation as primary outcome. Secondary outcomes were (re)hospitalization rates, psychopathology, severity of illness, and measures of safety and tolerability. Patients were randomized to haloperidol (1-4 mg/day; n=103), amisulpride (200-800 mg/day; n=104), olanzapine (5-20 mg/day; n=105), quetiapine (200-750 mg/day; n=104), or ziprasidone (40-160 mg/day; n=82). Analysis was by intention-to-treat. The proportions of patients who discontinued treatment within 12 months were 72% for haloperidol, 40% for amisulpride, 33% for olanzapine, 53% for quetiapine, and 45% for ziprasidone. Comparisons with haloperidol showed lower risks for discontinuation for amisulpride (hazard ratio, HR 0.36; 95% CI 0.23-0.55), olanzapine (HR 0.27; 95% CI 0.17-0.42), quetiapine (HR 0.49; 95% CI 0.33-0.73), and ziprasidone (HR 0.47; 95% CI 0.29-0.76). Patients on

haloperidol showed similar improvements in psychopathology and in hospitalization rates, but displayed more signs of parkinsonism and used more anticholinergics than patients treated with the other antipsychotics. This pragmatic trial suggests that clinically meaningful long-term antipsychotic treatment is achievable in the first-episode of schizophrenia. However, due to the discrepancy in discontinuation rates and symptomatic improvement between haloperidol and the SGAs it cannot be concluded that SGAs are more efficacious than haloperidol in the treatment of these patients.

RS15.2. SAFETY AND TOLERABILITY OF FIRST AND SECOND GENERATION ANTIPSYCHOTICS

W.W. Fleischhacker, for the EUFEST group
Department of Biological Psychiatry, Medical University of Innsbruck, Austria

The European First Episode Schizophrenia Trial (EUFEST) provides an important data set on safety and tolerability of old and new antipsychotics in a large sample of first-episode patients hardly ever exposed to antipsychotics. Patients were randomised to haloperidol (1-4 mg/day), amisulpride (200-800 mg/day), olanzapine (5-20 mg/day), quetiapine (200-750 mg/day), or ziprasidone (40-160 mg/day) for a study duration of one year. Discontinuation due to side effects on quetiapine and olanzapine was lower than on haloperidol. Higher proportions of patients on haloperidol or ziprasidone experienced akathisia as compared with patients on the other antipsychotics (26-28% vs. 10-16%; $p<0.01$) and more patients on haloperidol showed signs of parkinsonism than patients assigned to any of the second generation antipsychotics (34% vs. 6-17%; $p<0.001$). Anticholinergic use was most frequent in patients on haloperidol. The proportions of patients being overweight were high (34-54%) and did not differ between treatment arms; however, weight gain (>7% from baseline) and weight change were highest for patients on olanzapine and lowest for patients on haloperidol or ziprasidone (e.g., 86% on olanzapine showed >7% weight gain vs. 39-53% for the other drugs). No difference was found between treatment arms concerning changes in fasting glucose, cholesterol, high- and low-density lipoprotein, fasting insulin, and triglycerides; 89% of patients on amisulpride had hyperprolactinemia, vs. 41-50% in patients on other antipsychotics ($p<0.001$). These results confirm those of other studies in similar samples with regard to safety differentiations between antipsychotics. Of note, younger patients appear to be at a considerably higher risk for weight gain than more chronically ill older patients.

RS15.3. COGNITIVE DYSFUNCTIONS IN FIRST EPISODE PATIENTS WITH SCHIZOPHRENIA

S. Galderisi
Department of Psychiatry, University of Naples SUN, Naples, Italy

Cognitive impairments are key features of schizophrenia, important determinants of poor psychosocial outcome and targets for treatment strategies. Their relationships with symptoms, drug treatment and duration of untreated psychosis remain controversial. Data collected early in the course of the illness are valuable to address these issues. However, in spite of the huge number of publications on cognitive impairment in schizophrenia, studies involving large cohorts of first episode schizophrenia patients are still scarce. The European First Episode Schizophrenia Trial (EUFEST) collected demographic, clinical, psychosocial and cognitive baseline data in 498 first episode patients with schizophrenia, schizophreniform or schizoaffective disorder, with minimal or no prior exposure to antipsychotics, and in 220 healthy subjects, comparable with patients for age, sex, race and education level of parents. Cognitive impairment, whose effect size ranged from -0.88 to -1.73, was observed in patients as compared to healthy controls. No association was found with the duration of untreated psychosis. Weak correlations were observed with psychopathological dimensions, mainly involving positive symptoms and disorganization. Gender, education and severity of reality distortion were independently associated with cognitive functioning, after controlling for age, depressive symptoms, tobacco smoking and cannabis use. EUFEST baseline cognitive findings confirm, in the largest sample of first-episode patients analyzed so far, with very short lifetime exposure to antipsychotics, that a moderate/severe cognitive impairment is already present early in the course of the illness. It has no association with the duration of untreated psychosis, involves several domains of cognition, and is largely independent from psychopathology.

RS15.4. THE IMPACT OF FIRST AND SECOND GENERATION ANTIPSYCHOTICS ON COGNITIVE PERFORMANCE

M. Davidson
Department of Psychiatry, University of Tel Aviv, Israel

The first wave of trials comparing second and first generation antipsychotics gave the former small advantages in terms of cognitive performance. This impression was not supported by a second wave of trials and by several large and independently funded trials. A large number of factors might explain these results, among which "practice effect" should not be overlooked. Most important, it should be considered that antipsychotics have not been screened or developed as pro-cognitive drugs, hence, the lack of pro-cognitive effect should not be surprising. The prevailing clinical impression is that individuals with schizophrenia suffer from easy observable cognitive impairment. However, when large populations of schizophrenic patients undergo neurocognitive testing, the composite scores distribution is moderately "shifted to the left", indicating that large proportions of the general population perform similar to these patients. Furthermore, up to 3% of the general populations have psychotic experiences. Since there exists no putative biological substrate for psychosis or for cognitive impairment, it could be hypothesized that they constitute independent comorbidities and have different biological substrates. If this hypothesis is correct, the same pharmacological intervention should be effective in cognitively impaired psychotic and non-psychotic (normal) individuals. Because trials in schizophrenia patients are burdened by several confounders, proof-of-concept trials of compounds hypothesized to enhance cognition in schizophrenia should first be carried out in non-psychotic individuals. Only compounds in whom a signal can be detected should be tried in schizophrenia patients, in whom much progress has been achieved in the methodology of measuring cognitive impairment.

RS16.
SUPPORTED EMPLOYMENT FOR PEOPLE WITH PSYCHOTIC DISORDERS

RS16.1.
INDIVIDUAL PLACEMENT AND SUPPORT IS EFFECTIVE ALSO IN EUROPE: EFFECTS ON CLINICAL CHARACTERISTICS AND THE PREVALENCE OF INPATIENT EPISODES IN PEOPLE WITH PSYCHOTIC DISORDERS

R. Kilian, R. Kalkan, T. Becker
Department of Psychiatry II, University of Ulm, Günzburg, Germany

This study applied a longitudinal path analysis for assessing the effects of an individual placement and support (IPS) program, in comparison with conventional vocational services (CVS), on psychopathology and hospitalization risk in people with schizophrenia. A randomized controlled trial including 300 patients with psychotic disorders (DSM-IV) was conducted in six European sites. Probability of employment, hospital admissions, and clinical outcomes were assessed at baseline and three follow-ups with 6 month intervals. A latent growth path model was computed to assess the longitudinal relationships between vocational intervention, probability of employment, psychopathology and risk of hospital admission. Participants in the IPS condition had a higher probability of being employed. The probability of employment was not affected by psychopathology at study onset. Participants who were employed at least for one day between baseline and first follow-up had a lower Positive and Negative Syndrome Scale (PANSS) score at first follow-up than participants who were not employed. An increasing probability of employment was related to an increase in psychopathological improvement. The probability of a hospital admission between first and second follow-up was lower for persons in the IPS condition and increased with an increasing PANSS score at the first follow-up. Thus, beyond increasing the probability of getting a job, the IPS intervention directly and indirectly supports the improvement of the clinical status and the reduction of hospitalization risk in patients with psychosis.

RS16.2.
INDIVIDUAL PLACEMENT AND SUPPORT IS EFFECTIVE ALSO IN EUROPE: EFFECTS ON SOCIAL FUNCTIONING AND DISABILITY

D. Wiersma, J.T. van Busschbach
University of Groningen, The Netherlands

Employment not only serves as a mean for living independently, but also as a way to gain respect from others, to have meaningful relationships and to occupy a certain position in the community. For people with severe mental disorders, paid work is generally one of the first activities that are abandoned because of the cognitive and emotional impairments and/or social discrimination. In the context of chronic schizophrenia, a disability in work performance generally will be present, and often with consequences for other social roles: social contacts, relationship with partner, participation in the family and in the broader society. In the EQOLISE study, individual placement and support (IPS) was found to be more effective than the usual vocational rehabilitative strategies in overcoming these barriers and helping clients to find paid work. In this paper we address the question as to whether the higher employment rates or IPS also lead to a more generalized improvement in overall functioning as measured by the Groningen Social Disability Schedule (GSDS-II). It is our expectation that actual work performance and experiences will increase feelings of empowerment and self-confidence, and so further help to improve functioning on other social roles, for example on the household role (independence in the household, financial management) and on the citizen role (interest in the world around, participation in society). This effect will also be stronger for IPS, since the IPS worker can provide coaching on the job and, by cooperating with the mental health team, can help to overcome problems on other life domains.

RS16.3.
WHAT NEXT IN SUPPORTED EMPLOYMENT IN PEOPLE WITH SEVERE MENTAL ILLNESS?

C. Lauber
Department of Psychiatry, University of Liverpool, UK

There is sufficient research evidence from North America and Europe that individual placement and support (IPS), a programme designed for vocational rehabilitation of people with severe mental illness, is more effective in finding and holding job in the open labour market than the traditional vocational rehabilitation services. However, between 40-60% of those treated with IPS are not successful in gaining a job in this market. This paper discusses potential new ways of adapting IPS to increase the rate of successful vocational integration. Promising ways are to combine either cognitive behavioural therapy (CBT) or cognitive remediation therapy with IPS. The latter has been extensively research in the US, whereas only very few and preliminary results are available for the combination of IPS and CBT. The paper also addresses the issue of all those who did not find a job with IPS, and provides data to better differentiate those who are better off in vocational services.

RS16.4.
TRAIN AND PLACE AND/OR PLACE AND SUPPORT: ARE THEY REALLY MUTUALLY EXCLUSIVE?

A. Fioritti, G. de Girolamo
Regione Emilia-Romagna, Bologna, Italy

Supported employment includes a variety of different techniques sharing a common "place and support" scheme. This philosophy of intervention has gathered a substantial bulk of evidence about its efficacy when compared with traditional "place and train" or sheltered intervention. However, these innovative strategies seem to penetrate very slowly in mental health services, raising the question of their implementation and harmonization with the general philosophy of services. Another point of discussion has to do with the actual number of people who either do not get a job with individual placement and support (IPS) or other forms of supported employment or do not keep it, once they have got it. This population is about half to two third, and this highlights the need for more sheltered or guided forms of job seeking. We propose a sequential model in which IPS and supported employment should be offered first to all patients who want to work, especially during the early stages of disorders, with no distinction of diagnostic status and disability level. Service offer should also include more traditional forms of employment, which should be made available only in case of repetitive failure with "place and support" schemes.

RS17.
PSYCHOPHARMACOLOGY IN EATING DISORDERS: WHY, WHEN AND HOW

RS17.1.
PSYCHOPHARMACOLOGY OF BULIMIA NERVOSA: OLD AND NEW PERSPECTIVES

K.A. Halmi
Weill Medical College, Cornell University, New York, NY, USA

Since bulimia nervosa was recognized as a distinct disorder, numerous randomized controlled trials with drugs in different pharmacological categories have been conducted. This paper discusses the rationale for choosing a drug that is likely to be most effective for the specific characteristics of the individual patient with bulimia nervosa. Evidence based treatment means adequate randomized controlled trials. Unfortunately, there are none to guide clinicians for bulimia nervosa patients who have additional specific comorbidities. Advice for pharmacological treatment for such patients must come from experienced clinicians. For example, a bulimia nervosa patient with mood dysregulation may benefit from a combination of the anticonvulsant oxcarbazepine and fluoxetine. Naltrexone may be effective for bulimia nervosa patients who have drug addictions. Risperidone and fluoxetine may benefit bulimic patients with severe borderline personality disorders.

RS17.2.
ARE ANTIPSYCHOTICS USEFUL IN THE TREATMENT OF ANOREXIA NERVOSA?

P. Monteleone, F. Brambilla, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Antipsychotic drugs have been used in the treatment of anorexia nervosa (AN) since the 1960s. Although the available evidence shows that the core psychopathology of AN is generally refractory to psychotropic medications, low dose of second generation antipsychotic drugs are currently prescribed for psychotic-like thinking, distressing anxiety and obsessionality. Recent case reports and non-controlled studies suggest that olanzapine (OLA) may benefit the specific management of underweight AN patients who have not responded to other treatment modalities. We performed a double-bind placebo-controlled study to investigate the psychobiological effects of OLA treatment combined to cognitive behavioural therapy (CBT) in AN. Thirty AN women underwent a 3-month course of CBT plus, at random and double-blind, either oral OLA (2.5 mg for 1 month, 5 mg for 2 months) or placebo (PLA). Body mass index (BMI), psychopathological aspects and homovanillic acid (HVA) blood concentrations were monitored at baseline and then monthly during the trial. BMI increased significantly but moderately in both treatment groups; the increase in BMI was significantly greater in the CBT+OLA-treated AN binge–purging patients than in restricted ones ($p=0.01$). Eating-related psychopathology improved in both treatment groups, without any significant difference between OLA+CBT and PLA+CBT treatments. Patients treated with OLA+CBT showed a significantly higher improvement in direct aggressiveness and Hamilton depression scale score than PLA-treated ones. Clinical changes did not correlate with plasma HVA changes. These data show that OLA can be significantly effective in improving specific aspects of AN, without inducing dramatic increases in body weight, as reported in other psychiatric patients.

RS17.3.
COMBINED NUTRITIONAL, PSYCHOLOGICAL AND PHARMACOLOGICAL TREATMENT OF BINGE EATING DISORDER

F. Brambilla, L. Samek, C. Mellado
Department of Psychiatry, Sacco Hospital, Milan, Italy

Binge eating disorder (BED) has been treated with nutritional therapy, psychotherapies or pharmacotherapies, with disappointing results in terms of full remission of symptomatology, long-lasting effects of treatments and relapses of the disorder. Since BED is a combination of physical and psychological pathologies, a successful treatment must take into consideration both types of impairments simultaneously. In this line, in a group of BED patients, we have administered a combination of nutritional therapy, cognitive-behavioural therapy (CBT), sertraline and topiramate, to see whether this approach may have an impact on both physical and psychological impairments. In a double-blind controlled design, we treated 30 BED patients for 6 months. Ten of them received a programmed diet, CBT, sertraline 50-150 mg/day and topiramate 50-150 mg/day (group 1); 10 received a programmed diet, CBT and sertraline 50-150 mg/day (group 2); 10 were administered nutritional counselling and CBT. Body mass index (BMI) was assessed, and EDI-2, SCL-90, PDQ-4 were administered every month for 6 months. BMI, bulimic symptomatology and other psychopathological aspects were improved by each of the three treatments, but more significantly and more constantly by the nutritional + CBT + sertraline + topiramate therapy.

RS17.4.
COMORBIDITIES IN EATING DISORDERS: THEIR INFLUENCE ON THE COURSE OF THE ILLNESS AND THEIR TREATMENTS

U. Schmidt
Section of Eating Disorders, Institute of Psychiatry, London, UK

Eating disorders (anorexia and bulimia nervosa, binge eating disorder and other forms of eating disorder not otherwise specified) are highly comorbid with a range of DSM-IV axis I and axis II disorders. A comprehensive review of the recent literature in this area was conducted, to assess the prevalence of these comorbidities, and their impact on eating disorder course and treatment outcome, and to identify pharmacological treatment studies designed to address these comorbidities. Common axis I comorbidities in eating disorders include depression, anxiety disorders, obsessive-compulsive disorder and substance misuse disorders. Different eating disorders or eating disorder subtypes have different comorbidity profiles. Some comorbid disorders are related to symptom severity, and in particular obsessive-compulsive spectrum disorders appear to have a negative impact on illness course and treatment outcome. Very few pharmacological treatment studies have been specifically designed to address comorbidities. Future research needs to address this deficit.

RS18.
CURRENT STATE AND FUTURE PROSPECTS OF EARLY DETECTION AND MANAGEMENT OF PSYCHOSIS

RS18.1.
SELF AND SCHIZOPHRENIA

J. Parnas
Center for Subjectivity Research, Faculty of Humanities, University of Copenhagen, Denmark

The ICD-10 and DSM-IV definitions do not address the nature of schizophrenia, failing to provide its constitutive descriptive features, what schizophrenia is, but heavily rely on a variety of exclusion criteria, i.e., what schizophrenia is not. This paper argues for a concept of schizophrenia linked to the structural changes of subjectivity, and indexed by the disorders of self-experience. We review a series of empirical data from cross-sectional and prospective studies of first admission patients, jointly pointing in the following direction: disorders of self-experience are at the root of early sense of alienation in schizophrenia and function as causally relevant experiential factors in the symptomatic progression of the illness. The view of schizophrenia as a neurodevelopmental disorder is briefly re-visited through the issue of the ontogenesis of self.

RS18.2.
INDEXING THE RISK FOR PSYCHOSIS

S. Ruhrmann, F. Schultze-Lutter, M. Birchwood, D. Linszen, R.K.R. Salokangas, G. Juckel, A. Morrison, H. Graf v. Reventlow, J. Klosterkötter, on behalf of the EPOS Group
University of Cologne, Germany; University of Birmingham, UK; University of Amsterdam, The Netherlands; University of Turku, Finland; University of Berlin, Germany; University of Manchester, UK

Current criteria for an ultra-high risk of psychosis allow a "yes or no" decision, but no further estimation of risk. However, recent developments in the international early detection centers call for a more sophisticated approach. This is particularly important in terms of early intervention, which has to be carefully adapted to the needs of the patients. The European Prediction of Psychosis Study (EPOS) is a hitherto unique prospective multicenter project on early detection. 245 help-seeking patients in a putatively prodromal state of psychosis were included in six centers in four European countries. The follow-up period was 18 months. For the current analysis, the predictive value of different psychopathological, clinical and demographic variables was investigated. A set of predictor variables was identified, which showed a high specificity and excellent discriminative accuracy, as well as a high positive likelihood ratio. A resulting prognostic score allowed a further estimation of risk in terms of magnitude and time. A two-step risk assessment is suggested, with EPOS inclusion criteria as sensitive first step indicating increased risk, followed by further, more differentiated risk estimation. This approach should overcome the loss of sensitivity produced by highly specific predictor models and allow for a needs-adapted targeting of intervention.

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RS18.3.
IMPROVING PREDICTION OF PSYCHOSIS BY A MULTI-DOMAIN APPROACH

A. Riecher-Rössler, J. Aston, S. Borgwardt, U. Gschwandtner, M. Pflüger
Psychiatric Outpatient Department, University Hospital, Basel, Switzerland

The Basel FePsy-study tries to contribute to optimising the methods for assessment of early risk for psychosis, by using a stepwise multi-domain approach including not only psychopathology and clinical risk factors, but also neuropsychology, neurophysiology and neuroimaging. Within the project, 53 individuals at risk for psychosis (identified by the newly developed Basel Screening Instrument for Psychosis, BSIP, according to the criteria of Yung et al) could be followed up for up to 7 years. Until February 28, 2007, 21 of the 53 individuals at risk had made the transition to psychosis (transition rate 34%). Predictors of transition were certain attenuated psychotic and negative symptoms and certain cognitive deficits. In an integrated model for prediction of transition using these variables, the overall predictive accuracy was 80.9%, with a sensitivity of 83.3% and a specificity of 79.3%. Others of the above named domains will be integrated into the model for prediction of psychosis. This will hopefully allow to make the prediction even more reliable in future.

RS18.4.
CLINICAL STAGING: A HEURISTIC FRAMEWORK FOR INTERVENTION AND UNDERSTANDING THE PATHOPHYSIOLOGICAL BASIS OF DISORDERS

P.D. McGorry
University of Melbourne and ORYGEN Research Centre, Parkville, Victoria, Australia

Diagnosis in psychiatry increasingly struggles to fulfil its key purposes, namely to guide treatment and to predict outcome. The clinical staging model, widely used in clinical medicine yet virtually ignored in psychiatry, is proposed as a more refined form of diagnosis which could restore the utility of diagnosis, promote early intervention and also make more sense of the confusing array of biological research findings in psychiatry by organising data into a coherent clinico-pathological framework. Clinical staging has immediate potential to improve the logic and timing of interventions in psychiatry, just as it does in many complex and potentially serious medical disorders. It will be a vital advance if intervention in subthreshold disorder is to be soundly based. Interventions could be evaluated in terms of their ability to prevent or delay progression from earlier to later stages of disorder, and they could be selected on clear-cut risk/benefit criteria. Biological variables and a range of candidate risk factors could be studied within and across stages, and their role, specificity and centrality in risk, onset and progression of disorder could be greatly clarified. A clinico-pathological framework could be progressively constructed. Clinical staging, with a restructure across and within diagnostic boundaries and with the explicit operationalisation of criteria for extent and progression of disorder, should be actively explored in psychiatry as a heuristic strategy for the development and evaluation of earlier, safer, and more effective clinical interventions, and for clarifying the biological basis of psychiatric disorders.

RS19.
CURRENT CLINICAL PERSPECTIVES IN PSYCHOSOMATIC MEDICINE

RS19.1.
CURRENT ISSUES ON COMORBID CONDITIONS

P. Ruiz
Department of Psychiatry and Behavioral Science, Houston, TX, USA

Comorbidity conditions have become a major clinical area of interest in recent years. While we have become very much aware of all the current diagnostic categories included in the DSM-IV, the presence of more than one psychiatric illness or condition in day to day psychiatric practice is the rule rather than the exception. Comorbidity factors nowadays need to be taken into consideration not only among psychiatric and medical conditions, but also among psychiatric conditions as well; for instance, it is common to see major depression or anxiety disorders manifested together with addictive disorders such as cocaine dependence. Depressive disorders are among the most common conditions observed in the field of psychiatry, and, therefore, it is imperative that we pay attention to the psychiatric conditions that are concomitantly manifested with depressive disorders in our daily practice. This paper aims to review the extensive role of comorbidities related to depression as a major financial burden in the field of psychiatry, and the evidence about how to appropriately diagnose and treat these comorbidities.

RS19.2.
CURRENT TREATMENT OF POSTPARTUM DEPRESSION

N.L. Stotland
Rush Medical College, Chicago, IL, USA

Postpartum depression is finally receiving appropriate public and professional interest. A book by an American movie star, and her public statements, have helped to decrease stigma. Psychotherapies are as effective for postpartum depression as for depression at other times in life, and can be first-line treatment for mild to moderate cases of postpartum depression. Patients who are more severely depressed will probably require pharmacologic treatment. There is some concern about the possible dangers of some or all psychotropic medications, particularly the selective serotonin uptake inhibitors (SSRIs) most commonly used to treat depression, to the breastfeeding infant. There is an increasing body of knowledge about the appearance of the various SSRIs in breast milk. However, it may be unwise to change medication in cases where several agents had to be tried before therapeutic benefit was achieved. If a woman has taken an SSRI during pregnancy, and up to the time of delivery, the small amount in breast milk may even diminish the risk of withdrawal symptoms in the baby. It is crucial to understand and to explain to the patient the documented and persistent ill effects that having a mother who is depressed has on a baby, so that the best possible risk/benefit ratio can be determined. It is often useful to involve those closest to the patient in the treatment decision. Since postpartum depression undermines a new mother's confidence in her mothering ability, it is also crucial to encourage and support her in that function.

RS19.3.
CURRENT EDUCATIONAL ISSUES PERTAINING TO CERTIFICATION IN PSYCHOSOMATIC MEDICINE

D.K. Winstead
Department of Psychiatry and Neurology, Tulane University School of Medicine, New Orleans, LA, USA

Psychosomatic medicine (formerly known as consultation-liaison psychiatry) has advanced rapidly in the United States in the past two decades. Similar advances are also taking place in other industrialized nations such as Canada, Japan, European countries and others. In 2003, the American Board of Psychiatry and Neurology officially recognized this field and set about to create a written examination for certification purposes and a second examination to be taken 10 years later for maintenance of certification (recertification). At the same time, the Accreditation Council of Graduate Medical Education approved a one year fellowship and set forth requirements for official accreditation. To date approximately 36 programs have been accredited and 853 individuals have been certified. Criteria for program accreditation are reviewed, as well as the major topics covered in the content outline of material that is ultimately tested by the written Board examination. The examination is administered by computer at a specialized testing center. Two hundred questions are administered over a 4 hour period. Although viewed as a subspecialty that would train psychiatrists for an academic or tertiary care practice, the numbers are not yet robust enough to sustain the field. Possible remedies for this dilemma would involve both increased funding for fellowship training as well as increased reimbursement for patient care services delivered.

RS19.4.
ILLNESS, SPIRITUAL BELIEFS AND CULTURE IN PSYCHIATRIC CONSULTATIONS

E.F. Foulks
Jefferson Parish Human Services Authority, Metaire, LA, USA

Gallup opinion surveys in the US have found that the number of people who indicate that they believe in God has remained consistently around 95%. About a third of these view religious commitment as "the most" significant component of their lives. Two thirds say religion is "important or very important" in their lives and indicate a preference for "a professional counselor who is religious". Scott Peck has pointed out that, while patients often invoke religious beliefs to explain their symptoms of mental disorder, they are seldom elicited by or communicated to the mental health professional, often resulting in misdiagnosis and mistreatment. Treating the "whole person", body and soul, has been the aim of physicians since antiquity. During the past century, advances in biomedical science and technology have often shifted focus of the clinician on biological tests and treatments, sometimes neglecting the inner-psychological experiences of suffering of the patient. Returning the clinical gaze once again on the bio-psycho-social-spiritual needs of the patient seems to be an inevitable emerging process, one that promises to enrich the experience of healing for the patient and clinician as well, offering both hope and meaning.

RS20.
BRAIN SYSTEMS AND PSYCHOSIS

RS20.1.
EMOTION NETWORKS AND EMOTION-COGNITION INTERACTION IN PSYCHIATRIC PATIENTS AND HEALTHY SUBJECTS

F. Schneider
Department of Psychiatry and Psychotherapy, University of Aachen, Germany

The investigation of emotional processes such as emotion perception or emotion induction has become a focus of research in modern neuroimaging. By means of olfactory or visual stimulation, neuronal networks of emotion processing, including central structures of the limbic system, such as the amygdalae, could be identified. But for everyday life it is of special importance to clarify the influence of emotion on cognition. Strong emotions, for example, can support learning in specific situations or improve attentional processes. Due to its importance for social life, it is of special interest to find out whether these emotion-cognition interactions are specifically disturbed in psychiatric patients. In an emotion-cognition experiment with healthy subjects, it could be shown that those participants that were affected in a verbal working memory task by an aversive odor (AG) activated other brain regions than the unaffected subjects (UAG). The latter showed greater activation in the fronto-parieto-cerebellar working memory network, including the precuneus, while the AG demonstrated stronger activation in more "emotional" areas (mainly the temporal and medial frontal cortex) as well as compensatory activations in prefrontal regions known to be essential for the cognitive down-regulation of emotions. Ongoing work is dedicated to clarify whether these effects can also be found in schizophrenia patients and if they can be found in adolescent patients as well as in adult onset schizophrenia.

RS20.2.
FAILURES OF A BASIC NEUROPHYSIOLOGICAL MECHANISM IN SCHIZOPHRENIA: EEG STUDIES OF COROLLARY DISCHARGE

J. Ford, D. Mathalon
Department of Psychiatry, University of California; Department of Psychiatry, VA Medical Center, San Francisco, CA, USA

Evidence is accumulating that schizophrenia is characterized by dysfunction of efference copy/ corollary discharge mechanisms that normally allow us to unconsciously recognize and disregard sensations resulting from our own actions. This dysfunction may give rise to subtle but pervasive sensory/perceptual aberrations in schizophrenic patients, altering their experience of their own overt and covert actions, as well as their interactions with the environment. It may also contribute to symptoms such as hallucinations and delusions, and may disrupt the motivation to engage with people and in activities. We have developed neurophysiological paradigms to study motor-sensory feed-forward processes, or efference copy/corollary discharge mechanisms, in the speech-auditory system, and showed these processes to be deficient in chronic schizophrenia. Specifically, we observed neural responses during talking that made evident the suppressive consequences of a successful corollary discharge mechanism. We also observed synchronous neural activity preceding talking that we believe reflects the efference copy in action. Recently, we extended this neurophysiological research to the somatosensory system, again finding evidence of deficient motor-sensory feed-forward processes in schizophrenia. These deficits may be part of the dysfunction of an elemental mechanism in schizophrenia. Asynchrony of the neural signal may represent a major new class of electrophysiological measures sensitive to a fundamental and ubiquitous pathophysiological process in schizophrenia.

RS20.3.
NEUROBIOLOGICAL SYSTEMS INVOLVED IN THE GENERATION OF AUDITORY VERBAL HALLUCINATIONS

T. Dierks
Department of Psychiatric Neurophysiology, University Hospital of Psychiatry, University of Bern, Switzerland

Modern neuroimaging techniques, like functional magnetic resonance imaging (fMRI) and electrical source imaging, are able to demonstrate normal and pathological brain function with a high spatial and temporal resolution. Thus, these technologies are well suited to investigate the neurophysiology of brain functional states, which represent psychopathological phenomena like hallucinations. We have investigated auditory verbal hallucinations in schizophrenic patients using fMRI, diffusion tensor imaging (DTI), spontaneous and stimulus related electrical brain activity as well as cortical thickness measurements, with the aim to understand why patients are so convinced about the external sources of their sensations and which brain structures are involved in their generation. All hallucinating patients demonstrated an increase of blood flow in the primary auditory cortex in the temporal lobe during hallucinations in a fMRI investigation. During the hallucinations, an increase of faster frequencies of the spontaneous EEG could be observed in the superior temporal lobe. Faster EEG frequencies are commonly associated with increased mental processing. Additionally, auditory evoked potentials demonstrated a reduced amplitude of the component N100, which is thought to be generated in areas in and around primary auditory cortex in the temporal lobe, indicating that the external stimulation competes with internal processes regarding available neuronal resources. DTI results, which depict the integrity of white matter connections in the brain, suggested an abnormally high neuronal coherence in the most important fibre tract connecting frontal and temporal speech areas (temporal section of the left arcuate fascicle). In addition, auditory areas in the superior temporal lobe, as well as speech processing regions, showed reduced cortical thickness. In summary, these results indicate an increased activity of the early auditory cortices during hallucinations (contrary to findings demonstrated in healthy subjects during inner speech), which could be one mechanism responsible for patients' conviction that their hallucinations are generated externally. Furthermore, the results suggest that these functional pathophysiological alterations as well as structural changes may be due to neurodevelopmental disturbances.

RS20.4.
SCHIZOPHRENIC THOUGHT DISORDERS AND THE LANGUAGE CIRCUITRY

W. Strik
University Hospital of Psychiatry, University of Bern, Switzerland

Formal thought disorders can be understood as errors in logical, semantical and associative language processing. Furthermore, several recent studies have shown that thought disorders are related to functional and structural changes in regions that can be attributed to the left hemispheric language circuitry, in particular the left temporal lobe. New results will be presented which indicate that there is a complex activation pattern in the left hemispheric language circuitry

linked to the severity of thought disorders in schizophrenia. In particular, regional blood perfusion measurement with arterial spin labeling (ASL) showed hyperperfusion at resting condition in the left temporal and in the left frontal lobe to be correlated with the severity of thought disorders. The activated regions corresponded with the frontal and temporal language areas. Furthermore, grey matter density reduction was found in the left temporal lobe, corresponding to the area of hyperperfusion, but not in the hyperactive frontal regions. The results can be interpreted as a hyperexcitation of the left hemispheric language circuitry as the brain physiological equivalent of formal thought disorders. The basis of this hyperexcitation may be a structural deficit in the left temporal language areas (Wernicke's area), either due to a compensatory activation, or to a disinhibition consequent to a loss of inhibitory interneurons. These results show that there is not one single local alteration explaining thought disorders. Rather, the symptoms can be best explained by a distinct pattern involving structural deficits and a complex functional imbalance involving the dynamic interaction of the frontal and temporal components of the language system. The available evidence allows to formulate an integrative model of formal thought disorders and hallucinations in schizophrenia.

RS21.
EARLY RISK FACTORS FOR LATE LIFE MENTAL DISORDERS

RS21.1.
CHILD ABUSE AND LATE-LIFE PSYCHIATRIC DISORDER

K. Ritchie
INSERM, La Colombière Hospital, Montpellier, France

Neurobiological and clinical studies suggest that childhood maltreatment may result in functional and structural nervous system changes which predispose the individual to depression. Depressive symptomatology and adverse and protective childhood events were examined in a population of 942 persons aged 65 years and over, taking into account socio-demographic characteristics and proximal competing causes of depression (widowhood, recent life events, vascular and neurological disorder, disability). Depression was defined as either a diagnosis of major depression on the MINI International Neuropsychiatric Interview or a score higher than 16 on the Center for Epidemiological Studies Depression Scale (CES-D). Exposure to traumatic events in childhood doubled the risk of late-life depression and increased the risk of repeated episodes. Not all events were found to be pathogenic; significant risk was associated with excessive sharing of parental problems, poverty, mental disorder in parents, excessive punishment, verbal abuse, humiliation and mistreatment by an adult outside the family. Interactions were observed between the 5-HTTLPR L allele, poverty and excessive sharing of parental problems. These data suggest that certain types of childhood trauma continue to constitute risk factors for depression in old age, outweighing more proximal causes. Gene-environment vulnerability interaction is linked in older age to the L-carrying genotype.

RS21.2.
THE INFLUENCE OF EARLY- AND MID-LIFE FACTORS ON LATE-LIFE MENTAL DISORDERS: RESULTS FROM THE GOTHENBURG STUDIES

I. Skoog
Neuropsychiatric Epidemiology Unit, Department of Psychiatry, Institute of Neuroscience and Physiology, Sahlgrenska Academy, University of Gothenburg, Sweden

The influence of early- and mid-life factors on mental disorders in late-life were examined in representative samples of elderly followed longitudinally in Gothenburg, Sweden. The H70 study started in 1971, the Women's Health Study in 1968, the 95+ study in 1996. These studies confirmed that mental disorders are very common in the elderly. The prevalence of dementia increases from 3% at age 70 to 51% at age 95. The prevalence of depression is around 10% at all ages. Lifetime prevalence of depression is 45% in women and 23% in men. The incidence of first-onset depression and dementia increases from age 70 to age 85. Early- and mid-life factors such as birth weight, adverse life events and personality are among those increasing the risk of depression in old age. Early life factors such as premorbid brain size, loss of parents and other adverse life events occurring before the age of 16, and midlife factors such as poorer lung function, hard manual work, psychological stress, cardiovascular risk factors, and homocystein levels increase risk for late-life dementia. Moderate consumption of wine decreases the risk. Secular changes in early and midlife risk factors occurring during the last 30 years may influence the occurrence of mental disorders in old age. Many of the risk factors occurring in early- and mid-life are possible to prevent by social, psychological or medical interventions.

RS21.3.
MID-LIFE CARDIOVASCULAR DISORDER AND LATE-LIFE DEPRESSION

R. Stewart
Institute of Psychiatry, London, UK

The relationship between cardiovascular disorders and depression is complex, with potentially bi-directional causation. "Vascular depression" has been proposed as a syndrome accounting for the comorbidity in late life between cerebrovascular disease and depression. However, although depression is common following stroke and myocardial infarction, the relationship between vascular risk factors and depression is much less clear, and there is more prospective evidence that depression predicts cardiovascular risk rather than the other way around. These findings suggest that it is overall poor health rather than specifically cardiovascular disease which may predict depression in late life.

RS21.4.
LONG-TERM CONSEQUENCES OF TRAUMATIC EXPOSURE IN ELDERLY GENERAL POPULATION

I. Chaudieu
Inserm U888, La Colombière Hospital, Montpellier, France

Several recent community studies have evaluated the impact of traumatic events on the development of post-traumatic stress disorder (PTSD), but very few studies have focused on their long-term consequences on general health. Our study aimed to evaluate the association between the experience of a lifetime traumatic event and current mental as well as physical health in a community-based study. Of a cohort of 1873 non-institutionalised persons aged 65 years and over,

randomly recruited from the Montpellier district electoral rolls, 1697 (90.6%) completed the Watson's PTSD Inventory to evaluate PTSD and the Mini International Neuropsychiatric Interview to assess current and lifetime symptoms of psychiatric disorders. Medical history (e.g., vascular events, diabetes, asthma, thyroid diseases) and general health-related information were collected by a face-to-face administered questionnaire. 55.6% of the study sample (58.5% of men and 53.6% of women) had experienced a traumatic event according to DSM-IV criteria. Thirty per cent of these traumatized subjects had developed re-experiencing symptoms and 2.2% had PTSD (0.54% of men and 3.41% of women). Traumatic events were associated with a significant increased risk of angina pectoris (OR=1.71; p=0.01). Re-experiencing symptoms were significantly associated with both an increase of psychiatric co-morbidity (OR for one or two disorders were 1.53, p=0.04 and 2.85; p=0.002, respectively) and an increase of thyroid dysfunction (OR=1.70; p=0.03), adjusted for age, sex and education. Our findings indicate that lifetime experience of traumatic events is frequent in the elderly. They have long-term consequences not only on mental illness but also on various chronic physical diseases.

RS21.5.
LIFETIME HORMONAL EXPOSURE AND LATE-LIFE MENTAL HEALTH

M.-L. Ancelin
Inserm U888, La Colombiere Hospital, Montpellier, France

The cyclic fluctuation of gonadal steroids at menarche coincides with the beginning of gender-based differences in depression rates which continue until menopause. Fluctuating hormone levels are known to influence a woman's mood throughout reproductive life, but hormonal markers associated with late-life depression among elderly women have not been studied. Current depressive symptomatology was evaluated in 1013 community-dwelling postmenopausal women aged 65 years and over. Multivariate logistic regression models adjusted for a range of potential confounders (socio-demographic factors, mental and physical incapacities, history of depression) were generated to determine whether any lifetime hormonal factors were associated with late-life depression. In cross-sectional analyses, a late age at menopause and a longer reproductive period were significantly associated with decreased risk of late-life depression. The other endogenous factors examined (age at first menses, parity, age at childbirth...) were not significantly associated with late-life depression. Among exogenous factors, long-term oral contraceptive past use was protective against depression but not current hormone replacement therapy. Over the 4-year follow-up period, hormone therapy was not significantly associated with improved psychiatric symptomatology however discontinuing treatment significantly increased depression risk. Factors linked to higher lifetime steroid exposure are associated with a decreased risk of late-life depression. Further work is needed to determine how hormonal interventions could be used in the treatment of late-life depression in certain sub-groups of hormone-sensitive women. Data on the appropriate management of depression in the context of hormone therapy discontinuation among postmenopausal women requires further investigation.

RS21.6.
LIFE COURSE PROFILES OF MENTAL ILLNESS AND POTENTIAL POINTS FOR INTERVENTION: A LONGITUDINAL BIRTH COHORT APPROACH

M. Richards
MRC Unit for Lifelong Health and Ageing, London, UK

The extent to which psychiatric disorders show continuity over the life course is a matter of serious concern. Depression in adolescence predicts depression in adulthood, childhood and adolescent conduct problems are associated with increased risk of all psychiatric disorders in adult life, and risk of disorder is transmitted across generations. Such continuity is observed in the British birth cohorts: longitudinal profiling in the 1946 cohort reveals that 86% of those at risk of mental disorder in adolescence continue this risk into adulthood, and that less than 30% of those with evidence of adult risk actually began this risk in adulthood. In addition to standard clinical interventions, it is therefore important to identify sensitive periods and key processes in the life course with the potential to modify risk. Candidates range from adverse exposures in infancy and beyond; experience of parenting and sibling and peer relationships in childhood; education, which structures subsequent components of achieved status such as work and income; "turning point" experiences during transition into adulthood, particularly labour market attachment and partnership; through to social support in adulthood itself.

RS22.
KEY AND UNRESOLVED ISSUES IN SUICIDE RESEARCH

RS22.1.
SUICIDE IN DEPRESSION: IS THIS THE CONSEQUENCE OF TREATMENT RESISTANCE?

Z. Rihmer
Department of Clinical and Theoretical Mental Health, Faculty of Medicine, Semmelweis University, Budapest, Hungary

Suicide, this very complex and multicausal human behaviour, is related to several psychiatric-medical, psycho-social and demographic risk factors. Psychological autopsy studies from different parts of the world consistently show that over 90 percent of suicide victims have at least one (mostly untreated) current major mental disorder, most frequently major depressive episode (56-87%) substance-related disorders (26-55%) and schizophrenia (6-13%). As suicidal behaviour in patients with mood disorders seems to be a state-dependent phenomenon (i.e., it decreases or vanishes after the clinical recovery), the successful acute and long-term treatment of mood disorders is crucial for suicide prevention. However, depression is frequently underreferred, underdiagnosed and undertreated, and the rate of antidepressant pharmacotherapy (and particularly the rate of adequate antidepressant pharmacotherapy) among depressed suicide victims is less than 20%, which is disturbingly low. The most important pharmacotherapy-related factors of suicide in depression are: lack of treatment, inadequate treatment, the first 10-14 days of the treatment, particularly in the case of insufficient care and/or lack of co-medication with anxiolytics, early termination of the therapy either by the patient or by the doctor, lack of long-term (maintenance and prophylactic) treatment in chronic or recurrent cases, and non-response and treatment resistance.

RS22.2.
WHY DO ANTIDEPRESSANTS NOT PREVENT SUICIDE?

R.J. Baldessarini, L. Tondo
Harvard Medical School, Boston, MA, USA; Lucio Bini Mood Disorder Center, Cagliari, Italy

Antidepressants (ADs) are among the most prescribed drugs of all kinds, and are often used in the hope of reducing suicidal risk, based on inconsistent, controversial evidence. We conducted a review of recent studies of the Harvard-McLean International Consortium for Bipolar Disorder Research and other recently published reports. ADs are the most prescribed drugs among American patients and lead US prescriptions for bipolar disorder (BPD) patients. Randomized, controlled trials (RCTs) consistently find greater reductions of suicidal ideation with ADs vs. placebo. As modern AD use rose sharply in the 1990s, suicide rates fell, but only in some countries/regions, and this relationship may no longer hold. Suicidal risks in RCTs are at least as high as in clinical samples of major depressive disorder patients, but pooled RCT data usually fail to show reduced suicides/attempts with AD treatment. Risk may even increase occasionally early in the treatment of juvenile patients given ADs, in whom the efficacy of these drugs is limited, whereas AD-associated suicidal risk may fall with age over 25. The only treatments with evidence of anti-suicidal effects are clozapine in schizophrenia, and lithium in BPD. Effects of mood stabilizing anticonvulsants are much lower. ADs appear to improve suicidal ideation but lack evidence of consistent prevention of suicidal behaviors linked to anger, agitation and impulsivity, or in juvenile depression. Much more research is required to address developmental changes in AD pharmacodynamics and to develop treatments that reduce excess mortality in psychiatric patients due to suicide, other violence, and comorbid medical illnesses.

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RS22.3.
EXPLORING THE PHENOMENOLOGY OF SUICIDE

M. Pompili
Department of Psychiatry, S. Andrea Hospital, La Sapienza University of Rome, Italy; McLean Hospital, Harvard Medical School, Boston, MA, USA

This paper aims to shed light on the phenomenology of suicide, that is, to focus on suicide as a phenomenon affecting a unique individual with unique motives for the suicidal act. Phenomenology studies conscious experience from the subjective or first-person point of view. We look back at the past centuries to understand why suicide was thought to be confined to psychiatric illness and to document the bias in studies supporting this notion. In contrast, we argue that suicide should not be considered to be a symptom. Rather, suicide is a separate dimension motivated by reasons which overlap with the psychiatric dimension. One major step forward in the conceptualization of suicide as a psychological disorder was provided by suicidology. Such discipline described how the development of a state of mind, that is, perturbation as a result of prolonged frustration of vital psychological needs, can undermine individual's life when the subject realizes that suicide is the best option to solve unbearable psychological pain. This paper also searches for new clues in the phenomenology of suicide and proposes an integration of biological and psychological perspectives in order to describe and help suicidal individuals comprehensively.

RS22.4.
COFFEE AND CIGARETTE USE: ASSOCIATION WITH SUICIDAL ACTS IN 352 BIPOLAR DISORDER PATIENTS

L. Tondo, C. Baethge
McLean Hospital, Harvard Medical School, Boston, MA, USA; Department of Psychology, University of Cagliari, Sardinia, and Lucio Bini Mood Disorders Research Center, Cagliari, Italy; Department of Psychiatry and Psychotherapy, University of Cologne Medical School, Cologne, Germany

Abuse of illicit drugs and alcohol is highly prevalent among patients diagnosed with bipolar disorders, and is an adverse prognostic factor. Much less is known about correlates of nicotine and caffeine consumption, but recent findings suggest an association of tobacco smoking with suicidal behavior. Retrospective analysis of demographic and clinical factors among 352 longitudinally assessed DSM-IV bipolar I and II disorder patients contrasted patients who did vs. did not use nicotine or caffeine, based on both univariate analyses and multivariate logistic regression modeling. Current smoking (46%) and coffee drinking (74%) were highly prevalent among study patients. After adjusting for covariates, both were significantly and independently associated with suicidal acts (coffee: OR=2.42; 95% CI: 1.15-5.09; smoking: OR=1.79; 95% CI: 1.02-3.15). Risk increased with more cigarettes/day ($p<0.0001$) and more coffee consumption (cups/day; $p<0.008$), but neither factor was related to episodes, depressions, or manias/year. This is the first report of an association between coffee consumption and suicidal acts among bipolar patients, possibly associated with behavioral activation and anxiety symptoms. Moreover, we confirmed an association of smoking with suicidal acts. Pending further confirmatory evidence, the findings underscore the importance of monitoring use of even legal substances among bipolar patients.

RS23.
ADVANCES IN THE TREATMENT OF CHRONIC AND RESIDUAL DEPRESSION

RS23.1.
RESIDUAL DEPRESSION: NEW TREATMENT STRATEGIES

G.A. Fava
Affective Disorders Program, Department of Psychology, University of Bologna, Italy; Department of Psychiatry, State University of New York, Buffalo, NY, USA

An increasing body of research is pointing to the fact that a single treatment is unlikely to yield full remission in major depressive disorder. Most of the patients display residual symptoms, particularly related to anxiety and irritable mood. These symptoms affect quality of life and are one of the most important predictors of relapse. Residual depression thus needs to be addressed by a therapeutic viewpoint. The sequential use of different treatment strategies (psychotherapy after pharmacotherapy; pharmacotherapy after psychotherapy; two different drug or psychotherapeutic therapies one after the other) has been suggested. The rationale of this approach is to spend therapeutic resources when they are most likely to make a unique and separate contribution to patient well-being and to achieve a higher degree of recovery. There is increasing evidence of the clinical advantages, in terms of relapse rate, of treating residual symptoms of depression after pharmacotherapy by cognitive behavioral strategies. The sequential

model requires a conceptual shift from current assessment and treatment planning strategies. It is based on repeated assessments, individualized plans and attention to subclinical symptoms.

RS23.2.
THE COGNITIVE BEHAVIORAL ANALYSIS SYSTEM OF PSYCHOTHERAPY AS A NEW PSYCHOLOGICAL TREATMENT STRATEGY FOR CHRONIC DEPRESSION

E. Schramm
Department of Psychiatry and Psychotherapy, University of Freiburg, Germany

Chronic depression accounts for roughly a third of all mood disorders. It is a particularly disabling disorder, which is associated with greater comorbidity and suicidality, more significant impairments in functioning, and increased health care utilization than acute major depressive episodes. In the past, chronic depression was often considered treatment resistant. Relatively few psychotherapy studies have focused on chronic forms of depression. In chronic major depression, a specific form of psychotherapy, the cognitive behavioral analysis system of psychotherapy (CBASP), proved to be as effective as medication. The combination of CBASP and medication revealed significant superiority over both monotherapies. CBASP integrates behavioral, cognitive, and interpersonal strategies. It focuses on problems resulting from an inhibition of maturation in early childhood by using the therapeutic relationship in a personal, disciplined way. In addition, other interpersonal strategies are used to overcome preoperational thinking. By means of a specific behavioral technique, the situation analysis, patients learn to focus on the consequences of their behaviour and to use efficient social problem-solving.

RS23.3.
CHILDHOOD TRAUMA AS A RISK FACTOR FOR CHRONICITY OF DEPRESSION

J. Wiersma
Department of Psychiatry and Institute for Research in Extramural Medicine, VU University, Amsterdam, The Netherlands

Childhood trauma is linked to adult depression and might lead to a more chronic course of depression. In this study (n=1230) data from the Netherlands Study of Depression and Anxiety (NESDA) have been used to investigate the relationship between childhood trauma (emotional neglect, psychological abuse, physical abuse and sexual abuse), early life events (parental loss, divorce of parents, separation and regularly run away from home), and chronicity of depression. Results show that chronicity of depression was associated with a significantly higher prevalence of emotional neglect, psychological abuse, physical abuse, and sexual abuse. No associations were found between early life events and chronicity of depression. The strongest association was found for those who experienced a great number of severe childhood traumas and chronic depression. After controlling for comorbid anxiety, severity of depression and age of onset, the association still existed. These results suggest that number and severity of childhood traumas play an important role as a risk factor for a chronic course of depression. For the treatment of depressed patients, it is therefore important to detect the presence of childhood trauma, since it may indicate a more chronic course.

RS23.4.
THE SPECIFIC PSYCHOPATHOLOGY OF CHRONIC DEPRESSION

E.-L. Brakemeier
Department of Psychiatry and Psychotherapy, Charité-Universitätsmedizin Berlin, Campus Benjamin Franklin, Berlin, Germany

By conceptualizing cognitive behavioral analysis system of psychotherapy (CBASP), McCullough proposed that chronically depressed patients have a primitive representational worldview, not addressed adequately in most contemporary therapy programs. Thus, psychotherapists are likely to overestimate the capabilities for change of their chronically depressed patients. McCullough pointed out that the essential problem of the disorder involves an age-inappropriate cognitive-emotional approach to reality that prevents the patient from recognizing his connection with environment. CBASP is based on two hypotheses concerning the specific psychopathology of chronic depression: a) patients are unaware that their primitive verbal thoughts/behaviour patterns keeps them perceptually disconnected from the environment; b) chronic depression is a developmental disorder leading patients to "preoperational thinking". This means that: a) they think in a prelogical and precausal manner; b) their behaviors are not influenced by logical reasoning or reality-based feedback; c) they are characterized by pervasive egocentricity; d) they use language in a monologue fashion; e) they are unable to generate true empathy; f) they show emotional deregulation under stress. Regarding the first hypothesis, a theoretical learning model and videotapes from therapy sessions try to demonstrate the proposed perceptional disconnection of chronically depressed patients. Concerning the second hypothesis, recent trials with different approaches to operationalize the six dimensions of the "preoperational thinking" are presented.

RS24.
IS CYCLOTHYMIA THE MOST COMMON AFFECTIVE PHENOTYPE?

RS24.1.
THE EPIDEMIOLOGY OF CYCLOTHYMIC TEMPERAMENT IN THE GENERAL POPULATION: RELATIONSHIP WITH SUICIDALITY

E.G. Karam, M.M. Salamoun, Z. Mneimneh, J. Fayyad, A.N. Karam, J. Yeretzian
Department of Psychiatry and Clinical Psychology, Faculty of Medicine, Balamand University, Beirut, Lebanon

Temperament is the theoretical mediation between environment and mental health disorders. The Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A) has been translated and validated in several languages, and used in different subgroups (e.g., clinical, students, company, employees and people with different educational levels). Lebanon is the only country that has validated the TEMPS-A in a national cohort, as part of the Lebanese Evaluation of the Burden of Ailments and Needs Of the Nation (LEBANON). A total of 1334 respondents (47% of the total national sample) were selected from the specific study for the assessment of temperament, namely the LEBANON-TEMP; of these, nine respondents refused to take the TEMPS-A and five had incomplete questionnaires, reducing the sample to 1320. In our sample, 6.2% of the respondents had z-scores above +2 standard deviations on the irritable temperament, 4.6% on the anxious, 4.4% on the cyclothymic,

and 3.5% on the depressive temperament subscales. None of the respondents had z-scores above +2 standard deviations for the hyperthymic temperament subscales. Our results are similar to some and different from other published reports. We also explored the relation of cyclothymic temperaments to suicidality in the general population from the national LEBANON study. Suicidal ideation, plans, attempts are being analysed in the layer content of other risk factors.

RS24.2. CYCLOTHYMIC TEMPERAMENT IN BIPOLAR I PATIENTS: NOSOGRAPHIC AND CLINICAL IMPLICATIONS

G. Perugi
Department of Psychiatry, University of Pisa, and "G. De Lisio" Institute of Behavioral Sciences, Pisa, Italy

The unipolar-bipolar distinction within manic-depressive illness has proven to be of great heuristic value for clinical and therapeutic research. This dichotomy, however, left many affective conditions lying at the interface of unipolar and bipolar disorders undefined. Originally, bipolar II disorder was defined on the basis of the presence of severe depressive episodes alternating with hypomania. Akiskal's more inclusive conceptualization of "soft bipolar spectrum" modified the foregoing definitions of bipolar II by incorporating depressions with antidepressant-induced hypomanic episodes, cyclothymic and hyperthymic traits, as well as those with familial bipolarity. All these conditions can be grouped in the broader category of "bipolar spectrum" disorders, in which the severity of the elated phases never reach the level of manic or severe mixed states, but remains at a clinical or subclinical hypomanic level. A question still open is whether "bipolar spectrum" disorder represents an autonomous type of bipolar illness or a transitory condition between unipolar and full-blown bipolar I disorder. Recently, we found in a large clinical sample of bipolar I patients a new bipolar spectrum dichotomy, based on the course of illness rather than hypomanic episodes. In these patients, cyclothymic temperamental dysregulation was related to early age at onset, recurrent depression, high rates of divorce or separation, high rates of school and/or job maladjustment, isolated "antisocial acts" and drug abuse. In addition, the depressive episodes were characterized by such features as phobic anxiety, interpersonal sensitivity, separation anxiety, obsessive-impulsive symptoms, somatization (subpanic symptoms), worse in evening, self-pity, subjective or overt anger. This pattern seems to indicate a broad mélange of "atypical" depressive symptoms with comorbid anxious and impulsive features. In conclusion, a dichotomy within the "bipolar spectrum" based on the presence of high recurrence and inter-episodic mood instability may lead to a better definition of new endophenotypes for genetic investigations and represent a more sensitive and specific predictor of course and treatment outcome.

RS24.3. THE CYCLOTHYMIC TEMPERAMENT: ITS ROLE IN ARTISTIC CREATIVITY, DEPRESSION AND SUICIDALITY

H.S. Akiskal, K. Akiskal
International Mood Center, La Jolla, CA, USA

Although cyclothymia has been introduced in the DSM and ICD diagnostic schemas as "subthreshold" mood disorder, its boundaries with normal temperament remain unclear, as well as the circumstances under which it requires therapeutic interventions, including pharmacotherapy. These are extremely important questions for public health, because affective disorders more often than not arise from antecedent temperaments. A new instrument, the Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A), has been validated (10 languages), generating sufficient research to help in formulating data-based answers to the foregoing questions. What we have learned about the cyclothymic temperament is paradigmatic of the dilemmas faced by the clinician-scientist, because current evidence from well-conducted international studies has shown that many artistically talented individuals seem to "benefit" from this temperament, yet affectively ill individuals with this temperament appear at some risk for suicide. This temperament also predisposes to bipolar II disorder, mixed states, rapid cycling, alcohol and substance abuse, it is often "comorbid" with multiple anxiety disorders, and may be a precursor of bulimia and HIV infection. Recent data further suggest that this temperament can serve as a behavioral endophenotype for bipolar disorder. That depression often arises from cyclothymia might also have something to do with the "s" allele of the serotonin transporter. More provocatively, suggestive linkage to chromosome 18p11 locus has been reported by our group in San Diego. Such developments provide the opportunity to explore new approaches to this very special group of individuals.

RS24.4. PHARMACHOTHERAPY AND PSYCHOEDUCATION FOR COMPLEX CYCLOTHYMIC PATIENTS

E.G. Hantouche
Anxiety and Mood Disorders Center, Paris, France

Most groups of psycho-education are currently based and orientated toward the classical clinical picture of bipolarity, bipolar I bisorder, which includes intense to severe (hypo-)mania phases (often leading to hospitalization). However, the reality of clinical practice shows another evidence: soft bipolar spectrum is probably the most frequent expression of this disorder. More than 40% of major depressions and 2/3 of recurrent or resistant depressions are part of this spectrum, which seems to be neglected in pharmacological and especially in psychological treatment processes. According to current clinical, epidemiological, and genetic studies, cyclothymia appears to be a likely precursor or a basic primary ingredient of the construct of soft bipolarity. A renaissance of cyclothymia is badly needed, because no psychopathological or therapeutic research had focused on this diagnosis, despite its high prevalence rate in general population and in major depressives seen in clinical settings (more than 30%, EPIDEP data). As initially proposed by Kahlbaum and Hecker, age of onset and time course of an illness, together with close clinical observation, help to delineate disease forms out of the mass of confusing symptoms. By applying these two variables, bipolar spectrum could be currently divided into two categories: typical bipolar I/II disorder (episodic mania or hypomania with free intervals) vs. cyclothymia (radically instable form with continuous ups and downs). This intra-bipolar dichotomy seems to be closer to the clinical reality of mood disturbances and especially more suitable for clinical practice. We have elaborated a psychoeducation group model. The format is weekly, with six sessions of 2 hours each. To be included, patient must present a bipolar II 1/2 disorder: persistent and significant cyclothymic trait (a score of at least 10 on TEMPS-A). The group therapy offers to patients the opportunity to get information on soft bipolar spectrum by sharing life experiences with other patients, and getting support from them and from psychologists. The key points of this psychoeducation are: knowing cyclothymia (clinical aspects, specificity, co-morbidity, causes, medication, symptoms); learning monitoring, self assessment, warning signs and coping with early relapses; getting

familiar with psychological vulnerabilities (sensitivity to rejection, obsessive need to please, testing limits, hyper-control, compulsive behaviors, emotional dependency); getting access to the cognitive processes linked to emotional disturbances; dealing with daily interpersonal conflicts; nurturing positive aspects of cyclothymia and one's own creativity.

RS25.
THE FUTURE OF RESEARCH ON MIGRATION AND MENTAL HEALTH

RS25.1.
WHAT RESEARCH IS NEEDED ON MIGRATION AND MENTAL HEALTH?

D. Moussaoui
Ibn Rushd University Psychiatric Centre, Casablanca, Morocco

Migration is a universal phenomenon and has always existed. The situation changed in a significant way during the last decades, because of the increasing numbers of all kinds of migrants. United Nations state that one person out of three lives and works in a different place than the one of birth. This is why there is a strong need for multidisciplinary research in the field of migration, mental health and psychiatry. Some of the topics to investigate are the following: What are the psychological reasons for migration? How to improve adaptation of new migrants and increase resilience towards cultural shocks? What are the clinical expressions of mental disorders among migrants? Do they change over time? Are they similar in the country of origin and in the host country? What is the impact of "long-term tourism" in the elderly? What is the role of the family in mentally ill migrants? Does it change over time?

RS25.2.
METHODOLOGICAL ISSUES IN RESEARCH ON MIGRATION

A. Qureshi
Transcultural Psychiatry Program, Department of Psychiatry, Vall d'Hebron University Hospital, Barcelona, Spain

Research in the field of migration and mental health is beset by methodological challenges that can result in spurious results and erroneous conclusions. Because universality of constructs and measurement procedures is assumed, the research process is culturally biased. Many of the constructs and the measurement procedures are predicated on Euro-American norms and values, meaning that such instruments may not provide a valid and reliable indication of the construct in question in all populations. The concepts that underlie research are often themselves products of the same Western cultural system, and may thus fall prey to what Kleinman termed a "category fallacy"; just because characteristics can be placed in a category does not mean that the category its culturally valid or relevant. Thus, "what" is studied may be measurable but this does not mean that it is relevant. An additional challenge has to do with sampling. The criteria used for inclusion in a specific group, be they geography, ethnic group membership, religion, language spoken, race, or otherwise, is often not well delineated, and, combined with access related concerns, it is not always easy to obtain a truly representative sample. Finally, related to the above issues, a series of ethical concerns are inevitably raised when doing research in the area of migration and mental health, which have to do with both the research itself and its possible consequences.

RS25.3.
THE ISSUE OF SUICIDE AMONG THE ETHIOPIAN JEWISH COMMUNITY IN ISRAEL: A PILOT STUDY

A.-M. Ulman, S.D. Walsh, C. Bursztein, G. Zalsman
Sackler Faculty of Medicine, University of Tel-Aviv, Israel; University of Bar-Ilan, Israel; Karolinska Institute, Stockholm, Sweden

Since countries have opened up their doors, mental health professionals have been confronted with clinical pictures necessitating new ways of reflecting, leading them to question their practice of psychiatry based on a Western system of reference. They have been confronted with clinical pictures which they did not understand. The Ethiopian Jewish community in Israel is an example. The community today numbers some 110,000 people. Their move from a tribal, rural lifestyle to an urban Western one was accompanied by deep difficulties and possibly the severest "acculturation stress" that any previous immigrant group to Israel has experienced. A preoccupying phenomenon is suicide, with unusually high numbers of attempts and acts in the community. The issue is puzzling, as in Ethiopia suicide is prohibited and rare. Field-work has been undertaken in Israel among new immigrant adolescents, in which suicide was understood as a result of great stress combined with learning of a new behavior or "language" from Israeli counterparts. Among adults, a study was made to draw the profile of the "potential victim": a young married man with family conflicts, who internalizes his aggression and seems depressed, but does not communicate his suicidal intentions. Seventeen years after the last massive migration wave, the problem is still acute, leaving professionals helpless. In this study we intend to bring epidemiologic data concerning suicide among the Ethiopian community members in Israel, and present the first results of a study using rating scales to assess factors potentially involved in the phenomenon.

RS25.4.
PSYCHIATRIC AMBULATORY CARE AND MIGRANTS

P. van Loon
Department of Transcultural Psychiatry, Riagg Rijnmond, Rotterdam, The Netherlands

Increased awareness of the influence of culture in psychiatric practice is essential in order to provide optimal care in an ambulatory setting. Issues to be discussed for a culturally sensitive service include communication factors (ethnicity of staff, cultural mediators, the role of interpreters); the search for valid and reliable cross-cultural psychological assessment instruments; the assessment of cultural identity and its impact on the manifestation of illness; knowledge and application of alternative and indigenous healing methods. The role of the social context and factors such as discrimination and stigma in the utilization of services are discussed. Attention is given to the shaping and development of services in the context of increasing globalization, based on experience built up in the Netherlands.

RS26.
CURRENT CHALLENGES IN PSYCHOSOCIAL REHABILITATION
(in collaboration with the World Association for Psychosocial Rehabilitation)

RS26.1.
THE GLOBAL DEVELOPMENT OF PSYCHOSOCIAL REHABILITATION

M.G. Madianos
Department of Mental Health and Behavioural Sciences, University of Athens, Greece

According to the World Health Organization, the development of mental health care and psychosocial rehabilitation services globally has shown some improvements between 2001 and 2005. However, regional imbalances have remained largely similar. In 2001, 59.1% of the countries of the world had community-based services for the rehabilitation of severe mental disorders. The most problematic situation was that of Eastern Mediterranean and Southern Asian countries. In 2005, only a slight increase in the development of such services (2.4%) all over the world was observed. There was also an increase in the percentage of countries with a mental health policy, mental health legislation and a therapeutic drug policy. Also, more countries are providing community mental health services and disability benefits in some form. Finally, there was an increase in the number of mental health professionals in the world, with the greatest increase noted in the number of psychologists and social workers. However, these numbers are inadequate in areas such as Africa and Southern Asia.

RS26.2.
THE ROLE OF STIGMA IN PSYCHOSOCIAL REHABILITATION

M. Economou
University Mental Health Research Institute, Papagou, Greece

Psychiatric rehabilitation is defined as any action intended to reduce the negative effects of chronic and severe mental illness. The degree of rehabilitation outcome mainly depends on patient's individual, social and clinical characteristics, but also on community's level of acceptance. Prejudice, stigma and discrimination against people with mental illness can seriously impede any effort for social integration. Stigma has been found to be one of the main obstacles to the successful treatment and rehabilitation of those who suffer from severe mental illness. It not only reduces the effectiveness of rehabilitation process, but also negatively influences the restoration of self-esteem and the overall quality of patients' life. In the last decades stigma and discrimination have become the focus of scientific interest. In 1996, the WPA initiated a Global Programme against Stigma and Discrimination because of Schizophrenia. The main objectives of the program focus on awareness raising, education, research, advocacy and communication. Continuing efforts to sensitize and educate the public to have more accurate and less stereotypical perceptions about the chronically mentally ill are basic elements of anti-stigma campaigns and lead to the empowerment of patients and their families. In this report a number of anti-stigma initiatives undertaken in Greece within the context of this Global Programme are presented, along with the lessons learnt through the years.

RS26.3.
THE CENTRAL ROLE OF FAMILY CAREGIVERS FOR THE REHABILITATION OF SCHIZOPHRENIA PATIENTS

J. Wancata, F. Friedrich, M. Ossege, A. Unger
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

A large number of studies have described the negative consequences of schizophrenia on family caregivers, such as emotional stress or symptoms of depression. Many relatives experience social discrimination because of the patient's mental illness. Other studies have shown that interventions to support caregivers and to improve their communication with the patient are effective. These positive effects concern both the patients (e.g., reducing the number of relapses, reducing the number of hospital admissions) and the relatives (e.g., increasing knowledge about schizophrenia). Unfortunately, some aspects of caregiving such as gender were not sufficiently considered until now. One-hundred and one patients and their mothers and fathers were investigated using semi-structured interviews and questionnaires. The mean number of days fathers lived together with the patients did not differ significantly from the mothers, but the average duration (hours per week) of contact with the patient was significantly higher for mothers. The mothers' objective burden was significantly higher than fathers, but parents did not show differences concerning subjective burden. Mothers were more frequently depressed, and fathers showed more frequently alcohol problems. The overall score of caregivers' involvement did not differ significantly between fathers and mothers. These data suggest that patients' relatives need comprehensive support from professionals, which should be considered when planning services for family caregivers.

RS26.4.
NEW STRATEGIES AND PARADIGMS FOR THE LONG-TERM CARE OF PEOPLE WITH SEVERE AND PERSISTENT MENTAL ILLNESS

A. Maone
Department of Mental Health, Local Health Unit Rome/A, Rome, Italy

In many countries a gradual shift toward a community mental health system of care is in progress. Two general trends regarding long-term care of people with severe and persistent mental illness can be recorded. The first consists of recovery and empowerment paradigms, a process of personal growth and development, which involves overcoming the effects of being a mental health patient, to regain control and establish a personally meaningful life. This approach is taking place where the patients live and involves mental health care interventions like outreach care, independent housing, supported employment, etc. The second one is represented by non-hospital residential facilities, which are gradually increasing, and which are showing low turnover and risk of new forms of institutionalization. In other words, the first trend is focussed on time to provide continuity of care along the natural course of the disorder and of the user's life. The second is based on space; users move from a place to another depending on their clinical status or on service's availability, often passively, maintaining a long-term dependency on the carers. For these reasons, it is necessary to reflect about the different implicit or explicit paradigms and developments, and to search for a balanced system.

RS26.5.
IMPLICATIONS OF RECOVERY: A PERSPECTIVE FOR PSYCHIATRIC SERVICES IN SPAIN

R. Guinea
Hospital de Dia, Madrid, Spain

Recovery has become the new "kid on the block" in the psychosocial rehabilitation vocabulary. However, it has been described in different qualitative ways. Recovery is a highly individual process, so it is difficult to describe it in phenomenological terms. It has to be considered as a long-term clinical and social outcome. As a consequence, in this process, the user is usually in contact with many different professionals and services. In this paper, some current definitions of recovery are given and all the related outcome studies are reviewed, along with the influencing sociocultural factors. Some reflections based on a qualitative study on the users' perspective when trying to achieve recovery are discussed within the context of the public mental health care system in Spain.

RS27.
PATHOPHYSIOLOGICAL MECHANISMS AND TREATMENT OF DEPRESSION ASSOCIATED WITH CEREBROVASCULAR DISEASE

RS27.1.
MECHANISM OF DEPRESSION AND APATHY AFTER FOCAL BRAIN LESIONS

S. Starkstein, R. Jorge, R. Robinson
University of Western Australia, Fremantle, Australia; University of Iowa, Iowa City, IA, USA

Early empirical studies demonstrated a strong association between acute post-stroke depression and lesions involving frontal regions of the left hemisphere. Further research demonstrated that subcortical lesions (mostly in the basal ganglia) resulted in a similar frequency of depression as cortical lesions, and a similar hemispheric asymmetry was also observed. Depression was also reported to follow right hemisphere and cerebellar or brainstem strokes, but with several idiosyncratic correlates, such as a shorter duration of depression. Recent meta-analyses on the association between post-stroke depression and lesion location produced contradictory results, but these discrepancies may result from methodological differences between studies. Apathy is the main differential diagnosis of depression after stroke. Initial studies among consecutive series of patients in the acute stage after stroke showed a significant association between apathy and lesions in the putamen, but no left-right asymmetry was found. Lesions in segregated fronto-subcortical loops considered to underlie "drive and motivation" and to provide "plans of actions" have been frequently associated with the mechanism of apathy, and the anterior cingulate was proposed to mediate the process of "converting motivation into action". Nevertheless, several empirical and conceptual limitations should be noted. First, a relatively small proportion of patients with basal ganglia lesions develop full-blown apathy, suggesting that the lesion is not a sufficient component. Second, the concept that action is causally dependent on motivation not only invokes a Cartesian approach to the mechanism of voluntary behaviour, but implies an infinite regress as well.

RS27.2.
THE ROLE OF CYTOKINES IN THE PATHOGENESIS OF DEPRESSION AND OTHER EMOTIONAL DISORDERS AFTER ACUTE STROKE

G. Spalletta
Department of Neuroscience, Tor Vergata University, IRCCS Fondazione Santa Lucia, Rome, Italy

Depression and other behavioral disorders occur commonly after stroke and adversely affect functional recovery. However, the biological basis of such disturbances have yet to be determined. Prior research indicates that the pro-inflammatory cytokines interleukin (IL)-1, tumor necrosis factor (TNF-α), IL-6, and IL-18 are involved in stroke-induced inflammation. Some of them contribute to the initiation or amplification of the inflammatory response following cerebral ischemia, and sometimes are even predictive of stroke outcome. In addition, several studies have suggested that pro-inflammatory cytokines can play a pathogenic role in depression. The purpose of this presentation is to explore the relationship between the production of pro-inflammatory mediators (IL-1, IL-6, TNFα and IL-18) and behavioral disturbances in a well-characterized sample of patients 72 hours after acute ischemic stroke. Results strongly suggest that the inflammatory processes occurring after stroke may contribute to the etiology of post-stroke depression and emotional unawareness and that the specific mechanisms underlying this phenomenon might be selectively mediated by different pro-inflammatory cytokines, such as IL-6 for depression and IL-18 for emotional unawareness or alexithymia. Their identification may imply a better understanding of the post-stroke depression pathogenesis, leading to design innovative therapeutic strategies for stroke patients.

RS27.3.
TREATMENT OF VASCULAR DEPRESSION USING TRANSCRANIAL MAGNETIC STIMULATION

R. Jorge
Department of Psychiatry, University of Iowa, Iowa City, IA, USA

The term vascular depression (VD) has been used to describe late-life depressive disorders in patients with clinical evidence of cerebrovascular disease**.** We conducted two prospective randomized controlled trials of the efficacy of left prefrontal transcranial magnetic stimulation (rTMS) to treat depression among patients with VD who failed previous treatment with antidepressants. After discontinuation of antidepressants, 92 patients with clinically defined VD were randomly assigned to receive either active or sham left prefrontal rTMS. In experiment 1, we administered a total cumulative dose (TCD) of 12,000 pulses. In experiment 2, we administered a TCD of 18,000 pulses. Sham stimulation was performed using a sham coil. In experiment 1, the sham group showed a 13.6% decrease in Hamilton Depression Rating Scale (Ham-D17) scores compared to 33.1% decrease in the TCD-12K group (p=0.04). Response rates were 6.7% in the sham group and 33.3% in the active group (p=0.08) and remission rates were 6.7% in the sham and 13.3% in the active group (p=0.50). In experiment 2, the sham group showed a 17.5% decrease in Ham-D17 scores compared with a 42.4% decrease observed in the TCD-18K group (p=0.0001). Response rates were 6.9% in the sham group and 39.4% in the active group (p=0.003), and remission rates were 3.5% in the sham and 27.3% in the active group (p=0.01). Response rates to rTMS were negatively correlated with age and positively correlated with frontal grey matter volumes. To our knowledge, this is the first controlled trial that demonstrates the efficacy of rTMS among geriatric patients.

RS27.4.
PREVENTION OF POST-STROKE DEPRESSION: ESCITALOPRAM AND PROBLEM SOLVING THERAPY VS. PLACEBO IN A RANDOMIZED DOUBLE-BLIND TRIAL

R. Robinson
University of Iowa, Iowa City, IA, USA

Depression occurs in approximately 37% of patients following the acute post-stroke period. This constitutes a high risk sample for prevention strategy. Patients with acute stroke who were non-depressed were enrolled at 3 sites within 3 months following stroke. A total of 176 patients were randomized to double-blind placebo controlled comparison of escitalopram (n=59) or placebo (n=58) and a non-blinded problem solving therapy (n=59). Patients were examined at 3, 6, 9, and 12 months using the Structured Clinical Interview for DSM-IV (SCID) and diagnostic criteria from DSM-IV-TR to assess the development of major or minor depression. Patients were also assessed for severity of depressive symptoms (Hamilton Depression Scale), functional impairment measures (Functional Independence Measure) and cognitive impairment (Repeatable Battery for Assessment of Neuropsychological status, RBANS). Patients who received placebo were significantly more likely to develop depression (22.4%; 11 major and 2 minor depressions) than those who received escitalopram (8.5%; 3 major and 2 minor depressions). Time to onset of depression was assessed using a Cox regression proportional Hazards model. Patients who received placebo were 4.5 times more likely to develop depression than patients who received escitalopram (adjusted HR=4.5; 95% CI=2.4-8.2; $p<0.001$). Similarly, patients who received problem solving therapy (11.9%; 5 major and 2 minor depressions) were significantly less likely to develop depression (adjusted HR-2.2; 95% CI=1.4-3.5; $p<0.001$). There were no significant intergroup differences on recovery from impairment in activities of daily living or cognitive function.

RS28.
THE EMERGENCE OF SUB-THRESHOLD PSYCHIATRY

RS28.1.
THE EMERGENCE OF SUB-THRESHOLD PSYCHIATRY: AN OVERVIEW

A. Okasha
Institute of Psychiatry, Ain Shams University, Kasr El Nil, Cairo, Egypt

Many studies have shown that we are faced in our daily clinical practice with many patients who do not fulfill the criteria of either ICD-10 or DSM-IV. They may be included under atypical, unspecified or not elsewhere classified. Sub-threshold cases or prodromata of psychotic or non-psychotic clinical conditions are encountered frequently in clinical practice, and because of some ethical and nosological issues their needs are unmet. Pharmacological intervention in such conditions is denied in some countries, especially with managed care, where maximization of profit and minimization of cost is the main objective. Recent data suggest that the impairment and disability caused by sub-syndromal disorders are almost equal to the syndromal ones. Our current classifications have no room for such disorders in spite of the suffering of those patients. This creates an ethical dilemma to clinicians who would like to help but are restricted by the fact that there are no guidelines for the treatment of these disorders. We discuss the ethics of managing sub-syndromal disorders in spite of lack of evidence-based information about such a category.

RS28.2.
PERSONALITY TRAITS VS. PERSONALITY DISORDERS

J.J. Lopez-Ibor
Complutense University, Madrid, Spain

The axis II of DSM was introduced in order not to forget in the diagnostic process the personality of patients. This is very important in classification systems based on the symptoms of diseases because, although useful for communication and scientific interchange, they are reductionistic as they do not consider the origin of these symptoms. The problem with Axis II of DSM is that it considers only personality disorders and clinicians should also take into account personality characteristics which are not morbid. It is therefore necessary to use two diagnostic approaches: one for psychiatric disorders, including personality disorders, and another one based on personality traits, to describe personality of patients in the same way as normal personalities are described. This approach is embedded in ICD-10 multiaxial version, but this has unfortunately not been used very much. The suggestion is made that future systems should consider these two perspectives. This leaves open the relationship between normal and abnormal personalities and, from present research in this field, one can anticipate that future research will be highly interesting.

RS28.3.
PUBLIC HEALTH ISSUES RELATED TO THE EXISTENCE OF SUB-THRESHOLD DISORDERS

N. Sartorius
Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

The currently most widely used systems of diagnosis aver that persons who show some but not all the symptoms selected for the definition of mental disorders do not have the disorder; yet they come forward seeking help from health services because they are distressed and often fail to perform in their personal and social roles. Since they do not have a mental disorder as defined in the prevailing systems of classification they do not benefit from their health insurance and are not supposed to be receiving treatment offered to people who have well-defined mental disorders. Their distress and disability reduces their quality of life and their capacity to fully contribute to the lives of their family and community: their condition thus creates a burden to society. The estimation of the total size of the social burden produced by disorders that do not reach the thresholds defined in the classification systems is difficult to estimate. The main reason for this difficulty is the often forgotten need to distinguish between definitions used in comprehensive systems of classification of disorders useful for public health purposes and research and the systems of defining the need for care used in clinical practice. This paper addresses the differences between these two systems of classification and the possible ways of reducing the difficulties that arise because of these differences.

RS28.4.
AFFECTIVE TEMPERAMENTS AS PRECURSORS OF MOOD DISORDERS

H.S. Akiskal
University of California at San Diego, La Jolla, CA, USA

Although dysthymia and cyclothymia have been introduced into the DSM and ICD diagnostic schemas as "subthreshold" mood disorders, their boundaries with normal temperaments and under what circumstances they merit therapeutic interventions, including pharma-

cotherapy, remain unclear. These are extremely important questions for public health, because affective disorders more often than not arise from antecedent temperaments. A new instrument, the Temperament Evaluation of Memphis, Pisa, Paris and San Diego Autoquestionnaire (TEMPS-A) has been validated (10 languages), generating sufficient research to help in formulating data-based answers to the foregoing questions. The temperament about which a great deal of relevant data exists is the cyclothymic, which is in some ways paradigmatic of the dilemmas faced by the clinician-scientist, because many artistically talented individuals seem to benefit from this temperament, yet affectively ill individuals with this temperament appear at some risk for suicide. This temperament also predisposes to bipolar II, mixed states, rapid cycling, alcohol and substance abuse, is often "comorbid" with multiple anxiety disorders, and may be a precursor of bulimia and HIV infection. New, provocative data suggest that this temperament can serve as a behavioral endophenotype for bipolar disorder. Indeed, suggestive linkage to chromosome 18p11 locus has been reported by our group.

RS28.5.
EARLY DIAGNOSIS AND EARLY TREATMENT OF SCHIZOPHRENIA IN THE PRODROMAL STATE

H.-J. Möller
Department of Psychiatry, Ludwig-Maximilians-University, Munich, Germany

The diagnoses of sub-syndromal and prodromal psychopathological symptoms have gained increased interest in the recent years. This is driven by the hypothesis that sub-syndromal or prodromal stages of psychopathology might develop into a full syndrome and that early diagnosis and early treatment could prevent this transition. This concept has been explored in the recent past in the field of schizophrenia (early diagnosis and early treatment of the prodromal stage) as well as in the field of Alzheimer's dementia (early diagnosis and treatment of mild cognitive impairment). While in the field of schizophrenia this concept could be supported by clinical trials, the treatment of mild cognitive impairments with acetyl-cholinesterase inhibitors apparently does not prevent the transition to Alzheimer's disease. Related to this field is also the diagnosis of sub-syndromal depression or mild depression, where controversies exist whether this condition should be treated with antidepressants or not. For example, the British National Institute of Clinical Excellence (NICE) suggests to treat only moderate and severe depression with antidepressants, while for mild depressions counselling seems to be sufficient. This opinion is not shared by all experts. Others perceive sub-syndromal depression/mild depression as a potential predecessor of moderate and severe depression, which is of course sometimes possible. The example of the early diagnosis and early treatment of schizophrenia, based on prodromal symptoms, is used to demonstrate the benefits and risks of such an approach.

RS29.
MANAGEMENT OF PSYCHOTIC DISORDERS IN COMMUNITY MENTAL HEALTH SERVICES: THE GAP BETWEEN EVIDENCE AND ROUTINE PRACTICE

RS29.1.
COMMUNITY PSYCHIATRY: BAD EVIDENCE AND GOOD PRACTICE

T. Burns
Department of Psychiatry, University of Oxford, UK

Community psychiatry research has experienced an explosion of studies within the last 30 years on the best management of severely ill patients, most of them affected by psychosis. Increasingly these have favoured a randomized controlled trial (RCT) model and the results have been included in meta-analyses. While the rigor of these studies has undoubtedly increased over this time, there remain special problems associated with community psychiatry research which have been neglected and have led to erroneous conclusions. We used meta-regression analysis to explore variations in outcomes in case management trials to understand better the characteristics of community psychiatry research that lead to such heterogeneity. Of four hypotheses tested, two explained the differences: the nature of the control service and, to a lesser extent, measureable elements of the experimental service. Comparing complex interventions against "treatment as usual" is a questionable practice and should be avoided. Core features of both the experimental and comparator conditions can, and should, be defined as the precondition of future trials. Care should be exercised in extrapolating from meta-analyses of such studies unless comparators can be confidently assumed to be equivalent.

RS29.2.
PATHWAYS OF CARE IN FIRST-EPISODE PSYCHOTIC PATIENTS TREATED IN COMMUNITY BASED-MENTAL HEALTH SERVICES. FINDINGS FROM THE PICOS-VENETO PROJECT

A. Lasalvia, M. Bertani, S. Bissoli, C. Bonetto, D. Cristofalo, K. De Santi, L. Lazzarotto, G. Marrella, R. Mazzoncini, N. Pellegrini, S. Tosato, M. Tansella, M. Ruggeri, on behalf of the PICOS-Veneto Group
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, University of Verona, Italy

The Psychosis Incident Cohort Outcome Study (PICOS) is a large multisite research conducted in the Veneto Region (Italy), aiming to develop a comprehensive model for predicting outcome in first-episode psychotic patients. Among the aims of the study were: a) to investigate pathways of care in first-episode psychotic patients treated within community based-mental health services, and b) to explore to which degree treatment guidelines are followed in the "real world" settings. Interventions provided to patients were retrospectively collected from clinical records at 1-year. An ad-hoc schedule was used for collecting information on both pharmacological and psychosocial treatments. No specific services for first-episode psychosis were available in the catchment area. Usual care generally consisted of psychopharmacological treatment (94% of patients received antipsychotics) provided within outpatient settings. Only 48% received some kind of psychosocial intervention, mainly consisting of unstructured individual support therapy. Psychodynamic-oriented psychotherapy or other specific psychotherapeutic interventions, such as cognitive-behavioral therapy (recommend in most treatment guidelines) were provid-

ed to less than 15%. Family interventions generally consisted of non-specific informal supportive/educative sessions; specific family psychoeducation (recommended in most treatment guidelines) was provided to less than 8%. At one-year follow up, 90% of patients were still in contact with treating mental health services and 66% were still receiving specialised intervention. Our findings highlight some discrepancies between interventions provided by mental health services and treatment recommendations contained in the recent guidelines. This suggests the need to implement specific and large scale initiatives aiming to close the gap between research and clinical practice.

RS29.3.
EFFICACY OF TREATMENTS ON THE COURSE OF DISABILITY: IMPLEMENTATION IN ROUTINE PRACTICE

D. Wiersma, J.T. van Busschbach
University of Groningen, The Netherlands

Recent years have witnessed an increase of studies of rehabilitation in community mental health services in the area of housing, occupation, daily activities and social contacts, most of the more recent ones specifically targeted to patients in the early phases of psychosis. There is no more dispute as to whether there is a need for rehabilitation, and a lot of effort is put in changing attitudes and raising the educational level of workers. However, although the evidence base of these rehabilitative efforts has been broadened, this did not result in a smooth implementation in routine clinical practice. In mental health teams, the focus on stabilizing symptoms forms an apparent barrier and only a minority of clients are offered adequate interventions like vocational training. A survey in 8 regions in the Netherlands revealed that the multidisciplinary guidelines for schizophrenia have not or only to a small extent been implemented as far as rehabilitation is concerned. A follow-up is ongoing to find out whether the situation has been improved since then. An overview is given of how much has been achieved in this area and what are the barriers ahead. In the discussion the question is raised as to the growing use of specialized rehabilitation centers based on the idea that this facilitates the right climate and guarantees the quality of the intervention. One could ask whether this is the way rehabilitation should further develop or if it is better to focus on integration of rehabilitation in day to day practice in the general mental health teams.

RS29.4.
THE PATIENTS' PERSPECTIVE OF EARLY TREATMENT OF PSYCHOSIS: A QUALITATIVE APPROACH

M. Amering
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Advocacy for patients empowerment has been joined by qualitative research offering new perspectives on treatments, rehabilitation and anti-stigma efforts in mental health. Patients' views have been proved to be of great usefulness, especially in the early phases of psychoses. New rules, e.g., user involvement and recovery orientation, as well as new tools, e.g., shared decision making and psychiatric advance directives, have emerged. Areas of conflict between the concepts of empowerment, patient self-determination, evidence-based medicine and mental health legislation may emerge. Development to meet these challenges successfully must use the expertise of users and carers as well as professionals. Consequences and challenges of the empowerment and recovery-orientation approach are presented and discussed, together with their impact on outcome in the critical period of psychosis. Results of studies conducted by using qualitative techniques in order to explore patients' views of treatments are presented, such as patient-centred characterization of wanted and unwanted effects of group psychoeducation, that help to understand the potentials of a psychoeducational intervention in schizophrenia, as well as studies on the impact of advanced directives seen as the promise of a new relationship with the mental health system, one built on collaboration and respect for the patients' experience-based expertise. Trialogue and other forms of collaboration on equal footing have the potential to move the field beyond a deficit model of mental illness towards a focus on the promotion of health, recovery and resilience, and a broadening of treatment goals beyond symptom reduction and stabilization.

RS30.
COMBINATION STRATEGIES FOR THE STABILIZATION OF PANIC AND GENERALIZED ANXIETY DISORDER

RS30.1.
COMBINATION ANXIOLYTIC THERAPIES: WHAT DO ANIMAL MODELS TELL US?

A. Shekhar
Department of Psychiatry, Indiana University, Indianapolis, IN, USA

A number of neurotransmitter mechanisms are involved in the normal regulation of panic responses within limbic structures such as the amygdala, and disruptions in these mechanisms could result in panic and other anxiety disorders. Normally, stimulation of the amygdala of rats (similar to stress or anxiety) results in anxiety and panic-like responses, as well as the activation of a select subgroup of brainstem serotonin (5-HT) neurons of the dorsal raphe nuceus. These 5-HT neurons project back to the amygdala and activate the inhibitory interneurons there via the serotonic 2A (5-HT2A) receptors, thus limiting the anxiety or stress response. However, repeated activation of the amygdala (termed "priming") disrupts this normal homeostatic feedback mechanism and induces a pathological, panic-like state, due in part to the resulting reduction in the 5-HT facilitation of inhibition in the amygdala. Under such a pathological state, acutely increasing 5-HT neurotransmission will paradoxically facilitate the excitatory inputs to the amygdala, perhaps by stimulating 5-HT2C receptors on the amygdala projection neurons. This could account for the often observed phenomenon of an exacerbation of panic symptoms during the initial phase of treatment with selective serotonin reuptake inhibitors (SSRIs). A rational approach to minimizing this acute stimulatory effects of SSRIs would be to re-establish the GABAergic inhibitory drive in the amygdala (and other limbic structures) with short-term anxiolytic therapy such as benzodiazepines. Thus, results from animal models of psychopathology can provide important information to develop rational treatment strategies for severe anxiety syndromes like panic and post-traumatic stress disorders.

RS30.2.
COMBINATION THERAPIES FOR PANIC DISORDER: A SURVEY OF THE CLINICAL EVIDENCE

D.V. Sheehan
University of South Florida, Tampa, FL, USA

Treatment guidelines recommend selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) as first-line treatments for panic disorder. However, one recent estimate found that approximately 50% of all patients prescribed SSRIs/SNRIs are concurrently prescribed a benzodiazepine. In spite of such widespread concomitant use of SSRIs/SNRIs and benzodiazepines, there is little research to inform this practice. The first such study, a double blind placebo controlled study by Goddard et al randomly assigned panic disorder patients to sertraline + placebo or sertraline + clonazepam. Patients were then treated for four weeks, after which they were slowly tapered off clonazepam. In the initial weeks, those on the sertraline + clonazepam combination had a more rapid onset of therapeutic action. Following taper, both groups had similar treatment outcomes with little rebound following clonazepam taper. There was a lower dropout rate in the weeks of treatment on the sertraline + clonazepam combination. Pollack et al. did a double-blind, placebo-controlled study with paroxetine with or without clonazepam, with similar results. Katzelnick et al carried out an SSRI/SNRI ± benzodiazepine study in primary care with similar findings. Goddard et al recently completed a multicenter double-blind placebo controlled study with sertraline ± alprazolam XR and evaluated health outcomes/quality of life and disability/functional impairment in addition to the usual anxiety and panic outcome measures. Together these findings suggest that for many patients, especially those who are at risk to drop out early, the SSRI/benzodiazepine combination has merit as a treatment strategy in the early months of treating panic disorder.

RS30.3.
COMBINATION PHARMACOTHERAPIES FOR GENERALIZED ANXIETY DISORDER

A.W. Goddard
Indiana University, Indianapolis, IN, USA

Commonly utilized pharmacotherapies for generalized anxiety disorder (GAD) include the selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs), benzodiazepines, tricyclic antidepressants, and the azapirone agent, buspirone. These are evidence-based practices for the short-term stabilization of GAD. However, these interventions are only modestly effective as initial treatments for GAD, based on a recent metaanalysis of clinical trials, which indicated an overall effect size of active medications of 0.39. Strategies such as intra- and interclass switching may be of value for some patients. However, comparative SSRI efficacy data suggest that GAD treatment effects are similar within this class. Thus, many patients are relatively resistant to SSRI therapy and may eventually require combination therapy in order to achieve a fuller treatment response. However, there are relatively few research data to inform the clinician on how best to apply combination treatment in GAD. There are now effectiveness trial data on the early benefit of combination SSRI/benzodiazepine therapy for GAD. In addition, there is accumulating evidence of the potential benefits of atypical antipsychotic augmentation therapy for SSRI-resistant GAD. This paper summarizes the emerging evidence base on this strategy, and weighs the risks and benefits of taking this treatment decision.

RS30.4.
RANDOMIZED TRIALS OF COMBINATION THERAPY VS. SSRI ALONE FOR PANIC AND GENERALIZED ANXIETY DISORDER IN NATURALISTIC SETTINGS

D. Katzelnick
University of Wisconsin Medical School, Madison, WI, USA

Selective serotonin reuptake inhibitors (SSRIs) and serotonin-norepinephrine reuptake inhibitors (SNRIs) are first-line treatments for panic disorder and generalized anxiety disorder (GAD), despite slow onset of action and potential to exacerbate anxiety symptoms early during treatment. Our two naturalistic studies evaluated time to response in subjects with panic disorder or GAD treated with alprazolam in combination with an SSRI/SNRI compared with SSRI/SNRI alone. Subjects ≥18 years old with a primary diagnosis of GAD were randomized to 8 weeks open-label treatment with alprazolam (4 weeks followed by 3 to 4 week taper) combined with an SSRI or SNRI, or SSRI/SNRI alone. The primary efficacy variable was time to response, defined as ≥50% decrease in Hamilton Rating Scale for Anxiety (HAM-A) total score. Pre-specified secondary variables included mean change in HAM-A total and improvement on the Clinical Global Impression of Improvement (CGI-I) and Patient Global Impression (PGI) scales. The intent-to-treat population comprised 245 subjects in the panic study and 129 subjects in the GAD study. There were no statistical differences between groups in the primary outcome of time to response in either study. Significant differences favoring combination treatment were observed in the early weeks in both studies in HAM-A total score ($p<0.05$), the CGI-I scale ($p<0.05$), and the PGI scale ($p<0.05$). Fatigue, headache and somnolence were the only adverse events reported by >5% of subjects. Approximately 33% of patients in both studies were still on alprazolam at study completion. Treatment with alprazolam combined with an SSRI/SNRI was generally well tolerated. Thus, although not different from monotherapy on the primary outcome, combination treatment was associated with more rapid improvement in HAM-A and global measures of well being in both the panic and GAD studies.

RS31.
MANAGEMENT OF TREATMENT-RESISTANT OBSESSIVE-COMPULSIVE DISORDERS

RS31.1.
WHAT IS TREATMENT-RESISTANT OBSESSIVE-COMPULSIVE DISORDER?

N.A. Fineberg, I. Pampaloni, A. Padhi
Queen Elizabeth II Hospital, University of Hertfordshire, Welwyn Garden City, UK

Although first-line treatment with selective serotonin reuptake inhibitors (SSRIs) and cognitive behaviour therapy (CBT) is effective for the majority of patients with obsessive-compulsive disorder (OCD), the response is characteristically partial and a substantial minority fail to make satisfactory improvements despite an adequate trial of therapy. These are the cases that psychiatrists are often called upon to treat, and for such individuals treatment strategies remain limited. Most of the research into treatment-resistant OCD has investigated SSRI non-response. A failure to improve by at least 25% on the Yale-Brown Obsessive Compulsive Scale, despite 12 weeks of continuous treatment at maximally tolerated doses, has been suggested as an operational definition for treatment resistance. Controlled studies have identified various clinical (younger age of onset, predom-

inant compulsions, comorbid tics, attention-deficit/hyperactivity disorder, oppositional defiant disorder, hoarding, bio-rhythm disturbance), radiological (increased and decreased activation, respectively, in orbito-frontal cortex and caudate nucleus) and genetic (5HTTLPR/5-HT2A polymorphisms) indices associated with SSRI-resistant OCD. Such cases also appear to respond favourably to treatment with additional antipsychotics, hinting at a separate neurobiology involving dopamine neurocircuitry. However, new research into the effectiveness of adjunctive antipsychotics in "non-resistant" OCD questions this hypothesis. A better understanding of the clinical predictors and neurobiology of pharmacological and psychological treatment resistance will help clinicians direct appropriate treatment to those who are most likely to respond and signal new treatment targets.

RS31.2.
DRUG TREATMENT OF RESISTANT OBSESSIVE-COMPULSIVE DISORDER

F. Bogetto
Department of Neurosciences, University of Turin, Italy

Patients with treatment-resistant obsessive-compulsive disorder (OCD) are those who undergo adequate trials of first-line therapies without a satisfactory response. Two major options are available for these patients: a) augmentation with pharmacotherapy or cognitive-behavioral therapy (CBT), and b) switch to another compound or another formulation. The first approach is to augment the serotonin reuptake inhibitor (SRI) with another drug or CBT. Pharmacological augmentation has been tried with several drugs; the effectiveness of antipsychotic (first and second generation) augmentation is well documented, and subjects with comorbid tic may be particularly responsive to haloperidol. A second, although less established, augmentation strategy consists in adding another SRI. Adding other drugs like pindolol and morphine has showed efficacy in few controlled studies. In the case of CBT, few studies showed that exposure and response prevention is an effective technique in patients with treatment-resistant OCD. The second approach, less studied, is switching from a serotonergic compound to another one (generally from a selective serotonin reuptake inhibitor to clomipramine or vice versa), or to venlafaxine or mirtazapine. Finally, patients that failed to respond to oral clomipramine might benefit from switching to intravenous clomipramine. The choice between augmenting the previous medication and switching to another one after failure of a first-line treatment strategy is currently under debate. It is advisable to consider an augmentation strategy in case of partial response, while the switch strategy should be employed in absence of any minimal improvement.

RS31.3.
UPDATED OVERVIEW OF NEUROSURGICAL TREATMENT FOR RESISTANT OBSESSIVE-COMPULSIVE DISORDER

B. Aouizerate, J.-Y. Rotge, C. Martin-Guehl, E. Cuny, A. Rougier, D. Guehl, P. Burbaud, B. Bioulac, J. Tignol
Centre Hospitalier Charles Perrens; Université Victor Segalen; CHU de Bordeaux, Bordeaux, France

Obsessive-compulsive disorder (OCD) is a relatively common psychiatric disorder that affects 2 to 3% of the general population. Over the last 30 years, classical therapeutic approaches have been developed, ranging from antidepressants primarily acting by blocking serotonin reuptake to cognitive-behavioral therapies, which are now established as effective for the management of OCD. However, at least 15-20% of patients with OCD fail to respond adequately to these conventional treatments. Therefore, psychosurgical approaches have been proposed for the management of these severely distressing and resistant forms of OCD. The most frequently described procedures, which are anterior capsulotomy, anterior cingulotomy, and subcaudate tractotomy, have been shown to be of significant benefit in the treatment of refractory OCD. They have been performed in order to interrupt the orbitofrontal and anterior cingulate loops at either cortical or subcortical level, which have been well documented as disrupted in OCD. Despite these lesion-producing techniques have relatively low incidence of serious complications or undesirable effects, deep brain stimulation, as a reversible and adjustable procedure, which represents a major therapeutic advance for incapacitating forms of Parkinson's disease, has recently been introduced in the field of OCD, primarily targeting the limb part of the internal capsule, the ventral striatum or the subthalamic nucleus. This technique has been found to produce favorable effects that need to be confirmed by further research in this area.

RS32.
CHRONOTHERAPEUTICS FOR MAJOR AFFECTIVE DISORDERS

RS32.1.
CHRONOBIOLOGY FOR THE CLINICIAN

A. Wirz-Justice
Centre for Chronobiology, Psychiatric University Clinics, Basel, Switzerland

Biological rhythm research has exploded in two directions: from the very basic elucidation of how clock genes tick to the application of circadian rhythm principles in medicine and the timing of drug application. Synchronising agents (zeitgebers), of which the most important is light, synchronise internal rhythms with each other and to external time. We know a great deal about circadian rhythms, including the importance of well-entrained rhythms for psychological well-being, mood and performance. Light therapy (which acts to entrain the circadian clock), was originally developed for seasonal affective disorder, for which it is now accepted as the treatment of choice. Importantly, light is now being shown effective for major non-seasonal and even chronic depression, as well as for bulimia and sleep-wake disturbances in ageing and dementia. Many disrupted sleep-wake cycles seen in the clinic are not aetiological to any particular illness, but contribute to symptom exacerbation. Thus, achieving better entrainment may improve clinical state, cognitive behaviour, and speed up remission. Psychiatrists have long observed altered circadian rhythms in depressive patients, most striking in bipolar disorder, due to its intrinsic periodicity, the cyclic nature of illness episodes, and the predictable shifts in sleep-wake timing from manic to depressed phases. The switch out of depression is often accompanied by a spontaneous sleep deprivation; conversely, a prescribed sleep deprivation can be rapidly antidepressant. More strikingly, a phase advance of sleep timing can induce longer antidepressant effects, suggesting an intimate functional relationship between sleep, its timing, and the depressive state.

RS32.2.
CHRONOTHERAPEUTICS TO TREAT BIPOLAR ILLNESS IN A HOSPITAL WARD

F. Benedetti
Vita-Salute San Raffaele University, Milan; National Institute of Neurosciences, Turin, Italy

Psychiatric chronotherapeutics is the controlled exposure to environmental stimuli that act on biological rhythms in order to achieve therapeutic effects in the treatment of psychiatric conditions. In recent years, some techniques (mainly light therapy and sleep deprivation) have passed the experimental phase and reached the status of powerful and affordable clinical interventions for everyday clinical treatment of depressed patients. These techniques target the same brain neurotransmitter systems and the same brain areas as do antidepressant drugs, and should be administered under careful medical supervision. Their effects are rapid and transient, but can be stabilised by combining techniques among themselves or together with common drug treatments. Antidepressant chronotherapeutics targets the broadly defined depressive syndrome, with response and relapse rates similar to those obtained with antidepressant drugs, and good results are obtained even in difficult-to-treat conditions such as bipolar depression. While disruption of sleep-wake and activity-rest rhythms is a known trigger of mood episodes in bipolar disorder, specific combinations of extended wake and light during depression, and extended bedrest and dark during mania, can help to rapidly restore euthymic conditions. Chronotherapeutics offers then a benign alternative to more radical treatments for severe depression in psychiatric wards, giving to the patients similar rates of response but with the advantage of rapidity of onset and lack of side effects.

RS32.3.
WAKE AND LIGHT THERAPY IN NON-SEASONAL MAJOR DEPRESSION

K. Martiny, E. Refsgaard, M. Lunde, P. Bech
Psychiatric Research Unit, Frederiksborg General Hospital, Hillerod, Denmark

Sleep deprivation is known to induce a rapid amelioration of depressive symptoms and recently techniques have been developed to sustain the acute response. These methods were incorporated into the Chronos study, where patients with a diagnosis of unipolar or bipolar major depression according to DSM-IV were included and randomized to either a chronotherapy group, using a combination of three total sleep deprivations and daily long-term (29 weeks) bright light treatment, or an exercise group, using a daily exercise program individually tailored to 30 minutes of moderate intensity. All patients were treated with duloxetine 60 mg daily. One week after the intervention, patients in the chronotherapy group showed a greater decrease in depression scores compared to patients in the exercise group, and this difference between groups increased over the following weeks. Thus, the chronotherapeutic intervention induced a rapid and sustained response, superior to the response seen in the exercise group. In a previous five week study with patients suffering from non-seasonal major depression, we had found that bright light in combination with sertraline was more effective than dim light (placebo condition) in combination with sertraline. Light treatment was very well tolerated and the compliance with light treatment was high. A response to light treatment has also been documented in patients with post-stroke depression.

RS32.4.
LIGHT THERAPY FOR DIFFICULT-TO-TREAT NON-SEASONAL DEPRESSION

M. Terman
Department of Psychiatry, Columbia University, New York, NY, USA

Light therapy grew from an intensive 25-year research focus on seasonal affective disorder (SAD). More recent investigations point to broader efficacy for non-seasonal depression, including patients who have been resistant to conventional antidepressants and electroconvulsive therapy. The circadian phase shifting capacity of timed light exposure is universal, and chronobiological factors are at play across the depression spectrum. Chronobiology aside, light therapy exerts a positive activating effect and is thought to stimulate the same neurotransmitter pathways targeted by drugs. Recent promising initiatives extend to light treatment for non-seasonal major depressive disorder and bipolar depression. Light therapy has been successful under both inpatient and outpatient regimens, used either as monotherapy or adjunctively with drugs. Remission rate has been similar to that for SAD. Four case series are reviewed: a) inpatients with unipolar depression and a history of drug resistance who failed to improve with novel administration of high-dose tranylcypromine; b) unmedicated outpatients with chronic depression; c) bipolar and unipolar medicated inpatients at suicidal risk; and d) bipolar and unipolar inpatients and outpatients, some medicated, with delayed sleep phase disorder. Importantly for clinical success, light therapy in each situation was scheduled relative to internal circadian clock phase (as estimated by a chronotype questionnaire) and habitual sleep time.

RS33.
ISSUES IN PHARMACOTHERAPY OF DRUG ADDICTION

RS33.1.
ANIMAL MODELS AS PREDICTIVE TOOLS FOR DRUG ADDICTION THERAPY

W. Fratta
Department of Neuroscience, University of Cagliari, Italy

Animal models of drug addiction have been, and still are, of fundamental importance to understand the neurobiological mechanisms of drug addiction and, consequently, for developing new therapeutic strategies. Several animal models of drug addiction have been developed. Among them, the most popular and well known by neuroscientists are drug self-administration and conditioned place preference. In both these models all the different phases of the "cycle" of drug addiction are represented. It is possible to study the phases of acquisition of drug abuse, of retention, of extinction, and finally of relapse to drug abuse. The latter is considered the most important from a clinical point of view. Quite a few experimental protocols have been developed to study the phenomenon of relapse to drug seeking, taking into account that the factors able to trigger relapse to drug seeking (drugs, cues, stress) are similar both in humans and animals. Although both conditioned place preference and drug self-administration are believed to be fully reliable and valid (all drugs abused by humans give positive responses in these models), there are important differences in these two animal models. In the conditioned place preference, the addictive property of a drug is associated to the environment where the drug induces its effects and the drug is administered to the animal by the experimenter, who decides the dose, whereas in

the drug self-administration model the animal self administers the drug (intravenously or orally). Thus, these two animal models can be complementary and represent, so far, the most reliable tools to investigate neurobiology and possible therapies in drug addiction.

RS33.2.
NEW TARGETS FOR TREATING DRUG DEPENDENCE: THE ROLE OF THE AMYGDALA

M. Cador
Université Victor Segalen, Bordeaux, France

Opiate withdrawal leads to the emergence of an aversive state that can be conditioned to a specific environment. Reactivation of these withdrawal memories has been suggested to be involved in relapse to drug-seeking of abstinent opiate addicts. Among the limbic areas that are likely to mediate these features of opiate dependence, amygdala nuclei represent critical neural substrates. Using a conditioned place aversion paradigm (CPA), we have previously shown specific opposite patterns of reactivity in the basolateral (BLA) and the central (CeA) amygdala, when comparing the experience of acute opiate withdrawal with the re-exposure to a withdrawal-paired environment. These data gave clues about the potential mechanisms by which amygdala nuclei may be involved in withdrawal memories. To extend these results, the present study aimed to assess the cellular reactivity and plasticity of amygdala nuclei during the opiate withdrawal conditioning process. For this, we have quantified c-fos and arc expression using in situ hybridization in rats, following each of the three conditioning sessions during CPA, and after re-exposure to the withdrawal-paired environment. BLA output neurons showed an increase in the expression of the plasticity-related arc gene during conditioning that was also increased by re-exposure to the withdrawal-paired environment. Interestingly, the CeA showed an opposite pattern of responding, and the intercalated cell masses (ITC), a possible inhibitory interface between the BLA and CeA, showed a persistent activation of c-fos and arc mRNA. We report here specific c-fos and arc patterns of reactivity in amygdala nuclei during withdrawal conditioning. These findings improve our understanding of the involvement of the amygdala network in the formation and retrieval of withdrawal memories. Plasticity processes within BLA output neurons during conditioning may participate in increasing the BLA reactivity to conditioned stimuli, which could in turn (by the control of downstream nuclei) reinforce and drive the motivational properties of withdrawal over drug consumption.

RS33.3.
CLINICAL GOALS FOR DRUG ADDICTION THERAPY

W. van den Brink
University of Amsterdam, The Netherlands

Both clinical experience and neurobiological evidence indicate that opioid dependence is a chronic relapsing disorder. Treatment objectives depend on the pursued goals: crisis intervention, abstinence-oriented treatment (detoxification and relapse prevention), or agonist maintenance treatment. The high quality of solid evidence in the literature demonstrates that there are numerous effective interventions available for the treatment of opioid dependence. Crisis intervention, frequently necessary owing to the high overdose rate, can be effectively handled with naloxone. Abstinence-oriented interventions are effective for only a few motivated patients with stable living conditions and adequate social support. Agonist maintenance treatment is considered the first line of treatment for opioid dependence. Numerous studies have shown efficacy for methadone and buprenorphine treatment, while maintenance with other agonists is also becoming available to a greater extent. Maintenance treatment with diamorphine should be made available for the small group of treatment-resistant, severely dependent addicts. Other harm-reduction measures can serve to engage individuals with opioid addiction who are not in treatment. In conclusion, opioid dependence is a chronic relapsing disease that is difficult to cure, but effective treatments are available to stabilize patients and reduce harm, thereby increasing life expectancy and quality of life.

RS33.4.
OPIOID DEPENDENCE AND PREGNANCY

G. Fischer
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

The management of opioid dependence during pregnancy has received considerable attention over the past three decades. Recent peer-reviewed literature in the fields of pregnancy and opioid dependence and neonatal abstinence syndrome has been evaluated and discussed. Pregnant opioid-dependent women must be carefully managed to minimize harm to the fetus; therefore, standardized care for maternal health is required. In a multidisciplinary care system, opioid maintenance therapy is the recommended treatment approach during pregnancy. Equivalent attention must be given to the treatment of neonatal abstinence syndrome, which occurs in 55-94% of neonates after intrauterine opioid exposure with a 60% likelihood of requiring treatment. Heterogeneous rating scales as well as heterogeneous treatment approaches are often responsible for extended hospital stays. The interpretation of available literature is confounded by several methodological flaws. In general, there is still a lack of evidence-based study designs for pharmacological treatment of these patients as well as for the neonatal abstinence syndrome.

RS33.5.
PHARMACOLOGICAL VS. PSYCHOSOCIAL INTERVENTIONS IN THE THERAPY OF ADDICTION

M. Davoli
Department of Epidemiology, Local Health Unit E, Rome, Italy

Several pharmacological approaches aimed at opioid detoxification are effective. Nevertheless, a majority of patients relapse to heroin use, and relapses are a substantial problem in the rehabilitation of heroin users. Some studies have suggested that the sorts of symptoms which are most distressing to addicts during detoxification are psychological rather than physiological. We explored the benefit from adding psychosocial interventions to detoxification treatments by searching the Cochrane Drugs and Alcohol Group trials register, the Cochrane Central Register of Controlled Trials (CENTRAL), PUBMED, EMBASE, CINAHL, PsycINFO and a reference list of articles. Nine studies involving people were included. These studies considered five different psychosocial interventions and two substitution detoxification treatments: methadone and buprenorphine. The results show promising benefit from adding any psychosocial treatment to any substitution detoxification treatment in terms of completion of treatment (RR 1.68; 95% CI 1.11 to 2.55); use of opiate (RR 0.82; 95% CI 0.71 to 0.93), results at follow-up (RR 2.43; 95% CI 1.61 to 3.66), and compliance (RR 0.48; 95% CI 0.38 to 0.59). Thus, psychosocial treatments offered in addition to pharmacological detoxification treatments are effective in terms of completion of treatment, use of opiate, results at follow-up and compliance. Limitations to this review are imposed by the heterogeneity of the assessment of outcomes. Because of lack of detailed information, no meta-analysis could be performed.

RS34.
THE EFFECTS OF PSYCHIATRIC CONDITIONS ON DRIVING: A PRIMER FOR PSYCHIATRISTS

RS34.1.
DRIVING AND PSYCHIATRIC ILLNESS

N. Korner-Bitensky
Faculty of Medicine, School of Physical and Occupational Therapy, McGill University, Montreal, Quebec, Canada

Mental illnesses, and/or medications used to treat these illnesses, can affect fitness to drive. Psychiatrists are expected to identify and report individuals with psychiatric conditions who they deem unsafe to drive, yet they receive little training to guide their decision making. We conducted a systematic review to identify the evidence regarding the impact of various psychiatric conditions on driving safety. We then carried out a national cross-sectional survey of a random sample of Canadian psychiatrists, exploring current attitudes, practices, and knowledge regarding fitness to drive in persons with mental illness and their variations according to provincial legislation. In the systematic review, fourteen studies were retrieved. In eight, mental illness was linked to higher accident rates. In the survey, out of 248 psychiatrists (response rate of 54.2%), 64.1% reported they strongly agreed/agreed that addressing patients' fitness to drive was important. Only 18.0% were always aware of whether their patients were active drivers. One-fourth strongly agreed/agreed they were confident in their ability to evaluate fitness to drive. The systematic review indicates that accident rates are higher among sub-groups of individuals, including those having the most severe degree of mental illness and those using specific psychotropic medications such as benzodiazepines. The survey findings indicate that psychiatrists have a broad range of attitudes, practices and knowledge. There appears to be a large gap between the expectations placed on psychiatrists and their readiness and self-perceived ability to make informed decisions related to driving safety.

RS34.2.
ALZHEIMER'S DISEASE AND DRIVING

M. Rapoport
Department of Psychiatry, University of Toronto, Ontario, Canada

Cognitive disorders have a particular propensity to impair driving skill and the insight required to adjust driving habits safely. We discuss the impact of Alzheimer's disease on driving. Cognitive screening tests have been used extensively for the early identification of dementing disorders, and there is a large literature as well about the association of these tests with driving. The studies utilized driving records, self-report, simulators and on-road tests as measures of driving safety. We present a recent systematic review of this literature that highlights the limitations of in-office cognitive testing. Behavioral disturbances are common in dementia, and can be associated with particularly risky driving in this population. Recent data from a Canadian longitudinal study indicates that driving cessation in dementia may be associated with hallucinations and apathy, and that the impact of behavioral disturbance may exceed that of cognitive decline when it comes to retiring from driving. We also discuss findings from a recent case-crossover study of psychotropic medications and driving in patients with dementia, indicating that the prescription of such medications is associated with an increased risk of motor vehicle collisions.

RS34.3.
THE POTENTIAL OF DRIVING SIMULATORS TO IDENTIFY UNSAFE DRIVERS

M. Bédard
Lakehead University, Thunder Bay, Ontario, Canada

Recent advances in driving simulation technology, along with substantial cost reductions, have led to the emergence of simulators as a tool to investigate driving behavior, and possibly to identify potentially unsafe drivers. We report on our work to document the validity of our simulator to evaluate driving. The simulator (STISIM 400) has three screens providing a 135 degrees field of view, a steering wheel with torque to provide adequate feel, and a set of pedals; the seats are adjustable to provide comfort to the participants. For the first set of studies, we used a simulated road circuit that emulates a typical on-road evaluation. We correlated the findings obtained on this simulated circuit with those obtained on the actual on-road evaluation, and with results from psychometric measures known to be associated with driving performance (e.g., Trail Making Test). For the second set of studies, we determined if participants felt immersed in the virtual experience by embedding threatening situations (e.g., a car pulling in front unexpectedly) in the simulated circuit and examining their physiological responses to these situations. Data based on the simulated evaluations correlated with those from on-road evaluations (r=.80) and psychometric testing (with Trails A: r=.90). The presentation of a threatening situation was followed by an average 4 beats/minute increase in heart rate. These data suggest that our simulator possesses sufficient validity for the evaluation of safe driving in healthy and possibly clinical populations.

RS35.
THE COST OF ADOLESCENCE: A MULTIDIMENSIONAL APPROACH

RS35.1.
ROLE OF REWARD SYSTEMS DEVELOPMENT IN THE PROPENSITY FOR SUBSTANCE ABUSE IN ADOLESCENTS

C. Lejuez
Center for Addictions, Personality, and Emotion Research, Department of Psychology, University of Maryland, College Park, MD, USA

Adolescent substance use presents a serious public health problem. At the individual difference level, disinhibition (e.g., sensation seeking, impulsivity) and negative affect reduction are two commonly cited mechanisms, but are rarely considered together in a more comprehensive framework. Towards that end, I present a model of the development and maintenance of adolescent substance use rooted in positive and negative reinforcement processes. Further, I present data using behavioral laboratory methods for assessing risk taking propensity (positive reinforcement) and distress intolerance (negative reinforcement) that both move beyond the limitations of self-report and provide empirical support for this model. Moreover, I outline the integration of other relevant factors, including genetic, biological and neurobehavioral functioning, as well as family emotional context. Finally, I consider how this type of approach can inform prevention and treatment efforts in the service of developing targeted programs addressing individual difference vulnerabilities to substance use.

RS35.2.
HOW BRAIN DEVELOPMENT DURING ADOLESCENCE CAN HELP UNDERSTAND NORMATIVE AND DEVIANT BEHAVIOR: A FUNCTIONAL MAGNETIC RESONANCE IMAGING PERSPECTIVE

M. Ernst
Emotional Development and Affective Neuroscience Branch, National Institute of Mental Health, Bethesda, MD, USA

Typical adolescent behaviors point to a remodeling of specific neural circuits. Enhanced risk-taking, intensification of prosocial behaviors, and increased lability and intensity of emotions have been shown to rely on unique patterns of cerebral activations. These activation profiles encompass prefrontal, amygdala and striatal structures. While these typical behavioral characteristics appear to be highly conserved across mammalian species, suggesting a pivotal role in evolutionary fitness, they bear a heavy cost. This cost is evidenced by the paradoxical, steepest within the lifespan, rise of morbidity and mortality rates during this transition period. Both emotional and behavioral dysregulation and onset of psychiatric disorders account for these consequences. Thus, understanding the neurobiological mechanisms underlying these risk factors is becoming a priority in clinical and neuroscience research. Together with animal work, morphometric imaging studies in humans have demonstrated specific developmental changes in brain structures across adolescence. Developmental functional magnetic resonance imaging (fMRI) studies comparing healthy adolescents with healthy adults, as well as healthy adolescents with anxious/depressed adolescents, are emerging in the literature. These studies are reviewed, with the aim of identifying possible developmental trajectories that underlie vulnerability as well as disease states. The findings are discussed against the backdrop of a neurobiological model, the triadic model, that provides mechanisms mediating symptom onset that can be tested in future studies. In addition, this model suggests directions for the development of preventive strategies.

RS35.3.
PUBERTAL HORMONES, THE ADOLESCENT BRAIN, AND SOCIAL BEHAVIORS

C.L. Sisk
Neuroscience Program and Department of Psychology, Michigan State University, East Lansing, MI, USA

The expression of certain sex-biased psychopathologies, e.g., eating disorders, depression, and schizophrenia, is associated with puberty and adolescence, suggesting that complex interactions among pubertal hormones, experience, and the developing brain contribute to the etiology of these disorders. The adolescent brain undergoes substantial remodeling and is a target for gonadal steroid hormones, which are elevated during puberty. It is therefore important to understand how pubertal hormones influence the developmental trajectory of the adolescent brain and neural circuits underlying complex behaviors that are impaired in psychiatric disorders, particularly with respect to social-related behaviors. Work on a laboratory animal model demonstrated that pubertal hormones induce long-lasting organizational influences on the adolescent brain by altering neural circuits, and programming adult behavioral responses during social interactions. Subsequent experiments showed that brain sensitivity to hormone-dependent organization decreases over the course of adolescent development, suggesting that effects of pubertal hormones on the adolescent brain will depend on the age at which puberty occurs. Finally, research using human subjects supported this prediction, by showing that earlier onset of puberty is associated with higher risk for disordered eating and anxiety in young adulthood. This work demonstrates that pubertal hormones exert long-lasting influences on neural circuits underlying complex social behaviors. It is proposed that individual variation in the timing of interactions between steroid hormones and the human adolescent brain, such as those that occur with precocious or delayed puberty, contribute to individual differences in behavior and risk for sex-biased psychopathology in adulthood.

RS35.4.
THE ROLE OF GENES, ENVIRONMENTAL FACTORS, AND DEVELOPMENT IN PSYCHOPATHOLOGY

K.R. Merikangas
Intramural Research Program, National Institute of Mental Health, Bethesda, MD, USA

Although the genome-wide approach has led to the identification of genes for several complex disorders, the effects of these risk alleles are modest. This suggests that complex disorders result from numerous interactions between host genetic susceptibility and environmental influences. However, there is a lack of consensus regarding the most appropriate designs for detecting gene-environment interactions (GxE), particularly when developmental level and sex differences are considered. This presentation provides an overview of study designs and findings for identifying GxE effects in selected psychiatric disorders. Strategies for choosing optimal study designs (prospective/retrospective case-control, family-based studies, case-only studies) are described. The yield of these studies for providing useful information about the neurobiology and environmental modulators of disorders is addressed. Furthermore, as GxE effects are most critical during vulnerable periods of transition, such as adolescence, a developmental perspective is discussed. Comparison of optimal study designs based on the characteristics of the risk genes, exposures and timing reveal that the prospective case-control design based on genetic factors that are strongly and reproducibly associated with complex diseases is the most powerful approach to identify environmental susceptibility factors. Focus on specific time periods will show how development may impact the designs and results of these studies. We conclude that numerous approaches will be necessary to advance our understanding of GxE for different mental disorders according to the disease prevalence, a priori knowledge of genetic or biologic markers, evidence for the role disease-specific environmental exposures, and vulnerable periods of development.

RS36.
SPIRITUALITY AND MENTAL HEALTH

RS36.1.
THE IMPACT OF IDIOM OF DISTRESS IN CLINICAL PSYCHIATRY

P. Ruiz
Department of Psychiatry and Behavioral Sciences, University of Texas Medical School, Houston, TX, USA

Since the origin of medicine, culture has always been an integral component not only of the medical field but of psychiatry as well. In many occasions, signs and symptoms of psychiatric disorders, and of medical disorder too, are expressed by patients via “idioms of distress”. These unique clinical manifestations are nothing else than manifestations based on the unique cultural characteristics of patients. An African patient from Nigeria will manifest different cultural charac-

teristics than an African American patient from Southern United States; or an aborigine patient from Australia or a Hispanic patient from Spain. In this presentation focus is given to examples of "idioms of distress" among different cultural groups and different ethnic and racial populations across the world.

RS36.2.
FOSTERING SPIRITUAL VALUES AND WELL-BEING – THE EVIDENCE OF ITS NEED IN MENTAL HEALTH CARE

R. D'Souza
Indo Australasian Psychiatric Association and South Asian Forum Austalasian Chapter, Dingley, Victoria, Australia

Mental health professionals and their patients are increasingly aware of the basic need of all human beings for a source of meaning that is greater than one's self. This growth in awareness is driven by the professional's practical goal of reducing disability from mental disorders and by the heartfelt wishes of the suffering for their therapists to recognize the need for self-transcendence. This has resulted in mental health professionals and the general public's growing awareness of the need to foster spirituality and well-being in clinical practice. We now see a groundswell of professional work to focus on the development of health and happiness, rather than merely to fight disease and distress. This paper considers the practical necessity to understand the science of well-being, including the stages of self-awareness on the path to well-being. This allows attention to spirituality based on principles of psychobiology with roots in compassion and tolerance, rather than on dogmatic judgments that are rooted in fear and intolerance. Only by addressing spirituality in a scientific and non-judgmental manner can we make psychology and psychiatry into a science of well-being that is able to reduce stigma and disability of psychological disorders.

RS36.3.
TOWARDS A SECULAR SPIRITUALITY: THE CONVERSATIONAL MODEL AND MONET'S QUEST FOR REALITY

R. Meares
University of Sydney, Australia

Well-being is increasingly regarded as a therapeutic objective beyond mere symptom reduction. In this paper, well-being is seen as an aspect of higher order consciousness, a state of mind conceived in terms of a hierarchy of consciousness derived from the theories of Hughlings Jackson, which predict that "higher" mental states are underpinned by enhanced co-ordination between areas of brain activity. Such integration is a central feature of personality development. In clinical terms, the opposite experience of well-being is the "psychic pain", which is central to the borderline experience. That this condition is associated with impaired integration is illustrated by an event-related potential study of borderline patients, indicating failure of co-ordination between the main components of P300, P3a and P3b. These data lead to the hypothesis that well-being depends upon a high level of "mental synthesis" and suggest that therapeutic potentiation of well-being may depend on approaches which enhance "mental synthesis." In this paper, the artistic journey of the impressionist painter Claude Monet is used to illustrate the hypothesis that a characteristic interplay with the environment is necessary to the emergence of a higher order state in which a sense of the spirit arises. In this generative interplay, usually depending on words, the other has the capacity to portray the "shape" of the subject's immediate personal reality, including its feeling basis. This way of responding, central to the conversational model, might be called analogical relatedness.

RS36.4.
KEEPING RELIGION SAFE FOR WOMEN

N.L. Stotland
Rush Medical College, Chicago, IL, USA

The worldwide increase in religious fundamentalism brings with it a resurgence of restrictive paternalism. There is more pressure for women in many cultures and subcultures to remain in the home, bear many children, and submit to their fathers, brothers, and husbands. Although education and freedom generally improve women's well-being, these paternalistic religious movements can be relatively beneficent or relatively punitive and denigrating. The central theses of the major religions extol the virtues of kindness, love, respect, and generosity. Sometimes these virtues can be invoked to protect women from men who would otherwise use the tenets of their religions to abuse their wives, sisters, and daughters.

WORKSHOPS

WO1.
SELF DISTURBANCE IN EARLY PSYCHOSIS: A CLINICAL AND CONCEPTUAL PERSPECTIVE

B. Nelson (Parkville, Australia), A. Raballo (Copenhagen, Denmark), L. Less (Munich, Germany), S. De Haan (Heidelberg, Germany), B. Skodlar (Ljubljana, Slovenia)

Recent years have witnessed widespread interest in the early phase of schizophrenia and other psychotic disorders. Strategies have been introduced to attempt to identify individuals in the pre-psychotic or prodromal phase. The most widely used of these approaches is the "ultra-high risk" (UHR) approach, which combines known trait and state risk factors for psychotic disorder. Phenomenological research indicates that disturbance of the basic or "minimal" sense of self may be a core phenotypic marker of psychotic vulnerability, particularly of schizophrenia spectrum disorders. Disturbance of basic self-experience involves a disruption of the sense of agency and ownership of experience, with an associated disruption in interpersonal functioning. Identifying self disturbance in the UHR population may provide a means of further "closing in" on individuals truly at high risk of psychotic disorder, thus supplementing the UHR identification approach. This would be of practical value in the sense of reducing inclusion of "false positive" cases in ultra-high risk samples, and of theoretical value in the sense of shedding light on core features of psychotic pathology. This workshop reports on recent international research into self disturbance in early psychosis, with an emphasis on theoretical discussion.

WO2.
CLOZAPINE: INDICATIONS AND MANAGEMENT OF COMPLICATIONS

P.F.J. Schulte, D. van Dijk, J. Arends, D. Cohen (Dutch Clozapine Plus Collaboration Group, The Netherlands)

Clozapine is the only antipsychotic which has consistently been shown to be effective in therapy refractory schizophrenia. The new

atypical antipsychotics show mixed results and two randomized controlled trials (RCTs) proved clozapine to be more effective than modern atypical antipsychotics. In therapy refractory bipolar or (bipolar) schizoaffective patients, the addition of clozapine has been reported to stabilize mood. Since many years, the anti-aggressive effects of clozapine in difficult-to-treat psychotic patients are well known. Two RCTs proved clozapine to be superior to haloperidol, risperidone and olanzapine, independently of antipsychotic effect. The anti-aggressive effect of clozapine seems to extend to other psychiatric conditions, such as borderline personality disorder. Numerous (retrospective) investigations point to an anti-suicidal effect of clozapine. A RCT in high-risk suicidal patients with (mostly non-refractory) schizophrenia or schizoaffective disorder showed superiority of clozapine over olanzapine in the reduction of suicidality. The risk of agranulocytosis is well known since the 1960s. Meanwhile, this complication has extensively been studied. Prevention, detection and treatment are established. Granulocyte colony stimulating factor (GCSF) shortens the time until recovery. More recently, it has become clear that clozapine, as well as other atypical antipsychotics, may lead to the development of the metabolic syndrome, with increase of weight, blood pressure, lipids and glucose. This workshop presents the evidence for the various indications of clozapine and discusses the strategies for the management of complications of clozapine treatment.

WO3.
DEVELOPING THE NEW BURDEN OF DISEASE ESTIMATES FOR MENTAL DISORDERS AND ILLICIT DRUG USE

H. Whiteford, L. Degenhardt (Mental Disorders and Illicit Drugs GBD Expert Groups, Australia)

The Global Burden of Diseases, Injuries, and Risk Factors (GBD) Study commenced in 2007 and represents the first major effort at a systematic revision of mortality and disability (disability adjusted life years) estimates since the original 1996 study. Over forty expert groups have been established to provide epidemiological estimates for all major diseases and injuries. A new set of disease, injury, and risk burden estimates will be developed using comparable methods for 20 world regions. The GBD study aims to provide information that is useful for governments, funders, clinicians and policy-makers. This workshop provides the latest information from the GBD study on the incidence, prevalence, remission and mortality estimates, by world region, being generated for schizophrenia, depression, bipolar disorder, anxiety disorders, attention deficit disorder, conduct disorder, eating disorders, pervasive developmental disorders, and cannabis, amphetamine type stimulants, heroin and cocaine use. Estimates for benzodiazepine abuse are also presented. The workshop also discusses some major methodological challenges being addressed in the GBD Study, such as decisions on the inclusion and exclusion of disorders in the estimates, dealing with missing data and generalizing from sub-national data sources, dealing with comorbidity, and estimating the attribution that mental disorders make to suicide.

WO4.
RECENT CHANGES IN PSYCHIATRIC CARE SETTINGS: EDUCATIONAL AND PRACTICAL IMPLICATIONS FOR YOUNG PSYCHIATRISTS

A. Fiorillo, U. Volpe (Naples, Italy), J. Beezhold (Norfolk, UK), N. Pastour, J. Fousson, C. Hanon (Paris, France), I. Tarricone (Bologna, Italy), S. Ferrari (Modena, Italy), N. Jovanovic, M. Rojnic-Kuzman (Zagreb, Croatia)

In recent years, the professional profile of psychiatrists has significantly changed, in part as a consequence of dramatic changes occurring at social, cultural, administrative and legal levels. The related modifications of models and settings of mental health care may have specific implications for residents in psychiatry and young psychiatrists, both at an educational and at a practical level. New therapeutic approaches are being developed, while several others have been abandoned despite their proved efficacy: several young psychiatrists are skilled in new drug treatments and innovative psychosocial interventions, while they may be less experienced in using "forgotten drugs", such as lithium or conventional antipsychotics. Indeed, different therapeutic approaches are being specifically required to treat different mental disorders in different settings, and young psychiatrists may not be equally trained in the various aspects of psychiatric care. As an example, the move from hospital-based to community-based mental health care, occurring in several countries worldwide, has determined a shift in clinical practice. However, although the integration of community-based and hospital-based mental health care is becoming of crucial importance for effectiveness of treatments, it is not always specifically addressed in psychiatric residency training. Furthermore, given the significant influence of cross-cultural factors on diagnoses, treatments and settings of care, recent societal changes, such as migration, are determining the need for psychiatrists to face emerging specific problems for which they are often not adequately trained. Finally, early career psychiatrists are more likely to work in isolated mental health centers, with lack of adequate supervision and possible rise of role conflicts, contributing to the development of burn-out and workplace-related syndromes. Specific research and educational actions against these risks should be implemented. Mentorship and exchange programmes may be particularly useful to reduce such risks.

WO5.
SEXUALITY AND MENTAL HEALTH

K. Wylie (Sheffield, UK), A. Palha, J. Azevedo (Oporto, Portugal), C. Simonelli (Rome, Italy), A. Singh (Sheffield, UK), R. Hernandez (Caracas, Venezuela)

Sexuality is rarely discussed in mental health settings, for many reasons. The complexity of issues with regard to sexuality are such that, even if the topic is broached by the clinician, there are a number of factors which still interfere with successful communication and progression within a management plan for the individual and his or her partner. This workshop addresses some of these factors. It considers the way staff attitudes around sexuality and older age can affect their relationships with peers and patients. It introduces the concept of alexithymia as a possible risk and/or maintenance factor for sexual disorders, which could be a useful predictor of treatment outcome. It explores if new ways of conceptualizing desire can actually help patients (and staff) think and feel differently about sexual encounters. Finally, even if these matters are accepted, are our diagnostic systems sufficient in complexity, or will new systems of classification just make matters more complex and daunting?

WO6.
MANAGEMENT OF MENTALLY DISORDERED SEXUAL OFFENDERS

W.L. Marshall (Kingston, Canada), B. Booth (Ottawa, Canada), J. Bradford (Ottawa, Canada), L.E. Marshall (Kingston, Canada)

This workshop describes the management of mentally disordered sexual offenders in a secure treatment unit. Some of these offenders may have various associated mental disorders, such as schizophrenia, bipolar disorder, or attention-deficit/hyperactivity disorder. Pharmacological interventions for these associated problems involves the usual approaches. In addition, most have anger problems and substance abuse, and they are placed in group therapy aimed at modifying these difficulties. In addition, the nurses, recreational therapists and vocational therapists offer an array of programs, including relationship training, self-esteem enhancement and medication management. The specific sexual offender program is conducted in open-ended (or rolling) cognitive behavioural groups led by either a psychologist or a social worker. Each offender remains in treatment until he either reaches the goals of the program or completes his sentence. The sexual offender program targets the following issues: self-esteem, shame, acceptance of responsibility, empathy, coping skills, emotional regulation, relationship skills, human sexuality and deviant sexual interests. In addition, the program helps offenders identify a range of positive future life goals, as well as strategies for avoiding future risks, and generate a list of people who will support them upon release.

WO7.
MANAGEMENT OF GERIATRIC DEPRESSION IN COMMUNITY SETTINGS

D. Roane, K. Danis, E. Wong (New York, NY, USA)

According to the World Health Organization, elderly people have the highest rates of new cases of mental illness. In the United States, rates of depression are as high as 25% in seniors, and 50% of older adults with mental health disorders fail to receive treatment. Reasons for this failure include denial, stigma, and access barriers such as cost, transportation, and physical frailty. One way to overcome these barriers is the use of community-based approaches. This workshop focuses on novel programs, in an urban community setting, which provide services for a multiethnic elderly population. In one program, psychiatrists from a teaching hospital work with a community-based organization to provide home visits for homebound mentally ill elderly. A second program provides treatment for depression in a senior citizen center. All new members of the center receive a depression screening, and, if appropriate, referrals to the mental health program. The multidisciplinary treatment team consists of geropsychiatry fellows, nurses, social workers and psychotherapists. Services offered on-site include psychiatric diagnosis, psychopharmacological treatment, individual therapy, and case management. Depressed patients served by the program are encouraged to participate in other center activities, including exercise and discussion groups, educational and recreational classes, and communal meals. Data evaluating the effectiveness of this approach to geriatric depression are reviewed. The workshop also addresses questions about initiating, funding, and sustaining community-based mental health services, as well as opportunities for research and training in community settings.

WO8.
RECOVERY: WHAT IT IS AND HOW MENTAL HEALTH PROFESSIONALS CAN SUPPORT IT

M. Slade (London, UK)

This workshop has three objectives. The first is to point out that the recovery approach should be the guiding philosophy for 21st century mental health care. Five rationales for this are identified: epistemological (arguing for a constructivist perspective); ethical (challenging the concept of "duty of care"); effectiveness (demonstrating that the benefits of the most common treatment – medication – have been exaggerated); historical (the interests of the individual mentally ill person being subordinated to the interests of other dominant groups in society) and policy (in most English-speaking countries, a focus on recovery is policy). The second objective is to clarify what personal recovery means. A new framework for understanding the processes involved in personal recovery is presented. This is a clinically applicable framework which identifies how clinical models can support recovery and how they hinder recovery. The framework highlights four recovery support tasks that mental health systems can undertake to support recovery: fostering relationships, promoting well-being, offering treatments and improving social inclusion. The third objective is to support mental health professionals who are convinced about the values, have crystallised beliefs and knowledge about personal recovery, and want to know where in practice to start. Case studies of best practice from around the world are presented. These illustrate how mental health services are putting recovery principles into practice, and provide a resource of innovative, established strategies which increase the organisational and clinical focus on personal recovery.

WO9.
FUNCTIONAL FAMILY THERAPY IN YOUTH AT HIGH RISK FOR DELINQUENT BEHAVIOR

D. Baron, E.H. Sholevar, T.L. Hardie (Philadelphia, PA, USA)

Functional family therapy (FFT) is a manualized, evidence-based therapy developed by Alexander over 40 years ago. It is now widely regarded as one of the most studied forms of family therapy. A five year collaboration between the Temple University Department of Psychiatry and the City of Philadelphia examined the effect of FFT in youth, aged 11-18 years, at high risk for delinquent behavior. We identified positive and negative predictive factors for time to first arrest related to FFT treatment. In 2004, there were 2.2 million arrests of youth under the age of 18. In that same year, youth accounted for 16% of all violent crimes. The cost to society of juvenile offenders is staggering. Over a lifetime, a "career criminal" costs society $1.5 million. This does not take into account the cost of human suffering. In this study we were able to collect extensive demographic and psychiatric data before engaging the family and youth in treatment. A number of interesting observations were made. As predicted, the better the compliance with treatment, the longer the time to first arrest. Attention-deficit/hyperactivity disorder and substance use were also predictors, as was affiliation with a deviant peer group. Interestingly, self report by the adolescent and the family did not predict outcome, underscoring the potential role of denial and rationalization. In this workshop we present the results of the project and discuss the significant findings.

WO10.
PROMOTING THE IMPLEMENTATION OF EVIDENCE-BASED TREATMENTS IN MENTAL HEALTH SERVICES

U. Malm, C. Brain, W. Rutz, E. Lindström, J. Eberhard (Committee for Care and Treatment of Psychoses, Sweden)

The Committee for Care and Treatment of Psychoses (CTP) is a small task force of Swedish psychiatrists that has been around doing idealistic work in order to improve the care and treatment for psychoses since about 20 years. The CTP has the objective to catch new innovative ideas and research in psychiatry and implement the new know-how in clinical practice. According to our clinical expertise, both educational curricula for all the players in mental health and involving the service users as partners in the decision making procedures are important for a successful implementation of new knowledge. This is not about pity. The risk of pity is that it kills with kindness. The promise of passion is that it builds on the hope that the mentally ill are fully capable of helping themselves if given the chance. In various professional and political contexts, the CTP has focused on the role of the local psychiatrist as an important factor in the transformation of research into everyday practice and changing the thinking of all stakeholders. In 2006, the Swedish government decided to include the CTP ideas and educational suggestions into a nation-wide full scale project aimed at introducing the basic evidence-based strategies of case management and assertive outreach. This project started in October 2007 and outcomes up to date are reported and discussed in this workshop.

WO11.
PROMOTING PRIMARY CARE INTERVENTION IN CHILD AND ADOLESCENT MENTAL HEALTH

J. Jureidini (North Adelaide, Australia), S. Iliffe (London, UK)

The prevalence of mental health problems in young people is significant and represents a large public health issue. More mental health intervention occurs in primary care than in any other part of the health system. This is because general practitioners (GPs) are often the first point of call and are expected to have the knowledge and skills to assess both physical and psychological symptoms. GPs are also often perceived as a low stigma option for people seeking out professional assistance. It is therefore critical that GPs are trained and supported by child and adolescent mental health specialists. Psychological therapy (such as cognitive behaviour therapy and interpersonal therapy) is the recommended first-line treatment for child and adolescent depression and anxiety, but more often GPs prescribe medication, feeling inexpert in non-pharmacological interventions. GPs are not enthusiastic users of packaged interventions like cognitive-behavioural therapy. Time constraints need to be respected as obstacles to applying new diagnostic and intervention packages. Although timely recognition and management of mental health problems will save time and money for the whole medical system in the medium to long term, the individual GP dealing more comprehensively with mental health issues will have extra costs. In our consultation with GPs, a further barrier to their involvement in this area is that they do not feel their opinion and expertise is adequately valued by mental health services staff when they refer or consult. This workshop presents an approach to child and adolescent mental health training for primary care doctors that builds capacity rather than teaching a package of mental health skills, that is acceptable to GPs, and that has benefit for children.

WO12.
PROMOTING BEST PRACTICE COMMUNITY MENTAL HEALTH CARE IN THE ASIA-PACIFIC

Chee Ng (Melbourne, Australia), Xin Yu (Beijing, China), U. Pichet (Songkla, Thailand), J. Kua (Singapore)

The Asia-Pacific Community Mental Health Development Project is a landmark regional project on community mental health developments which documents culturally sensitive and effective mental health services across Asia-Pacific. This has culminated in a recent summary report that illustrates a diversity of models in community mental health care, which was written and edited by an international network of mental health reformers from 14 countries in the region. The Project examined the current status of community mental health systems in each country as well as the challenges and innovations in providing mental health services for people with mental illness in the community. It aims to illustrate and promote best practice in mental health care in the community through use of information exchange, current evidence and practical experience in the region. In this workshop, which highlights a shared vision for an increased emphasis on community-based services, some of these exemplary practices from China, Australia and other countries are discussed. Challenges, often including the relative lack of resources in mental health workforce, facilities, availability of psychotropic drugs and service provisions, are also explored. The learning derived from the local reform experiences has led to the development of common principles that can facilitate reform and inform future policies in community mental health systems. These guidelines can help develop appropriate mental health care and promote positive change in the delivery of community mental health services within and across different countries.

WO13.
ANTI-STIGMA STRATEGIES IN A DEVELOPING COUNTRY

M.R. Jorge (São Paulo, Brazil), J.A. Carvalho (Recife, Brazil), C.C. Villares (São Paulo, Brazil)

Brazil is a country marked by important social inequalities, and many people with schizophrenia have their condition greatly aggravated by poverty, poor education, and social exclusion. Changing this reality requires a complex and sustained set of networking strategies. The Brazilian Psychiatric Association has devised, as part of its mission, a set of initiatives to inform and educate the population about mental disorders and their proper management, aiming at reducing the stigma related to mental illness in the country. A community program called ABP Comunidade was created with the intent to bring the population closer to psychiatrists, offering high quality information through well-designed communication strategies. The Brazilian Schizophrenia Association, established in 2002 in São Paulo, originated from an anti-stigma project carried out in partnership with the Schizophrenia Program of São Paulo Federal University. It was established as a nonprofit civil organization co-led by consumers and family members. Its goal is to work with state-of-the-art psychiatric knowledge and practices in actions that bridge science and promotion of human dignity of people affected by schizophrenia, proposing dialogue and empowerment as the main strategies for social change. The Brazilian site of the WPA Global Programme against Stigma and Discrimination because of Schizophrenia was launched in 2001. Among its activities, several research projects were carried out to investigate various aspects of stigma in different settings. This workshop presents the results of the above anti-stigma activities in Brazil.

WO14.
PRACTICAL ISSUES IN THE LONG-TERM MANAGEMENT OF SCHIZOPHRENIA

I. Bitter (Budapest, Hungary), S. Galderisi (Naples, Italy), Z. Janka (Szeged, Hungary)

The objective of this workshop is to address recent knowledge about the long-term course of schizophrenia, with special emphasis on data about biological correlates, such as morphological brain changes; the benefits of and the issues around long-term treatment of the disorder, including factors influencing adherence to treatment; the Italian experience of long-term management of schizophrenia, with focus on service delivery in a country without mental hospitals. The workshop summarizes biological and clinical data supporting the need for long-term antipsychotic treatment for schizophrenia, including the impact of different antipsychotic compounds and drug formulations, and identify effective service delivery options in areas with no mental hospitals. It aims to help practicing psychiatrists in treatment planning for schizophrenia and to provide them with information supporting communication with patients and their relatives, as well as decision makers.

WO15.
MENTALIZATION-BASED TREATMENT FOR BORDERLINE PERSONALITY DISORDER

D.L. Bales (Halsteren, The Netherlands), A.W. Bateman (London, UK), H. Andrea (Halsteren, The Netherlands), A. Hesselink (Halsteren, The Netherlands)

Mentalization is the process by which we implicitly and explicitly interpret the actions of ourselves and others as meaningful on the basis of intentional mental states (e.g., desires, needs, feelings, beliefs, and reasons). We mentalize interactively and emotionally when with others. Each person has the other person's mind in mind (as well as their own), leading to self-awareness and other awareness. Persons with a borderline personality disorder are characterised by a loss of capacity to mentalize when emotionally charged attachment relationships are stimulated. The aim of mentalization-based treatment (MBT) is to increase this capacity in order to ensure better regulation of affective states and to increase interpersonal and social function. This workshop provides an overview of treatment outcome results of MBT-research so far, and presents the first prospective results of an outcome study in the Netherlands.

WO16.
FAMILY-INVOLVED TREATMENT FOR BIPOLAR DISORDER: COMPELLING APPROACHES

I. Galynker (New York, NY, USA), S. Tross (New York, NY, USA), D. Perlick (New York, NY, USA), D. Miklowitz (Boulder, CO, USA), A. Lee (New York, NY, USA), A. Steele (New York, NY, USA)

Bipolar disorder is a chronic lifelong mental illness, which affects at least 4.4% of the US population and 1-3.7% worldwide. Untreated, it can cause catastrophic suffering and impairment in family life and work function for bipolar sufferers and family members. There is persuasive evidence that making willing families an integral part of treatment improves patient outcome; and that family characteristics influence outcome of patient treatment. Yet, as compared to treatment protocols for chronic illnesses like diabetes, family members are seldom a part of the treatment process, due to reasons such as tradition, stigma of mental illness, and medical-legal issues. To address this gap, models of family-involved treatment have been developed, including intensive family focused therapy, caregiver health promotion therapy (family focused therapy - health promoting intervention, FFT-HPI), family-inclusive treatment using a family psychiatrist (FIT) and others. FFT-HPI is a 12-session cognitive-behavioral intervention which helps family caregivers to improve their health through cognitive reframing, relaxation exercises, and exposure therapy. Because lower caregiver burden is associated with improved patient outcomes, FFT-HPI is additionally expected to benefit patients. FIT is a treatment modality for patients and caregivers offering continued supportive therapy and open communication with the family regarding medications and symptoms. This workshop presents these approaches to family-involved treatment, discusses on-the-ground successes and pitfalls of implementation and shares evidence of outcome.

WO17.
HOW TO TEACH NON-PSYCHIATRISTS TO DIAGNOSE, TREAT AND APPROPRIATELY REFER PATIENTS WITH PSYCHOPATHOLOGY

D. Baron (Philadelphia, PA, USA), R. Fahrer (Buenos Aires, Argentina), M. Riba (Ann Arbor, MI, USA), S. AbdulMagd (Cairo, Egypt)

The primary care physician is the first point of contact for most patients with mental disorders. Not only there are insufficient numbers of psychiatrists worldwide, but most are clustered in the large metropolitan areas, leaving rural districts often without any psychiatrists. Accurate early detection and appropriate treatment of common mental disorders, such as depression, with referral to the psychiatrist when necessary, are priorities to be taught to the primary care physician. Continuing medical education strategies help to improve detection and management of mental disorders in physically ill patients. The goal of this workshop is to educate psychiatrists on how to teach non-psychiatrists to diagnose and treat the most common forms of psychopathology encountered in a general medical practice.

WO18.
MANAGEMENT OF CO-OCCURRING MENTAL ILLNESS AND SUBSTANCE USE DISORDERS

J. Pasic, C. Youdelis-Flores, R.K. Ries (Seattle, WA, USA)

Co-occurring mental illness and substance abuse is a major public health problem. There are special challenges when mentally ill individuals abuse psychostimulants, since these substances are so potent in causing or amplifying major psychiatric symptoms, thus confounding both diagnosis and treatment. The clinical presentations and treatment of psychostimulant abuse and co-occurring severe mental illness have not been well studied or described in the literature. This workshop summarizes the limited research available with regard to diagnostic and treatment issues. It also outlines off-label medication options for the practicing clinicians to consider. Substance-induced psychiatric disorders are common and are generally considered less severe and with a more benign course, although long-term follow-up reveals a surprising amount of similarity in prognosis and outcome. Diagnostic dilemmas and differences in treating and managing co-occurring disorders and substance-induced psychiatric disorders have arisen in recent years, and practices are changing in response to

current research and clinical realities. This workshop provides information about how to discriminate between substance-induced psychiatric disorders and co-occurring disorders. Finally, the workshop focuses on the relationship of suicide to substance abuse and how this challenges acute psychiatric treatment services.

WO19.
THE THERAPEUTIC ALLIANCE WITH SUICIDAL PATIENTS

K. Michel (Bern, Switzerland), D.A. Jobes (Washington, DC, USA)

While the need for a proper psychiatric assessment and diagnosis remains uncontested, treating psychiatric morbidity is not equal to prevention of suicidal behaviour. Empathic assessment and understanding of suicidal risk requires a set of specific clinical skills. What is needed is that clinician and patient develop a respectful working relationship that is based on the experience of a shared understanding of the patient's suicidal experience, which in every case must be highly individualized. An empathic and collaborative approach to clinically engaging suicidal patients sharply diverges from conventional clinical approaches where clinicians tend to control and contain the patient, treating suicidal risk by focusing on psychopathology and psychiatric diagnosis. The experience of working together with a shared focus is the basis for a sound clinical alliance, which sets the scene for a common long-term goal: namely, that ongoing and future risk of suicidal behaviour can be effectively tackled. In this workshop, the theoretical and empirical basis of working with suicidal patients in a collaborative and patient-oriented way is presented.

WO20.
MENTAL HEALTH CARE AMONG WOMEN: BARRIERS AND FUTURE PERSPECTIVES

P. Ruiz (Houston, TX, USA), S.L. Gaviria (Medellin, Colombia), N.L. Stotland (Chicago, IL, USA), D.E. Stewart (Toronto, Canada), A. Yusim (New York, NY, USA)

For centuries, the mental health care of women all over the world has been relegated to a second level, due to discriminatory practices, ignorance, and stigma. During the last two decades, the mental health care of women has received more attention and priority. As a result of these positive efforts, research and investigational initiatives have led to positive outcomes. This new and evidence-based scientific knowledge about what works and what does not work with respect to women's mental health care has not only been well received by the field of psychiatry in recent years, but is gaining more focus and relevance at the policy making levels of governments and professional organizations/associations. In this respect, this WPA International Congress is an ideal setting to present and discuss the most recent advances in the psychiatric care of women; particularly, insofar as mood disorders are concerned. Focusing on mood disorders is very relevant, because recent epidemiological studies have shown that women have a much higher incidence than men in certain situations, like during the postpartum period, especially among women from ethnic minority backgrounds, such as African Americans and Hispanic Americans, or during certain age periods, such as during adolescent or women who are pregnant. In this workshop, the presenters focus on the most current biopsychosocial and evidence-based approaches in the diagnostic, treatment, and preventive efforts vis-à-vis women who suffer from mood disorders. Hopefully, the outcome of this workshop will benefit women's mental health care worldwide.

WPA SECTION SYMPOSIA

SS1.
PUERPERAL AND MENSTRUAL PSYCHOSES: AN UPDATE
(organized by the WPA Section on Perinatal Psychiatry and Infant Mental Health)

SS1.1.
MENSTRUAL PSYCHOSIS

I. Brockington
University of Birmingham, UK

The association of acute, transient episodes of psychosis with the menstrual cycle was described in the 19th century. There are over 80 well attested cases in the world literature. This paper will briefly review them, and set them in the context of the neuroscience of menstruation, other cyclical medical disorders and menstrual mood disorder. Menstrual psychosis can be managed by agents that arrest the menstrual cycle. There is an association with puerperal bipolar and acute polymorphic psychoses, which have a similar clinical range. These episodes tend to cluster shortly after the menarche, and after childbirth. A series of monthly episodes can also occur *before* the menarche, either ceasing at the first bleed, or continuing in rhythm with the menses. Pre-menarchal monthly exacerbations have been noted in diabetes, epilepsy and menstrual hypersomnalism. They raise the possibility that menstrual psychosis is caused by anomalies at hypothalamic rather than pituitary-ovarian level.

SS1.2.
PSYCHOTIC ILLNESS IN FIRST-TIME MOTHERS WITH NO PREVIOUS PSYCHIATRIC HOSPITALIZATIONS: A SWEDISH POPULATION-BASED STUDY

C.M. Hultman, B. Harlow, U. Valdimarsdóttir, P. Sparén, S. Cnattingius
Department of Medical Epidemiology and Biostatistics, Karolinska Institutet, Stockholm, Sweden; Epidemiology and Community Health, University of Minnesota School of Public Health, Minneapolis, MN, USA; Centre of Public Health Sciences, Háskóli Íslands, Iceland

Psychotic illness following childbirth is a relatively rare but severe condition with unexplained etiology. Most studies have not distinguished postpartum psychosis from bipolar disorder or the proportion of the incidence attributable to pre-pregnancy psychiatric morbidity. We have in two Swedish population-based studies used registry data to determine postpartum onset of psychotic and bipolar episodes within 90 days after the first birth, in women with and without pre-pregnancy or prenatal psychiatric hospitalization, and investigated potential maternal and obstetric risk factors of psychoses after childbirth. The cumulative incidences for postpartum psychotic and bipolar episodes (adjusted for age at first birth) were 0.07% and 0.03%, respectively. The incidence of psychiatric hospitalizations for postpartum psychotic or bipolar episodes among women without previous psychiatric hospitalizations was 0.04% and 0.01% of first births,

respectively; for women with any psychiatric hospitalization before delivery, the incidence was 9.24% and 4.48%, respectively. For postpartum psychotic and bipolar episodes, the risk increased significantly with the recency of pre-pregnancy hospitalizations, number of previous hospitalizations, and length of most recent hospitalization. More than 40% of women hospitalized during the prenatal period for a bipolar or a psychotic condition were hospitalized again during the postpartum period. High maternal age increases the risk, while diabetes and high birth weight are protective of first-onset psychoses, distinctly during the postpartum period. The incidence of psychotic illness peaks during the immediate postpartum period among first-time mothers without any previous psychiatric hospitalization. Almost 10% of women hospitalized for psychiatric morbidity before delivery develop postpartum psychosis after their first birth. This underscores the need for obstetricians to assess history of psychiatric symptoms and, with pediatric and psychiatric colleagues, to optimize the treatment of mothers with psychiatric diagnoses through childbirth.

SS1.3.
NEW PARENTS AND MENTAL DISORDERS

T. Munk-Olsen, T.M. Laursen, C.B. Pedersen, O. Mors, P.B. Mortensen
National Centre for Register-Based Research, University of Aarhus, Aarhus; Centre for Psychiatric Research, Aarhus University Hospital, Risskov, Denmark

Studies on postpartum mental disorders among mothers have primarily focused on either depression or psychoses and have generally not included the broader spectrum of mental disorders. A few studies have found that some men have symptoms of depression after becoming fathers. We aimed to estimate the risk of postpartum mental disorders necessitating hospital admission for mothers as well as fathers during a 1-year postnatal follow-up period after birth of first live-born child. This was a register-based cohort study formed by linking information from Danish health and civil service registers. From 1973 to 2005, a total of 630,373 women and 547,431 men became parents for the first time, and during the first year after childbirth, these parents contributed 1,115,639 person-years at risk. The main outcome measure was first-time psychiatric hospital 0 to 12 months after becoming a parent. A total of 1171 mothers and 658 fathers were admitted with a mental disorder to a psychiatric hospital during the first 12 months after parenthood. Primiparous women had an increased risk of incident hospital admission with any mental disorder through the first 3 months after childbirth, with the highest risk 10 to 19 days postpartum (relative risk: 7.31; 95% confidence interval: 5.44-9.81). Unlike motherhood, fatherhood was not associated with any increased risk of hospital admission. In conclusion, in Denmark, the risk of postpartum mental disorders among primiparous mothers is increased for several months after childbirth, but among fathers there is no excess of severe mental disorders necessitating.

SS1.4.
DO GENETIC FACTORS INFLUENCE VULNERABILITY TO PUERPERAL PSYCHOSIS?

I. Jones
Department of Psychological Medicine, University of Cardiff, UK

It has long been recognised that childbirth is a time of considerable risk for women with bipolar disorder, with severe postpartum episodes (postpartum/puerperal psychosis) occurring following 25% to 50% of deliveries. This represents a many hundred-fold increase compared with the general population rate of around 1 in 1000, and highlights the importance of considering issues regarding pregnancy and childbirth in women with bipolar disorder. Studies have confirmed that women with bipolar disorder are at very high risk of episodes of severe postpartum affective disorder, and that familial (genetic) factors influence vulnerability to the puerperal trigger. Based on these findings, we are conducting molecular genetic studies, using both candidate gene and linkage approaches that have implicated regions of chromosomes 16 and 8 as harbouring genetic variants that may predispose women to bipolar affective puerperal psychosis. It is hoped that this line of research will uncover the nature of the puerperal trigger, allow a more individualised estimation of risk for women with bipolar disorder, and provide further information relating to the aetiology of mood disorders in both the puerperium and at other times.

SS1.5.
IS THE INCIDENCE OF POSTPARTUM PSYCHOSIS DECLINING?

S. Tschinkel-Linden, M. Harris, J. Le Noury, D. Healy
Department of Psychology, University of Bangor; University of Cardiff, UK

There are suggestions from a number of recent datasets that postpartum psychoses of the cycloid type are declining in frequency. We have utilised a database of 3872 admissions to the North Wales Asylum during the period 1875-1924 to extract data on the prevalence, course and clinical features of postpartum psychoses. We have collected first admissions for postpartum psychosis between 1994 and 2005 in North West Wales to establish a current incidence rate for the disorder. Postpartum psychoses accounted for 10% of first admissions among women of childbearing years to asylums in the years around 1900. In contrast, on the one hand the incidence of psychoses with a first onset in the postpartum period has fallen dramatically in the modern period, while on the other hand the incidence of postpartum psychoses in women with a pre-existing mental illness remains the same as it was circa 1900. The clinical features and course of postpartum psychoses in the historical period differ from those of other psychoses during this period, but it is unclear if these features are gender rather than disorder linked. These findings suggest that psychoses with their first onset in the postpartum period may be vanishing. If replicated, this would support claims that these disorders are distinct from other disorders. Alternately, if regarded as affective disorders, establishing the basis for the apparent decline in frequency of these disorders may have implications for other affective disorders.

SS2.
EVOLUTIONARY PSYCHOPATHOLOGY: CLUES FOR TREATMENT
(organized by the WPA Section on Psychotherapy)

SS2.1.
THE EVOLUTIONARY ROLE OF DYSPHORIA AND HAPPINESS IN AGONISTIC ENCOUNTERS

L. Sloman, E. Sturman
Department of Psychiatry, University of Toronto, Ontario, Canada

Individuals may try to succeed in agonistic encounters by the fear of triggering the dysphoria associated with losing, and by anticipation of the euphoria associated with winning. Student athletes were tested for positive affect, hostility, anxiety, and dysphoria before and after competition. We recruited 115 participants, mean age 20.2±3.7 years. After losing, participants were significantly more dysphoric, more hostile, less anxious, and had lower positive affect than before the match. Following victory, participants exhibited an increase in positive affect compared to pre-match measures, and experienced significantly less dysphoria, hostility, and anxiety. In comparing winners and losers, winners were significantly less dysphoric, less hostile, less anxious, and had greater positive affect compared to losers. These findings support our hypothesis. Price and others argue that negative mood and anxiety help terminate agonistic encounters by triggering flight or submission, thereby preventing unnecessary injury or death. On the basis of our findings, we propose that those who are engaged in agonistic encounters struggle to avoid the negative affect associated with losing and/or to experience the euphoria associated with winning. These findings show how the fear of triggering negative mood can trigger adaptive behavior leading to the conclusion that negative mood might have an even more important evolutionary function than originally proposed by social rank theorists. Winning contributes to adaptive and losing to maladaptive cycles and promotion of adaptive cycles is a psychotherapeutic goal.

SS2.2.
DEPRESSION AS RITUAL DEATH

J.S. Price
Brighton General Hospital, Brighton, UK

Comparative ethologists have described how agonistic behaviour has been ritualized throughout the vertebrate subphylum, but they have not appreciated that losing needs to be ritualized as much as the fighting. After a non-ritual fight one of the contestants is left incapacitated or dead. After a ritual fight both are still alive but one requires to be incapacitated, otherwise the ritual would be ineffective. It has been suggested that this ritual incapacity takes a psychological form and can be recognised in our own species as severe depression. The advantage of ritual over unritualised combat is that it leaves both parties alive and uninjured. In humans there are two additional advantages. First, the loser may be able to carry out work at the behest of the winner. Second, there is no question of revenge killing by the loser's relatives, and this helps to maintain group cohesion. Depression is not seen to be the result of agonistic behavior. It usually presents as physical disease and the sufferer does not have much idea of its cause. Incapacity due to depression is not seen as caused by the winner in ritual combat, and therefore revenge by the loser's relatives does not occur.

SS2.3.
MIMESIS IN HUMAN EVOLUTION

R. Gardner
Department of Psychiatry, University of Wisconsin at Madison, WI, USA

In 1991, Merlin Donald published a then heralded book: "Origins of Modern Mind: Three Stages in the Evolution of Culture and Cognition". I found the book core to understanding critical differences between humans and precursor primates, but it seems lost to psychiatric and psychotherapeutic thinking. I therefore highlight it again, especially since he worked to integrate a burgeoning neural science with complex human behavior. He labeled three cognitive-cultural stages as episodic, mimetic and mythic. Myths – stories – depend on the invention of language. He deals fully with language, but innovatively highlights pre-human transitions from episodic to mimetic, going beyond a brain characterized by hardwired features to the flexible learning of later adaptation. Mimesis, music and rhythms distinguish humans from the great apes, likely due to the bonding potential of McNeill's "keeping together in time". More than imitation or mimicry, mimesis involves the "invention of intentional representations". Charades illustrate mimesis: "untrained, unrehearsed… creative, novel and expressive acts". They continue as "still a central factor in human society [and] at the very center of the arts". Mimesis as illustrated in "nonverbal communication" figures in the pathogenesis of relational ills in medical practice and psychotherapy, so that research on it and its neural mediation should command center stage.

SS2.4.
THE BIOLOGY OF MATERNAL-INFANT BONDING, PARENTAL LEAVE POLICIES, AND THE PREVENTION OF CHILD ABUSE

M. Erickson
University of Washington, DC, USA

Maternal-infant bonds are vulnerable in the post-partum period. In various species, stressors in the post-partum, such as separation or lack or support, may result in maternal abuse or abandonment. Likewise, in humans, even modest increases in post-partum support can reduce maternal abandonment. Parental leave policies are measures of societal support and vary strikingly across industrialized nations. This paper examines the hypothesis that the generosity of parental leave policies favorably influences maternal-infant bonding and hence will be inversely correlated with the prevalence of child abuse. Mortality due to child abuse from the 10 most populous US states and 10 comparable nations were examined relative to parental leave scores (parental leave score=weeks of guaranteed leave x percentage of wage provided, e.g., Norway – 52 weeks x 80% of wage=4160). Child mortality from abuse was inversely correlated to parental leave scores. Notably, all included US states had higher child mortality due to abuse than any of the 10 industrialized nations examined. Together, the US has the most limited family leave policy and child abuse mortality rates 2-8x that of comparable nations. Parental leave policies have not heretofore been legislated with reference to the biology of maternal-infant bonding. Findings presented here suggest that biologically informed policy can reduce child abuse.

SS3.
THE ASSOCIATION BETWEEN IMPULSIVITY AND ADDICTION: CAUSES, CONSEQUENCES AND TREATMENT IMPLICATIONS (organized by the WPA Section on Impulsivity and Impulse Control Disorders)

SS3.1.
DIMINISHED SELF-REGULATION AS A PREDICTOR OF RELAPSE IN PROBLEM GAMBLING: A FOCUS ON IMPULSIVITY AND REWARD SENSITIVITY

R.J. van Holst, A.E. Goudriaan, J. Oosterlaan, E. de Beurs, W. van den Brink
Academic Medical Centre, Department of Psychiatry, University of Amsterdam; Department of Clinical Neuropsychology, Vrije Universiteit, Amsterdam, the Netherlands

Diminished self-regulation plays an important role in the definition of pathological gambling (PG), and diminished self-regulation is of importance for the course and treatment of related addictive disorders. However, only few empirical studies are available regarding neurocognitive self-regulation in PG. This study therefore compared the performance on several self-regulation tasks, comparing a PG group (n=48) with an alcohol dependence (AD) group (n=46), a Tourette syndrome (TS) group (n=47), and a normal control (NC) group (n=49). Tasks relying on dorsolateral and orbital prefrontal brain circuitry were included, such as response inhibition (Stop Signal Task), planning (Tower of London), cognitive flexibility (Wisconsin Card Sorting Task), and decision making (Iowa Gambling Task). Pathological gamblers showed diminished performance on a range of self-regulatory functions, such as response inhibition, cognitive flexibility, planning and decision-making. Performance was not associated with subclinical comorbidity levels. For the larger part, diminished performance on these self-regulatory functions was also present in the AD group. However, the TS group only displayed a diminished response inhibition. Neurocognitive functions in PG should be addressed in treatment and incorporated more explicitly in theoretical models of PG, since they can influence the course of the disorder negatively.

SS3.2.
IMPULSE CONTROL DISORDERS AS ADDICTIVE DISORDERS

F. Vocci
National Institute on Drug Abuse, National Institutes of Health, Bethesda, MD, USA

Although substance dependence disorders can be conceptualized as impulse control disorders, it does not necessarily follow that impulse control disorders are addictive disorders. The current diagnostic scheme of impulse control disorders contains the following conditions: intermittent explosive disorder, kleptomania, pyromania, pathological gambling, and tricotillomania. The diagnostic criteria for pathological gambling most closely approximate a substance dependence disorder. Pathological gamblers express preoccupation with gambling, use larger amounts of money to get the desired affective response, repeatedly fail to curb their gambling, and often suffer interpersonal, legal, and job-related consequences similar to those addicted to substances. Individuals with kleptomania, pyromania, and trichotillomania have some features common to substance use: i.e., there is tension or affective arousal prior to the act and the act often provides gratification or relief. However, with the exception of trichotillomania, disturbances or impairments of social, occupational or other important areas of function are usually not reported. Intermittent explosive disorder seems to be the least like a substance dependence disorder.

SS3.3.
IMPULSIVITY IN ADDICTION: UNDERLYING NEUROBIOLOGY AND EFFECT ON TREATMENT

F.G. Moeller, J.M. Schmitz, J.L. Steinberg, C. Green, K.M. Hasan, P.A. Narayana
Department of Psychiatry and Behavioral Sciences, and Department of Diagnostic and Interventional Radiology, University of Texas Health Science Center at Houston, TX, USA

The purpose of this paper is to present new findings on the neurobiology of impulsivity and associated behavioral inhibition, decision-making, and delayed reward in drug addiction, and also to provide data that these behaviors have an impact on treatment outcome. Data are presented showing higher impulsivity, lower behavioral inhibition, and impaired decision-making in drug dependent subjects compared to controls. Data are also presented from diffusion tensor imaging (DTI) as well as functional magnetic resonance imaging (fMRI) showing that these behavioral changes in drug users are associated with functional and structural alterations in brain function. Specifically, cocaine dependent subjects show lower fractional anisotropy (FA), which is evidence of subtle white matter pathology, compared to age and gender matched non-drug using controls. These differences in brain structure are associated with measures of behavioral inhibition. The treatment implications of these findings are significant: in a recent treatment study of cocaine dependent subjects, those subjects treated with citalopram showed significant reductions in cocaine positive urines. A post-hoc analysis showed an interaction between medication treatment and baseline Iowa Gambling Task (IGT) performance. Specifically, those cocaine dependent subjects who had intact decision-making on the IGT responded well to citalopram. However, those subjects who showed poor decision-making on the IGT did not show a reduction in cocaine positive urines after treatment with citalopram. These results are discussed in light of similar brain imaging and behavioral findings in some impulse control disorders.

SS3.4.
IMPAIRED IMPULSE CONTROL AND DECISION MAKING IN BULGARIAN HEROIN ADDICTS

J. Vassileva, P. Petkova, S. Georgiev, E.M. Martin, V. Velinov, M. Raycheva, R. Tersiyski, P. Marinov
University of Illinois at Chicago, IL, USA; St. Naum University Hospital, Sofia, Bulgaria; Alexandrovska Hospital, Sofia, Bulgaria

Neurocognitive studies of substance-dependent individuals (SDIs) are often hampered by two significant methodological challenges: polysubstance dependence and comorbid psychiatric conditions, which are independently associated with neurocognitive and impulse control impairments. In order to avoid these methodological challenges, we tested heroin addicts in Bulgaria, where heroin addiction is highly prevalent but polysubstance dependence is rare. The goal of the current study was to evaluate the potential contribution of psychopathy to manifestations of impulsivity among a group of Bulgarian heroin addicts. We tested 78 male currently abstinent heroin addicts, classified as psychopathic or non-psychopathic using the Hare Psychopathy Checklist, Revised (PCL-R). The Iowa Gambling Task and the Delayed Reward Discounting Task were used as indices

of cognitive impulsivity and the Go/No-Go passive avoidance learning task as a measure of motor impulsivity. Psychopathic heroin addicts showed notable deficits in decision-making/cognitive impulsivity evidenced by significantly more disadvantageous decisions on the Iowa Gambling Task. However, psychopathic heroin addicts did not show deficits in motor impulsivity and did not discount delayed rewards more than non-psychopathic heroin addicts. These results indicate that the presence of psychopathy may exacerbate decision-making and impulse control deficits in heroin addicts.

SS4.
NEW FINDINGS IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER (organized by the WPA Section on Attention Deficit Hyperactivity Disorders)

SS4.1.
THE SYNTHESIS BETWEEN BRAIN, MIND, AND PSYCHE AS REFLECTED IN THE UNDERSTANDING AND TREATMENT OF ADULT ADHD

S. Tyano, I. Manor
Geha Mental Health Center, Petach-Tiqva; Sackler Faculty of Medicine, University of Tel-Aviv, Israel

Psychiatry today becomes a mixture of several attitudes, sometimes negotiating, sometimes confronting one another. The different aspects include the cognitive, the biological, and the psychodynamic ones, which are all expressed by the clinical evaluation as well as the treatment. Attention-deficit/hyperactivity disorder (ADHD) has been recently recognized among adults (prevalence 4-7%). It is also an example of the integration of the above three perspectives, having organic etiology and many neuropsychological, behavioral and dynamic aspects. Accordingly, the treatment of ADHD demonstrates this integrative approach, since it includes medication, cognitive-behavioral therapy and psychoanalytically oriented psychodynamic techniques. We present a case study of five adults suffering from ADHD, who were treated according to the integrative approach. All the adults were diagnosed between the ages of 55-60, and all were male. They agreed to participate in this group, which used art and drama-therapy techniques. They were all treated by medication during the time of the group, mostly methylphenidate, regular or long-acting, and went through individual short term cognitive-behavioural therapy. We discuss some clinical, as well as theoretical, issues that arise from this experience, and suggest some therapeutic guidelines considering this approach.

SS4.2.
CIRCADIAN PREFERENCE IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER, BREAST CANCER PATIENTS AND NORMAL CONTROLS

J.J.S. Kooij, A.M. Boonstra, M.M. van Veen
PsyQ, Psycho-Medical Programs, The Hague, The Netherlands

The majority of the adults with attention-deficit/hyperactivity disorder (ADHD) have chronic difficulty to go to bed on time, and this has been associated with a delayed onset of melatonin in saliva. They show a circadian preference for activities in the evening/at night. The impact of this sleep pattern may be great on mood (i.e., seasonal affective disorder), eating habits (e.g., timing of meals and binge eating), activity patterns (e.g., nightshift work and light at night) and health in general (i.e., a greater risk for obesity and cancer). We present data of a study comparing the circadian preference of adults with ADHD, breast cancer patients and normal controls.

SS4.3.
ADHD FREQUENCY AND CHARACTERISTICS IN STUDENTS SUFFERING FROM LEARNING DISABILITIES

I. Manor, S. Medad, Z. Zemishlani, N. Vurmbrand
Geha Mental Health Center, Petach Tikva; MAHUT Center, Seminar Hakibutzim, Tel-Aviv, Israel

Attention-deficit/hyperactivity disorder (ADHD) is a common disorder, estimated to occur in 4-6% of the adult population. Learning disabilities (LD) are a group of heterogeneous disorders that manifest in significant difficulties in acquisition and use of various learning abilities. LD were found in 10-20% of the general population. ADHD and LD share many common dysfunction characteristics in all daily activities. Studies show an overlap of 20-30% between the two disorders, and more psychometric disabilities, as well as a higher comorbidity rate and a lower socioeconomic status, in adults who suffer from both disorders than in those with LD alone. Yet, studies dealing with ADHD and LD comorbidity and its implication are few. We wanted to examine ADHD frequency among students diagnosed as suffering from LD, and its correlation with other comorbidities. The sample included 100 students, male and female, all aged 18 years or above, recruited in a specific center for LD. All students were diagnosed in the past as suffering from LD. ADHD assessment included a structured interview (SCID), the Wender Utah Rating Scale (WURS), the adult ADHD self report scale (ASRS) and test of variables of attention (TOVA) with and without methylphenidate (MPH) challenge.

SS4.4.
THE EFFECT OF PHOSPHATIDYLSERINE-OMEGA-3 IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

S. Rozen, I. Manor, T. Cohen, Y. Manor, D. Pelled, A. Weizman
Geha Mental Health Center, Petach Tikva; Sackler Faculty of Medicine, University of Tel-Aviv; Enzymotec Ltd, Migdal-HaEmeq; Felsenstein Medical Research Center, University of Tel-Aviv, Israel

Poor metabolism of omega-3 and/or omega-6 long-chain polyunsaturated fatty acids (LC-PUFA) has been suspected to be associated with attention-deficit/hyperactivity disorder (ADHD) since the 1980s. Accordingly, it was hypothesized that supplementation of LC-PUFA products may result in an improvement in the symptoms of ADHD. Clinical evidence indicated that consumption of EPA+DHA fatty acids (FA) esterified to different carriers has different effects on the incorporation of these FAs in blood fractions. Moreover, the sustained attention performance of children with ADHD was favorably affected following 3 months of omega-3 phosphatidylserine (PS-omega-3) consumption, as measured by TOVA (test of variables of attention). The PS, as the omega-3 carrier, had a more pronounced effect than the fish oil derived omega-3. This study aimed to investigate whether supplementation of PS-omega-3 to ADHD children could affect their symptoms and wellbeing. In this 15-week, randomized, double blind, placebo-controlled (2:1), parallel-group study, the effect of (2?150) mg/day of encapsulated PS-Omega3 or placebo ingestion was examined in 200 ADHD diagnosed children (6–12 years) without concomitant drugs. Vital signs, monitoring side effects

and blood samples were used for tolerability assessment. The efficacy analysis included teachers and parental assessment questionnaires, TOVA, clinical assessment, and quality of life assessment. Results of 145 eligible participants (estimated 70% boys and mean age 9.1±1.9) that completed the intervention indicate that PS-omega-3 supplementation affects ADHD symptomatology and is well tolerated.

This work was sponsored by Enzymotec Ltd.

SS5.
STIGMA: CURRENT CHALLENGES FOR CARE AND TREATMENT
(organized by the WPA Sections on Public Policy and Psychiatry and on Stigma and Mental Health)

SS5.1.
LESSONS FROM 10 YEARS OF WORK AGAINST STIGMA

N. Sartorius
Association for the Improvement of Mental Health Programmes, Geneva, Switzerland

The World Psychiatric Association started a programme against stigma in 1996, and over the next few years some 20 countries joined the programme. The initial conception of the programme was built on literature reviews and experience from some of the programmes that had been underway at the time. As time went by, it became obvious that many of the notions that were the basis of the programme had to be changed. Principles such as that of continuous consultation with people suffering from schizophrenia and their families, and the concentration on changing specific behaviours rather than focusing on changes on attitudes, gradually evolved and significantly facilitated the development of initiatives in countries that decided to join the WPA programme. We briefly describe the WPA programme and the lessons that were learned from its implementation.

SS5.2.
STIGMA RESISTANCE: CONCEPT AND DATA

M. Amering, I. Sibitz
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Despite many efforts, stigma and discrimination are still major obstacles for mental health care, undermining recovery and social inclusion. We describe concepts of stigma resistance and resilience. Persons from all spheres of life have shown that they can be unaffected by stigmatizing and discriminating environments or can generate strength through holding up in the face of such adversities. Stigma resistance can be conceptualized as a form of resilience, and similar possible determinants can be explored. Among them are the concept of exposure vs. avoidance and the role of turning point experiences. Finding out more about stigma resistance could be a crucial step in improving the situation of people and the effectiveness of interventions targeting stigma and social exclusion. Research should focus on stigma resistance and its possible value as an independent variable as well as an outcome variable of specific and unspecific interventions in mental health care.

SS5.3.
EVIDENCE FOR DISCRIMINATION AND EVIDENCE FOR REDUCING DISCRIMINATION

G. Thornicroft
Health Services Research Department, Institute of Psychiatry, London, UK

Stigma and discrimination against people with mental illness are common and severe wherever they have been studied. One surprising aspect of this is that many consumers report that they feel discriminated against by health and social care staff, even though these are precisely the staff who are trained and experienced in offer assistance to people with mental illnesses. Furthermore, the "social contact" hypothesis suggests that those with more contact with people with a diagnosis of mental illness will have more favourable and less stigmatising views. This paper reviews evidence about discrimination and evidence of what is effective to reduce stigma and discrimination.

SS5.4.
STIGMA BY HEALTH/MENTAL HEALTH PROFESSIONALS

L. Küey
Istanbul Bilgi University, Istanbul, Turkey

Stigma, considered as an amalgam of ignorance, prejudice and discrimination, is directed to the patient with mental illness as a whole. It seems that stigmatizing approaches and processes are more "holistic", so to say, than the prevailing clinical practice in psychiatry. The stigmatizing effect of the mental health professionals themselves is well documented and discussed in many studies. Mental health professionals can simultaneously be stigmatizers, stigma recipients and agents of de-stigmatization. The attitudes, behaviour and stigmatizing approaches of physicians, psychiatrists and mental health workers concerning somatic illnesses and somatic treatments of patients with mental disorders is one of the significant aspects of the problem. Moreover, the striking results of some studies revealing stigmatizing attitudes among mental health professionals warn psychiatrists to re-evaluate their training programmes in the light of current stigma theories. It is widely accepted that patients with mental disorders are underdiagnosed and undertreated or mistreated for their somatic illnesses. This fact is further complicating the challenge of treatment gap in mental disorders. This paper focuses on the stigma by health and mental health professionals concerning treatment of medical comorbidities of people with mental disorders.

SS6.
THE ENIGMA OF PSYCHIATRIC BRAIN DRAIN AND POSSIBLE SOLUTIONS
(organized by the WPA Section on Psychiatry in Developing Countries)

SS6.1.
HOW TO SURVIVE EVEN WITH BRAIN DRAIN

E. Mohandas
Elite Mission Hospital, Kerala, India

The migration of a talented pool of qualified psychiatrists to greener pastures in affluent countries has in a way drained a significant portion of the mental health manpower. The fact that the United States harbors 6000-7000 psychiatrists of Indian origin and that a significant chunk of Indian psychiatrists have moved to Canada, UK, Australia

and New Zealand gives us an estimate of the scale of this brain drain. The reality that qualified hands will move out of this nation for academic and monetary benefits and a better quality of life is undeniable. The fact that brain drain be curtailed by offering the discerning professional attractive career options within this country is of paramount importance. Parallel to this, efforts have to be undertaken to survive the possible crippling effect of brain drain. To achieve this, the training programmes for undergraduates and postgraduates need to be strengthened to increase the competence level of the indigenous doctors. There is need for patient education campaigns and community outreach programmes to improve the awareness and to ensure that those who need such services are not neglected. Skill building of the primary care providers and internists may help in providing better mental health services. Different organizations in private and public sector can co-ordinate the skill sharing campaign across the country and among the neighboring countries who need such help.

SS6.2.
MINIMISING THE IMPACT OF BRAIN DRAIN OF PSYCHIATRISTS

A. Javed
Medical Centre, Warwickshire, UK

The issue of brain drain has emerged as an important discussion point that requires careful consideration from the governments and professional organizations. It is true that immigration of health professionals from low and middle income countries cannot be stopped, due to many reasons including financial incentives, better quality of life and personal choices, but it is evident that the impact of brain drain does affect the overall situation of mental health and leave many countries with minimum infrastructure and manpower. With a universal increase in the migration of health professionals, there is a need to start some serious discussions about minimising the impacts of this major shift that is leading to poor service delivery, poor attention to the rights of mentally ill, professional isolation and lowering of moral among the psychiatrist community in these countries. We discuss some ideas about strengthening the mental health services in low income countries where a heavy price is being paid for this phenomenon. Examples will be given from the experience of South Asian Forum on Mental Health and Psychiatry, that has initiated a number of innovative projects in this regard. The concept of "brain circulation" will be discussed, with stories of successes in many low income countries.

SS6.3.
BRAIN DRAIN AND ITS IMPLICATIONS FOR DEVELOPING COUNTRIES: INNOVATIONS AND RENEWED INSIGHTS FOR CAPACITY BUILDING OF MENTAL HEALTH CARE

R. D'Souza
Indo Australasian Psychiatric Association and South Asian Forum Australasian Chapter, Dingley, Victoria, Australia

Developing countries are faced with the challenges of mental health care for the generally large populations that are surrounded by vast needs coupled with very limited resources. It is estimated that there are large numbers of patients suffering from mental health and neurological disorders in these countries. On the other hand, the ratio of psychiatrists and mental health practitioners to population falls well below any documented optimum recommendations. Ironically, many developing countries have produced qualified psychiatrists and allied health professionals that have moved for various reasons to the developed world and contributed significantly not only to mental health and well-being of a community that has comparatively better mental health indices but also to the work force, making up the optimum psychiatrist population ratio that is recommended for good outcomes. The recent disasters that have affected many developing countries have further demonstrated the disparity of resources and capacity. This paper highlights the new concept of "brain circulation", as opposed to the old brain drain phenomenon, and its implications for capacity building, mental health promotion and empowering the mental health professionals which can assist in delivering mental health care in these regions.

SS6.4.
FIDDLING WHILE MENTAL HEALTH IN LOW INCOME COUNTRIES DECLINES

M. Parameshvara Deva
Department of Psychiatry, Suri Seri Begawan Hospital, Kuala Belait, Brunei

The fact of brain drain is well over 30 years old. Young trainees from low income countries started in the 1970s to stay back in the affluent countries that trained them because of better incomes there. The gradual trickle grew in a decade into a torrent and adding to it the blatant enticing of senior psychiatrists from the south Asian region to Britain. The effect on the lower income countries was given lip service and couched in soft language. Debated in journals were muted by studies that solved nothing. The time has come to put substance to rhetoric on two fronts. Firstly, at the level of the UN and the WHO, to agree a monetary compensation to the institutions that trained the emigrants. Secondly, an agreement of the recruiting country to allow a month paid training donation to the country of training for 5 years to be guaranteed on recruitment. The argument of freedom of movement of professionals equates the low income with the highest in income among countries. There appears to be a lack of common sense, conscience, an ignoring of justice and a belittling of the right to mental health for the poor of the lower income countries. Forums discuss at an intellectual and superficial level what is the painful reality of millions without access to mental health care. Some Asian non-governmental organizations are organizing training and support for mental health in the low income countries, along with the WPA Section on Psychiatry in Developing Countries, to encourage volunteers from among emigrants to donate services to help their kin at home. This is showing some signs of success, despite very limited resources.

SS7.
TOWARDS A CONSENSUS ON ETHICS AND CAPACITY IN OLD AGE PSYCHIATRY (Part I) (organized by the WPA Section on Old Age Psychiatry)

SS7.1.
ETHICAL PRINCIPLES IN OLDER PEOPLE

J. Warner
St. Charles Hospital, London, UK

The care of older people with mental illness is often complicated by ethical dilemmas. Ethical principles can guide clinicians and facilitate decision making by adding clarity to complex situations. The main ethical principles are: autonomy (respect of the individual's right to self determination on issues of health and social care); beneficence (the need to act in the best interests of a patient); non-maleficence

(the need to avoid harm to a patient); justice (the need to treat all people equally and apply resources fairly). In clinical decision making, tensions frequently exist between the principles. Principles of confidentiality and veracity further complicate the picture. How these principles are interpreted and applied differs between states, making a consensus statement difficult.

SS7.2.
DEFINING DECISION-MAKING CAPACITY AND COMPETENCE

S. Kim
University of Michigan, Ann Arbor, MI, USA

Most jurisdictions have legal frameworks to protect people with impaired decision-making ability. Such frameworks should not make old age or a diagnosis of a mental disorder as sufficient in itself to determine lack of capacity. The presumption of capacity is an important principle, though sometimes impairment due to severe mental disorders may reverse this presumption. Key components of capacity include understanding, appreciation, reasoning, retention, and the ability to express a stable choice. Individuals need to be given adequate information in a suitable form about the decision in question, including the patient's condition, the potential benefits and risks of the proposed course of action, and the alternatives and their potential consequences. The threshold for the determination of capacity varies according to the degree of risk and potential benefit of the decision. Capacity is specific to the decision in question (e.g., health, wills, finance). Capacity may also change over time and context. Good clinical practice requires a flexible and supportive approach in order to optimise capacity. Most health and social care professionals working with older people will have to make some type of capacity assessment and therefore require appropriate training. Expert advice may be needed by those with responsibility for formal adjudication of capacity in accordance with local custom and legal requirements. Local legal requirements in the assessment of the capacity to manage financial and personal affairs should be informed by a comprehensive clinical, functional, and cognitive assessment.

SS7.3.
RIGHTS TO TREATMENT, RESEARCH AND ACCESS

E. Chiu
University of Melbourne, Australia

The ethical principle of distributive justice underpins the rights of older persons to all available forms of treatment for their medical conditions. However, the existence of ageism, compounded by a strict, fundamental adherence to a person's utility to society, frequently negates this right. In the area of access to care and social services, the upholding of this principle must be strongly protected. Older persons' voluntary and informed contribution to research, thus adding to very needed sum of knowledge in the mental disorders of the elderly, must be recognised, encouraged and applauded; while at the same time protecting them against harm and exploitation.

SS7.4.
END OF LIFE ISSUES

N. Tataru
Forensic Psychiatry Hospital, Stei, Romania

The physician who deals with patients who approach the end has to cope with a number of ethical dilemmas and medical challenges. People with dementia often receive suboptimal end-of-life care and have been often neglected. Respect for the individual's expressed wishes and interest should guide all end-of-life care decisions. We discuss about the right to be treated vs. the right to refuse the treatment when the patient believes that his/her quality of life would be compromised by continued treatment, and about *the right to live* vs. *the right to die*. According to Hippocratic Oath, patients have to be treated in dignity, but not to be "over-treated" by all modern possibilities. The aim of any mental health intervention for older adults is to preserve and enhance their personal autonomy and self esteem necessary for their own project for the end of their lives, permitting them to live and die with dignity.

SS8.
COMMON INFLAMMATORY PATHWAYS IN DEPRESSION, SOMATOFORM DISORDER AND CHRONIC FATIGUE SYNDROME
(organized by the WPA Section on Biological Psychiatry)

SS8.1.
THE IMMUNE PATHOPHYSIOLOGY OF DEPRESSION

B.E. Leonard
Department of Psychiatry and Psychotherapy, Ludwig Maximilian University, Munich,Germany; Pharmacology Department, National University of Ireland, Galway, Ireland

Bacterial and viral infections that affect the brain, or the therapeutic administration of interferon for the treatment of hepatitis or some forms of cancer, frequently cause affective symptoms that resemble those seen in major depression, such as depressed mood, anhedonia, cognitive and memory deficits, anorexia, anxiety, loss of libido and disturbances of sleep profile. Patients with major depression often have elevated proinflammatory cytokines, such as interleukins 1 and 6, and tumour necrosis factor alpha, that correlate with the symptoms of the disorder. This raises the question whether major depression is an immunological disorder. In support of this hypothesis, there is evidence that inflammatory cytokines increase the activity of cyclo-oxygenase 2 and nitric oxide synthase in the brain, and increase the release of corticotrophin releasing factor. As a consequence of these changes, neuronal apoptosis is increased, particularly in the hippocampus and neocortex. Of the pro-inflammatory cytokines involved in the neurotoxic damage, IL-1 plays a major role in triggering a cascade of changes in the apoptotic pathway, changes that include the stimulation of the mitogen activated protein kinase (MAP kinase), the apoptotic p38 protein and c-jun N-terminal kinase (JNK). These cytokines also stimulate the kynurenine pathway, leading to the synthesis of the neurotoxin quinolinic acid. There is now experimental evidence that chronically administered antidepressants attenuate these apoptotic changes by decreasing the pro-inflammatory cytokines and increasing the synthesis of neurotrophic factors. This results in neuronal repair. Such findings offer a new insight into the psychopathology of depression and a novel approach to its possible treatment.

SS8.2.
RELATIONSHIPS BETWEEN INFLAMMATORY MARKERS, POLYUNSATURATED FATTY ACIDS AND NEUROTRANSMITTER SYSTEMS IN DEPRESSION AND SOMATIZATION

S. Riemer, M. Maes, F. Pilger, W. Rief
Department of Clinical Psychology and Psychotherapy, University of Marburg, Germany; Clinical Research Center for Mental Health, Antwerp, Belgium; Center for Behavioral Medicine, Klinik Roseneck, Prien am Chiemsee, Germany

Abnormalities in inflammatory mediators, serotonergic mechanisms, and fatty acid composition play a role in depression. Polyunsaturated fatty acids (PUFA) are the basic constituents of phospholipid membranes; they determine membrane fluidity and modulate membrane receptors, including serotonin, and they modulate inflammatory reactions. Previous studies indicated that major depression is accompanied by inflammatory reactions, a depletion of n-3 fatty acid levels and lowered plasma tryptophan concentrations. In subjects with somatoform disorder, we detected indices of immune activation, e.g., increased serum soluble interleukin-1 receptor antagonist levels and decreased plasma tryptophan. This study examined the PUFA concentrations in depressed patients and in patients with somatization as compared with normal controls. Relationships with the inflammatory markers and plasma tryptophan were examined. Blood samples of 150 subjects from four groups (i.e., somatization, depression, depression and somatization, healthy controls) were analyzed for the PUFA content in the phospholipid fraction, inflammatory markers and markers of the serotonergic system. The study replicates former findings that in depression there is a significant relationship between n3-PUFA levels and the serotonergic system. Similar relationships are also detected in patients with somatization. The interrelationships between the inflammatory biomarkers, on the one hand, and n-3 PUFA contents and plasma tryptophan, on the other, are presented. The results show that changes in inflammatory markers, the turnover of serotonin and n-3 PUFA are important pathways underpinning both depression and somatization. The results suggest that somatization is, as depression, a biological entity and suggest that new drug development in somatization should target the above immune pathways and neurotransmitters.

SS8.3.
IMMUNE DISORDERS AND INFLAMMATORY MECHANISMS IN CHRONIC FATIGUE SYNDROME: AN OVERVIEW

K.L. De Meirleir
Department of Human Physiology, Vrije Universiteit, Bruxelles, Belgium

Chronic Fatigue Syndrome (CFS) is characterized by abnormalities in the 2-5A pathway: 2-5 oligoadenylate synthetase (OAS), Rnase L and RNA-dependent protein kinase (PKR) are upregulated. RNase L is present as the native as well as the 37-KDa fragment in mononuclear cells, the latter being produced by proteolytic cleavage. Our research has shown that one of the major enzymes involved in this mechanism is leucocyte elastase. Simultaneous induction of 2-5 OAS-like proteins or thyroid-receptor interacting protein (TRIP) may explain the extreme fatigue in these patients. Besides infection by, or reactivation of, the different viruses detected in CFS patients, other mechanisms are very likely a source of an abnormal triggering of both 2-5 OAS/PKR apoptotic pathways in immune cells such as endogenous retrovirus (HERV) sequences or Alu sequences from our own genome. PKR activation leads to NF-kappaB activation, which stimulates the expression of enzymes whose products contribute to the pathogenesis of the inflammatory process of CFS, including the inducible form of nitric oxide synthetase (iNOS), leading to increased nitric oxide (NO-) and inducible cyclooxygenase (COX2), which generates prostanoids. NO- regulates numerous physiological processes, including neurotransmission, smooth muscle contractility, platelet reactivity, and the cytotoxic activity of immune cells. In the presence of reactive oxygen species produced by monocytes and activated phagocytes, NO- is oxidized to the peroxynitrite ion (ONOO-), which is extremely toxic to natural killer and lymphokine-activated killer cells. Activated PKR also plays a central role in the Th1/Th2 balance, which can be severely disrupted in CFS patients. Besides their direct immune functions, activated immune cells produce high quantities of glutamate. In the brain, glutamate exerts excitatory effects on neurons through the NMDA receptor. A reduction in activated immune cells consequently impairs such cross-talk. Furthermore, NO- plays a role as feedback regulator of glutamatergic excitation, especially in the hypothalamus, where it downregulates the secretion of corticotropin-releasing hormone. These dysregulations, depending on their severity, lead to and explain the various symptoms, pathologic expressions and co-morbidities, which makes CFS patient populations as heterogeneous as those of cancer patients.

SS8.4.
INFLAMMATION, OXIDATIVE AND NITROSATIVE STRESS AND LEAKY GUT AS COMMON PATHWAYS UNDERPINNING MAJOR DEPRESSION AND CHRONIC FATIGUE SYNDROME

M. Maes
Clinical Research Center for Mental Health, Antwerp, Belgium

There is now evidence that major depression (MDD) is accompanied by an activation of the inflammatory response system, increased production of TRYCATs (tryptophan catabolites along the indoleamine oxidase pathway) and increased oxidative and nitrosative stress (O&NS). There is also evidence that chronic fatigue syndrome (CFS) is accompanied by increased intracellular inflammation and O&NS. Maes' cytokine hypothesis of depression considers external and internal stressors as trigger factors for depression through an increased production of pro-inflammatory cytokines. In CFS, there is a hypothesis that infections are an important pathway causing inflammation. Another pathway which may explain the comorbidity between MDD and CFS is an increased translocation of gram- bacteria through an increased gut permeability or leaky gut, which point toward intestinal mucosal dysfunction (IMD). Indeed, both MDD and CFS are accompanied by increased IgM and IgA responses against lipopolysacharide (LPS) of *Hafnia alvei*, *Pseudomonas aeruginosa*, *Morganella morganii*, *Pseudomonas putida*, *Citrobacter koseri*, and *Klebsielle pneumoniae*. A systemic increase in LPS not only causes a systemic inflammation, but also a central neuroinflammation, with an activation of brain microglia and a chronically elevated production of pro-inflammatory mediators. An increased production of pro-inflammatory cytokines may induce depression and somatic symptoms, such as fatigue. We show that treatment with specific antioxidants with or without IV immunoglobins can treat IMD in CFS, and that the normalization in IMD is accompanied by a clinical remission in 80% of the patients. This treatment shows also a clinical efficacy in depressed patients resistant to treatment with antidepressants. The findings show that inflammation, O&NS and IMD are important pathways underpinning both depression and CFS and that these inflammatory pathways may explain the occurrence of "psychosomatic symptoms" in these disorders.

SS9.
IMPLEMENTING MENTAL HEALTH CARE THROUGH DEVELOPING CARING COMMUNITIES (organized by the WPA Section on Public Policy and Psychiatry)

SS9.1.
TASK SHIFTING TO SCALE UP MENTAL HEALTH CARE: EMPOWERING THE COMMUNITY TO CARE FOR MENTAL DISORDERS

V. Patel
London School of Hygiene and Tropical Medicine, London, UK; Sangath Centre, Goa, India

The scarcity of specialist mental health human resources in developing countries, compounded by their inequitable distribution and inefficient utilization, has been well documented. This human resource gap will remain large for the foreseeable future, and is likely to be worsened as populations grow in many countries and as specialists emigrate. Task shifting, a strategy which involves the rational redistribution of tasks among health workforce teams, has become a popular method to address specialist health human resource shortages in other public health fields. Specific tasks are moved, where appropriate, from highly qualified health workers to health workers with shorter training and fewer qualifications in order to make more efficient use of the available human resources for health. A Cochrane systematic review has reported that lay health workers show promising benefits in promoting immunisation uptake and improving outcomes for acute respiratory infections and malaria, when compared to usual care. The World Health Organization has recently released global recommendations and guidelines on task shifting for scaling up HIV care and proposes the "adoption or expansion of a task shifting approach as one method of strengthening and expanding the health workforce to rapidly increase access to HIV and other health services". We present a perspective on the role of task-shifting to scale up mental health care, by empowering community and lay health workers to deliver specific tasks, the clinical trials which have demonstrated the benefits of such task-shifting interventions, the role of mental health specialists in such intervention programs, and research priorities.

SS9.2.
PUBLIC POLICY AS A TOOL FOR BRIDGING TREATMENT GAP

O. Gureje
Department of Psychiatry, University College Hospital, University of Ibadan, Nigeria

Low- and middle-income countries face the challenge of bridging the gap between need and available treatment for mental health problems. Even though effective and relatively cost-efficient treatments exist, most of these countries have yet to take advantage of these to provide needed service for their people. A major hurdle in facing this challenge is the development of practical policy options that allow the countries to make use of the available resources that they have. A lot can be done towards scaling up mental health services within existing health care structures. Mental health policies that build on such structures are more likely to be feasible and achievable.

SS9.3.
PRIMARY PREVENTION THROUGH COMMUNITY SUCCESS IN SECONDARY AND TERTIARY PREVENTION

M. Amering
Department of Psychiatry, Medical University of Vienna, Austria

Communities play a major role in terms of stigma attached to mental health problems and treatments as well as in terms of discrimination and social inclusion of its members with mental health problems. Knowledge about determinants of mental health and consequences of mental health problems are a major resource for any community. Understanding mental illness and disabilities and engaging in helping community members with mental health problems can strengthen communities' mental health capacities and improve mental health literacy at the same time. In order to reach the wider community with mental health and illness information, appropriate conceptualization and dissemination strategies in accordance with local resources need to be generated. The currently often hidden knowledge of a large part of the community – namely that of relatives and friends of people with mental health problems as well as the expertise of those who are coping with or have overcome such problems in their own lives – should be validated and shared. A community with expertise and experience of successful interventions with regard to secondary and tertiary prevention for persons with mental illness is likely to profit also in terms of primary prevention for the wider community.

SS9.4.
THE PSYCHIATRIST AND SHARED WORK IN MENTAL HEALTH CARE

H. Herrman
ORYGEN Research Centre, Department of Psychiatry, University of Melbourne, Australia

The way that psychiatrists, other professionals and families and consumers work together has an impact on standards of clinical care and professional satisfaction. Although in the past, in some countries, psychiatrists have often worked in relative isolation, today it is rare for mental health care to be provided by a single professional, even where one person is designated as the primary direct-care provider. Much of contemporary mental health care in well resourced countries is delivered either directly or indirectly by several persons. Collaboration and the working relationships in teams are important to good quality mental health care. Effective teamwork and collaboration is supported by several elements, including agreed goals, an agreed approach, effective communication styles, established ground rules, clear team roles, and competent leadership. Obstacles to effective teamwork and collaboration include: ambiguity and conflict over roles; conflict and confusion over leadership; differing understandings of clinical responsibility and accountability; poor understanding between the professions; and differing rewards between the professions. The Royal Australian and New Zealand College of Psychiatrists, through a committee of its Board of Professional and Community Relations, convened a number of meetings and discussions on this topic. The committee developed a series of recommendations in relation to education, professional organizations, workplaces and government. The principles established are potentially relevant to the need for appropriate sharing of care between specialist and primary carers in health systems of various types.

SS10.
PSYCHIATRY AT THE END OF LIFE: CLINICAL AND THERAPEUTIC CHALLENGES (organized by the WPA Section on Psycho-oncology)

SS10.1.
EXISTENTIAL AND SPIRITUAL ISSUES IN PALLIATIVE CARE

L. Travado
Clinical Psychology Unit, Centro Hospitalar de Lisboa Central, EPE, Hospital S. José, Lisbon, Portugal

Diagnosis and treatment of advanced diseases such as cancer provoke a series of dramatic changes (physical, psychological, spiritual and interpersonal) that affect the patient and his or her family as well as their social milieu. In the last decade some attention has been given to spirituality and its role in cancer patients' coping. We discuss the theme of spirituality and existential issues in cancer. Since few data is available about spirituality among cancer patients in Southern European countries, the results of the Southern European Psycho-Oncology Study (SEPOS) are presented. Specifically, the data concerning 323 outpatients with a diagnosis of cancer, a good performance status (KPS >80) and no cognitive deficits or central nervous system involvement, participating in the study in Italy, Spain, Portugal and Switzerland, are presented. Each patient was evaluated for spirituality (VAS 0-10), psychological morbidity (HADS), coping strategies (Mini-MAC) and concerns about illness (CWI). The majority of patients (79.3%) reported being supported by their spirituality/faith throughout their illness. Spirituality was significantly correlated with fighting spirit (r=.27), fatalism (r=.50) and avoidance (r=.23) and negatively correlated with education (r=-.25), depression (r=-.22) and HAD total (r=-.17).

SS10.2.
HOW TO RECOGNIZE AND MANAGE DEPRESSION AT THE END OF LIFE

M. Lloyd-Williams
Academic Palliative and Supportive Care Studies Group (APSCSG), School of Population, Community and Behavioural Sciences, Liverpool, UK

Depression is common in palliative care patients but underrecognised and undertreated. Reasons for poor diagnosis of depression include clinician factors of lack of recognition or a desire to normalise depression as a symptom and also patient factors in that patients are more willing to disclose physical symptoms than symptoms of low mood. New data has emerged which suggests that that not only depression causes increase in morbidity, but patients with depression also have increased mortality in advanced cancer. A resume of how clinicians can use tools to aid diagnosis will be addressed including reference to the development of the Brief Edinburgh Depression scale. The assessment and management of depression (both pharmacological and non-pharmacological) in patients in advanced stages of illness should be considered mandatory in palliative care programs.

SS10.3.
PSYCHIATRIC ISSUES IN ASSISTED SUICIDE: REVIEW OF THE OREGON EXPERIENCE

M. Riba
Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA

In October 1997, the Oregon Death with Dignity Act was enacted. This act legalized physician-assisted suicide for competent, terminally ill persons in Oregon. There were many concerns that patients with depression or those who lacked support or were in pain would be those who would request assisted suicide. There were also issues about the psychological impact on physicians and nurses who were caring for these patients. Since that time, numerous studies have been done to better understand physician and patient and family concerns and issues. For example, in a survey between February and August 1999, Ganzini et al determined that physicians granted about 1 in 6 requests for lethal medication prescriptions but that 1 in 10 requests resulted in suicide. While significant palliative care interventions were provided, some patients did not change their minds about suicide. In a self-administered survey sent out to Oregon physicians in Feb 1999, Ganzini et al found that physicians made increased referrals to hospice and that they had made increased efforts to improve their knowledge of the use of medications in the terminally ill. The physicians noted that, since 1994, they had made efforts to improve their care of patients with terminal illness and had had more conversations with patients about assisted suicide. In a survey, family members provided the most important reasons that their loved ones requested physician assisted death. These reasons included wanting to control the circumstances of death and die at home, issues about loss of dignity and future losses of independence, quality of life and self-care ability. The family members noted that the least important reasons were depression, financial concerns and poor social support.

SS10.4.
THE FAMILY AND THE NEED FOR CONTINUITY OF CARE: GRIEF AND COMPLICATED GRIEF

P. Gritti, L. Grassi
Department of Psychiatry, University of Naples SUN, Naples; Section on Psychiatry, Department of Medical Science of Communication and Behavior, University of Ferrara, Italy

The family has a special and specific role in psycho-oncology and palliative care. The needs of cancer patients in an advanced phase of illness and at the end of life represent a challenge for family members. Data merged by the literature have indicated the extreme importance of evaluating the family factors to be considered in the anticipatory grief phase, in order to refer dysfunctional families to proper psycho-oncology and psychiatric services. Kissane et al showed that family assessment in the early phases of palliative care predicted the development of psychopathological disorders and improved the specificity of family focussed intervention.. On the other hand, the phase of grief and bereavement, after the loss of their loved ones, represents a further significant challenge for the family members. In this case also early evaluation can predict the development of complicated grief, that can be recognised in about 20% of the families. In a study conducted by Grassi et al, scores on the Pre-Loss Inventory were associated with the risk of complicated grief, as evaluated in 60 families followed by a palliative care program. The need for more attention to the family during bereavement is mandatory, and primary care guidelines should be improved in order to recognize complicated grief problems emerging in this phase.

SS11.
RECOVERY BEYOND RHETORIC (organized by the WPA Section on Public Policy and Psychiatry)

SS11.1.
AN INTERNATIONAL PERSPECTIVE ON RECOVERY

M. Slade
Institute of Psychiatry, London, UK

There is increasing consensus in the English-speaking world about the importance of "recovery" as a guiding philosophy for mental health services. There is less consensus about the practical implications, or what a recovery-focussed mental health service looks like. This paper aims to define personal recovery; to present a theoretical framework for understanding personal recovery; and to identify the four ways in which mental health professionals can support recovery. The most widely cited definition of recovery is elaborated, and key recovery domains identified from a systematic review of consumer narratives of recovery. A new theoretical framework for recovery is presented, which identifies the centrality of identity, the contribution of clinical models to recovery (and how they can be toxic to recovery), and why hope is necessary. Four key recovery support tasks which follow from this framework are then identified: fostering relationships, promoting well-being, offering treatments, and improving social inclusion. Examples are given of how actual services around the world are undertaking these tasks to support recovery. A recovery orientation in mental health services involves a fundamental shift in power, values, attitudes, skills and behaviours. It will involve system transformation, and genuine partnership between those using, working in and managing services.

SS11.2.
GOOD PROGNOSIS IN SCHIZOPHRENIA

R. Warner
University of Colorado, Boulder, CO, USA

The recovery model is built around optimism and the expectation of improvement and eventual recovery which is shared by people with mental illness, their carers and service providers. Unfortunately, a common popular and professional misconception concerning schizophrenia is that recovery from the illness is rarely possible. We offer evidence that recovery from schizophrenia occurs frequently and outline the factors that contribute to good outcome. A meta-analysis of studies of outcome from schizophrenia in Europe and North America throughout the twentieth century reveals that there has always been a substantial social and complete recovery rate from the illness. The recent International Study of Schizophrenia confirms this finding and expands on it with respect to both the developed and the developing worlds. Employment, social inclusion and family involvement all appear to enhance recovery from schizophrenia. Service providers may offer a more positive view of the prognosis in schizophrenia to their patients, family members and other providers.

SS11.3.
TAKING AGENCY SERIOUSLY: PARTICIPATION IN PUBLIC MENTAL HEALTH

K. Hopper
Center for the Study of Recovery in Social Contexts, Nathan Kline Institute, Orangeburg, NY, USA

For three decades, Amartya Sen's "capabilities" approach has helped fuel a revolution in quality of life studies, especially in assessment of assisted development in poor countries. Sen's signature argument that advances in well-being are best captured by expansions in real opportunities (or substantive freedoms) available to people has recently been applied to disability as well as poverty. Well-being for Sen is inextricably linked to agency. Thus participation in what changes us, even if allegedly for the better, is critical. This paper reports on an ongoing effort to foster participation in public mental health services and research, identify mechanisms (e.g., advance directives) and structural supports designed to enable it, and document critically the barriers and difficulties involved. Progress in cultivating participation is possible but, like recovery-oriented programs more generally, must contend with conventional power relationships, public concerns at variance with user priorities, and structural constraints. Closer to home, it demands a commitment to mutual learning and flexible pedagogy. If recovery from psychosis (and from a mental health service system content to manage stable patients) can be seen as reclaiming and cultivating agency, constructs and measures must be devised that go beyond the usual inventories of symptoms and functioning to address citizenship, connectedness, and persona projects.

SS11.4.
THE POLITICS OF REMISSION AND RECOVERY IN SCHIZOPHRENIA

H. Katschnig
Ludwig Boltzmann Institute for Social Psychiatry, Vienna, Austria

The concepts of "remission" and "recovery" have been propagated in recent years by different players in the mental health care field, attempting to correct or replace the hitherto prevalent concept of chronicity of schizophrenia. This paper aims to analyse the interests and strategies of different players in propagating these concepts. There are at least five groups of main players in the mental health care field – professionals (psychiatrists, nurses, social workers, etc.); family members; users/consumers; health care politicians, planners and administrators; pharmaceutical industry – who in themselves do not necessarily represent homogenous interests. Psychiatrists and the pharmaceutical industry have propagated "remission criteria", based exclusively on the medical model and symptoms, stressing reliability, but leaving completely aside "real life" issues. In contrast, user groups increasingly promote the idea of "recovery", taking into account such real life issues as quality of life, hope, self-management, satisfaction, social inclusion, but at the price of creating misunderstandings due to lack of clarity of the meaning of recovery (outcome vs. process) and difficulties in translating the word from English to other languages. Both groups overlook that: a) the concept of schizophrenia is not validated by any external criteria and b) all long-term studies carried out so far show a heterogeneous outcome. Many kinds of interests – hidden, "open secret" and also declared ones – lead to the neglect of available facts and information and hamper the rational discussion of the nature and course of mental disorders.

SS12.
SOCIAL PSYCHIATRY: THE BASIC PIECE OF THE PUZZLE TO UNDERSTAND THE PATIENT AS A PERSON
(organized by the WPA Section on Stigma and Mental Disorders, in collaboration with the World Association for Social Psychiatry)

SS12.1.
ON THE RIGHTS OF THE MENTALLY ILL

J. Arboleda-Florez
Queen's University, Kingston, Ontario, Canada

The regular discourse for the rights of the mentally ill, whereby the mental health system and psychiatrists get chastised for abusing the political freedoms and the personal integrity of mental patients in institutions, seems to have gone stale in countries that have advanced mental health systems in which mental hospital are almost abolished and patients are usually accessing treatment in the community. How well are they faring and how responsible are community treatment systems to advance other kinds of rights for the mentally ill are matters of concern as well. We review issues of vital importance to understand the history of human rights for the mentally ill and where we stand in this discourse at the present time.

SS12.2.
STIGMA OF MENTAL ILLNESS: THEORETICAL ISSUES

H. Stuart
Department of Community Health and Epidemiology, Queen's University, Kingston, Ontario, Canada

Over the past twenty years, there has been a growing realization that stigmatizing attitudes and their behavioural counterpart of discrimination against the mentally ill, have massive negative and deleterious effects on mental patients, their families and even on their clinical caregivers. Theoretical literature on the stigma of mental illness and its deleterious impacts on the recovery of mental patients is now extensive. Research on stigma has also enjoyed an élan over the past fifteen years and research reports have added to the growing body of knowledge in this area. On the other hand, it is only more recently that those stigmatizing negative attitudes have been known to lead to discriminatory practices that impinge on mental patients' normal enjoyment of rights and entitlements that other citizens take for granted. While negative rights such as rights to life, liberty and protection from undue state interference on the lives of citizens are very well protected in most countries, especially in the industrialized world, positive rights that encompass the rights to citizenship and enjoyments that most citizens take for granted (housing, nourishment, intimacy) are less protected for the mentally ill in the community. We review theoretical issues of stigma and discrimination, their development and impact on patients and caregivers, and how better knowledge of their origins and impacts have led to programs and interventions to combat them.

SS12.3.
OBSTACLES TO PREVENT STIGMA: CHALLENGES FOR SOCIAL PSYCHIATRY IN JAPAN

M. Mizuno
Department of Neuropsychiatry, University School of Medicine, Toho, Japan

Recently, much attention has been paid to early recognition and intervention for psychosis. In Japan, implementation of early intervention in psychiatry has just started. However, the duration of untreated psychosis (DUP) in Japan (8 months in median, 20 months in mean) is extremely long compared to other countries. The reason is not clear, but several issues concerning Japanese psychiatric services and attitudes of the people should be taken into account. For many years, Japanese psychiatric services have struggled against a conservative hospital-based psychiatry with huge numbers of psychiatric beds and long stays. Psychiatric services are still predominantly hospital-based. Such reliance on hospital-based psychiatry is a barrier to the development of community-based psychiatry and, as expected, a source of stigma. Complicating this reality is the fact that mental health issues are systematically neglected in the educational system from primary school to high school and higher education. As a result, students in the crucial ages of onset of psychosis have no adequate knowledge of psychiatric disorders. Although the Japanese Society of Psychiatry and Neurology changed the name of schizophrenia in 2002 into the new less stigmatizing term "Togo Shiccho Sho" (integration disorder), the situation concerning stigma towards mental illness has apparently not changed. We address some aspects of stigma in Japanese people through the experiences of social psychiatry in Japan.

SS12.4.
CULTURAL IDENTITY AND PSYCHOPATHOLOGY: A MAJOR CHALLENGE

D. Moussaoui
Ibn Rushd University Psychiatric Centre, Casablanca, Morocco

One of the main trends for human kind in the 21st century is migration. It is highly probable that all countries at the end of this century will become cultural melting pots. This necessitates to think and investigate cultural identity as a major component of psychopathology. This could be done along some axes such as the following. Perception of time of developing and developed countries (for example Switzerland and Japan) is not similar. Social and geographical space is also different, especially in the "invisible dimension". Concerning relationships between genders, patriarchal societies have been dominant and the deep socio-cultural transformations have led to a rise of women power, depending on the level of development of the society. Finally, religion and spirituality become again a major factor, as it has been the case for centuries. This trend is seen not only in developing but also in developed countries. All these factors should be taken into account in the diagnosis and the treatment of mental patients, especially for migrants.

SS12.5.
ROMANIAN MENTAL HEALTH REFORM AFTER ADMISSION TO THE EUROPEAN UNION

A. Paziuc, P. Paziuc
Campulung Moldovenesc, Romania

During the communist regime, mental disorders were a matter of national shame. As a consequence, people with these problems were often victims of bias, prejudice, mistreatment and abuse. After

Romanian admission to the European Union in 2007, due to international pressure, the status of mentally ill started to improve. This paper reports the changes which happened in the mental health field, the gap between legislation and reality, the way in which the users and their families are now more interested and involved in the development of alternative and better mental health care services, the successes and the obstacles. The paper tries to underline the importance of organizing local and national policy forums which offer new ways for professionals, users and non-governmental organizations to have "a voice" in the developments affecting their lives, to be listened by people who make decisions on mental health policy, to fight against the stigma and disadvantage of being a user of mental health services. The members of these forums (professionals, users, local government officials and other stakeholders) try to discuss and to develop their skills and knowledge for human rights, lobbying and campaigning in order to find the ways to influence policy makers in mental health field at local and national level.

SS13.
EDUCATION AND TRAINING IN TRANSCULTURAL PSYCHIATRY: PROSPECTS AND CHALLENGES (organized by the WPA Section on Transcultural Psychiatry)

SS13.1.
CULTURAL CASE FORMULATION IN PSYCHIATRY AND MEDICINE: PROSPECTS AND CHALLENGES

R. Wintrob
Warren Alpert School of Medicine, Brown University, Providence, RI, USA

It took a ten-year struggle to get the perspective of cultural psychiatry to be recognized and included in the content of DSM-IV. Inclusion of the cultural components of clinical case formulation has been important for psychiatry as a field, as much as for cultural psychiatry's impact on the clinical practice of psychiatry around the world. Since 1994, there has been a steady increase in utilization of the concepts of "cultural competence", "cultural assessment" and "cultural case formulation" in clinical mental health service settings, as well as in professional training. At the same time, there has been a much greater interest in and wish to apply cultural assessment concepts in all fields of medicine. This trend reflects the greater acceptance of "cultural diversity" and "multiculturalism" throughout the world. However, there is as yet no mandate for clinicians to make use of the cultural components of clinical case formulation in clinical practice. It is not a requirement for professional certification that clinicians must demonstrate competence in cultural case formulation. There is no requirement that trainees in all the mental health service disciplines become experienced in cultural case formulation. There should be a place in DSM-V for the fundamentally important issue of adaptation to culture change, as well as the related issue of the outcome of acculturative stress and its impact on individuals, families, communities, and across generations. This presentation proposes that demonstrating competence in cultural case assessment and cultural case formulation be required, and be made part of the licensing process for all clinicians delivering mental health care to culturally diverse populations.

SS13.2.
PSYCHIATRIC TRAINING FROM A CULTURAL PERSPECTIVE

M. Kastrup
Centre for Transcultural Psychiatry, Psychiatric Center Rigshospitalet, Copenhagen, Denmark

Psychiatric services in the Northern European Region are faced with new challenges related to the immigrant population. In Denmark, people of non-Danish background comprise about 8-10% of patients in psychiatric care. This proportion varies greatly, as community mental health services in certain areas of the larger cities have about 25% immigrant patients, and in forensic services the proportion may be as high as 40%. No explicit health policy has been formulated with respect to immigrants. They have access to the same health services as the rest of the population once they have been granted a residency permit. A large proportion of immigrants has a traumatized background and exhibits a variety of problems linked to this. Specialized services focusing on therapeutic interventions targeting their trauma histories have been established in some regions, but there is limited recognition of the complexity of problems this population may exhibit. Until now the psychiatric curriculum for trainees at all levels pays limited attention to the cultural dimension. Medical students receive little training on cultural issues in psychiatry, and during residency training the curriculum comprises only a few theoretical lectures on the field of transcultural psychiatry. With increased globalisation there is, however, a need to pay more attention to cultural aspects at all levels and to develop strategies to increase the cultural competence of psychiatrists and other mental health professionals. We discuss the content of a culture-sensitive curriculum and strategies to implement it.

SS13.3.
EDUCATION AND TRAINING FOR CLINICIANS IN PSYCHIATRY AND PRIMARY CARE: THE HOSPITAL AS A PLACE OF ENCOUNTER

S. Golsabahi
University of Witten/Herdecke, Germany

An infrastructure that becomes more and more developed guarantees better communication within and between continents and countries. This infrastructure, for example in the European Union, reflects the diversity of the European Union and its citizens. Migration involves people of different backgrounds whose ability to interact and communicate with each other is essential. In our everyday life, we as physicians are confronted with essential questions concerning intercultural communication. Physicians who are familiar with cultural diversity could save time and money if they allowed their patients to talk about their history and symptoms in their own way, before they take steps that do not correspond to their patients' presenting histories. With more knowledge of cultural context at the back of their minds, physicians would be able to work in a more effective way. At the same time, foreign patients would feel understood and safe, and they would thus place greater confidence in the physician, which is an important step towards treatment compliance, and ultimately, patients' recovery. We, a German-speaking group of psychiatrists, are trying to implement a continuing course in transcultural psychiatric assessment for physicians. The team wants to improve the communication problems among clinicians and patients of diverse cultural backgrounds. We are aiming at continuation courses that will provide colleagues with information on the one hand, but also work in a concrete way on problems observed in everyday hospital work, using

case studies. The purpose of this project is to make clinicians' daily contact with patients from different cultural backgrounds easier, and to help the medical staff avoid the powerless situations they sometimes experience in today's hospital environment.

SS13.4.
TEACHING CULTURAL DIVERSITY IN THE PSYCHIATRIC CURRICULUM

S. Dein
Centre for Behavioural and Social Sciences in Medicine, University College London, London, UK

There is increasing acceptance among mental health clinicians that cultural factors play a significant role in the presentation, diagnosis and treatment of mental illness. Respect for cultural diversity requires that practitioners understand and acknowledge such diversity and understand the impact of discrimination and prejudice on mental health and on the delivery of mental health services. We describe ways that cultural diversity can be taught in the psychiatric curriculum. There is some consensus that "fact-file" approaches to ethnic diversity, which emphasize teaching about different cultural beliefs, have limited impact. Rather, psychiatric trainees need to understand issues of racism in their own work and develop cultural sensitivity and cultural competence. These competencies can be achieved through teaching and discussion of the following areas: awareness of personal reactions to others who are different, attitudes towards different groups, cultural knowledge, and skills to interact and communicate with culturally diverse groups. Case based discussions and teaching by representatives of diverse cultural and religious groups may be used to consolidate these processes of learning. Anthropology plays a central role in the education of psychiatrists. Anthropological topics that will be emphasized include conceptualisations of race, ethnicity and culture and their relationships to social deprivation, holism and cultural relativism. The role of anthropological theory in cultural teaching will be discussed.

SS13.5.
CULTURAL COMPETENCE IN PSYCHIATRIC CARE

K. Bhui
Centre for Psychiatry, Barts, and London School of Medicine and Dentistry, London, UK

Cultural psychiatry is a body of skills and knowledge that has to be acquired, developed and refined during the career of health professionals. In the UK, there is a unique historical, legal and policy context in which cultural competence training has flourished. Certain traditions in medical training and recent changes to the curriculum for residents have impacted on the pace of progress. The notion of cultural competence has gained significance in health and non-health sectors and is rapidly becoming the vehicle by which organisations are seemingly improving cultural competence. Cultural competency training may improve the quality of mental health care for ethnic groups. In a systematic review, we evaluated the world literature for definitions and models of professional education or service delivery where these had been evaluated. Of 109 potential papers, only 9 included an evaluation of the model to improve the cultural competency of services and practitioners. All nine studies were located in North America. Cultural competency included modification of clinical practice and organizational performance. Few studies published their teaching and learning methods. Only three studies used quantitative outcomes. One of these showed a change in attitudes and skills of staff following training. The cultural consultation model showed evidence of significant satisfaction by clinicians using the service. No studies investigated service user experiences and outcomes. There is limited evidence on the effectiveness of cultural competency training and service delivery. Further work is required to evaluate improvement in service users experiences and outcomes.

SS14.
AWAKE AND SLEEP EEG CHANGES IN DEMENTIA: IMPLICATIONS FOR TREATMENT
(organized by the WPA Section on Psychiatry and Sleep Wakefulness Disorders)

SS14.1.
CHOLINERGIC SYSTEMS AND CORTICAL RHYTHMS IN ALZHEIMER'S DISEASE: NEW FINDINGS

C. Babiloni, G.B. Frisoni, M. Pievani, C. Del Percio, F. Vecchio, C. Geroldi, F. Eusebi, C. De Carli, P.M. Rossini
Department of Biomedical Sciences, University of Foggia, Italy; San Raffaele Cassino and IRCCS San Raffaele Pisana, Rome, Italy; Fatebenefratelli Hospital, Rome, Italy; IRCCS S. Giovanni di Dio-Fatebenefratelli, Brescia, Italy; Department of Physiology and Pharmacology, La Sapienza University, Rome, Italy; IRCCS Neuromed, Pozzilli, Isernia, Italy; Center for Neuroscience, University of California at Davis, Sacramento, CA, USA; Department of Neurology, Campus Biomedico University, Rome, Italy

Acetylcholinesterase inhibitors (AChEI) such as donepezil act in mild Alzheimer's disease (AD) by increasing cholinergic tone. Differences in the clinical response in patients who do or do not benefit from therapy may be due to different functional features of the central neural systems. We tested this hypothesis using cortical electroencephalographic (EEG) rhythmicity. Resting eyes closed EEG data were recorded in 58 mild AD patients (Mini Mental State Examination, MMSE, range 17-24) before and approximately 1 year after standard donepezil treatment. Based on changes of MMSE scores between baseline and follow-up, 28 patients were classified as responders and 30 patients as non-responders. EEG rhythms of interest were delta (2-4 Hz), theta (4-8 Hz), alpha 1 (8-10.5 Hz), alpha 2 (10.5-13 Hz), beta 1 (13-20 Hz), and beta 2 (20-30 Hz). Cortical EEG sources were studied with low-resolution brain electromagnetic tomography (LORETA). Before treatment, posterior sources of delta, alpha 1 and alpha 2 frequencies were greater in amplitude in non-responders. After treatment, a lesser magnitude reduction of occipital and temporal alpha 1 sources characterized responders. These results suggest that responders and non-responders had different EEG cortical rhythms. Donepezil could act by reactivating existing yet functionally silent cortical synapses in responders, restoring temporal and occipital alpha rhythms. In this line, we tested the hypothesis that alpha rhythms are affected at preclinical stage of AD, namely amnesic mild cognitive impairment (aMCI). The aMCI patients were divided into two groups of high (MCI Ch+, N=29; MMSE=26.2) and low cholinergic damage (MCI Ch-, N=28; MMSE=26.6). Power of occipital, parietal, temporal, and limbic alpha 1 sources was maximum in controls, intermediate in MCI Ch-, and low in MCI Ch+ patients, confirming the hypothesis.

SS14.2.
SUBJECT-SPECIFIC EEG ANALYSIS FOR PERSONALIZED DIAGNOSIS AND CARE FOR DEMENTIA

E. Ifeachor, P. Zhoa, A. Anastasiou, N. Hudson, S. Wimalaratna, S. Saxena, R. Ford
Faculty of Technology, University of Plymouth; Department of Neurophysiology, Derriford Hospital, Plymouth; Department of Neurology, Radcliff Infirmary, Oxford; Old Age Psychiatry, Plymouth Hospitals NHS Trust, Plymouth, UK

Changes in the EEG can be detected fairly early in dementia and the changes could be quantified as an objective index or marker for dementia. A key objective of our work is to develop simplified, user-friendly EEG tools, based on such markers, which could be used to detect dementia early, measure progression of the disease and monitor response to treatment, on an individual basis. Personalization of diagnosis and treatment is important because the disease is heterogeneous. An emphasis of our work is to develop robust markers of Alzheimer's disease (AD) using nonlinear methods, such as those based on information theory, chaos, analysis of PDF of certain EEG features, and graph theory. An attraction of these approaches is that there may be a natural link between their underlying principles, the physiology of AD and its impact on brain functions. Our work has led to the development of robust markers which can detect AD within the general at risk population with reasonable accuracy (specificity of 99.9% and sensitivity of 78%). This compares well with other studies, reported by the American Academy of Neurology, which typically provide a sensitivity of 70%. Our work may have important clinical implications for treatment and care for AD. Accordingly, a study of the time evolution of the markers for an individual would enable clinicians to look for a distinguishing change that implies the onset of disease or a continuing change that gives a measure of disease progression or effect of treatment. Correlation of the markers with some risk factors could provide a basis for planning and initiating treatment early.

SS14.3.
SLOW-WAVE SLEEP AND CYCLIC ALTERNATING PATTERN IN DEMENTIA

E. Bonanni, G. Tognoni, M. Maestri, E. Di Coscio, F. Cignoni, H. Tsekou, A. Bonakis, P. Ktonas, T. Paparrigopoulos, S. Papageorgiou, D. Vassilopoulos, C. Soldatos, L. Murri
Neurological Clinic, Department of Neurosciences, University of Pisa, Italy; Sleep Research Unit, Department of Psychiatry, University of Athens, Greece; Neurological Clinic, Department of Neurology, University of Athens, Greece

Dementia is characterized by a decrease in total sleep time and an increase in awakenings and arousals. Such modifications accompany cognitive decline and could be of particular interest since slow-wave sleep and slow-wave EEG activity may play a role in cognitive processes. Furthermore, modifications in sleep microstructure have been related to memory processes. Particularly, the cyclic alternating pattern (CAP) has been related to memory performance in healthy and sleep disorders subjects but has not been evaluated in neurodegenerative disorders. Here, we analyze sleep microstructure changes and sleep slow-wave activity (SWA) in dementia patients compared to healthy controls. For the dementia group, spectral analysis showed a significant increase in the power of the whole delta band and of all the delta sub-bands, except the first one (0.4-0.8 Hz). In the control group, a power decrease of the whole delta band and of all the sub-bands, except the first one (0.4-0.8 Hz), was observed across the three NREM-REM cycles, while it was not detected in the dementia group. For the dementia group, period-amplitude analysis showed a significant reduction of incidence and amplitude for visually well-defined delta waves with a frequency less than 1.6 Hz, and a significant increase for waves with a frequency more than 2 Hz. Consistently, a modification in CAP rate was also seen in the dementia subjects. Our results suggest that sleep delta activity and CAP cycles are altered in dementia. The consequence of these alterations should not be underestimated, considering the role of SWA in cognitive processes.

SS14.4.
SLEEP SPINDLE MORPHOLOGY MAY PROVIDE BIOMARKERS IN DEMENTIA

P. Ktonas, S. Golemati, H. Tsekou, N.T. Economou, P. Theodoropoulos, P. Xanthopoulos, A. Bonakis, T. Paparrigopoulos, S. Papageorgiou, M. Zervakis, D. Vassilopoulos, C. Soldatos
Sleep Research Unit, Department of Psychiatry, University of Athens; Department of Electronic and Computer Engineering, Technical University of Crete; Neurological Clinic, Department of Neurology, University of Athens, Greece

Sleep may be severely fragmented in dementia. Since sleep spindles may play an active role in inducing and maintaining sleep as well as in cognition, this work reports on the quantification of sleep spindle morphology in search of novel biomarkers in dementia. Night sleep EEG data from subjects with dementia and controls were obtained through standard procedures. Visually well-defined sleep spindles from several sleep stage 2 epochs were chosen for analysis. The spindle waveforms were processed automatically for instantaneous envelope (IE) and instantaneous intra-spindle frequency (IF) estimation, and several parameters were obtained quantifying IE and IF characteristics. Two parameters were found to differentiate the dementia from the control group. One parameter quantified the average amplitude of the spindle envelope (of higher value in the control group, indicating more spindle power), and the other parameter quantified the instantaneous intra-spindle frequency dynamics (of higher value in the dementia group, indicating more intra-spindle frequency "instability"). Although our study involved a relatively small number of subjects, the results indicate the possibility of extracting dementia biomarkers related to sleep spindle morphology. These biomarkers imply possible differences in neural dynamics between dementia and control subjects. Accordingly, the spindle power parameter difference implies a possible difference in cortical neural dynamics due to plausible synaptic loss in dementia, while the intra-spindle frequency parameter difference implies a possible difference in thalamo-cortical neural dynamics due to plausible compromised capability of thalamic "pacing" in dementia. The use of these biomarkers to assess dementia patients and related treatment appears promising.

SS15.
PROCESSES OF INCLUSION FOR PEOPLE WITH INTELLECTUAL DISABILITY AND MENTAL HEALTH PROBLEMS
(organized by the WPA Section on Psychiatry of Intellectual Disability)

SS15.1.
INTELLECTUAL DISABILITIES AND EUROPEAN PROGRAMS ON SOCIAL INCLUSION FOR MENTAL HEALTH

L. Salvador-Carulla
PSICOST Research Association, Jerez de la Frontera, Spain

Social exclusion is a major public health risk that affects the mental health of a very large number of people across the European Union (EU). It can impede access to services and resources such as housing and employment. Solidarity and social cohesion are hallmarks of the European Union, as stated in the EU Green Paper on Mental Health in Europe and the Lisbon Conference. Recently, work in the EU has focused on developing methods to improve social inclusion of people with mental illness or at risk of mental illness. These programs are aimed at fostering recovery and promote the opening of opportunities in the community for people with psychiatric disorders, and to promote mental health and resiliency in this population. These programs do not adequately consider the problems of the persons with intellectual disabilities and mental health problems who may account for 33% of all people with intellectual disabilities. The ongoing programs at the EU and their implications for intellectual disabilities are reviewed. The POMONA project, an EU project on health indicators of people with intellectual disabilities, is presented as an example.

SS15.2.
HOW SHOULD SERVICES RESPOND TO PEOPLE WITH INTELLECTUAL DISABILITIES WHO ARE SUSPECTED, CHARGED, OR CONVICTED OF A CRIMINAL OFFENCE?

T. Holland
Department of Psychiatry, University of Cambridge, UK

Challenging behaviour is common among people with intellectual disabilities (ID), and sometimes results in contact with the criminal justice agencies. In England, provisions are in place when people with ID are interviewed as suspects. Courts may seek guidance with respect to fitness to plead and, on issues relating mitigation and sentencing, if a person with ID is found guilty. Data are presented on the prevalence and nature of offending by people with ID and on the care pathways of people with ID in the criminal justice and/or health systems. Issues such as fitness to plead, vulnerability at police interview, and the ability to form intent, are considered. People with ID are over-represented in the criminal justice system, but whether the police are called in the event of challenging behaviour appears arbitrary. When diverted from the criminal justice system, people with ID can become trapped in distant secure settings for prolonged periods of time. In the UK, government policy has emphasised the importance of the diversion of people with mental disorder from the criminal justice system to receive treatment. This is problematic for people with ID, as the focus might more appropriately be on the management of risk in the community rather than treatment in hospital.

SS15.3.
FROM "THERAPEUTIC" SEGREGATION TO SOCIAL INTEGRATION

E. Farnetani, M. Bertelli
University of Siena; WORK 2000, Arezzo; Italian Society for the Study of Mental Retardation/Intellectual Disability, Italy

When people with severe intellectual disabilities (ID) grow older and their family loses capacity to keep them at home, institutionalisation still represents the most frequent solution. Providing housing support is not the most difficult problem to address. Of greater concern is the availability of support service for the maintenance or the development of life skills. Thus, the disorder-unspecific approach of old asylum type institutions should give way to the individualised intervention of community centres. In the area of Valdichiana (Tuscany, Italy) the Work 2000 cooperative is putting into effect a programme of inclusion and quality of life (QoL) enhancement for people with ID through group homes integrated with the local mental health service net. The present study aims at evaluating the impact of this new intervention on the health care cost of the person with ID, on carers' subjective burden of care, and on clients' QoL. Cost includes any kind of health service (i.e., general practitioner or specialist visit, emergency, hospitalisation, nursing), drugs, and care. Preliminary results indicate a reduction of both general health care cost and carer's burden of care, and an improvement of clients' QoL. Flexible housing models of community integration seem to be usefully applicable to people with ID.

SS15.4.
A HOUSING SERVICE AS A THERAPEUTIC INSTRUMENT FOR PEOPLE WITH SEVERE INTELLECTUAL DISABILITY

M. Bertelli, L. Lombardi, A. Paoli, I. Masciavè
AMG Centre for Research and Evolution, Florence, Italy

In the last decade, an international movement of deinstitutionalisation has developed, along with the worldwide cultural and scientific revision of the concept of mental retardation. The most innovative aspect is the consideration of the person in his wholeness, in his unitary development, and in reference to the life-span. There is no evidence that mental functions other from cognition are necessarily impaired in the intellectual disability (ID) person. It can be instead assumed that these functions may represent the fulcrum of the whole psychic functioning as well as an interface for the interaction with the environment. We describe the theoretical basis for the construction of a new rehabilitative environment for people with severe ID with or without mental health problems. Architecture should facilitate usability and identification by offering a wide range of logical, archetypal, emotional, or spiritual shapes. The environment should communicate a sense of continuity between inside and outside. It should offer a sense of protection and safety, but it should also transmit involvement with the external. Some spaces and rooms should be equipped for multi-sensorial stimulation. Walls and floors could be covered with different combinations of materials and developed like reflexologic tools to improve sense of balance.

SS16.
HOPE IN PSYCHIATRY
(organized by the WPA Sections on Philosophy and Humanities in Psychiatry and on Public Policy and Psychiatry)

SS16.1.
A PHILOSOPHICAL PERSPECTIVE ON HOPE

G. Stanghellini
Department of Biomedical Sciences, University of Chieti, Italy

Hope is a primarily future-oriented expectation of attaining personally-valued goals that will give or restore meaning to one's own experiences. The connection in the phenomenon of hope between meaning and temporality is of specific philosophical and psychopathological interest. In human existence, the meaning of an experience is set within a temporal dynamic that is highly non-linear: not only past experiences (retentional meanings) has influence on the future (protentional ones), but also what is expected affects the meaning of past experiences. Hope, as a future-oriented attitude, is integral to protention and as such a pre-requisite for attributing new meanings to one's own past. As the process of recovery in mental health is often based on restoring meaningfulness or attributing new meanings to one's past experiences, hope can be seen as a pre-requisite for recovery.

SS16.2.
CONCEPTUALISATION AND MEASUREMENT OF HOPE

B. Schrank
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

In psychiatry, hope is an important factor that contributes to therapeutic efficacy, while loss of hope can predict suicide. Hope is associated with personal resilience and variance in symptomatology and connected to placebo and halo effects. And, perhaps most prominently, hope is central to the concept of recovery. However, despite the wealth of existing measurement tools, the concept itself and the way it should be measured remain contested. We provide a systematic overview on the conceptualisation and measurement of hope in the literature. Many conceptual frameworks for hope have been proposed for hope in health research. More than forty definitions and over thirty measurement tools can be identified in the literature, few of which have been used in research involving mental health patients. Seven key dimensions of hope were identified, which allowed an integrative definition and four components of hope to be proposed for use in mental health research and practice. Measurement tools cover varying parts of the overall concept of hope. Hence, measuring hope with different well evaluated scales may mean that entirely different constructs are captured. The development of a consensus around the most applicable measure of hope for use in people with mental illness is needed. This will ensure that the concept is being applied consistently between studies, and will maximise the possibility of developing clinically useful normative data.

SS16.3.
HOPE AND RECOVERY

L. Davidson
Program for Recovery and Community Health, Yale University, New Haven, CT, USA

This paper considers the central role of hope in promoting recovery for individuals with serious mental illnesses. Several of the mechanisms by which hope promotes recovery are described and their implications for practice are identified. These mechanisms range from one person's carrying surrogate hope for another who feels hopeless and instilling hope in persons who have become demoralized, to creating opportunities for individuals to experience pleasure as a foundation for hope and the central role of hope in enabling people to take risks to promote their own recovery. All of these mechanisms require practitioners to shift from a deficit or problem focus to a strengths or solution focus; a shift made all the more necessary by the history of pessimism toward outcome in psychosis which dates back to the earliest days of psychopathology. Several of these mechanisms also require the person with serious mental illness to play a key role in pursuing recovery. Taken together, the implications of these findings regarding the numerous roles of hope in recovery from serious mental illnesses argue for practitioners to expand their customary view of their role as "treaters" or clinicians to incorporate the additional tasks of enhancing access to opportunities for success and pleasure and providing the community supports that may be required by a person's disability for him or her to be able to take advantage of these opportunities effectively.

SS16.4.
EVIDENCE ON HOPE IN PSYCHIATRY – WHERE DO WE GO FROM HERE?

M. Hayward
Department of Psychology, University of Surrey, Guildford, UK

Hope pervades all aspects of mental health practice: clients who are hopeful of getting better are more likely to do so; and hopeless practitioners are likely to have low expectation for those they serve. Within the empirical literature, hope is described as a complex construct that extends beyond optimism and efficacy, an essential component in a process of recovery, and not necessarily affected by the symptom level. However, there are few published studies that consider individual differences in hope as a variable that can influence the therapeutic relationship and associated outcomes. As understandings of recovery-oriented practice are refined, there needs to be a greater emphasis on understanding the influence of hope as an active ingredient in facilitating positive change, and how this influence can be profitably nurtured by practitioners. This paper explores the gap between commonly accepted opinions on hope and the lack of evidence. A programme of research is proposed that is capable of furthering the scientific examination of hope in the context of mental health and distress.

SS17.
SERVICE USER INVOLVEMENT IN MENTAL HEALTH RESEARCH
(organized by the WPA Section on Public Policy and Psychiatry)

SS17.1.
SERVICE USER INVOLVEMENT IN MENTAL HEALTH RESEARCH: HISTORY AND CONCEPTS

J. Wallcraft
J. Wallcraft Consultancy Ltd, Worcester, UK

Involving mental health service users in research about mental health is a fairly recent innovation. It has been built on the aspirations of mental health service users for full involvement and partnership in their treatment and recovery. The movement of service users/patients/ex-

patients came out of the liberation movements of the 1970s, particularly in North America and parts of Europe. Patients and ex-patients of psychiatry were concerned about drug treatments, ECT, psychosurgery and about forced treatment under the law. Mental health service users began carrying out their own research from the 1980s onwards, based on models of emancipatory research and disability research. Service user researchers argued that quality research could be carried out from a declared standpoint such as service users' rights to self-identity, choice and empowerment. More mental health researchers disclosed personal or familial connections to the mental health system. In the 1990s, service user researchers in the USA and the UK explored ways that people with a mental illness diagnosis can recover and live well. In Australia, service user researchers evaluated mental health services, and in New Zealand survivors collected recovery narratives. Service users in the UK lobbied for inclusion in clinical research. The UK Department of Health set up the INVOLVE project to support consumer involvement in health research across all health groups. Policy guidance now enshrines public involvement in research. Arguments continue as to the best means to ensure and evaluate real involvement.

SS17.2.
COLLABORATION BETWEEN SERVICE USERS AND NON-SERVICE USER RESEARCHERS

D. Rose
Institute of Psychiatry, London, UK

The Department of Health in England has established a unit called INVOLVE to promote public and patient involvement in research. INVOLVE has identified three levels of such involvement: consultation, collaboration and user-controlled research. This paper focuses on collaboration. We describe two new models and methods of research, drawn from the work of the Service User Research Enterprise (SURE) at the Institute of Psychiatry in London. We discuss the benefits and costs of collaboration from the perspectives of service users and service user researchers, particularly with respect to power relations between service user researchers and mainstream researchers. We address some epistemological issues germane to the distinctive nature of user research as compared to mainstream research, particularly in respect to current hierarchies of evidence. Collaborative research is difficult to do well; power relations in the collaborative research endeavour must be addressed; mainstream researchers often describe user research as biased and anecdotal and this criticism needs to be challenged. Research carried out by user researchers in collaboration with mainstream researchers must be a true partnership. Currently, this is not the case.

SS17.3.
PARTICIPATORY RESEARCH

K. Hopper
Center for the Study of Recovery in Social Contexts, Nathan Kline Institute, Orangeburg, NY, USA

Problems and promises in participatory research in a newly funded center for services research are currently explored. Participation was first seen as both research strategy and deliberate exercise in recovering agency on the part of users of services. Our efforts were framed in a modified version of Amartya Sen's "capabilities" approach. In practice, this commitment proved further reaching and consequential. This paper aims to review how our center's experience – using inclusionary practices, intentional capacity building, flexible schedules – collectively arrived at expectations of what it means to take part in a newly formed intellectual community, and imaginative logistics. Moreover, we critically assess the decision, early in this project's history, to address a specific blind spot in the literature on "community based participatory research" – namely, documentation of how the process actually works (or not) in practice. Furthermore, we examine the lessons learned: how "consciousness-raising" takes place and alters practice; how regular monitoring of and feedback about the participatory process affected our ability to make good on our original inclusionary promise; what implications this has for the design of subsequent research. Our key messages are that in participatory research "capacity-building" is a reciprocal exchange; that it demands deliberate work, trial-and-error, and flexible time-schedules/adaptive logistics, and not simply the best of intentions. When built in from the start, participatory research is an exercise in collective consciousness-raising, mutual learning, and adjusted expectations that are difficult to predict at the outset.

SS17.4.
USER PERSPECTIVES IN PSYCHIATRIC RESEARCH: THE ROLE OF QUALITATIVE METHODS

B. Schulze
Department of General and Social Psychiatry, University of Zurich, Switzerland

Qualitative research has been met with growing interest in recent years. Several trends in medical and psychiatric practice, including patient orientation, the recovery movement and the search for evidence-based interventions, have propelled scientific inquiry into subjective perspectives on experiencing mental health problems. Interest in qualitative methods in psychiatry evolved with the recognition of the importance of understanding service users' experiences of their illness, its consequences, and psychiatric treatment. Aiming to document the development of research into service user perspectives, results of a systematic review of qualitative studies in psychiatry were analysed, with regard to the topics on which user perspectives were obtained and how publication patterns evolved over time. Multiple databases (Ovid Medline, PsycINFO, PsychLit, Cochrane Reviews) were scanned for relevant publications in the period from 1997 to 2007. A proliferation of qualitative literature could be noted, especially from 2000 onward. Reflecting this development, user perspectives have become increasingly more prevalent in the published literature. Studies mainly focus on service users' experiences of mental health problems (subjective illness models, stigma, quality of life, help-seeking motivations) and of using mental health services (expectations, empowerment, service evaluation). Most qualitative studies identified adopt an empowerment model of mental health, promoting service user involvement in the development, provision and evaluation of mental health services. Qualitative methods have contributed considerably to facilitating access for user perspectives to the mainstream psychiatric discourse. Findings on user perspectives provide important insights with significant potential to inform evidence-based service and policy development in mental health.

SS18.
TOWARDS A CONSENSUS ON ETHICS AND CAPACITY IN OLD AGE PSYCHIATRY (Part II) (organized by the WPA Section on Old Age Psychiatry)

SS18.1.
DISCRIMINATION, STIGMATISATION AND EXCLUSION

C. de Mendonça Lima
Centro Hospitalar do Alto Ave, Guimarães, Portugal

A prevailing double stigma attached to mental disorders in general and to the end of life in particular does not help old people to access to necessary care. Older women may face further stigmatization, and poverty may lead to even further discrimination. Stigma results from a process whereby certain individuals and groups are unjustifiably rendered shameful, excluded and discriminated against. Discrimination is any distinction, exclusion or preference that nullifies or impairs equal enjoyment of rights. Ageism and age discrimination describe attitudes and practices that disadvantage older people. The need to reduce stigma and discrimination is ethically mandated by their harmful consequences, including perpetuation and worsening of mental illness. Neither chronological age nor dementia (or mental incapacity) should in itself be a reason to withhold beneficial treatment of psychiatric or physical conditions. Overall resource shortage does not justify discrimination against older people with mental illness. Actions against stigma and discrimination of older persons with mental disorders should be a part of the promotion of good mental health by professional training and public education, and a major component of all levels of a health and social care programme.

SS18.2.
DECISION MAKING AND RELATIONSHIPS

C. Peisah
University of New South Wales, Sidney, Australia

The decisions of older people with mental illness may be influenced by their relationships and, conversely, mental disorders may affect decision making in regards to forming or severing relationships. Issues of undue influence frequently arise when older people with mental disorders make decisions, as do questions regarding abuse and ability to consent arise when older people with mental illness enter into relationships. Health care practitioners are sometimes asked to assess or intervene in such situations. At the same time, the role of social support in the lives of older people and the need to support carers is widely acknowledged. Acknowledging these competing ethical principles of promoting autonomy and safety within relationships while preserving the role of carers, this paper outlines: the role of carers in decision-making; the risk factors for undue influence in decision making; and considerations to be taken into account when deciding whether or not to intervene in a possibly abusive relationship involving an older person with impaired capacity.

SS18.3.
ELDER ABUSE

G. Livingston, C. Katona
Department of Mental Health Sciences, University College, London, UK

Abuse of older people has only been recognized relatively recently. Within an ageing society, there will be a significant rise in the number of people vulnerable to abuse. There are many forms of elder abuse, including psychological, physical, sexual, financial, and social abuse as well as neglect and abandonment. The consequences of abuse for the older person include distress, physical and mental ill-health, financial loss, premature institutionalization, and reduced survival. As many as 5% of all people aged 65 or over, and around a quarter of vulnerable older people, report some recent abuse. Signs of probable abuse include unexplained injuries, evidence of neglect, fearfulness or other indicators of distress, and insufficient funds available to buy essentials. Elder abuse is often hidden and under-reported. It is incumbent upon all those involved in the care of vulnerable elders to be vigilant for signs of abuse, and for carers to recognise that carer stress may reduce their threshold for perpetrating abuse. Abuse should never be condoned whatever the mitigating circumstances. What may not be considered abusive towards a healthy, competent person may be so in a vulnerable older adult. Adequate staff numbers, appropriate training, fair pay and recognition, and defined career structures are essential in reducing risk of elder abuse, as is enhanced public awareness and education. This paper summarises recent evidence concerning the prevalence of elder abuse and strategies to reduce its incidence in the context of the relevant underlying ethical principles.

SS18.4.
PRACTICAL STRATEGIES IN PROTECTING THE RIGHTS AND THE SECURITY OF OLDER PERSONS WITH MENTAL DISORDERS

V. Camus
Université François Rabelais, Tours, France

Older people with mental disorders are particularly at risk of being mistreated, abused or neglected because of their mental disorder, even by health professionals that are sometimes in conflicting attitudes regarding the respect of beneficence/non maleficence and autonomy principles. In such situation, patients are often referred to mental health professionals in order to document clinical evidence of decreased competency in decision-making capacity. Specific clinical and communication skills are needed to help health professionals and patients in benefice/risk evaluation and decision making. A systematic approach includes a careful clinical assessment but also an evaluation of patient and informal caregiver relationship. Involvement of any third part such as the designated spokesman, guardian or legal authority can sometimes help in the evolution of both patient and health professional point of view. Also, temporality is a major component of the conflicting situation resolution. Training in consultation-liaison psychiatry should include basic attitudes and communication skills to face these highly frequent situations in clinical settings.

SS19.
ETHICAL ISSUES IN THE RELATIONSHIP OF PSYCHIATRY TO THE PHARMACEUTICAL INDUSTRY
(organized by the WPA Sections on Public Policy and Psychiatry and on Psychiatry, Law and Ethics)

SS19.1.
THE PRIVATIZATION OF KNOWLEDGE AND CONFLICTS OF INTEREST IN BIOMEDICAL RESEARCH

L. McHenry
California State University, Northridge, CA, USA

Scientific and ethical misconduct has increased at an alarming rate as a result of the privatization of knowledge. What began as an effort to spur entrepreneurship and increase discovery in biomedical research by strengthening the ties between industry and academics has led to an erosion of confidence in the reporting of research results. Inherent tensions between profit-directed inquiry and knowledge-directed inquiry are instantiated in psychopharmacology, especially in the co-option of academic activity to corporate objectives. The effects of these tensions are visible in research agendas, publication practices, postgraduate education, academic-industry partnerships and product promotion. Topics investigated in this paper include: the Bayh-Dole Act, the Trade Secrets Act, bias in trial design, suppression of data from clinical research, recruitment of key opinion leaders, ghostwriting for medical journals, the peer review system, and industry-sponsored continuing medical education. This paper aims to examine critically the origins of government legislation (especially in the United States) that has favored the profit motive of the medico-pharmaceutical industry and the consequences for accountability, authorship practices and transparency in disclosure. Knowledge as the legal property of research sponsors, as opposed to a community of disinterested inquirers into objective scientific results, has accelerated conflicts of interest. Drug marketing has usurped the authority of scientific testing. This paper concludes that the privatization of knowledge in medical research has created a serious ethical problem for the primary professional responsibility of physicians to patients.

SS19.2.
AN OPERATIONAL PROPOSAL FOR ADDRESSING CONFLICT OF INTEREST IN THE PSYCHIATRIC FIELD

G.A. Fava
Department of Psychology, University of Bologna, Bologna, Italy; Department of Psychiatry, State University of New York, Buffalo, NY, USA

The issue of conflict of interest has brought clinical medicine to an unprecedented crisis of credibility. Corporate actions that have placed profit over public health have become regular news in the media. The public seems to be increasingly sceptical of the integrity of medical practice, including psychiatry. Clinicians are more and more disoriented because of the discrepancy between the campaigns to shape a favourable climate of opinion for new drugs and the disappointing results in practice. Attempts to control conflict of interests by simple disclosure have yielded very limited results. This paper advances a radical proposal for addressing the issue of conflict of interest in psychiatry and regaining credibility. It is based on the definition of "substantial" conflict of interest: being an employee of a private firm; being a regular consultant or in the board of directors of a firm; being a stockholder of a firm related to the field of research; owing a patent directly related to the published work. Occasional consultancies, grants for performing investigations, or receiving honoraria or refunds in specific occasions would not be a source of substantial conflict of interest. Psychiatric investigators who hold positions in scientific societies, medical journals (editorship), groups for guidelines and clinical matters, should be devoid of substantial conflict of interest. Disclosure is no longer sufficient for the independence of the psychiatric field. Financial conflicts of interest in psychiatry need to be addressed in a substantial, and not simply formal, way. The current format of scientific meetings and societies functioning should be modified.

SS19.3.
SELLING AND MARKETING IN THE PHARMACEUTICAL INDUSTRY: WHAT HAS CHANGED IN THE LAST DECADE?

H. Schulze
C/Change Inc, Chicago, IL, USA

In the last 10 years, more change has occurred in pharmaceutical sales and marketing than in the previous forty. In-office, informational "detailing" visits by sales representatives has rapidly given way to on-line detailing. Changes in US regulations have allowed an explosion in direct-to-consumer advertising. What are the pros and cons of information that bypasses medical professionals to the consumer? How is this changing the way pharmaceutical companies market to medical professionals? What are the ethical implications of more information and new media for each of these groups? What is "enough" information for consumers? What is "too much"? Is greater information empowering consumers or complicating doctor/patient relationships? Is it reducing the stigma of illnesses like depression or encouraging premature diagnosis? This paper aims to provide an overview of the trends in sales and marketing techniques currently practiced by pharmaceutical companies and discuss the shift of promotional dollars from medical professionals to consumers. Further research is needed into: a) the implications of the shift from pharmaceutical products as medical treatment to "consumer good"; b) the growing imbalance in presentation of therapeutic alternatives (e.g., medication vs. social or behavioral interventions as a first line of treatment). Media channels that today provide medical professionals and consumers with more information than ever are not value-neutral repositories of knowledge. They are open to influence from an industry eager to capture market share. All groups would be well-served to examine communication channels more closely, and discuss ways of increasing disclosure of funding sources and influences.

SS19.4.
THE PHARMACEUTICAL INDUSTRY AND THE CREATION OF PSYCHIATRIC DISEASES

J. Moncrieff
Department of Mental Health Sciences, University College London, UK

Psychiatric classification is a contentious area which is susceptible to political and commercial interests. The pharmaceutical industry can exert a powerful influence over psychiatric research, knowledge and practice through sponsorship of research and promotion of certain messages. This presentation examines how the pharmaceutical industry has shaped psychiatric knowledge, by looking at how the industry has helped to create and promote certain psychiatric disease categories. Examples include depression, which was not recognised as a common or important psychiatric disorder until drug companies pro-

duced drugs that were marketed as antidepressants. The industry has also helped promote disorders such as social anxiety disorder, panic disorder and "compulsive buying" disorder in order to further marketing objectives. Current conceptions of the nature of bipolar disorder have been fostered by certain drug companies, and the popularity of concepts such as prodromal states for psychosis have been encouraged by industry sponsorship of activities and research. The pharmaceutical industry has played an important role in shaping current psychiatric knowledge. The activities of the industry have helped create certain disease categories and reinforced the significance of others. The industry has also influenced how we understand the nature of many psychiatric conditions. The influence of the pharmaceutical industry may determine mental health practice in ways that do not benefit patients or society.

SS20.
SOCIAL INCLUSION OF PEOPLE WITH MENTAL DISORDERS: TOWARDS SOLUTIONS (organized by the WPA Sections on Public Policy and Psychiatry and on Stigma and Mental Health)

SS20.1.
STIGMA AND CULTURAL CONTEXT

A. Yin-Har Lau
Delivering Race Equality Team, UK

Over the past three years, the Count Me In national inpatient surveys have shown a marked disparity between black (Afro-Caribbean and African), and white/black mixed users (patients) in terms of care pathways, and entry points, compared to white and non-black users, and all other groups. They are more likely to enter the care pathway through being sectioned under the Mental Health Act. Other groups, especially white, are more likely to be referred through primary care. Primary care services have not been seen as welcoming to black and minority ethnic (BME) populations in their catchment areas, as access for acute healthcare, e.g., heart disease, also shows low uptake. In traditional ethnic communities, there is often a distrust of statutory services, and poor access to competent interpreters. Stigma, and both individual and family shame around mental illness, means that early acknowledgment of mental health difficulties is rare, and expectations of good outcome and recovery from mental illness are limited, as is hope of resuming meaningful roles in society. Early intervention in psychosis (EIP) teams started recently across the country are anecdotally showing good BME uptake. These teams are staffed to promote recovery, and return to work. A project is underway to encourage EIP teams to engage with the Education and Skills Strategy 2006, around providing learning to learners with disabilities, with employment as an end goal. Positive examples of recovery with the new energy from these teams, working with learning providers, may have an impact on stigma, and outcomes. Digital patient stories using ethnic and religious values are also useful in combating stigma.

SS20.2.
EMPLOYERS WITHOUT BORDERS – AN ANTI-STIGMA PROGRAM AMONG EMPLOYERS IN THE ISRAELI LABOR MARKET

A. Tal
In Good Company – Looking Beyond, Israel

Employment rates of persons with psychiatric disability are usually reported to rarely reach more than 10%. Consequently, unemployment and subsequent poverty are one of the most challenging problems persons with psychiatric disabilities have to face. While the reasons for the low rates of employment among persons with psychiatric disabilities involve a variety of barriers, substantial records show that stigma and discrimination have a critical role. As a result of the recognition that stigma and discrimination may lie at the root of unemployment of persons with psychiatric disabilities, an anti-stigma program aimed to reduce stigma and discrimination among employers, and to increase labor force participation of persons with psychiatric disabilities, has been developed. The program implements three main strategies to achieve its goals: a) a three-hour session with employers from different branches of commerce, industry and services, that includes information about mental health, contact with persons with psychiatric disabilities that work successfully in a variety of occupations, meetings and discussions with employers that hire persons with psychiatric disabilities and meetings with professionals from the supported employment field. b) Establishment of a prestige club of employers that hire persons with psychiatric disabilities, with the collaboration of the National Insurance Institute, the Ministry of Health and the Ministry of Industry, Trade and Labor. c) Close relationship with the Israeli media promoting the project among the general public.

SS20.3.
CHANGING BEHAVIOUR NOT JUST ATTITUDES: AN ANTI-STIGMA PROGRAMME IN ENGLAND

J. Wallcraft
J. Wallcraft Consultancy Ltd, Worcester, UK

A an exciting and innovative £18 million programme to combat stigma and discrimination in mental health was launched in 2008 in the UK. Run by a consortium of leading voluntary organisations, it aims to reduce discrimination on mental health grounds by 5% in 4 years. A rigorous evaluation of the programme's achievements will be led by Prof. G. Thornicroft of the Institute of Psychiatry, and the programme manager, S. Baker, hopes this will provide good quality research on what works and how to do it. The work includes 28 funded community projects for people with and without mental health problems working together. Already running are boxercise classes led by a former boxing champion, and organic market gardening which will provide healthy food through constructive physical activity. The projects will help 25,000 people develop healthier lifestyles, which is proven to reduce the likelihood of poor mental health. There will also be a massive social awareness advertising campaign and high profile test cases of breaches of the Disability Discrimination Act. A 6 month consultation was carried out with service users and carers to ensure the programme puts forward the correct key messages, and a panel of 12 service users and carers will help oversee the work.

SS20.4.
HISTORY OF ANTI-STIGMA INITIATIVES IN CANADA

H. Stuart
Department of Community Health and Epidemiology, Queen's University, Kingston, Ontario, Canada

The historical beginnings of public health efforts to reduce mental health related stigma in Canada date from the 1950s. Three generations of anti-stigma work have since unfolded. The first pre-dated deinstitutionalization and the social theories that first defined the nature and effects of social stigma. The second coincided with the community mental health movement that defined stigma largely in terms of the iatrogenic effects of institutional care and the stigmatizing effects of community living. The third coincided with internation-

al recognition of the disabling effects of mental illnesses and the importance of social inclusion for promoting recovery. Each era marked a first: the first documented attempt to change public attitudes about mental illness; the first replication study ever to examine secular trends in attitudinal change; and the first contribution to a global effort to fight mental health related stigma and discrimination. With current plans underway to develop a nation-wide anti-stigma program, Canada is poised to step into a new generation of antistigma activity. This historical review of Canada's anti-stigma initiatives will shed light on best principles and practices that have stood the test of time and will provide stepping-stones into tomorrow.

SS21.
AESTHETICS OF TREATMENT IN PSYCHIATRY (organized by the WPA Sections on Clinical Psychopathology and on Philosophy and Humanities in Psychiatry)

SS21.1.
ARS THERAPEUTICA: NEW AESTHETICS IN PSYCHIATRY

M. Musalek
Department of Psychiatry, University of Vienna, Austria

The term new aesthetics goes back to G. Böhme (1995), who introduced it for describing a new approach in aesthetic research in medicine, the work on atmospheres. In contrast to "surface aesthetics" ("Oberflächenästhetik") such as cosmetics, decoration, ornamentation, tanning etc., new aesthetics refers to so-called "profound aesthetics" ("Tiefenästhetik" – W. Welsch, 2002). The main focus of research of profound aesthetics is transformations, configurations, "Gestaltung", change of perspectives, etc. Following this approach, the main fields of interest of the arts of therapy ("Ars Therapeutica") are aesthetic-based treatment, cosmopoetics and attractivity of therapy. The fundamental hypothesis of such an approach is that attractivity of treatment goals and procedures enhances efficacy of treatment. Studies using methods of medical humanities as well as natural and social sciences are needed in order to prove this hypothesis and show the clinical relevance of aesthetic approaches in the treatment of mental disorders.

SS21.2.
ARE AESTHETIC EFFECTS DRIVING TREATMENT?

G. Bernegger
Lugano, Switzerland

Medical treatment is plenty of effects belonging to aesthetic categories (with "aesthetic" we mean both what is related to the field of beauty and what is related to subjective perception). Even if these effects are not usually recognized, nevertheless they do affect in a hidden way the treatment and its result. The aesthetic efficacy comes therefore alongside the technical efficacy and the bio-chemical efficacy. But what are these aesthetic effects? And in what manner do they show themselves? Some of them are already considered by bio-medicine and pharmacology (e.g., the organoleptic properties of medicines condition patients' attitudes towards them). Some others are less recognised (for example, the style of the interaction between medical professionals and patients as well as the aesthetic quality of the way of coping and living with diseases and sufferings). A greater awareness of the aesthetic – and not just technical – dimension of therapy will allow to intentionally use these aesthetic effects, without letting them driving the therapy in an uncontrolled way.

SS21.3.
THE AESTHETIC AND THE ETHIC DIMENSIONS IN PSYCHIATRY

K.W.M. Fulford
Department of Philosophy, University of Warwick, Coventry; Department of Psychiatry, University of Oxford, UK

In the current climate of dramatic advances in the neurosciences, it has been widely assumed that the diagnosis of mental disorder is a matter exclusively for value-free science. On the contrary, values come into the diagnosis of mental disorders directly through the criteria at the heart of psychiatry's most scientifically-grounded classification, the American Psychiatric Association's DSM. Various possible interpretations of the importance of values in psychiatric diagnosis are possible. Drawing on work in the Oxford analytic tradition of philosophy, it can be argued that, properly understood, diagnostic values in psychiatry are complementary to good science. This interpretation opens up psychiatric diagnostic assessment to the resources of a new skills-based approach to working with complex and conflicting values (also derived from philosophy) called "values-based practice". The developments in values based practice complement evidence-based practice in an approach to diagnostic assessment that is both science-based and person-centred.

SS21.4.
DOES PSYCHOPATHOLOGICAL KNOWLEDGE INHABIT SURFACE OR PROFUNDITY?

G. Stanghellini, M. Rossi Monti
University of Chieti; University of Urbino, Italy

There is a conflict between different schools of psychopathology. Dynamic approaches, that serve as the basis of psychological and psychotherapeutic practice, hold that psychopathology should be firstly concerned with inner experiences and invisible, sub-personal mechanisms producing the meaning of human actions. Evidence-based approaches, that are more concerned with objective measures in order to establish reliable diagnoses, emphasize the trustworthiness of the observation of symptoms of behaviour and expression. Both approaches overlook the personal level of analysis. The phenomenological approach, grounded in a detailed analysis of subjective experiences, is concerned with bringing forth the typical, ideally necessary feature(s) of actual personal experiences in a given individual in order to establish objective, trans-personal constructs. A three-step procedure is necessary to move from subjective experiences, through personal narratives, to trans-personal constructs. We address the kinds of aesthetics and rhetoric that subtend each of these approaches and discuss their implications for psychopathological knowledge.

SS22.
ADVANCES IN THE MANAGEMENT OF TREATMENT RESISTANT MENTAL DISORDERS (organized by the WPA Section on Psychiatry, Medicine and Primary Care)

SS22.1.
RATIONAL NEUROPSYCHOPHARMACOLOGY OF TREATMENT-REFRACTORY DEPRESSION

C.B. Nemeroff
Department of Psychiatry and Behavioral Sciences, Emory University School of Medicine, Atlanta, GA, USA

A considerable database has established that a suboptimal response to antidepressant monotherapy occurs in the majority of patients

treated for unipolar and bipolar depression. As with other complex disorders such as hypertension or cancer, combination and augmentation therapy has been embraced. We describe the data concerning decision-making in clinical practice based on evidence-based medicine for management of treatment-refractory depression (TRD), with a focus on the pathophysiological basis for such decisions. The discussion includes augmentation strategies with T_3, lithium and atypical antipsychotics, switching strategies to drugs of different mechanisms, e.g., MAOIs, and combination strategies of two antidepressants or antidepressants and psychotherapy.

SS22.2.
TRANSCRANIAL MAGNETIC STIMULATION IN THE TREATMENT OF REFRACTORY PSYCHIATRIC DISORDERS

J.J. Lopez-Ibor, J.I. Pastrana, S. Cisneros, M.I. Lopez-Ibor
Instituto de Investigaciones Neuropsiquiátricas Dr. Lopez Ibor, Madrid, Spain

During the last 20 years, new techniques have been developed which allow the study of magnetic fields generated in the brain and their therapeutic use to stimulate neurological structures. Transcranial magnetic stimulation (TMS), based on the application of these principles, constitutes the main therapeutic novelty in the field of psychiatry during the last years. Its efficacy has been studied in neurological disorders, such as focal dystonia, and in psychiatric disorders, such as depression, bipolar disorder, obsessive-compulsive disorder, post-traumatic stress disorder and schizophrenia. However, its use as a routine tool has not become generalised. Although the efficacy and safety of TMS has been specially documented for depression, this technique has not been included in treatment protocols. The suitability of using high or low frequencies as well as the cerebral structure where it should be applied still remain controversial. Due to its electro-magnetic mechanism of action and the clinical safety it offers, it seems that TMS should be used prior to more aggressive techniques like electroconvulsive therapy. Most published studies and clinical trials use TMS as an alternative for cases which are resistant to one or two drugs at full dosage. We review the studies published on this issue, with a special focus on efficacy, safety and ways to implement this technique. We will also present our personal experience in more than 400 patients since 2001, pointing out efficacy, tolerability and low rate of secondary effects.

SS22.3.
DEEP BRAIN STIMULATION FOR TREATMENT-REFRACTORY NEUROPSYCHIATRIC DISORDERS

S. Guinjoan, R. Fahrer
Department of Psychiatry, Foundation against Neurological Illness in Childhood (FLENI), Buenos Aires, Argentina

A vast experience has accumulated over the last 15 years regarding the use of deep brain stimulation (DBS) for movement disorders, specially Parkinson's disease, severe dystonia, and essential tremor. The success of translational research from experimental models to clinical syndromes in this area has spurred interest in the use of this reversible method in diverse neuropsychiatric syndromes not responding to traditional treatments, including psychotherapies, medications, and electroconvulsive therapy. The objective of this presentation is to review ongoing research efforts on the use of DBS for treatment-resistant depression (TRD), obsessive-compulsive disorder (OCD), and Gilles de la Tourette's Syndrome (TS). The current understanding of the neurobiological basis of TRD, OCD and TS is briefly reviewed, with emphasis on functional brain imaging, and then targets being explored or considered as potentially useful in these disorders are considered. We will comment on our experience with the use of bilateral DBS of the subgenual cinguli's white matter, and the autonomic and circadian correlates of its use as a possible mechanism for its beneficial effect. We also discuss future venues of research in this area for other neuropsychiatric disorders, including schizophrenia and other psychoses.

SS23.
CONTRIBUTIONS OF NEW TECHNOLOGIES IN THE MENTAL HEALTH FIELD (organized by the WPA Section on Informatics and Telecommunications in Psychiatry)

SS23.1.
AN ELECTRONIC DIARY APPROACH TO INTEGRATED CARE DELIVERY

M.J. Rigby
University Centre for Health Planning and Management, University of Keele, UK

Integrated community care delivery can too easily be based on empty wishes and false promises. A new "CareBook" philosophy based on internet services is proposed, comprising a patient electronic diary as the vehicle of cross-organisational care planning and care delivery. It would also enable coordination with other important elements such as regular family member visits. Coupled with this, the care delivery objectives could be holistically developed and entirely visible to the patient and their immediate carers. This would avoid the risk of one element encouraging a patient to think of being able to self-care, whilst a partner service might be seeking to persuade them to accept a move into residential care. A shared CareBook would enable all agencies to integrate into the common pattern, or instigate discussions if they felt a change was necessary. Such an electronic diary could also provide the co-ordination for care delivery, particularly where domiciliary delivery is concerned, with its difficulty of physical monitoring. The schedule of care delivery requirements could be re-visualised as a worker-specific schedule, making it much easier to arrange an alternative provider if the scheduled carer is unavailable. Modern web services have advanced rapidly, as has the concept of "software as a service". Such technologies open up the feasibility of controlled but reliable broker-based real time reading of records such as the CareBook diary.

SS23.2.
TELE-PSYCHIATRY IN DEVELOPING COUNTRIES

T.A. Okasha
Institute of Psychiatry, Faculty of Medicine, Ain Shams University, Kasr El Nil, Cairo, Egypt

Tele-psychiatry may prove to be more useful in developing than developed countries. The lack of mental health resources, whether human resources, mental health professionals, inpatient or outpatient facilities and even community care, is becoming a problem that is in need of an immediate solution. Especially for remote areas in developing countries, in which transport is difficult and the centralization of services exists only in big cities, the next revolution in promoting mental health services becomes the use of telecommunication, to reach those areas giving advice about diagnosis, management and reassurance to primary care physicians or mental health professionals.

SS23.3.
THE IMPACT AMONG MENTAL HEALTH PROFESSIONALS OF A NEW TOOL FOR PSYCHIATRY LEARNING

P.M. Furlan, R.L. Picci
Department of Mental Health, San Luigi Gonzaga Hospital, University of Turin, Italy

Teaching psychiatry, especially in the presence of patients, involves a wide range of implications. There are first of all issues of privacy: to publicize a patient's mental disorder can lead to traumatic repercussions; this issue is complicated by the impossibility to be totally certain that the patient has actually given his consent. The examination and investigation of the patient's symptoms is always a delicate procedure: asking about delusions, soliciting the recall or reproduction of feelings, sensations or even episodes could be considered unethical. This limitation implies a high reliance on the verbal description of complex behaviour or subjective feelings, which rarely achieves a scientifically satisfactory level of objectivity and uniformity. To overcome these restrictions, we created a DVD which enabled us to combine written descriptions and visual material. 130 scenes from 57 motion pictures featuring the whole spectrum of psychopathological symptoms have been identified. We devised in the home page menu a complete psychopathological framework describing every disturbance of each mental condition, all of which are classified and described in their subtypes. Clicking on one of these disturbances or subtypes, a short film clip starts, while a drop menu lists all the subtypes of the main disturbances, together with a complete list of other illnesses where the symptoms might be present as well as the DSM-IV-R classification. Another possibility is to browse within correlate syndromes. Returning to the screen, short subtitles occasionally appear in order to pinpoint particular concepts. The product is a valid teaching and learning tool for trainees, general practitioners and students.

SS23.4.
ETHICS AND INFORMATICS

G. Christodoulou, M. Margariti, N. Christodoulou
Hellenic Center for Mental Health and Research; Department of Psychiatry, Athens University, Athens, Greece

The introduction of modern technology in psychiatric practice should be regarded as a positive development, in addition to being inevitable. The issue is how to take advantage of technology without violating the basic principles of our profession and especially those related to ethics and to the care for the patient as a person. Ethical issues associated with the implementation of informatics in psychiatry involve mainly (but not exclusively) confidentiality. Some of the potential ethical problems related to informatics stem from the fact that often there is dependence on health informaticians with a great range of professional standards. Thus, the ethical codes binding health professionals should also apply (in some way) to these informatics professionals. A crucial question to ask is whether the physician has the ethical right to refuse the implementation of modern technology, like informatics, arguing that it may harm the patient. The answer is that the principle of beneficence would be violated by not allowing the patient to benefit from the advantages of informatics. However, care should be taken not to violate the other ethical principles and especially those of autonomy and justice.

SS24.
THE PROVISION OF PSYCHOSOCIAL TREATMENT: FACTS AND INDICATIONS
(organized by the WPA Section on Psychotherapy)

SS24.1.
THE PROVISION OF PSYCHOTHERAPY AND PSYCHOSOCIAL INTERVENTIONS IN ITALY: RESULTS FROM THE PROGRES-ACUTE

A. Preti, G. de Girolamo
Department of Psychology, University of Cagliari; Health Care Research Agency, Emilia-Romagna Region, Bologna, Italy

No national survey to date explored the provision of psychotherapy and psychosocial interventions in psychiatric services. This study presents data from the PROGRES-Acute, the first nationwide study aimed at investigating the process of care in Italian mental health system. Socio-demographic and clinical characteristics and pattern of care of 1,330 patients discharged from public and private inpatient facilities in Italy were assessed with a standardized methodology during an index period in the year 2004. Dynamic focused psychotherapy was available in 29% of the facilities; 24% provided cognitive behavioural therapy; 32% family therapy; and 39% structured rehabilitative intervention. Individual psychotherapy involved 40% of treated patients, and was more often provided to women than men, to educated people than to illiterate, to students or employed than to unemployed or disabled, and to patients diagnosed with depression, anxiety and psychosomatic disorders. Other kinds of psychotherapy and rehabilitation or psychoeducation interventions were less likely provided to admitted patients (less than 8% of cases), with no difference by socio-demographic profile or diagnosis. In conclusion, while individual psychotherapy is provided to a reasonable large fraction of acute patients, in all likelihood the majority of those able to benefit from it, other psychosocial interventions are poorly implemented in psychiatric services, even in a country, like Italy, where the care for people diagnosed with a mental disorder is organized to a large extent through a network of community-based mental health services.

SS24.2.
CRITICAL LEARNING PERIODS FOR SELF-ESTEEM: IMPLICATIONS FOR THE CHOICE BETWEEN INDIVIDUAL AND GROUP TREATMENT

J.S. Price
Brighton General Hospital, Brighton, UK

The main types of psychotherapy available to patients are brief individual psychotherapy, long-term individual psychotherapy, group therapy and marital/family therapy. Current assessment and triage procedures give scant guidance to the choice between individual and group therapy, which is often determined more by availability than by patient need. This paper borrows concepts from comparative ethology, and explores whether critical learning periods for self-esteem during ontogeny may identify factors which favour one type of therapy over the other. The evidence for critical learning periods for self-esteem is examined, with particular attention to the source of the input for learning. One critical learning period has been described as occurring in early childhood, and the source or input is one or more parent figures and/or related adults. The other main learning period is in adolescence, and in this case the source of input is the members of the adolescent peer group. Psychotherapy provides a "corrective experience" and it is important for the input to mirror the source of the negative learning experience which has led to low self-esteem. In

long-term individual therapy, the therapist can take on the role of the parent and correct the negative input from a parent in early childhood. Likewise, in group therapy, the other group members can take the role of the adolescent peer group and correct a negative experience which occurred during adolescence.

SS24.3.
PROMOTING PARENTAL SELF-EFFICACY IN RUNNING SIMULTANEOUS GROUPS FOR CHILDREN WITH HIGH FUNCTIONING AUTISM SPECTRUM DISORDER AND THEIR PARENTS

L. Sloman, J. Leef
Department of Psychiatry, University of Toronto, Ontario, Canada

We ran simultaneous groups for children with high functioning autism spectrum disorder (HFASD) and their parents. The aim of the child group was to improve the children's social interaction skills with peers. The goal of the parent group was to educate parents about HFASD and teach the parents a variety of ways to respond to their child's HFASD. Parents actively shaped the agendas of the parent groups and initiated free flowing discussions. Outside speakers attended some sessions. These included children and adults with ASD and parents of children with ASD as well as professionals in the field. The program included ongoing two-way communication between child group leaders and parents. The parents completed the Parenting Stress Index, the Parent Management-Training Questionnaire and the Child Social Responsiveness Scale pre and post. Parents reported a significant decrease in parental distress and in the number of dysfunctional child-parent interactions and a significant increase in their perceived level of parental self-efficacy. We often see how frustration leads to discouragement and parental disempowerment and social withdrawal in the child, which escalate in a cyclical fashion. The program aims to terminate maladaptive cycles and promote cycles of adaptation intra-psychically in children and parents and interpsychically between the parents and child. Our family systems paradigm and concurrent group model seems uniquely suited to these families.

SS24.4.
HOW DOES PSYCHOTHERAPY REFLECT HUMAN EVOLUTION?

R. Gardner
Department of Psychiatry, University of Wisconsin at Madison, WI, USA

Conspecifics may occasionally aid impaired animals in other species, but humans have institutionalized such help with medical science and other assistance, e.g., psychotherapy. These cultural institutions depend on human relatedness to even strangers, as well as a receptivity to aid from people known abstractly (e.g., teachers or doctors in even foreign lands). These stem from established storylines and tendencies to help other humans. We report on a study carried out in 40 first-year medical students stressed by curriculum changes under new leadership. All 40 provided weekly quantitative data for 36 weeks with complete compliance. The investigators did not plan "therapy" but rather to collect qualitative data in the form of short weekly essays from half the students. To reinforce completion, a same faculty person quickly answered each, including evidence of having read it, supportive comments and a signature. In a highly significant result, matched controls drank steadily more as the year went on, while the essay group steadily less. Analysis showed note-relationship played a powerful role, though the note-maker may not have otherwise related to the student. Wampold critically reviewed the thousands of published studies of psychotherapy. He found that effectiveness related not to the mode of treatment but to the attitude and relating capacity of the therapist. Humans evolved ally-use and story-use, two social attributes that help adaptation.

SS25.
GENETICS OF SUICIDE: WHAT'S AROUND THE CORNER?
(organized by the WPA Section on Suicidology)

SS25.1.
INTERACTION BETWEEN CHILDHOOD TRAUMA, SEROTONIN TRANSPORTER PROMOTER AND SUICIDE

A. Roy
Department of Veteran Affairs, Trenton, NJ, USA

We examined whether the 5-HTTLPR gene alone, or interacting with childhood trauma, was predictive of suicidal behavior in substance-dependent patients. We interviewed 306 abstinent male African-American substance-dependent patients about whether they had ever attempted suicide, and administered the 34-item Childhood Trauma Questionnaire (CTQ). Patients and 132 male African-American controls were genotyped to determine the S, L(G), and L(A) 5-HTTLPR alleles; some analyses grouped the S and L(G) alleles on the basis of equivalent function. The distribution of 5-HTTLPR genotypes did not differ between patients and controls, nor between suicide attempters and non-attempters. However, patients with low expression 5-HTTLPR genotypes and above-median CTQ scores were more likely to have attempted suicide. Logistic regression showed increasing risk of a suicide attempt with increasing reports of childhood trauma scores; in addition, this increase was exaggerated among those with low expression forms of the 5-HTTLPR genotype. Childhood trauma interacts with low expressing 5-HTTLPR genotypes to increase the risk of suicidal behavior among patients with substance dependence.

SS25.2.
THE ROLE OF GENETIC ENVIRONMENT IN SUICIDE PREVENTION

D. Wasserman
Karolinska Institute, Stockholm, Sweden

Suicide affects about one million people each year. Environmental factors such as negative life events may act as a significant contributor to suicidal behavior. However, in many cases, the exposure to the same environmental stress does not result in increased suicidality. According to a stress-vulnerability model, genetic set-up, as well as environmental exposure to psychological stress, contributes to a person's predisposition to suicidality, as well as to major depression (MD). The main neurochemical findings on suicidality have suggested alterations in neurosystems which are usually implicated in MD: a lowered serotonergic activity, depletion of the noradrenergic (NA) system and dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. Our results on the genetic variation in the CRHR1 gene in connection to depression and stress among suicidal individuals and in the TBX 19 gene, which is regulated by CRH, suggest that genetic variation in the CRH-mediated regulation of the HPA axis is a factor of importance in suicidality.

SS25.3.
BEYOND DNA SEQUENCE

M. Sarchiapone
University of Molise, Campobasso, Italy

Brain derived neurotrophic factor (BDNF) has been implicated in neuronal survival and plasticity and reported as being involved in various mental illnesses, as well as in attempted and completed suicide. Evidence from postmortem studies has also shown an altered expression of BDNF in suicide victims brains. Association studies for functional polymorphisms in the BDNF gene provided conflicting results. We went one step forward in the analysis of the BDNF gene by also studying epigenetic factors, the inherited and acquired modifications of DNA and histones that modulate gene expression without a change in nuclear DNA sequence. We studied DNA methylation of the BDNF gene in 44 suicide victims and 33 controls. We also analyzed global DNA methylation and quantified mRNA in 12 subjects. We found no significant differences between cases and controls in global DNA methylation. At all four studied methylation sites, suicide victims had significantly higher methylation than controls. BDNF mRNA was significantly and negatively correlated with methylation. These results suggest that methylation at the selected four sites correspond to a reduction in mRNA transcription and may account for decreased BDNF expression in brains of suicide victims. The study of DNA methylation has the potential to transform our understanding about the molecular aetiology of suicide.

SS25.4.
INTERPLAY OF GENE, ENVIRONMENT AND COGNITION IN SUICIDAL BEHAVIOR

P. Courtet
University of Montpellier I, Montpellier, France

In recent studies we showed that decision making, an executive function related to the functioning of the orbitofrontal cortex, was involved in the vulnerability to suicidal behaviour independently from the psychiatric disorders of the subjects. We reported that decision making was influenced by several serotonergic genotypes associated with the vulnerability to suicidal behaviour. Current research is aiming to investigate the complex interplay of environmental factors, occurring from childhood to adulthood, and vulnerability factors. Some data suggest that the genes coding for the serotonin transporter and brain derived neurotrophic factor (BDNF) influence the impact of childhood maltreatment on the suicidal risk. Moreover, we investigated the influence of such interactions on the severity of the suicidal behaviour. We created an index of suicidal severity by assessing various characteristics of the suicidal history (lethality, repetition, intent, use of a violent mean). We investigated whether this suicidality index was influenced by the 5-HTT genotypes, the history of childhood maltreatment and their combination. Furthermore, by assessing several cognitive functions, including decision making, in suicide attempters, we reported the influence of cognitive functioning on the risk of occurrence of some specific stressful life events and a correlation with childhood early maltreatment. In conclusion, the data presented here suggest that the relationship between environmental factors, genes and cognitive functioning in suicide attempters are of both interactive and correlative natures.

SS26.
INTERNATIONAL PERSPECTIVES OF FORENSIC PSYCHIATRY (organized by the WPA Section on Forensic Psychiatry)

SS26.1.
INTERNATIONAL PERSPECTIVES OF FORENSIC PSYCHIATRY

J. Arboleda-Florez
Queen's University, Kingston, Ontario, Canada

Forensic psychiatry if the subspecialty of psychiatry that deals with issues that develop when mental patients find themselves involved in legal proceedings. This subspecialty also deals with legal regulations concerning mental patients and with their management in correctional institutions. As a subspecialty, forensic psychiatry has achieved an exponential growth in importance as an essential component of mental health services in many countries. The reasons for this prominence are not clear yet, but it is important to see how the development of mental health services, or their lack of, interacts with the growth of forensic psychiatry and whether inadequate general mental health services lead to the development of legally enforced treatment dispositions. The growth of forensic psychiatry also weighs heavily on matters of ethics, not only at the level of the individual interventions, but also at the level of systems. Forensic psychiatrists usually find themselves confronted with dual obligations, caught in between systems.

SS26.2.
ON THE ETHICAL IMPLICATIONS OF ACTING AS EXPERT WITNESS

A. Calcedo Barba
Department of Psychiatry, Hospital General Universitario Gregorio Marañón, Madrid, Spain

After 2500 years of history, the ethics of practicing medicine in general, and psychiatry in particular, is reasonably clarified. Although there have been several declarations approved by the WPA, the essence of what is correct or incorrect remains stable. This is not the case in forensic psychiatry. Significant leaders of this field have questioned if it is possible for forensic psychiatry to have an ethical framework similar to clinical psychiatry. On the contrary, other colleagues claim that, despite the role of "collaborators of justice", we are still physicians and we must never abandon this sensitivity. We discuss the arguments in favour and against these two positions. We also comment on the situation, now increasingly frequent in Spain, where clinicians are being forced to act as expert witnesses to avoid the cost of hiring forensic experts.

SS26.3.
FORENSIC INPATIENT ASSESSMENTS IN CANADA: ETHICAL ISSUES

M. Chan
Queen's University, Kingston, Ontario, Canada

In Canada, under federal law, criminally accused persons may be admitted under judicial order to a forensic unit for inpatient evaluation. Input is usually requested on the issues of fitness to stand trial and criminal responsibility. The role of the assessing psychiatrist is primarily to provide an assessment report to the court, but treatment concerns usually present early on, especially in psychotic individuals who, then, must be treated in order to make them fit or competent to

provide a defence or to accept a defence as not criminally responsible because of a mental condition. The dilemma is whether the clinician should get into treatment issues with the accused. The American (AAPL) position is that strict role boundaries should be observed and that assessor objectivity may be compromised if this is not maintained, hence that the assessing clinician should be different from the treatment clinician. Where there is only one clinician available to assume both roles, the implication of just assessing without providing treatment raises other concerns, not just ethical, but legal as well. Is there another approach?

SS26.4.
MENTALLY ILL IN PRISONS

N. Konrad
Institute of Forensic Psychiatry, Charité University Medicine, Berlin, Germany

The high prevalence of mental disorders in prisoners has been impressively demonstrated in recent surveys. It is problematic to explain this high prevalence only by an increase in mentally ill prisoners. One aspect is the fact that it has only recently become possible to reliably recognize psychiatric disorders, due to improved diagnostic procedures. In addition, prison personnel may be more highly sensitized to consider deviant behavior as a symptom of a mental disorder. Whether or not mentally disordered persons "belong" in prison is primarily a legal philosophical and political problem. A generally accepted concept for inpatient psychiatric care in prisons has not yet been reported. Few treatment programmes have been evaluated as yet. The United Nations International Resolutions, the Council of Europe, the World Medical Association, the World Psychiatric Association as well as the Oath of Athens (International Council of Prison Medical Services) have addressed prison psychiatry, but more detailed guidelines in dealing with mentally disordered prisoners are lacking.

SS26.5.
DEINSTITUTIONALIZATION, DE-HOSPITALIZATION, AND THE CRIMINALIZATION OF THE MENTALLY ILL IN CANADA

H. Stuart
Department of Community Health and Epidemiology, Queen's University, Kingston, Ontario, Canada

Up until 1950, Canada's mental hospital system was in a period of vigorous growth. Institutions tended to be large, geographically isolated, and housed large numbers of patients (some over 5,000). At its zenith, in the mid to late 1960s, there were 75,000 beds typically filled at 10-30% over-capacity. By 1975, this had decreased to 54,000, and by 1980, to 20,000, reflecting an overall decline of approximately 70%. Provincial governments were increasingly investing in general hospital psychiatric units and, in the wake of rising inpatient costs, community based services. Today, few psychiatric hospitals remain, and general hospital inpatient psychiatric beds are increasingly difficult to access, with average lengths of stay of only 17 days. We review the impact of the twin processes of deinstitutionalization (the closure of psychiatric hospitals) and dehospitalization (restrictions in access to general hospital psychiatric beds) on the criminalization of the mentally ill, and survey mental health system initiatives designed to ameliorate this problem.

SS26.6.
FORENSIC PSYCHIATRY AND INVOLUNTARY TREATMENT IN ROMANIA

N. Tataru
Forensic Psychiatry Hospital, Stei, Romania

Generally, Romania's legislation is in keeping with the principles set out by the World Health Organization and the United Nations concerning the protection of people with mental illnesses. The legislation calls for adequate treatment and respect for the human rights of the persons with mental disorders. Standards and practice regarding involuntary commitment in a psychiatric department and involuntary ambulatory treatment of persons with mental disorders have improved since the introduction of the new mental health law in 2002. We discuss the complications and difficulties when trying to apply the civil commitment compulsory hospital admission measures. There are legal and ethical limits to involuntary hospitalisation, because involuntary treatment and hospitalisation restricts a person's liberty.

SS27.
PSYCHIATRY IN THE GENERAL HOSPITAL (organized by the WPA Section on Psychiatry, Medicine and Primary Care)

SS27.1.
MEDICAL-PSYCHIATRIC COMORBIDITY

M. Rigatelli, S. Ferrari, L. Pingani
Department of Psychiatry, University of Modena and Reggio Emilia, Modena, Italy

The complex interaction between medical and psychiatric disorders is symbolized by the contradiction that is implicit in the traditional, historical, cultural juxtaposition of what is medical and what is psychiatric. Contemporary consultation-liaison psychiatry and psychosomatic medicine find one of their main aims in developing the culture of the Engelian bio-psycho-social paradigm, by creating a strong scientific background based on epidemiologic research and the study of bio-psycho correlates of illness. Very relevant findings such as the fact that a quarter or more of patients attending primary care outpatient clinics suffer from medically unexplained symptoms, or that the 30-60% of patients admitted in the general hospital present a significant psychiatric comorbidity, justify the high scientific interest in this field of research, which also affects day-to-day clinical practice and health-policy decisions. A recent WHO world study on almost 250,000 subjects demonstrated that depression has the largest effect in worsening health conditions when compared to other co-causal factors. Understanding of the connection between psychiatric disorders and many chronic physical conditions, such as coronary heart diseases, diabetes and stroke, has remarkably increased in recent years and is contributing to reshape the concept itself of illness.

SS27.2.
THE "CLUSTERING" HYPOTHESIS OF GENERAL PSYCHIATRIC AND SOMATIC COMORBIDITY IN THE ELDERLY

A. Lobo, A. Lobo-Escolar, G. Marcos, C. De la Cámara, A. Campayo, P. Saz, and the ZARADEMP Workgroup
Universidad de Zaragoza; Instituto Aragonés de Ciencias de la Salud and Centro de Investigación Biomédica en Red de Salud Mental (CIBERSAM), Ministry of Health, Spain

We tested in a representative sample of the elderly population in Zaragoza, Spain the "clustering" hypothesis about the association of somatic and psychiatric morbidity. A stratified, random sample of 4,803 individuals aged 55 and over was selected for the baseline study. The elderly were assessed with standardized, Spanish versions of several instruments, including the Geriatric Mental State (GMS)-AGECAT. Psychiatric cases were diagnosed according to GMS-AGECAT criteria, and somatic morbidity was documented with the EURODEM Risk Factors Questionnaire. Most of the elderly had at least one medical condition (3,430 individuals, 81.1%), and 2,592 (54%) were considered to have psychiatric morbidity. In support of the working hypothesis, in the final, adjusted model, there was a positive and statistically significant association between general somatic morbidity and general psychiatric morbidity (OR=1.61; p<0.001). Most somatic categories were associated with psychiatric illness but, adjusting for demographic variables and individual somatic illnesses, the association remained statistically significant only for cerebrovascular (OR=1.47; CI 1.09-1.98) and thyroid diseases (OR=1.67; CI 1.10-2.54). If the hypertension category was removed from the group of somatic conditions, comorbidity clustered in 19.9% of the sample, and did not increase systematically with age. This is the first study supporting in the elderly population the "clustering" hypothesis, and suggests that there is a positive and statistically significant association between general somatic and general psychiatric morbidity.

SS27.3.
ROLE OF THE PSYCHIATRIST IN THE TRAINING OF THE NON-SPECIALIST PHYSICIAN IN THE GENERAL HOSPITAL FOR PREVENTION, DIAGNOSIS AND TREATMENT

R. Fahrer
Department of Psychiatry, Foundation against Neurological Illness in Childhood (FLENI), Buenos Aires, Argentina

Psychiatry has been definitely incorporated and integrated with the rest of medicine and into the general hospital as psychosomatic medicine. The workload for psychiatry is increasing, while the work force is decreasing and, therefore, simpler cases of psychiatric illness will continue to be treated by internists and general practitioners. Moreover, a growing group of chronic interventions require significant life adjustment and psychological acceptance by the patients. The general practitioner must be adequately trained and drilled to help the patient and to maximize benefits. Moreover, with the aging of the population, there will be an increase in age-related neuropsychiatric morbidity associated with dementia, stroke, and Parkinson's disease. Therefore, the primary care physician must be trained to adequately prevent, diagnose, and to provide initial treatment and rehabilitation of these conditions. The role of the psychiatrist in the training of the non-specialist physician is crucial. In order to prepare the general practitioner properly, the psychiatrist must be carefully selected as trainer. He must have: a) a medical identity; b) a training in psychiatry with a sound basis on psychotherapy; c) teaching skills allowing for work in a non-specialized medical setting.

SS27.4.
DIABETES AND MENTAL DISORDERS: WHAT DO WE KNOW ABOUT RISKS AND LINKAGES?

M.B. Riba
Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA

Type 2 diabetes mellitus is a serious, prevalent and chronic problem in approximately 8 percent of adults in the United States and is increasing globally. There is mounting evidence that patients with major mental disorders may have even higher prevalence rates. There have been many explanations offered for the higher risk of type 2 diabetes in patients with schizophrenia, for example, a biological link; unhealthy lifestyles, such as smoking, lack of exercise, and a high-fat diet. Recent issues relate to metabolic consequences of using second-generation antipsychotics as well whether antidepressants raise diabetes risk. Citrome and colleagues determined there was a doubling of the treated incidence rate and a rise in prevalence of identified cases of diabetes among psychiatric inpatients from 1997 to 2004. This underscores major public health problems especially for vulnerable psychiatric patients. In addition, we are finding that for children and young adolescents with Type 1 diabetes, mental health care, including psychological interventions such as cognitive behavioral, family systems and psychodynamic therapy, are particularly useful in improving hemoglobin A1c levels. We review the literature on the issues of comorbidity, linkages and risks between diabetes and mental disorders and provide suggestions for future directions in research and clinical care.

SS28.
ADDICTION PSYCHIATRY: AN UPDATE (organized by the WPA Section on Addiction Psychiatry)

SS28.1.
SPIRITUALITY AND ADDICTION

M. Galanter
Department of Psychiatry, New York University School of Medicine, New York, NY, USA

An understanding of the spiritual experience is presented, drawing on physiology, psychology, and cross-cultural sources. It is described in terms of how spirituality is manifest in different social and clinical settings, some of which are beneficial and others potentially compromising. This will create a context for clarifying how recovery from addiction takes place on the basis of spiritually-related experiences for certain people. Alcoholics Anonymous is then described as a spiritually-oriented recovery movement, that is, one that effects compliance with its behavioral expectations by engaging members in a social system that promotes new and transcendent meaning in their lives. The mechanisms underlying the attribution of new meaning in Alcoholics Anonymous is discussed in relation to the models of positive psychology and social network support. Both aspects of Alcoholics Anonymous renewal are reflected in its impact on addictive behavior. It is, in fact, possible to define the criteria for successful addiction recovery in spiritually-oriented terms.

SS28.2.
DOCTORS' HEALTH AND ADDICTIVE DISORDERS

N. el-Guebaly
Department of Psychiatry, University of Calgary, Canada

Further to the WPA approval of a position paper on practice issues surrounding "physician impairment with mental illness and addictions" in 2003, a Task Force on Physician Health and Well-Being was established. This presentation summarizes the activities carried out to date: the evaluation of the scope of "doctors' health" including "impairment" vs. "burn-out"; a refocus from a disease orientation to health promotion strategies and the practical range of "physician health issues"; insights from the mostly Western scientific literature; the preliminary results of an incremental survey of WPA Member Societies; practice guidelines regarding the assessment and treatment of physicians with addiction problems. Our objectives are: to outline the benefits and limitations of a focus on "impairment" vs. "well-being"; to review the empirical evidence as well as the cultural impact of the care of addicted physicians; to outline practice guidelines for individual assessment and treatment.

SS28.3.
PHARMACOLOGIC TREATMENTS FOR SUBSTANCE ABUSE/DEPENDENCE

H.D. Kleber
Department of Psychiatry, New York University School of Medicine, New York, NY, USA

The increase in substance dependence internationally continues to be a major problem for individuals, families and the larger society. Treatment remains difficult, but there are a number of pharmacological interventions which can improve outcome. This presentation reviews medications for opioid and alcohol dependence, where we have the most agents, as well as promising possibilities for cocaine and marijuana dependence. The pro's and con's of each intervention are noted, as well as possible patient/treatment matching and the differential use of medications to achieve abstinence vs. relapse prevention.

SS28.4.
DUAL DIAGNOSIS IN ITALY: FINDINGS FROM THE PADDI STUDY

G. Carrà, M. Clerici
Department of Mental Health Sciences, Royal Free and University College Medical School, London, UK; Department of Neurosciences and Biomedical Technologies, University of Milan Bicocca, Milan, Italy

Comorbid substance misuse in mental illness is associated with significant clinical, social and legal problems. An epidemiologically informed approach to planning service delivery requires an understanding of which clinical populations are at particularly high risk for such "dual diagnosis". Most evidence about the prevalence of this comorbidity comes from the USA, Canada and Australia, and, though at a different pace, also from Europe. In Italy, rare and diverse evidence has been accumulating, with no research run nationwide so far. The aims of the Psychiatric and Addictive Dual Disorders in Italy (PADDI) study are to begin to fill this gap by investigating the prevalence and characteristics of comorbid disorders due to use of alcohol and psychoactive substances other than alcohol among people followed in Italian Mental Health Trusts. A cross-sectional survey design has been used to determine the prevalence of comorbid drug and alcohol and any, even minor, mental disorders. Staff ratings were used to assess comorbid substance use. Though the overall dual diagnosis prevalence was around 2%, significantly higher rates were found in inner cities. Furthermore, significant differences were found between different geographical areas (Northern vs. Centre vs. Southern Italy). Peculiar diagnostic subgroups showed higher risk to develop such comorbid condition, whilst a number of clinical and sociodemographic variables, including area of residence, were associated with the risk to develop a dependence syndrome. Sampling and assessment procedures are major limitations which might explain the lower rates as compared with the current Anglo-Saxon literature.

SS29.
PERILS AND PERPLEXITIES IN TREATING EATING DISORDERS
(organized by the WPA Section on Eating Disorders)

SS29.1.
NEW PERSPECTIVES IN THE TREATMENT OF ADULTS WITH ANOREXIA NERVOSA: LESSONS FROM A RANDOMIZED CONTROLLED TRIAL

U. Schmidt, A. Oldershaw, H. Startup, K. Tchanturia, J. Treasure
Section of Eating Disorders, Institute of Psychiatry, London, UK

Psychological treatment of adults with anorexia nervosa continues to be a major challenge, with high drop-out rates and poor outcomes. We have developed a novel maintenance model, drawing on our group's findings of the functional neurobiology and neuropsychology of anorexia nervosa. The model is aetiologically based, includes both individual and interpersonal maintaining factors, and targets cognitive and emotional processes and traits, rather than focusing only on the content of experiences and beliefs. Based on this model, we have developed a modularized and manualised treatment (MANTRA; Maudsley Model of Anorexia Treatment for Adults). Components of this treatment have been piloted in our Unit and in another centre (Adelaide, Australia) with excellent acceptability and outcomes. We are now conducting a randomized controlled trial of this treatment compared against the best available comparison treatment, i.e., specialist supportive clinical management in outpatients with anorexia nervosa. To date fifty patients have been included in the study. We present the rationale for the trial, data supporting the underlying treatment model and preliminary findings from the trial.

SS29.2.
PREDICTORS OF TREATMENT ACCEPTANCE AND COMPLETION IN ANOREXIA NERVOSA

K.A. Halmi, S. Agras, S. Crow, J. Mitchell, T. Wilson, S. Bryson, H. Kraemer
Weill Medical College, Cornell University, New York, NY; Stanford University School of Medicine, Stanford, CA; University of Minnesota Medical School, Minneapolis, MI; Neuropsychiatric Research Institute, Fargo, MD, USA

Published randomized controlled treatment studies of anorexia nervosa are rare. This study evaluates factors leading to non-acceptance and non-completion of treatment for two specific therapies (cognitive-behavioral therapy and fluoxetine) and their combination in the treatment of anorexia nervosa. Random assignment of these three treatments was made in 122 anorexia nervosa patients with a treatment protocol for one year. Drop-out rate and acceptance of treatment (in treatment at least 5 weeks) were the main outcome measures. Treatment acceptance occurred in 73% overall, and only in 56% of

those assigned to medication alone. In the other two groups, high and low obsessive preoccupation scores determined acceptance (91% and 60%). High self-esteem was the only predictor of treatment completion and was associated with a 51% rate of treatment acceptance.

SS29.3.
FAMILY THERAPY FOR ADOLESCENT EATING DISORDERS: A CRITICAL REVIEW

J. Lock
Stanford University School of Medicine, and Lucile Packard Children's Hospital, Stanford, CA, USA

We present a critical review of family therapy for adolescent anorexia nervosa. Five randomized controlled trials provide systematic evidence supporting the usefulness of family therapy for anorexia nervosa, though its superiority over other forms of therapy remains unsettled. All systematic trials of family therapy for anorexia nervosa employ a form of family treatment wherein parents are in charge of outpatient weight restoration. The largest study suggests that two-thirds of patients are recovered within a year of treatment using this approach and that these improvements are maintained over 5 years. More recently, a study comparing a similar form of family therapy for adolescent bulimia nervosa found family treatment to be superior to a non-specific individual therapy. Thus, although family therapy appears feasible and effective for adolescent eating disorders, further studies employing active comparison treatments are needed.

SS29.4.
DO BIOLOGICAL FACTORS PREDICT RESPONSE TO TREATMENT IN EATING DISORDERS?

P. Monteleone, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Neurotransmitters and central or peripheral peptides modulating feeding have been suggested to play a role in anorexia nervosa (AN) and bulimia nervosa (BN), since dysregulations of their physiology have been repeatedly reported in patients with eating disorders (ED). Preliminary evidence supports the idea that those alterations may affect also the prognosis of AN and BN and, therefore, may be useful in predicting the outcomes of ED treatments. For instance, the fat hormone leptin has been consistently reported to be decreased in underweight AN patients, and to normalize with the recovery of body weight. However, a too rapid weight restoration abnormally increases circulating leptin in AN women, and hyperleptinaemia has been reported to contrast the reaching of the target BW and to be associated with the risk of renewed weight loss. Similarly, reduced concentrations of the brain-derived neurotrophic factor and abnormal responses of ghrelin and peptide YY to food ingestion, occurring in the acute phase of AN, may persist after weight gain and constitute a vulnerable biological background predisposing the patients to future relapses. The pharmacogenetic approach has been recently used in the prediction of the response to treatment with selective serotonin reuptake inhibitors (SSRIs) in BN patients. Preliminary data showed that BN patients carrying the short allele of the promoter of serotonin transporter gene had a worse response to SSRI treatment. Additional research is needed to clarify the role of biological alterations in both the pathophysiology of AN and BN and the prediction of their response to currently available treatments.

SS30.
NEW THERAPIES FOR SCHIZOPHRENIA: AN OUTLOOK INTO THE FUTURE
(organized by the WPA Section on Schizophrenia)

SS30.1.
THERAPEUTIC STRATEGIES FOR TREATING COGNITIVE IMPAIRMENTS IN SCHIZOPHRENIA

S.R. Marder
Semel Institute for Neuroscience at UCLA and VA Mental Illness Research, Education, and Clinical Center, Los Angeles, CA, USA

Cognitive deficits affect nearly every individual with schizophrenia. Moreover, the severity of these cognitive deficits is closely related to the severity of functional impairments, that result in poor community adaptation and work disability for the large majority of individuals affected by this illness. Although available pharmacological treatments are effective for reducing the severity of the psychotic symptoms of schizophrenia, they are relatively ineffective in reducing the severity of neurocognitive deficits and associated functional impairments. These observations led the National Institute of Mental Health in the United States to develop an initiative termed MATRICS (Measurement and Treatment Research to Improved Cognition in Schizophrenia) to facilitate the development of pharmacological agents for improving cognition. We review the recommendations from MATRICS and data from recent and active clinical trials. These trials include agents aimed at a number of molecular targets, including NMDA, AMPA, GABA, and nicotinic receptors. In addition, we review studies using psychosocial strategies for improving cognition.

SS30.2.
COMPARATIVE EFFECTIVENESS OF ANTIPSYCHOTIC MEDICATION

W.W. Fleischhacker
Biological Psychiatry Division, Innsbruck, Austria

The introduction of the second generation antipsychotics represents a considerable advance for the treatment of patients with schizophrenia. Two ongoing debates overshadow this development: first, whether second generation antipsychotics should be favored over traditional neuroleptics as first line treatments for most patients; second, how the newer drugs differ from each other. While there is an emerging consensus for a cautious yes on the first question, there is little evidence based information to guide the clinician on the second one. Head to head comparisons of second generation antipsychotics are still scarce, although a few studies comparing amisulpride, clozapine, olanzapine and risperidone to each other have been published. Where there has been more than one comparative clinical trial, as for instance for olanzapine and risperidone, the evidence is equivocal. All of these drugs have been said to have advantages over classical antipsychotics with respect to negative and affective syndromes as well as cognitive dysfunctions in schizophrenia patients although, again, the evidence is far from conclusive. This needs to be substantiated and it would be most helpful to know whether they also differ amongst each other in this regard. Ideally, if this evidence were available, a clinician would be able to prescribe drug treatment according to an individual patient's needs. We review published clinical trials and summarize the strengths and limitations of the current evidence.

SS30.3.
EVIDENCE-BASED PSYCHOTHERAPY FOR SCHIZOPHRENIA

S. Klingberg, G. Buchkremer
Department of Psychiatry and Psychotherapy, University of Tuebingen, Germany

According to recently published meta-analyses, cognitive behavioural therapy is useful for symptom reduction and family intervention contributes to relapse prevention in schizophrenia. On this background, treatment guidelines in many countries now recommend psychotherapeutic interventions for routine care of schizophrenia patients. However, many questions are unanswered, e.g., the therapeutic efficacy in different phases of the disorder, efficacy regarding other outcomes than persistent positive symptoms, the influence of methodological quality on treatment effects, the role of specific treatment content. We report on the results of a multicentric randomised clinical trial addressing the efficacy of a combined psychological intervention (CPI) to reduce the relapse rate in 111 first episode schizophrenia patients. In the CPI group, no relapse occurred during 2-year follow-up compared to three relapses in the control group, which received psychoeducation. However, despite trend in the expected direction, the difference between groups was not significant. Secondly, we present data on a further randomised clinical trial investigating the efficacy of cognitive-behavioural therapy for the reduction of negative symptoms. 198 patients have been included in this study and we report on the patient selection and the final sample. In conclusion, treatment research on psychotherapeutic intervention in schizophrenia patients has made enormous progress. Methodological quality is rapidly increasing. The available evidence indicates that psychotherapeutic interventions are generally useful for the treatment of schizophrenia patients. New research will allow optimising indication and timing of treatment.

SS30.4.
TREATMENT OF SCHIZOPHRENIA IN DEVELOPING COUNTRIES

O. Gureje
Department of Psychiatry, University of Ibadan, Nigeria

Schizophrenia is often chronic and requires long-term treatment commitment. Even though suggestion has been made for a possible better outcome in developing countries, the reality of the illness for many sufferers in those countries is poor access to care and gross impairment of quality of life. Treatment guidelines commonly advocate a management approach for schizophrenia that is multidisciplinary and in which psychological and social intervention strategies play as important a role as pharmacotherapy. This approach is difficult to implement in many developing countries. Inadequate manpower and poor access to medication, especially those made unavoidable by patent protection, are some of the hurdles in the way of evidence-based treatment. We review current treatment practice for schizophrenia in developing countries and provide suggestions on how affordable evidence-based treatment may be implemented in such settings.

SS31.
ACCESS TO MENTAL HEALTH CARE: GLOBAL PERSPECTIVES (Part I)
(organized by the WPA Sections on Conflict Management and Resolution, on Psychiatry and Public Policy, and on Mental Health Economics)

SS31.1.
ACCESS TO MENTAL HEALTH CARE: A NORTH AFRICAN PERSPECTIVE

T.A. Okasha
Institute of Psychiatry, Faculty of Medicine, Ain Shams University, Cairo, Egypt

Egypt has around 1000 psychiatrists, 250 clinical psychologists, 1355 psychiatric nurses and about 9000 psychiatric beds (for a population of 77 million). It is moving towards primary care in psychiatry through general practitioners, and this has been incorporated into the National Mental Health Program for the past 12 years, rather than community care. In Morocco there are about 300 psychiatrists, 620 psychiatric nurses, 75 clinical psychologists. There are very few social workers and no occupational therapist. There are 1,900 psychiatric beds in the entire country (30 million inhabitants), divided between psychiatric hospitals and psychiatric wards integrated into general hospitals. Most of the activities of mental health are done in the outpatient sector. In Tunisia, mental health was afforded low priority, as in other developing countries faced with major health concerns such as epidemic diseases or infant mortality. Nowadays, only 150 psychiatrists and 800 psychiatric beds (representing 5% of the total hospital capacity) are available to a population of 10 millions souls. Consequently, a significant proportion of the population does not have access to mental health facilities.

SS31.2.
SUB-SAHARAN AFRICA: ACCESS TO MENTAL HEALTH CARE

F.N. Kigozi
Butabika National Mental Referral and Teaching Hospital, Kampala, Uganda

Sub-Saharan Africa is characterized by a very low public sector expenditure on health, less than 10% of the gross national product for most countries. Many of the Sub-Saharan African countries do not have a budget for mental health. Of those that have, the majority spend less than 2% of their total health budget on mental health. Although there is a general agreement that mental health services should be integrated into primary health care, this has not been fully realized due to a number of challenges. The Western model of community-based services is not directly applicable to the low income countries in Sub-Saharan Africa, where there is scarcity of trained mental health professionals. As a result, all countries have formulated policies that emphasize decentralization and integration of mental health into primary health care, putting emphasis on partnership with non-governmental organizations. It is well-recognized that traditional healers play a key role in dealing with mental health issues in African societies, backed by the traditional belief systems. The need to collaborate with them has been emphasized, despite the tendency by modern medicine to have a negative and distancing attitude towards traditional healers.

SS31.3.
MENTAL HEALTH IN LATIN AMERICA: CHALLENGES AND PERSPECTIVES

J.J. Rodriguez
Pan American Health Organization, Washington, DC, USA

This paper describes the processes of changes that occurred in mental health care in Latin America countries after the Declaration of Caracas (1990). The Pan American Health Organization (PAHO/WHO) has played an important role in the process of restructuration of the mental health services, offering technical cooperation to the countries. A group of experts within PAHO reviewed the results of the most relevant epidemiological studies in Latin America in the last fifteen years, which revealed a high prevalence of mental disorders and an insufficient response by the health services. On the other hand, the treatment gap, the number of people with mental disorders that do not receive any type of treatment, can exceed 50% in many diseases. This paper explains some of the most common problems faced by the mental health services in the Latin American countries. An assessment of mental health systems made in Central America show a structure of services where the majority of human and financial resources continue to be concentrated on the large national psychiatric hospitals; and these hospitals spend up to 90% of the budget devoted to mental health. Finally, we stress that mental health has been climbing positions on the agenda of the governments and the societies of the Latin American countries. There are local and national experiences and lessons learned. Moreover, the associations of users and family members have developed and increased the struggle for the defense of the human rights of people affected by mental disorders.

SS31.4.
ACCESS TO MENTAL HEALTH CARE IN THE ANGLOPHONE CARIBBEAN

F.W. Hickling
Department of Community Health and Psychiatry, University of the West Indies, Mona, Kingston, Jamaica

Jamaica and Trinidad led the Anglophone Caribbean in the development of post-colonial mental health services after a two hundred-year legacy of custodial mental hospitals and draconian mental health legislation. Two diverse approaches to mental health legislation have led to divergent models of community mental health delivery in these islands. Relying significantly on an integrated primary care network of community mental health nurses, both models differ significantly in the mode of treatment of the acute mentally ill. In Jamaica, the acutely mentally ill are admitted in the main to open medical wards of general hospitals islandwide, while in Trinidad, the acutely mentally ill are admitted to a single community psychiatric unit or the existing mental hospital, both operating on the custodial model of care. Jamaica leads the region with a model of child mental health services, substance abuse services, and an emerging forensic psychiatric service. Private mental health services operate collaboratively with the public mental health services. The sixty year-old University of the West Indies (in four island campuses) provide psychiatric training for 250 medical and 500 nurse graduates annually. The university trains 10 psychiatrists, 30 psychologists and 15 community psychiatric nurses annually to serve the Caribbean population of 5 million.

SS32.
THE ROLE OF PSYCHIATRY IN SPORT (organized by the WPA Section on Exercise, Psychiatry and Sports)

SS32.1.
THE BENEFITS OF EXERCISE FOR MOOD DISORDERS

S.A. Azim, Li Jing Zhu
University of Cairo, Egypt; Beijing Olympic Committee, Beijing, China

The role of exercise in maintaining overall health has been discussed for thousands of years. Its impact on mental health has also been known since ancient times, despite the lack of controlled clinical trials proving the claims. Over the past three decades, an expanding focus on the role of regular, aerobic exercise as part of a treatment strategy for mood disorders and anxiety has emerged. Exercise has been demonstrated, alone and in combination with pharmacotherapy, to be an effective treatment modality and an overall physical and mental stress reducer. The extant research literature suggests that exercise is a plausible, effective treatment for patients suffering from mood and anxiety disorders. We review the existing literature on this topic and discuss the application of exercise in the treatment regimen for all patients suffering from mood disorders, regardless of age, gender and level of physical fitness.

SS32.2.
SUBSTANCE ABUSE IN ATHLETES

S. AbdulMagd
University of Cairo, Egypt

Recent studies have demonstrated an increase in drug and alcohol use among athletes compared to age and gender matched non-athletes. In a 1996 study of college athletes in the US, 54% admitted to high quantity alcohol consumption vs. 36% of non-athletes. A survey conducted in 2001 revealed that 79.2% of University athletes admitted to alcohol intake on more than one occasion during the previous year. Although the use of steroids and other performance enhancing drugs dominates the sports page headlines, alcohol is a far more prevalent problem among athletes. Alcohol is the most frequently used, and abused, substance in sports. We review the existing literature and discuss strategies to better screen for drug abuse in athletes. A treatment plan appropriate for athletes is presented, along with issues concerning drug testing at all levels of competition.

SS32.3.
COGNITIVE-BEHAVIORAL THERAPY IN DEPRESSED ATHLETES

D. Baron
Department of Psychiatry, Temple University College of Medicine, Episcopal Campus, Philadelphia, PA, USA

A significant amount of time and money is spent on the treatment of physical injury and illness in athletes. The status of an athlete's injury is extensively covered by sideline reporters in all sports worldwide. However, it is rare for the emotional state of an athlete to be mentioned. The status of an athlete's depression would appear to be a taboo topic to cover. This is likely related to the ongoing stigma associated with mental illness globally. This situation makes it difficult for athletes to discuss their mood state, despite having no problems reporting an orthopedic or musculoskeletal difficulty. This mind set

has created a unique challenge for sports psychiatrists in diagnosing and treating depression in athletes. We review the unique challenges of working with athletes, coaches, and trainers in recognizing the importance of mood disorders for athletic performance. Special emphasis is laid on the role of cognitive-behavioral therapy (CBT) in treating depressed athletes, and data from Canada are presented on the use of CBT in an Olympic swimmer and changes measured in the hippocampus after treatment by functional magnetic resonance. Additional published studies successfully treating depressed athletes with CBT will be highlighted. Finally, we describe how to utilize coaches and the medical staff to reinforce CBT techniques.

SS33.
ACCESS TO MENTAL HEALTH CARE: GLOBAL PERSPECTIVES (Part II)
(organized by the WPA Sections on Conflict Management and Resolution, on Psychiatry and Public Policy, and on Mental Health Economics)

SS33.1.
ACCESS TO CARE IN NORTH AMERICA: COLORADO AND ONTARIO COMPARED

R. Warner, J. Trainor
University of Colorado, Boulder, CO, USA; Centre for Addiction and Mental Health, Toronto, Ontario, Canada

Canadian health care is provided through a single payer system, making free care available to all. In the United States, multiple payer sources, governmental, commercial and individual, create a complex web within which many are left with limited coverage or none at all. Expenditure on health care is over 50% greater in the US – 15.3% of gross domestic product in the US in 2005 compared to 9.8% in Canada. This paper aims to describe access to psychiatric care in the Canadian province of Ontario and the US state of Colorado. In Colorado, many people in need do not receive psychiatric services until an emergency exists, access to care being dependent on the type of insurance in which the individual is enrolled. There is no overall system to ensure that those with the greatest need receive priority. Multiple access points to care prevent effective triage for hospital services. Inadequate community resources lead to poor continuity of care after hospital treatment. In Ontario, a core basket of services is available without cost, and clinical staff can develop treatment and community support plans without reference to insurance issues. Challenges do exist, however, in the supply of services and in their availability to sub-groups of the population. Notable among these is the provision of culturally appropriate services for diverse ethnic groups, especially in Toronto, which is now one of the most ethnically diverse cities in the world. In both Colorado and Ontario, there is also a shortage of skilled providers in rural and remote areas. We offer solutions to the access problems encountered in each location.

SS33.2.
MENTAL HEALTH CARE IN KAZAKHSTAN

M.K. Kulzhanov, S.A. Yegeubaeva
Kazakhstan School of Public Health, Almaty, Kazakhstan

Kazakhstan became independent in 1991, and it faced many of the same challenges as other countries from the former Soviet Union, including an oversized and inpatient-oriented system of health facilities and a drop in health financing in the early transition period. Although the country embarked on several major health reforms in the second decade of 1990s, these often lacked consistency and clear direction. In 2004, Kazakhstan initiated a comprehensive National Programme of Health Care Reform and Development for the period 2005-2010. As a share of gross domestic product, budget allocations to the health sector increased in Kazakhstan from 2.0% in 2000 to 3.4% in 2006. Mental disorders rank as first among females (16.7% DALY) and second among males (13% DALY) in top 10 conditions that account for approximately 90% of the burden of disease in Kazakhstan. Because mortality from mental health disorders is minor, disability in daily living comprises the bulk of their burden on the population's health. Kazakhstan formally guarantees access to a wide range of mental health services, including consultation, diagnosis, treatment, preventive care and rehabilitation. There is appropriate legislation base for action of mental health services. At the same time, legal provisions have not been put into action comprehensively.

SS33.3.
MENTAL HEALTH CARE IN EAST ASIA

T. Akiyama
Kanto Medical Center, Tokyo, Japan

East Asia (China, Hong Kong, Korea, Japan, Mongolia, Taiwan) shares cultural heritage. However, based on the history of politics and economy, the current status of mental health care is different. Hong Kong alone received a direct European influence. Republic of Korea, Japan and Taiwan have never been occupied by the West. Being capitalist and diligently committed to develop economy, these countries have long learned Western knowledge, and for mental health care, too. However, the practice is not based on Western standards. The challenge is how to harmonize the Western knowledge and the East Asia cultural heritage and to solve the conflicts arising from this assimilation. These countries may be exploring their new identities in general and for mental health care as well. China has been attaining co-existence of communism in politics and vast development in economy. In developed areas like Shanghai, an advanced community mental health system is available. For the whole country, there still exist fundamental issues like insurance. Mongolia was previously communist, and is economically not established yet and dealing with primary issues like establishing epidemiological data or mental health policy. For North Korea, detailed information is not available.

SS33.4.
ACCESS TO MENTAL HEALTH CARE: A SOUTH ASIAN PERSPECTIVE

V. Patel
London School of Hygiene and Tropical Medicine, London, UK

More than a sixth of the world's population live in the countries which comprise South Asia. A number of population based studies have demonstrated a large unmet need for care, even for persons with the most severe forms of mental disorder. This paper considers some of the major challenges which limit the access to appropriate mental health care in the region. These include: a weak general health care system, which limits the potential for integration of mental health care; the scarcity, and inequitable and inefficient distribution, of mental health resources; the lack of a public mental health leadership at the national or regional levels; the strong influence of privatization of health care; the weak regulatory systems, for example, to ensure evidence based mental health care; the almost complete absence of any form of community care throughout the region; and the high levels of stigma related to mental disorder.

SS34.
PREVENTION OF SUICIDAL BEHAVIOUR: THE ROLE OF HEALTH PROMOTION PROGRAMMES (organized by the WPA Section on Suicidology)

SS34.1.
LIFE STYLES AND RISK GROUPS

J.P. Kahn
Service de Psychiatrie et Psychologie Clinique, CHU de Nancy; Hôpital Jeanne d'Arc, Toul, France

Suicide is one of the leading causes of death worldwide, among the top ten causes of death in every country, and one of the three leading causes of death for people between the ages of 15-34. In adolescence, serious suicide attempts occur in approximately 3% of adolescents. A number of risk factors contribute to suicidal behaviours. Besides well established clinical factors, such as prior suicide attempt, depression, disruptive behaviour disorders, and substance use disorders, research also points out the influence of various personality traits, life styles, sociodemographic, gender, familial and situational risk factors, all of which are not mutually exclusive and often co-occur, placing these groups at high risk for suicidal behaviour, with comorbidity further increasing risk. Groups at high risk for suicidal behaviour include gay, lesbian and bisexual youths, incarcerated adolescents and homeless/runaway teens. Findings from prevention and intervention studies are modest. Therefore, a policy to offer access to those "at risk groups" to evidence based prevention programs in the areas of health education and skills training appears to be important.

SS34.2.
SAVE YOUNG LIFE IN EUROPE – SAYLE

D. Wasserman
Karolinska Institute, Stockholm, Sweden

SAYLE is a health promoting programme, funded by the European Commission, for adolescents in European schools. Its main objectives are to lead adolescents to better health through decreased risk taking and suicidal behaviours, to evaluate outcomes of different preventive programmes and to recommend effective culturally adjusted models for promoting health of adolescents in different European countries. It is developed by a consortium of 12 countries: Austria, Estonia, France, Germany, Ireland, Hungary, Italy, Israel, Romania, Slovenia, Spain and Sweden (co-coordinating centre). In this health promotion programme, an intervention study will be implemented to assess the effects of three different health promoting/suicide preventing programmes in comparison with control groups in 11,000 students across 12 European countries. The three interventions are: a) a general health promotion programme targeting students awareness on healthy/unhealthy behaviors and students' self-efficacy in diminishing unhealthy behaviors; b) screening by professionals of at-risk students through a questionnaire; for adolescents identified as high risk, the program includes individual assessment and referral to mental health treatment and measures ensuring compliance; c) a gatekeeper's program, training all adult staff at schools (teachers, counselors, nurses, etc.) and parents on how to recognize and refer a student with risk-taking behaviours or those suffering from mental illness to mental health help resources.

SS34.3.
WHAT'S IN YOUNG PEOPLE'S MIND

M. Sarchiapone
University of Molise, Campobasso, Italy

Suicide is one of the most important causes of death in the age group 15-34, and ranks as the second cause of death after traffic accidents and other injuries in the ages 15-19. Research shows that youth suicide almost always occurs in the context of an active, often treatable, mental illness, such as depression, that has frequently gone unrecognized or untreated. Depression is linked also with other kind of self-destructive and risk-taking behavior besides suicidal behaviour, for example bullying, unprotected sexual behaviour, substance use. Psychosocial factors are also linked to risk-taking behaviours that may be considered as suicidal equivalents. During the transition from childhood to adulthood, adolescents establish patterns of behaviour and make lifestyle choices that affect both their current and future health. Adolescents' egocentrism leads them to believe that everyone is concerned with their well-being; their sense of invulnerability allows them to take risks without believing that these risks can affect their future. They test their limits when engaging in risk behaviours, forging their identities. Serious health and safety issues such as motor vehicle crashes, violence, substance abuse, and promiscuous sexual behaviours adversely affect adolescents and young adults. Not eating appropriately, not engaging in physical activity, and choosing to use alcohol, drugs and tobacco increase the risk of developing health problems in adulthood. Therefore these behaviours, which are associated with the leading causes of mortality and morbidity, remain a major problem among adolescents and need to be prevented.

SS34.4.
SAYLE PREVENTION STRATEGY PLAN

V. Carli
University of Molise, Campobasso, Italy

SAYLE is a health promoting program for adolescents in European schools. Promoting healthy behaviors is multi-faceted and no health is possible without mental health. The ultimate outcome of unhealthy and risk-taking behaviors is suicide. Risk-taking and suicidal behavior can be prevented. A pilot intervention study will be implemented to assess the effects of three different health promoting/suicide prevention programs in 11,000 students across eleven European countries: a) TeenScreen – screening by professionals of at-risk students through a questionnaire; b) QPR (Question, Persuade & Refer) – a gatekeepers' program, training all adult staff at schools (teachers, counselors, nurses, etc.) and parents on how to recognize and refer a student at risk for suicide or suffering from mental illness to mental health help resources; c) a general health promotion program targeting students' awareness on healthy/unhealthy behaviors. Objectives of the research program are: gather information on health and well-being in adolescents; produce an epidemiological database for adolescents in Europe containing data on student's healthy and at-risk lifestyles and their relation with health measured by well-being, depression and suicidality; perform interventions in adolescents leading to better health through decreased risk-taking and suicidal behaviors; evaluate outcomes of interventions in adolescents from a multidisciplinary perspective, including social, psychological and economical aspects; recommend an effective transcultural model for promoting health for adolescents in Europe; provide information for evidence-based prevention programs for adolescents in culturally diverse populations; increase awareness and knowledge in policy makers, professionals and the public.

SS35.
ACCESS TO MENTAL HEALTH CARE: GLOBAL PERSPECTIVES (Part III)
(organized by the WPA Sections on Conflict Management and Resolution, on Psychiatry and Public Policy, and on Mental Health Economics)

SS35.1.
ACCESS TO MENTAL HEALTH CARE IN WEST ASIA AND EASTERN MEDITERRANEAN

A. Mohit
Department of Social Determinants of Health, Tehran University of Medical Sciences, Tehran, Iran

Countries of the West Asia and Middle East have many similarities and diversities at the same time. According to the World Health Organization (WHO), they spend on the average 4-5% of their gross domestic product on health, out of which 1-2% goes to mental health, most of which still for the old mental institutions. At the beginning of the 1980s, a new movement to modernize psychiatry and mental health started. The main strategy of this movement, which was supported by the WHO, was integration of mental health in the general health and primary health care systems. Integration compensated for shortages in human and other resources and decreased the stigma. Today, examples of such programs exist in many countries, like Bahrain, Iran, Jordan, Pakistan, Saudi Arabia and Oman. In Lebanon, involving private sector general practitioners is being taken seriously. These are probably movements that will lead the way towards the future of psychiatry in this region. More recently, efforts are being made to develop a basic mental health structure in countries in complex emergencies. Mental health programs in natural disasters were developed after recent earthquakes in Iran and Pakistan. In Afghanistan, Iraq and Palestine, mental health programs to address local problems have developed. We review the existing literature and try to provide a clearer picture of the achievements and challenges faced by mental health systems, including the roles of public, private and insurance sectors in this increasingly important part of the world.

SS35.2.
MENTAL HEALTH CARE ACCESS AND PROMOTION IN AUSTRALIA AND THE PACIFIC ISLANDS

H. Herrman, F. Hughes, S. Rajkumar
ORYGEN Research Centre, Department of Psychiatry, University of Melbourne, Australia; University of Technology, Sydney, New Zealand; Rural School of Health, Bloomfield Hospital, Orange, Australia

Australia and New Zealand are affluent countries with well resourced health care systems, located in the South Pacific. They each allocate approximately 10% of health care budget to mental health. In Australia, resource disparities are evident in the urban and rural parts of the country and there are marked differences in health and mental health status between indigenous, new arrival and other populations. This paper discusses the response to the differing needs in rural and urban areas of the country. It considers the efforts to promote mental health through the work of sectors outside the health system, and respond to the needs for prevention, treatment and rehabilitation of those with illnesses through primary and specialist health care. By contrast, many island nations in the south and north Pacific have few formal mental health care resources. Most allocate no specific budget to mental health, and some allocate 1-2% of the health care budget. Each nation has its own multiple challenges. Non-governmental organisations contribute through a range of public health initiatives, education and training, workforce development or mental health service delivery and can greatly assist the governments. The WHO Pacific Islands Mental Health Network (PIMHnet), supported by the New Zealand government, was launched during the Pacific Island Meeting of Health Ministers in Vanuatu in 2007. Working together, network countries can draw on their collective experience, knowledge and resources and those of their neighbours and global partners, in order to promote mental health and develop systems that provide effective treatment and care. PIMHnet has identified the need to strengthen collaboration between key partners to meet the mental health needs of people in the Pacific.

SS35.3.
ACCESS TO CARE IMPEDIMENTS: SCANDINAVIAN PERSPECTIVES

M. Kastrup, W. Rutz
Centre of Transcultural Psychiatry, Rigshospitalet, Copenhagen, Denmark; Faculty of Social Sciences, University of Uppsala, Sweden

The Scandinavian countries have a number of features in common. Among them: value systems stressing solidarity and justice; long democratic traditions; strong labor unions; and women having strong positions. With respect to health care, free and equal access to health services including mental health irrespective of sex, race, age, ethnic group or social class is a basic assumption of the health systems in the Scandinavian countries. Despite that, a number of issues give rise to concern. According to the European Brain Council, projections towards 2020 show that the neuro-psychiatric disorders will increase in proportion from the present 10.5% of the total burden of disease in 1990 to 15% in 2020. As a consequence, these disorders should have a high ranking on the health political and economic agenda also in Scandinavia. According to the European Ministerial Report, the treatment gap in Western Europe is estimated to 17.8% for schizophrenia, 45.4% for severe depression, and 62.3% for generalised anxiety. Certain groups of patients are more likely to be without sufficient access to mental health care. Among them, refugees coming from other cultures where insufficient focus has been directed towards investigating their special needs, homeless persons, persons with dual diagnosis. The paper concentrates on issues of concern related to available psychiatric services and strategies to overcome care impediments.

SS35.4.
ACCESS TO MENTAL HEALTH CARE IN CENTRAL EUROPE AND THE BALKANS

D. Lecic Tosevski
Institute of Mental Health, School of Medicine, University of Belgrade, Serbia

Psychiatry and mental health care have many similarities and differences in Central European countries and the Balkans. Some of these countries have experienced conflicts and prolonged stress in the recent past, which led to deterioration of health system and psychiatric services. The chronic stress caused significant psychological sequelae, especially to vulnerable people, with increasing prevalence of mental disorders. However, there are some positive developments in the region. The mental health project of the Stability Pact for the Balkans and South-East Europe entitled "Enhancing social cohesion through enhancing community mental health services", aiming to a comprehensive, long-term strategy of prevention of conflicts, started

in 2002 and involves nine countries. The project has already made great impact in the following: a) harmonization of national mental health care policies; b) preparation of laws for protection of rights of mentally ill persons; c) opening of community mental health care services. The project is ongoing and might be used as a good example of collaboration in the region. In addition, some multicentric research projects on post-traumatic stress involving many countries of the region are underway, which are also contributing to the reconciliation, harmonization and stability.

SS35.5.
RUSSIA AND EASTERN EUROPE: SOCIAL TRANSITION AND MENTAL HEALTH

V.N. Krasnov
Moscow Research Institute of Psychiatry, Moscow, Russia

The period of social transition in Russia and other Eastern European countries has revealed the vulnerability of people's mental health, as evidenced not only through changes in the incidence of the main mental disorders, but also by the upward trend in alcohol and drug use, suicide rate and prevalence of cardiovascular diseases, and the fall in life expectancy, especially among men. The adverse trends are linked with each other or have developed roughly in parallel: the increase in alcohol abuse was accompanied by a peak in suicides, reaching a figure of 42 per 100,000 in 1994. Despite a tendency towards social and economic stabilization in the last few years, indicators of mental and general health in Russia have so far remained worse than they were in the 1970s and the 1980s, and also worse than current indicators in Western Europe and United States of America. The introduction of internationally recognized legislative standards into mental health service practice has undoubtedly been a positive development. Such standards ensure the protection of human rights during the delivery of mental health care and make it easier to organize new forms of support and treatment, especially in primary medical care, and to develop psychosocial methods of treating and rehabilitating people with mental disorders. An increasingly wide range of specialists in clinical psychology and social work, as well as former patients and their relatives, are now involved in providing care to people with mental disorders.

SS36.
MANAGEMENT OF MENTAL AND BEHAVIOURAL DISORDERS IN PEOPLE WITH INTELLECTUAL DISABILITIES
(organized by the WPA Section on Psychiatry of Intellectual Disability)

SS36.1.
CASE-MIX OF INTELLECTUAL DISABILITIES BASED ON FUNCTIONAL DEPENDENCY: IMPLICATIONS FOR TREATMENT

L. Salvador-Carulla, K. Gibert, J.C. Marin, A. Martorell, M. Nadal, M. Bertelli
PSICOST Research Association, Jerez de la Frontera, Spain; Department of Statistics and Operations Research, Universitat Politecnica de Catalunya, Spain; Italian Society for the Study of Mental Retardation (SIRM), Italy

While a significant research on case-mix has been carried out in schizophrenia and other severe mental disorders, little is known on the case-mix of persons with intellectual disabilities (PWID). Functional impairment (FI) is a better predictor of service utilisation and related outcomes than clinical symptoms. High levels of functional dependency warrant access to special services in Europe. This study was aimed at providing a case-mix classification of PWID based on severe disability or functional dependency. A sample of 156 PWID in an occupational setting was studied using a standard psychiatric assessment (Mini PAS-ADD), and measures of care management (ICAP), family burden (SOFBI) and functional impairment (WHO-DAS). A mixed qualitative and quantitative approach was followed. Clustering based on rules (ClBR), a hybrid knowledge discovery from data (KDD) technique, was used to extract knowledge from complex domains in form of typical profiles. KDD classified 45.8% of subjects as functional dependent. Two sub-classes were identified by ClBR: limitations in specific skills and behavioural problems. A restrictive semantic rule was developed to discriminate these groupings using ratings in three ICAP sections: general behaviour, living in the community and communication. This rule identified 17,4% of users as functionally dependent. Even in settings for highly functioning PWID, a significant number of users fulfil criteria of functional dependency. Two different groups with different pattern of service use and family burden can be identified: those with specific skills impairment mainly due to physical problems and those with behavioural problems. The therapeutical implications of this case-mix should be operationalised.

SS36.2.
USE OF PSYCHOTROPICS TO MANAGE PROBLEM BEHAVIOURS AMONG ADULTS WITH INTELLECTUAL DISABILITIES

S. Deb
Division of Neuroscience, Queen Elizabeth Psychiatric Hospital, University of Birmingham, UK

A proportion of people with intellectual disabilities (ID) show problem behaviours. Both pharmacological and non-pharmacological strategies are used to manage these behaviours. The types of medications that are used for this purpose either alone or in association with other non-pharmacological management include antipsychotics, antidepressants, anti-anxiety drugs, mood stabilisers, psychostimulants, opioid antagonists and also vitamins and diets. These medications are not licensed for the treatment of problem behaviours and should be used with some caution because of their adverse effects. Apart from a few exceptions, most of the evidence for the effectiveness of medication for the management of problem behaviours comes from non-controlled or non-randomised observational studies. Most randomised controlled trials (RCT) show risperidone to be more effective than placebo, but one recent RCT showed that placebo was more effective than risperidone in improving problem behaviours in people with ID. Current guidelines suggest that a thorough assessment of the cause and effect of the problem behaviour should be carried out before prescribing medications. A formulation should document the assessment and rationale for the use of medications. Where appropriate, behavioural and psychological interventions should be employed either instead of or along with the medication. People with ID and their carers should be involved in the decision making process. At the outset the time, method and professionals involved with the follow-up assessment should be determined. Follow-up should involve an objective assessment of target behaviours and an assessment of the quality of life of the person and their carers. At each follow-up a re-formulation should be carried out with consideration of non-medication based management and possibility of withdrawing medication. Important issues such as capacity, consent and legal issues should always be borne in mind.

SS36.3.
BEHAVIOURAL AND COGNITIVE-BEHAVIOURAL INTERVENTIONS FOR OUTWARDLY DIRECTED AGGRESSIVE BEHAVIOUR IN PEOPLE WITH INTELLECTUAL DISABILITIES

A. Hassiotis, I. Hall
Royal Free and University College Medical School, London; Learning Disabilities Service, Mile End Hospital, London, UK

Outwardly directed aggressive behaviour is a significant part of problem behaviours presented by people with learning disabilities. Prevalence rates between 3.3% to 36% have been reported in the literature. Such behaviours often run a long term course and are a major cause of social exclusion. We aimed to determine the efficacy of behavioural and cognitive behavioural interventions for outwardly directed aggressive behaviour for people with learning disabilities. The Cochrane Library (CENTRAL) 2007 (Issue 1), MEDLINE 1966 to February 2007, EMBASE 1980 to February 2007, PsycINFO 1872 to February 2007 and Dissertation Abstracts late 1960s to February 2007 were searched. Where appropriate, research filters were used. Studies were selected if more than four participants, children or adults, were allocated by random or quasi-random methods to either intervention or standard treatment/wait list. References identified by electronic searches, examinations of bibliography and personal contacts were screened against inclusion criteria by two independent reviewers. Two reviewers independently extracted and entered data into RevMan (Cochrane Collaboration software). Four studies based on adult populations with learning disabilities were deemed to be suitable for inclusion in the current version of this review. Data were only available in a form suitable for meta-analysis in three studies, but due to heterogeneity of populations and interventions, meta-analysis was not performed. Direct interventions based on cognitive-behavioural methods (modified relaxation, assertiveness training with problem solving, and anger management) appear to have some impact on reduction of aggressive behaviour at the end of treatment and in some studies also at follow-up (up to six months). The existing evidence on the efficacy of cognitive behavioural and behavioural interventions on outwardly directed aggression in children and adults with learning disabilities is scant. There is a paucity of methodologically sound clinical trials. Given the impact of such behaviours on the affected individual, his or her carers and on service providers, effective interventions are essential. It is also important to investigate cost efficacy of treatment models against existing treatments. We recommend that randomised controlled trials of sufficient power are carried out using primary outcomes of reduction in outward directed.

SS36.4.
ANTIPSYCHOTIC DRUGS FOR THE MANAGEMENT OF BEHAVIOURAL DISORDERS IN PEOPLE WITH INTELLECTUAL DISABILITIES: GENERIC QUALITY OF LIFE AS AN OUTCOME MEASURE

M. Bertelli, D. Scuticchio, B. Fontani, R. Rossi, L. Salvador-Carulla
Italian Society for the Study of Mental Retardation (SIRM), Italy; Centre for Research and Evolution, Florence; Social Cooperative Work 2000, Arezzo, Italy; PSICOST Research Association, Jerez de la Frontera, Spain

First- and second-generation antipsychotics are frequently used for the management of behavioural disorders (BDs) in people with intellectual disability (ID). However, outcome differences between the two groups of drugs have not been adequately investigated and have not included generic (other than problem-specific or disorder-specific) quality of life. Fifty-five subjects with ID, psychiatric disorders and BDs were randomly recruited to evaluate the effectiveness of different antipsychotic drugs on BDs and their impact on quality of life. At the time of recruitment, 22 subjects were receiving old-generation compounds and 23 a new-generation antipsychotic (clozapine, olanzapine, risperidone, or quetiapine). All subjects were assessed for psychiatric diagnosis (DM-ID; SPAID-G), clinical global impression (CGI), severity of BDs (HBSs), side effects (DOTES), and generic QoL (QoL-IP) at baseline and every 6 months for a period of 24 months. Treatments with traditional neuroleptics resulted to be associated with more frequent discontinuation, higher incidence of side effects, and lower efficacy on BDs than treatments with new-generation antipsychotics. Traditional neuroleptics also resulted in significantly worse impact on generic QoL.

SS37.
CHALLENGES IN COMMUNITY-ORIENTED PSYCHIATRIC CARE
(organized by the WPA Section on Emergency Psychiatry)

SS37.1.
CRISIS INTERVENTION AT THE GENERAL HOSPITAL AMONG ACUTELY SUICIDAL BORDERLINE PATIENTS

A. Andreoli, A. Berrino, Y. Burnand, P. Ohlendorf, S. Lorillard
Service de Psychiatrie de Liaison et d'Intervention de Crise, Hôpitaux Universitaires de Genève, Geneva, Switzerland

Our study aimed to further investigate whether crisis intervention at the general hospital provides appropriate management of acutely suicidal borderline patients admitted to medical emergency room. One hundred patients aged 16-60, assigned to treatment as usual (TAU) at discharge from emergency room and a comparable patient cohort referred to supplementary crisis intervention at the general hospital (SCI) were followed-up during 3 months in a pre-post design. All patients met criteria for borderline personality disorder at the International Personality Disorder Interview. At discharge from the general hospital, 97% patients who received SCI did not require inpatient treatment anymore and 86% were able to start structured outpatient treatment. At 3-month follow-up, suicide attempt repetition, treatment failure and psychiatric hospitalization were respectively 8% (mean survival time, in days: 85.6±16.3; 95% CI 82.3-88.8), 14% and 8% (mean survival time: 84.4±19.8; 95% CI 80.5-88.4) in this group. Among comparison subjects assigned to TAU, the corresponding rates were 17% (mean survival time: 79.8± 25.9; 95% CI 74.6-84.9), 56%, 56% (mean survival time: 42.2±43.6; 95% CI 33.5-50.8). The global 3-month costs for inpatient treatment were respectively 687,680 SF and 911,400 SF for SCI and TAU. The data show fair adherence to outpatient treatment and low adverse outcome among acutely suicidal borderline patients referred to supplementary crisis intervention at the general hospital at discharge from emergency room. These results indicate that implementation of SCI is feasible and may provide an appropriate alternative to standard emergency management of the acute suicidal crisis among borderline patients. The data suggest that new controlled research should further investigate the comparative cost-effectiveness of this innovative crisis intervention program.

SS37.2.
INTERNET: A SOURCE OF NEW PSYCHIATRIC EMERGENCIES? THE CASE OF ANOREXIA NERVOSA

P.M. Furlan, R.L. Picci
Department of Mental Health, San Luigi Gonzaga Hospital, University of Turin, Italy

Health care is one of the major areas of Internet activity both as a source of information and for its exchange. This can lead to psychiatric emergencies, because of exchange of incorrect information and advice, inappropriate treatments, scaremongering, although most of these home pages, web sites, chat lines try to provide relief for psychological problems and help their users/members. However, there is one psychopathological field where much of the "interaction" seems intended to attract new recruits, to make pathology appear attractive and where the advice is oriented to highlighting (and aggravating?) the main features of the pathology: anorexia nervosa. Exploring these sites, we have entered a world sometimes jealously defended, often seductive and not without its dangers. Indeed, carrying out this study, two young researchers (both female psychologists) had a severe crisis which lead to a temporary interruption of their duty. A number of different viewpoints analysing the stance of the site creators and dominant members are presented and discussed.

SS37.3.
BURNOUT IN ACUTE PSYCHIATRIC CARE: AN ITALIAN SURVEY

C. Bressi, M. Porcellana, G. Invernizzi
State University and Niguarda Hospital, Milan, Italy

Emergency mental health professionals are asked to face an increasing number of clinical, legal and economic issues that may be sources of occupational stress. Aims of this cross-sectional, multicentre study were to evaluate the prevalence of burnout and job satisfaction among psychiatrists and nurses working in inpatient psychiatric wards and to investigate the contribution of different individual and environmental factors to burnout. A sample of 36 psychiatrists and 95 nurses from five acute adult mental health wards in Milan completed the Maslach Burnout Inventory (MBI), a job satisfaction measure and a study-specific questionnaire. A series of linear regression models was constructed to explain the variance in the main dependent variables (MBI sub-scores), and the relative magnitude and direction of their associations with individual and work context and environment variables. The scores on MBI sub-scales indicated a high level of emotional exhaustion in 30.6% of the psychiatrists and 21.1% of the nurses; a high level of depersonalisation in 41.7% and 27.4% respectively; and a low level of personal accomplishment in 25% and 34.7% respectively. Physicians seemed to be more stressed by work environment factors, whereas nurses seemed to be more stressed by personal factors. Variance in emotional exhaustion was mostly accounted for by the combined effect of job satisfaction and excessive workload (R^2=0.343; F=16.183; p<0.001). These data suggest that psychiatrists and nursing staff differ in terms of the prominence given to individual stressors in their work environment and confirm that job satisfaction could have a protective role.

SS37.4.
EMERGENCY PSYCHIATRY IN INFANCY

S. Tyano
University Medical School, Tel Aviv, Israel

The very topic of emergency in infant psychiatry (0-3 years) is not dealt with in child psychiatry textbooks, nor in conferences. This is due in part to the fact that infant psychiatry, as a domain in itself, is still not well known among mental health professionals, but also to the reluctance one may have to think about psychiatric emergencies for babies. Babies are totally dependent upon their caregivers, so what can be an emergency condition for them? We present two clinical vignettes that illustrate two points on the spectrum of conditions where the holding environment of the baby is in danger, and the baby develops symptoms that reinforce the environmental dysfunction and create a potentially malignant vicious circle.

SS38.
DEPRESSION AND MEDICAL COMORBIDITY (organized by the WPA Sections on Conflict Management and Resolution and on Psychiatry, Medicine and Primary Care)

SS38.1.
DEPRESSION AND CARDIOVASCULAR DISEASES: EVALUATION AND TREATMENT INTEGRATION

F. Tudose
Department of Liaison Psychiatry, Emergency University Hospital of Bucharest, Romania

Cardiovascular diseases (CVD) lead in prevalence and mortality in the European countries and in the United States of America. It is predicted that by 2010 depression will be second in prevalence. It is likely that cardiovascular diseases and depression will be the main public health challenges for the next two decades. CVD and depression share some common biological, psychosocial and even genetic factors. A systematic study was performed at the University Hospital in Bucharest, over a three years period. It included 1200 inpatients from the cardiology ward of our hospital, who were examined in consultation-liaison. The Beck Depression Inventory (BDI) was administered to all patients and revealed major depression in 16.3% of the patients (BDI score >24) and minor depression in 11% of them (BDI score >10). We compared this population with that of a group of 712 inpatients hospitalized in the gastrointestinal (GI) department during the same period. In the GI group, BDI scores revealing major depression were found in 5.4% of cases and scores revealing minor depression in 8.1% of cases. These differences between the CVD and GI unit patients are statistically significant. Given the current scientific literature depiction of myocardial infarct as a risk factor for depression and depression as a risk factor for CVD, it is highly recommended to evaluate and monitor for depression all cardiology inpatients, starting with the first day of hospitalization; develop a mutually agreed upon therapeutic protocol between the cardiology and psychiatric staffs; review and revise periodically; and assume a joint responsibility for outcome studies and improved protocols.

SS38.2.
DEPRESSION AND DEMENTIA: LESSONS LEARNED FROM THE BUCHAREST MEMORY CENTER

C. Tudose
Memory Center, Psychiatric Hospital Alexandru Obregia, Bucharest, Romania

Depression in late life is often associated with cognitive impairments. Historically, these cognitive deficits had been regarded as benign and reversible (referred to as pseudo-dementia or depression with reversible dementia). In the last five years, at our center, 4700 patients were diagnosed with dementia. Of these, 611 were referred for further evaluation because of cognitive deficits associated with depressive symptomatology. From this group, 411 proved to have minor depression and 200 major depression. The clinical and psychological assessment of all the cases allowed us to appreciate that minor depression was associated with mild to moderate dementia in the majority of patients referred. Among the major depression group, the majority (96%) revealed a diagnostically validated comorbid depression and dementia, while the rest (4%) revealed depression with cognitive deficits but no dementia. Most of the patients of the comorbid group (80%) responded to treatment as did the group (4%) with depression with cognitive deficits but no dementia. The remainder (16%) was refractory to treatment. Depression in late life must to be reevaluated. The relationship between depression and dementia is more complex than originally anticipated. Clinical aspects and psychological assessments can assist with the proper recognition of this complex clinical picture and depict early the transition from depression to dementia with subsequent practical recommendations.

SS38.3.
DEPRESSION AND INFLAMMATION: RESEARCH EVIDENCE AND CLINICAL IMPLICATIONS

C.B. Nemeroff
Emory University School of Medicine, Atlanta, GA, USA

There is increasing evidence that depression and inflammation are inexorably linked. Patients with major depression exhibit increases in a variety of inflammatory markers, including C-reactive peptide, interleukin-6, tumor necrosis factor (TNF) and others, as well as a decrease in natural killer (NK) cell activity. The implications of these findings are of paramount importance, because they may underlie the increased vulnerability of depressed patients to cardiovascular disease, diabetes and, perhaps, neoplastic disease. The reverse findings of high rates of depression in patients with primary inflammatory disorders, including cardiovascular diseases, is another significant source of data on this link between depression and inflammation. The depressogenic effects of α-interferon, used in the treatment of malignant melanoma and hepatitis C, and prevention of interferon-induced depression by pretreatment with selective serotonin reuptake inhibitors (SSRIs), represents one of the promising venues of integrating research evidence and clinical interventions regarding depression and inflammation.

SS38.4.
POST-PARTUM DEPRESSION AND CHILD HEALTH: EPIDEMIOLOGY, INTERVENTIONS, OUTCOMES, AND IMPLICATIONS FOR FUTURE POLICIES

E. Suardi, E. Sorel, H. Siddiqi, R. Dutta, I. Orinda
Department of Mental Health, St. Elizabeths Hospital; George Washington University, Washington, DC, USA

Whereas pregnancy and the mother-infant dyad are common targets of public health programs, the impact of maternal mental illness on child health is often not adequately understood. Mental health care remains separate from primary care and neglected, limiting the benefits of otherwise well designed interventions. With an estimated prevalence of 10-15% in developed countries and higher in underdeveloped countries, post-partum depression is a major public health problem. Serious consequences on child health and development have been documented, including impaired cognitive and motor development, increased risk of injury, inadequate preventive care (e.g., missed vaccinations), malnutrition and stunting, impaired attachment, and impaired psychological development. A review is performed of data on risk factors, prevention, detection and treatment, effects on mother and child health, and strategies to decrease these impacts. Examples of successful and failed past attempts of integrating mental health into primary care and community health care are also discussed. The authors propose: screening mothers for depression and other mental conditions during well visits of infants; incorporating mental health treatment of mothers in child health and nutrition programs; utilizing non-medical workers as first line in stepped-care models. They advocate that maternal mental health become central on the agenda of national and international policy makers, non-governmental organizations and benefactors.

SS39.
ADVANCES IN THE ASSESSMENT OF PEOPLE WITH INTELLECTUAL DISABILITY (organized by the WPA Section on Psychiatry of Intellectual Disability)

SS39.1.
STRENGTHS AND LIMITS OF THE DIAGNOSTIC CRITERIA FOR PSYCHIATRIC DISORDERS FOR USE WITH ADULTS WITH LEARNING DISABILITIES (DC-LD) AND OF THE DIAGNOSTIC MANUAL FOR INTELLECTUAL DISABILITY (DM-ID)

S.-A. Cooper, L. Salvador-Carulla, T. Holland, M. Bertelli
Psychological Medicine, University of Glasgow, UK; PSICOST Research Association, Jerez de la Frontera, Spain; Department of Psychiatry, University of Cambridge, UK; Italian Society for the Study of Mental Retardation (SIRM), Florence, Italy

The Diagnostic Manual for Intellectual Disability (DM-ID) produced by the National Association for the Dually Diagnosed (NADD) is not the first attempt to improve the diagnosis of mental disorders in people with intellectual disability (pwID). Many years before, the Royal College of Psychiatrists published a guide entitled DC-LD (Diagnostic Criteria for Psychiatric Disorders for Use with Adults with Learning Disabilities). Both instruments seem to support previous evidence of a very high prevalence of psychiatric disorders in pwID. The aim of the present paper is to compare strengths and limits of DM-ID and DC-LD at the light of the most recent literature and international experience on their application. DC-LD was created primarily for

adults with moderate to profound ID. DC-LD uses a different multiaxial system than the DSM-IV-TR. The editors of DM-ID envisioned that there would be a need to develop two adapted criteria, one for mild/moderate ID and other for severe/profound ID, each correlated with the DSM-IV-TR criteria. However, as the process has moved forward in the development of the manual, the editors came to realize that, in many diagnostic categories, there was no need to differentiate between mild/moderate and severe/profound, neither between mild ID and general population. Both DM-ID and DC-LD seem not to completely meet the need of symptomatic thresholds for diagnoses. Future attempts should refine symptoms description and further characterize some clusters of symptoms as something different from a behavioural phenotype of intellectual disability etiologies.

SS39.2.
AN ITALIAN CONSENSUS DOCUMENT FOR THE LIFE-SPAN MULTI-DISCIPLINARY APPROACH TO MENTAL HEALTH PROBLEMS OF PEOPLE WITH INTELLECTUAL DISABILITY

G. La Malfa, C. Ruggerini, M. Bertelli, S. Lassi, A. Castellani, S. Monchieri
Italian Society for the Study of Mental Retardation (SIRM), Florence, Italy

Intellectual disability (ID) or mental retardation is a lifelong condition included in the group of mental disorders in the international classification systems (ICD-10 and DSM-IV-TR). ID is associated with significant health problems, such as sensory impairment, motor deficit or multiple disabilities. It is also important to note that over 30% of people with ID have a co-occurring psychiatric disorder, which often has onset in childhood and persists through adolescence and adulthood. However, ID is largely disregarded as a health issue by national organisations. The Italian Societies of Mental Retardation/Intellectual Disability, of Infancy and Adolescence Neuro-Psychiatry, of Geriatric Psychiatry, for the study of Quality of Life, of Paediatrics, of Audiology and Phoniatrics have just completed the production of a consensus document on the life-span multi-disciplinary approach to mental health problems of people with ID. ID has consequences throughout the life-span and imposes a considerable burden on families and caregivers. It also requires high service provision and produces high health and societal costs. In the coming years national scientific societies have to cooperate in the promotion of research activity in this area for a better definition of multidimensional pathogenic mechanisms, valid assessment procedures, and better outcome measures. People with ID could draw great benefit from early lifespan-centred interventions.

SS39.3.
AN ITALIAN CONSENSUS DOCUMENT FOR MENTAL HEALTH PROBLEMS OF PEOPLE WITH INTELLECTUAL DISABILITY: MAIN ISSUES

C. Ruggerini, M. Bertelli, G. La Malfa, C. Porcelli, S. Monchieri, A. Castellani, S. Manzotti, G. Griffo, S. Monchieri
Italian Society for the Study of Mental Retardation (SIRM), Florence, Italy

The Italian Scientific Societies of Mental Retardation/Intellectual Disability, Infancy and Adolescence Neuro-Psychiatry, Geriatric Psychiatry, Study of Quality of Life, Paediatrics, Audiology and Phoniatrics have just completed the production of a consensus document on the life-span multi-disciplinary approach to mental health problems of people with intellectual disability (ID). Through two conferences and many internet forums, the six academic societies worked on the production of a document consisting of the following chapters: concept of mental retardation, international documents of reference, epidemiology, role of associations for the disabled, etiology, vulnerability, challenging behaviours, diagnosis communication, forgotten generations, social role for adulthood and elderly, quality of life, assessment, treatment, support to development, services, training, treatment of co-occurring illnesses. The consensus document adopts some related international documents as its philosophical background. These documents include the United Nations Human Right Declaration for Disabled People, and the World Health Organization Community Based Rehabilitation and Innovative Care for Chronic Conditions. Strong emphasis is given to opportunities for life-long learning.

SS39.4.
PSYCHIATRIC DISORDERS IN INTELLECTUAL DISABILITY AND ADAPTIVE BEHAVIOUR: ARE THEY RELATED?

M. Bertelli, D. Scuticchio, G. Giambalvo Dal Ben, M.N. Cappelli, A. Palma, M. Macrì
Italian Society for the Study of Mental Retardation (SIRM); AMG Centre for Research and Evolution, Florence, Italy

In people with intellectual disability (ID), the impact of psychiatric disorders on adaptive behaviour is unclear. The areas of adaptation and socialization, motor and daily living skills seem to be more impaired in pervasive developmental disorders than in schizophrenia-spectrum, personality or mood disorders. The purpose of this study was to further explore the interrelationship of adaptive skills and psychiatric disorder in adults with ID. Among people with ID attending a housing and support service in Tuscany (Italy), 10 subjects with a mood disorder, 10 with a schizophrenia-spectrum disorder, 10 with a pervasive developmental disorder, 15 with other psychiatric disorders, and 10 without a psychiatric diagnosis (DM-ID controlled) were consecutively recruited to be assessed for adaptive behaviour by the Vineland Adaptive Behavior Scale (VABS). Scores were corrected for severity of mental retardation and other background variables. Though the level of mental retardation seemed to considerably overshadow the impact of any psychiatric disorders on adaptive skill profile, people with co-occurrence of psychiatric disorders scored worse on the VABS than those without a psychiatric diagnosis. The lowest scores were recorded for pervasive developmental disorders.

SS40.
RECENT ADVANCES IN OCCUPATIONAL PSYCHIATRY
(organized by the WPA Section on Occupational Psychiatry)

SS40.1.
RECENT DEVELOPMENTS IN NATIONAL HEALTH SERVICE WORKFORCE POLICY IN THE UK

A. Lau
North East London Mental Health Trust, London, UK

New workforce policy seeks to involve the workforce more closely in decision making in the National Health Service (NHS). The regulator for quality and standards in the NHS is the Healthcare Commission. In 2008, it announced it will now consider annual staff surveys in its annual performance ratings of NHS Trusts (healthcare organisations). Annual staff surveys are to be given more weight. If there are a series of poor staff surveys over a number of years, then the Trust will

need to show what it is doing to address staff concerns. A crucial issue that sparked the "new" attention to workforce issues was the disaster around UK Department of Health workforce planning in 2007, concerning junior doctor training places. On 23 March 2007, 12,000 junior doctors, backed by senior doctors across the country, took to the streets of London on a march. This was coordinated by a junior doctors' protest group, RemedyUK. They protested against the imposition of a system in which junior doctors were selected for training places by a computer system which did not take account of CVs, or use selection interviews. The process also saw a shortfall of about 10,000 junior doctor training places. All hospitals and units across the country were affected. Medical staff morale plummeted, especially that of all junior doctors who were affected by these developments. Subsequent events led to the resignation of prominent politicians and health officials. This paper goes into lessons learnt by this experience.

SS40.2. OCCUPATIONAL STRESS INTERVENTION: A COMPARATIVE EVALUATION IN BRAZILIAN WORKERS

A.M. Rossi
International Stress Management Association in Brazil (ISMA-BR), Porto Alegre, Brazil

This study was designed to evaluate an integrative approach (IA) that aims to address the different individual needs and allows the individual to use his/her own creative powers of visualization to overcome occupational stress. The two specific research questions investigated were: a) does the IA reduce or eliminate symptoms of occupational stress? b) is there a significant difference between the IA and the progressive muscle relaxation (PMR) treatments in reducing occupational stress? Thirty-four stressed workers were randomly assigned to the two treatments and a control group. Measurements included self report and physiological measures. All subjects scored 450 or above on the Brief Stress and Coping Inventory and scored high on the STAI Form Y-1. Physiological measures (skin temperature, galvanic skin response and heart rate) were taken before and after treatment. Results indicate that the IA approach produced significantly lower self report measures of stress than either the control group or the PMR group. No treatment was significantly more effective in producing lowered physiological measures. Both treatment groups (IA and PMR) showed a significant lowering of physiological measures from pre-test to post-test.

SS40.3. PSYCHOSOCIAL FACTORS AFFECTING RETURN TO WORK FOLLOWING SICK LEAVE AMONG WORKERS WITH DEPRESSION

T. Ogawa, J. Shigemura, A. Yoshino, S. Nomura
Department of Psychiatry, National Defense Medical College, Saitama, Japan

This study was conducted among 89 Japanese workers with major depressive disorder (MDD) to examine factors associated with their return to work (RTW) status following sick leave (SL). Individuals with ≥2 weeks of SL episode and with ≥2 months of pharmacotherapy history were analyzed. Measurements such as the Mini-International Neuropsychiatric Interview (MINI), the Hamilton Rating Scale for Depression (HAM-D), the Interpersonal Sensitivity Measure (IPSM), neuroticism, and WHO QOL26 were evaluated. Univariate and multivariate analyses were done to identify the variables associated with RTW status. To control for current MDD severity, analysis was also performed among a remission subgroup (HAM-D≤7; n=54). Thirty-eight subjects (42.7%) had returned to work. In univariate analysis, RTW status associated with being married, older MDD onset age, ≥5 months since the recent major depressive episode (MDE) diagnosis, ≤6 months of SL duration, no comorbid anxiety disorder, low scores of HAM-D, IPSM, and neuroticism, high WHO QOL26 score, a history of job-related stress, and availability of employee support systems. In multivariate model, predictors of RTW status were: SL duration ≤6 months, ≥5 months since the recent MDE diagnosis, HAM-D≤4 and IPSM≤94. In the remission subgroup, the above variables, except for HAM-D, also predicted RTW status. RTW status was predicted by HAM-D≤4, IPSM≤94, ≥5 months since the recent MDE diagnosis, and ≤6 months of SL. These findings may be helpful to adapt MDD treatment strategies among workers.

SS40.4. THE EFFECTS OF WORK STRESS ON HEALTH: THE ROLE OF ENVIRONMENTAL AND PERSONALITY FACTORS

M.S. Kopp, Á. Skrabski
Institute of Behavioural Sciences, Semmelweis University, Budapest, Hungary

The aim of this cross-sectional study on a large representative population sample was to analyse the association between work related factors and self-reported mental and physical health after controlling for negative affect and hostility as personality traits. The effect of job related factors on Beck Depression Score, WHO well-being score and self-rated health (SRH) were analysed in a representative sample of 3153 male and 2710 female economically active Hungarians. In both genders, negative affect was the most important correlate of depression, well-being and SRH, whereas hostility was closely associated only with depression. Education and income were closely associated with depression and SRH, but less strongly with well-being. Job insecurity, low control and low social support at work, weekend work hours, job related life events and dissatisfaction with work and with boss were independent mental health risk factors, but there were important gender differences. The results of this large national representative study indicate that, independent of negative affect and hostility, a cluster of stressful work-related psychosocial conditions accounts for a substantial part of variation in self-reported mental and physical health of the economically active population in Hungary.

SS40.5. EMPLOYMENT STATUS AFTER JOB LOSS DUE TO MENTAL DISORDERS

S. Shima
Kyoto Bunkyo University, Kyoto, Japan

This study was carried out in 109 patients who visited Kandahigashi Clinic between 2001 and 2007 and lost their jobs due to mental disorders. Using their clinical reports, information on their backgrounds and employment status was collected. Subjects were male 66.1%, aged from 19 to 62. Diagnosis was mood disorders in 89.9%, neurotic disorders in 6.4%, and schizophrenic disorder in 3.7%. During one year after job loss, 54.2% were full-time employed, 15.7% were part-time employed, and 30.1% remained unemployed. Among 83 ex-employees who were followed-up for one year after their job loss, those who were treated with pharmacotherapy and psychotherapy were more frequently employed. People with schizophrenic disorder were more often unemployed. Those with spouses were more often employed. These results imply that a social system is needed to help ex-employees with mental disorders to get another job.

SS41.
BIG CITIES AND MENTAL HEALTH
(organized by the WPA Section on Urban Mental Health)

SS41.1.
BIG CITIES AND THE EPIDEMIOLOGY OF MENTAL DISORDERS: WHAT IS THE EVIDENCE?

G. de Girolamo
Health Care Research Agency, Emilia-Romagna Region, Bologna, Italy

The explosion of urbanization on a global scale has increased the need to study the extent to which urbanization is a risk factor or, conversely, protective for the mental health of populations living in these areas. In particular, research applying the epidemiological investigation methods are valuable for this purpose. The results of research conducted internationally confirm that urbanization is a risk factor for many mental disorders, particularly schizophrenia and substance abuse, in the latter case through a higher likelihood of contact with substances of abuse. Several studies have shown that the incidence of schizophrenia is higher among persons born in urban areas, and there is a dose-relationship correlation between size of the urban area and amount of risk. It is important to strengthen the research investigating the links between ecological environment of life and psychiatric morbidity.

SS41.2.
MENTAL HEALTH PROBLEMS AND SERVICES IN SÃO PAULO, BRAZIL

M.R. Jorge
School of Medicine, Federal University, São Paulo, Brazil

São Paulo is among the five largest metropolitan areas of the world and shares many mental health problems with similar cities: homeless people with severe mental disorders, different forms of violence and its consequences (such as post-traumatic stress disorder), high prevalence of alcohol and drug problems, stigma and discrimination related to mental disorders, all kinds of conditions related to poverty, impaired quality of life, lack of health services (particularly for children and adolescents) and other problems in access to care. The case of São Paulo is discussed and compared to other realities.

SS41.3.
PERSPECTIVES ON MENTAL HEALTH AND MENTAL HEALTH SERVICES IN NEW YORK

G. Caracci
Department of Psychiatry, University of Medicine and Dentistry of New Jersey, Newark, NJ, USA

New York, one of the world's largest metropolises, is known for its dynamism in cultural, academic, financial and communication spheres. At the same time, New York faces great challenges concerning mental health and mental health services. From an epidemiological viewpoint, recent trends in globalization, immigration as well as terrorism have greatly shaped the epidemiological landscape of the city. The city's mental health services needed to change with the changing times. We review the available mental health services, with special emphasis on special needs population such as the elderly, women, children, substance abusers, illegal immigrants and refugees. In addition, we comment on social and environmental determinants of mental health of citizens of this fascinating and vibrant town.

SS41.4.
BIG CITIES AND MENTAL HEALTH IN CENTRAL AND EASTERN EUROPE

L. Vavrusova
Department of Psychiatry, University Hospital, Bratislava, Slovak Republic

Traditionally, the health care systems in central and eastern European countries have been established as a network of public health care for each region. In this paper we provide information on the development of psychiatric facilities in big cities of the region. The turmoil occurring during the last decade has led to a reorganization of acute and chronic beds, an increased involvement of the private sector, a greater diversity of psychiatric services, a growing participation of non-governmental organizations, users and carers. However, there is still need for further developments concerning the issues of suicidality, homelessness, underemployment of psychiatric patients, rehabilitation, social services and legislation.

SS42.
SUBJECT'S EXPERIENCES: A KEY DOMAIN FOR PSYCHIATRIC ASSESSMENT AND CLASSIFICATION?
(organized by the WPA Section on Classification, Diagnostic Assessment and Nomenclature)

SS42.1.
EXPERIENCE OF ILLNESS AND HEALTH IN PERSON-CENTERED INTEGRATIVE DIAGNOSIS

J.E. Mezzich
New York University, New York, NY, USA

A diagnostic approach to be effective as informational base for clinical care and health promotion must encompass all domains fundamental for such central clinical activities. In addition to information on the spectrum from illness/disabilities to recovery/functioning and on contributory (risk and protective) factors, it would be helpful and relevant that the diagnostic formulation include information on the experience of illness and health. Such information would enhance understanding of the clinical situation and is likely to help in engaging patients and family and to strengthen their commitment to a substantial care plan. Elements of experience of illness and health being considered within the development of person-centered integrative diagnosis include suffering and cultural experience of illness and help-seeking efforts on one hand and quality of life and cultural experience of identity and positive health on the other. Also to be considered are the specific categorical, dimensional and narrative descriptive procedures to be employed and how to facilitate interactions among clinicians, patient, family and other carers and attention to pertinent subjectivity and inter-subjectivity.

SS42.2.
SUFFERING AS A DOMAIN OF PERSON-CENTERED INTEGRATIVE DIAGNOSIS

T. Sensky
Imperial College, London, UK

The alleviation of suffering is widely quoted as a major goal of medicine, yet in everyday clinical practice, suffering is seldom mentioned, let alone quantified. Suffering may be conceptualised, according to the seminal work of Eric Cassell, as the response to a serious threat to

the individual's personhood (in essence, the ways in which the individual characterises him/herself). Qualitative and quantitative data will be presented to show that: a) patients with chronic physical illnesses have a remarkably consistent understanding of the meaning of suffering, and b) suffering is commonly associated with threats to personhood which are perceived as uncontrollable and/or intrusive. Suffering tends to be only weakly related to "objective" measures of illness severity, but often correlates more strongly with psychological variables, such as depression and sense of coherence. Suffering is therefore linked more closely to the individual's appraisal of the illness than to the illness itself. Methods are outlined of assessing suffering and working with it in clinical practice.

SS42.3.
THE EXPERIENTIAL SUBSTRATE OF SCHIZOPHRENIA

M. Moscarelli
International Center of Mental Health Policy and Economics, Milan, Italy

The "experiential substrate" of schizophrenia is a domain of the descriptive psychopathology characterized by "passive" experiences and defined as: a) passively and involuntarily received by the patient, simple, immediate, self-giving; b) non-optional, unavoidable, self-evident; c) easily recognized and acknowledged by patients, who are able to describe and recognize/acknowledge the individual "passive experiences" if adequately questioned; d) experienced in various areas (e.g., thought, perception, emotion); e) potential "indicators" of schizophrenia; f) frequently experienced as enigmatic and puzzling; g) frequently experienced as disturbing. This restrictive definition of the of "passive" experiences excludes the subject's: a) active and intentional "position taking" towards each passive experience; b) actively and intentionally formulated judgments, ideas, notions, convictions and beliefs; c) acts of judgment formulation aimed to understand/explain each "passive experience" in terms of doubt/belief, no conviction/conviction, uncertainty/certainty; d) acts of judgment formulation aimed at understanding or explaining the "passive experience" in terms of its relationship to a codified and/or operationalized symptom or diagnosis of schizophrenia ("awareness of illness" or "insight"). The definition of "passive experiences" can enable the experiential substrate of schizophrenia to be acknowledged as an independent domain with a specific role in the assessment of the disorder. The term "descriptive micropsychopathology" is proposed for this new method aimed to describe "passive" experiences and "active" judgments as independent domains to enhance the reformulation of criteria for symptom assessment, and consequently reformulation of the criteria for the assessment of efficacy, effectiveness and subjective usefulness of interventions in schizophrenia. A new measure focuses on the evaluation of the "passive experiences" and on the disturbance they cause to the subjects affected by schizophrenia.

CS1.
ETHICAL CHALLENGES IN PSYCHIATRY (organized by the WPA Standing Committee on Ethics)

CS1.1.
THE RELEVANCE OF MORAL THEORIES TO THE PRACTICE OF MEDICINE AND PSYCHIATRY

G.N. Christodoulou, D. Anagnostopoulos, N.G. Christodoulou, M. Margariti
Hellenic Center for Mental Health and Research; Department of Psychiatry, Athens University, Athens, Greece

This paper discusses moral theories in psychiatry (virtue ethics, casuistry, deontological theory, utilitarianism, principlism and ethics of care) and their relevance to psychiatric clinical practice. The advantages and disadvantages of each of these theories are considered and it is pointed out that they should be regarded as complementary rather than antithetical. The primacy of theories based on values as opposed to theories based on rules is stressed. Codes of ethics in medicine and psychiatry existing from ancient times to the present are briefly reviewed and their similarities and differences are highlighted. Controversial issues, like exposure of incompetent colleagues, responsibility to the state, societal duties of the psychiatrist, arising from these codes of ethics are discussed. Recurring topics, like turning to experienced colleagues if needed (awareness of limitations), the "do no harm" Hippocratic dictum, confidentiality and priority of the well-being of the patient are highlighted. The involvement of the World Psychiatric Association in the revision of the Helsinki Declaration on Medical Research (World Medical Association) is a very important development, as it shows that our medical colleagues have started considering the importance of input from our discipline to issues related to medical ethics.

CS1.2.
CAN COMPULSORY TREATMENT BE VALUES-BASED?

K.W.M. Fulford
Universities of Oxford and Warwick; Department of Health, UK

Values-based practice is a new skills-based approach to working with complex and conflicting values in health care. This paper briefly introduces values-based practice and shows how developments in this area support more traditional approaches to working with values in health care, in particular ethics. The model for clinical decision-making that is described is essentially this: the clinical skills of values-based practice are combined with best evidence from evidence-based practice within a framework of shared values defined by ethics. An example of how this model works in practice is described which has been developed as part of a wider programme of policy and practice developments in values-based practice in the UK government's Department of Health – the Code of Practice and related training materials that have been produced to support implementation of new legislation covering the use of compulsory treatment in psychiatry. This example shows that compulsory treatment, as perhaps the most contentious area of psychiatric practice, can indeed be not only evidence-based but also values-based.

CS1.3.
PSYCHIATRY AND THE PHARMACEUTICAL INDUSTRY: AN ETHICAL ISSUE

S.A. Azim
University of Cairo, Egypt

The support given from the industry to prescribers, to researchers, for conferences/congresses and related activities, although quite helpful, still may influence the decisions of psychiatrists, which may sometimes be not in the benefit of their clients. This conflicting situation is usual nowadays, especially with the growing importance of pharmaceutical products. The shortage of support from the government and from other authorities to cover mental health activities and research in this domain in quite evident. Psychiatrists should be oriented to the ethical issues that arise in psychiatry's relationship with industry. The support provided by the industry should be unrestricted and allowing more freedom and transparency. Some regulations can be established between the industry and psychiatric institutions.

CS1.4.
ETHICAL ISSUES RELATED TO PSYCHIATRIC TREATMENT IN DEVELOPING COUNTRIES

J.K. Trivedi, M. Dhyani
Department of Psychiatry, Medical University, Lucknow, India

Ethics is derived from the Greek word "ethicos", which means "rules of conduct that govern natural disposition in human beings". It is the body of moral principles or values governing a particular culture or group. Ethics in psychiatry is always in a state of flux, adapting to changes in the specialty and its place in the world at large. The ethical issues that are relevant to the developing or low resource countries are in contrast to the industrialized countries. Issues such as euthanasia, surrogate motherhood, organ transplantation and gene therapy, which are on the forefront in the industrialized countries, are, for the moment, irrelevant in most developing countries. Ethical dilemmas associated with the allocations of limited resources are more important in the developing countries. Issues such as oppression and corruption, along with cross cultural research and activities of multinational companies, are relevant in developing countries. The majority of population in these areas is illiterate and unaware of their rights and is vulnerable to all sorts of allurements and or mistreatments. There is lack of consensus on these ethical issues and well defined ethical guidelines are needed.

WPA SECTION WORKSHOPS

SW1.
NEUROPHYSIOLOGY IN PSYCHIATRY: STANDARDIZATION, TRAINING AND CERTIFICATION
(organized by the WPA Section on Psychophysiology)

S. Galderisi (Naples, Italy), N. Boutros (Detroit, MI, USA), M. Brunovsky (Prague, Czech Republic), H. Soliman (Cairo, Egypt), A. Mucci (Naples, Italy)

Standard EEG and evoked potentials are useful tools in the diagnostic workup of patients with psychiatric or neurological disorders. However, most psychiatrists and sometimes even neurologists are not trained in electrophysiology and are not knowledgeable about its applications in the differential diagnosis of psychiatric disorders, monitoring of drug toxicity and neurofeedback. Contrary to the current trend to reduce training in electrophysiology, the core curriculum of psychiatrists should include education on the proper use of EEG in diagnosis and management of patients with psychiatric disorders and the acquisition of basic skills in qualitative and quantitative EEG and evoked potentials recording and interpretation. The WPA Section for Psychophysiology in Psychiatry started a discussion among world leaders in the field on the possibility to create homogeneous electrophysiology training for psychiatrists across the world. In this workshop, experts from various countries describe the present state of standardization of EEG and evoked potentials recording techniques and of training and certification procedures in their national contexts. Proposals for implementing homogeneous training programs and certification procedures are discussed.

SW2.
INTEGRATING RURAL MENTAL HEALTH WITH PRIMARY CARE IN DIVERSE CULTURES
(organized by the WPA Section on Rural Mental Health)

S. Rajkumar (North Richmond, Australia), F. Hughes (Porirua, New Zealand), T.A. Okasha (Cairo, Egypt), F. Kigozi (Kampala, Uganda), M.S. O'Brien (Lawrence, KS, USA), J.C. Anthony (East Lancing, MI, USA)

This workshop focuses on sparsely populated remote regions where specialist services are minimal or nil. It covers different views of caring disciplines such as nursing, social work and psychiatry. The concepts and innovations have relevance to a vast population who are rural and remotely based globally. The overall aim is to enhance rural mental health and primary care in remotely based areas of the world and tease out replicable models that are cost effective and yet beneficial to the community.

SW3.
PREGNANCY RELATED PSYCHIATRIC PROBLEMS: SORTING THEM OUT AND ADDRESSING REAL ISSUES
(organized by the WPA Section on Perinatal Psychiatry and Infant Mental Health)

G. Apter-Danon (Antony, France), N.L. Stotland (Chicago, IL, USA), G. Robinson (Toronto, Canada), N. Garret-Gloanec (Nantes, France), C. Nadelson (Boston, MA, USA)

In the last years a number of studies have focused on psychiatric disorders linked to reproductive issues. Pregnancy termination and abortion have been linked to consequent mood and anxiety disorders and eventually post-traumatic stress disorder. Past history of abuse and trauma, as well as of depression, in women's lives and its association to depression in pregnancy, however, often goes neglected. Abortion and its supposed psychiatric consequences have been subject to heated debate often confounding examination of scientific facts. On the other hand, the myth of pregnancy as a blessed period, free of psychiatric disorders, is still strong though continuously proved wrong whether it be for women with bipolar or major depressive disorder. Recognition and assessment of symptoms during the peri-partum is still insufficient. Links to past maternal history are not

taken into account and mood disorders during the peri-partum are undermanaged and go untreated. As for post-partum depression, maternal responsibility and guilt often become the main issues highlighted in studies preoccupied by the impact of maternal depression on infant development. This workshop will focus on all these different aspects of psychiatric issues related to reproduction. A review of the literature, methodological issues and therapeutic management of all situations will be provided. A general comprehensive discussion encompassing reproductive women's mental health issues will complete our presentation.

SW4.
HUMANITIES IN MEDICAL TRAINING AND IN THE HEALING PROCESS (organized by the WPA Section on Literature and Mental Health)

Y. Thoret (Poissy, France), E. Sukhanova (New York, NY, USA), A. Rivas (Guadalajara, Mexico), S. Kato (Tochigi, Japan), E. Saad de Janon (Guayaquil, Ecuador), L. Küey (Istanbul, Turkey)

Our Section intends to promote humanities and literature in medical education, in order to help medical students to develop their critical and analytical skills and to better understand the socio-cultural patterns of mental health and pathology. Many institutions of higher learning are now considering ways to incorporate studies in the humanities in their undergraduate curricula for medical students. Our Section is putting together a proposal for a core curriculum in medical humanities, including a multicultural suggested reading list, main learning outcomes and goals, and supplementary materials such as sample course syllabi. This workshop comments on three texts which could be presented to the students, dealing with treatment in psychiatry and, more precisely, the process of healing in this field of pathology.

SW5/6.
CULTURE, HUMOR AND PSYCHIATRY: A SYNTHESIS (Parts I and II) (organized by the WPA Section on Transcultural Psychiatry)

R. Wintrob (Providence, RI, USA), M. Weiss (Basel, Switzerland), T. Akiyama (Tokyo, Japan), J.D. Kinzie (Portland, OR, USA), K. Bhui (London, UK), R. Bennegadi (Paris, France), P. Leung (Portland, OR, USA), L. Küey (Istanbul, Turkey), J. Obiols-Llandrich (Andorra), D.L. Mkize (Durban, South Africa), Y. Thoret (Poissy, France), M.R. Jorge (São Paulo, Brazil), S. Villaseñor Bayardo (Guadalajara, Mexico), H. Wahlberg (Stockholm, Sweden), S.O. Okpaku (Nashville, TN, USA), J. Cox (Stoke-on-Trent, UK)

There is no culture that does not appreciate humor, and every culture expresses humor in unique ways. Humor has as its most fundamental purpose the relief of stress and anxiety. The situations that encompass humorous anecdotes are firmly rooted in every culture's conceptions of human frailties, fears, longings and aspirations. Wishes for self-aggrandizement are balanced by fear of exposure and ridicule. Wishes for wealth, power, attractiveness and vigor are countered by the all too frequent realization that such wishes cannot be realized except in dreams and in humor. In this workshop, psychiatrists with experience in both clinical and cultural psychiatry in many parts of the world address the relationships between culture, humor and psychiatry in the cultures they know best. They use humorous anecdotes to illustrate what humor reveals about personality, personal and social conflict and its resolution, and how psychology and psychiatry provide a substrate and interpretative focus for the many-layered meaning of humor cross-culturally.

SW7.
WOMEN AND WORK STRESS (organized by the WPA Section on Women's Mental Health)

U. Niaz (Karachi, Pakistan), M.B. Rondón (Lima, Peru), D.E. Stewart (Toronto, Canada), A. Riecher-Rössler (Basel, Switzerland)

Gender differences in work-related health conditions have been researched worldwide over the past two decades. An extensive and relevant literature on women's work and mental health issues is now available. Paid employment, in particular, has been considered an important part of women's living conditions, as the number of women entering the labour market has grown constantly over the past decades. As a matter of fact, occupation ranks sixth amidst the ten major risk factors for the global burden of disease that affect disproportionately women. According to World Bank estimates, from 1960 to 1997, women have increased their numbers in the global labour force by 26%. Today, women make up about 42% of the estimated global working population, making them indispensable as contributors to national and global economies. This is true in developed and emerging countries. Women's work is generally associated with better health. Nevertheless, as women have become more assimilated into the workforce, they have realized considerable changes in their traditional roles, which may contribute to health problems. In particular, the multiple roles that they fulfil in society render them at greater risk of experiencing mental problems than others in the community. Many studies seem to show that female workers may be exposed to some gender related stressors which could threaten their mental health and well-being. Fostering a good work-life balance will improve the possibilities for women and men to enjoy both work and family, without being forced to choose between the two.

SW8.
TREATMENTS FOR PREGNANT WOMEN WITH CHRONIC MENTAL DISORDERS (organized by the WPA Section on Perinatal Psychiatry and Infant Mental Health)

J. Cox (Stoke-on-Trent, UK), N.M.-C. Glangeaud-Freudenthal (Villejuif, France), A.-L. Sutter-Dallay (Bordeaux, France), N. Garret-Gloanec (Nantes, France), G. Apter-Danon (Antony, France), O. Omay (Tain l'Hermitage, France)

Treatments during pregnancy are an important issue because of their consequences, not only for women's health, but also for the foetus and future infant's development. The analysis of two different data bases about the prescription of psychotropic drugs during pregnancy will be presented and discussed. A review of literature will open a discussion on practical and ethical issues of chemotherapeutic treatment strategies, as well as other approaches, such as specific pregnancy psychoeducation. A European database (1032 mother-baby unit inpatients) will bring information on treatment received during pregnancy by women who were admitted with post-partum mental health disorders (mainly chronic psychotic disorders and affective disorders) in

mother-baby units in France, Belgium and Luxembourg. A case study will describe a negative effect of a sudden interruption of a drug treatment during pregnancy. A national social insurance database of pregnant women (87,213 women) will describe neuroleptic prescription according to gestation period. Links between professionals involved in women's psychological and somatic care during pregnancy are essential in prevention and care of major mood disorders during pregnancy and post-partum.

SW9.
THE ROLE OF ART IN TREATMENT, REHABILITATION AND SOCIAL INCLUSION (organized by the WPA Section on Art and Psychiatry)

E. Sukhanova (New York, NY, USA), H.-O. Thomashoff (Vienna, Austria), D. Waller (London, UK), E. Jadresic (Santiago, Chile), A. Kopytin (St. Petersburg, Russia)

Today, when we are constantly reminded of the dangers of thinking in exclusive terms, art affords us a model of dialogue in which the other is accepted as an equal conversation partner. Art fosters cooperative communication in which dignity and individuality of a mental health patient may be reaffirmed. Therefore, art may be used to facilitate personal empowerment and confronting stigma. At the same time, art allows for critical distance and vast opportunities for individual choice, and thus may be conducive to an improved self-image and self-esteem. This workshop tackles the issue of using the introspection inherent in art as a treatment tool. The role of art as a social force that contributes to the way mental health and illness are perceived in a given community is also explored. An understanding of the mechanisms which underpin the production and perception of art helps us understand how psychiatric art can promote the acceptance a person in his or her full subjective being, "in his or her totality", to use an expression of Jean Delay. Finally, methodological approaches to measuring efficacy of art therapy and public education through art are discussed, using research data collected by several Section members in their countries.

SW10.
PSYCHOANALYTICAL AND DEPTH PSYCHOLOGICAL ASPECTS OF EXPRESSIVE THERAPIES (organized by the WPA Section on Psychoanalysis in Psychiatry)

M. Ammon (Berlin, Germany), I. Burbiel (Munich, Germany), M. Botbol (Paris, France), E. Fabian (Munich, Germany)

The workshop introduces psychoanalytic and depth psychological approaches and principles of expressive creative therapies for psychiatric patients. Treatment methods for personality disorders, psychoses and early traumatized patients have to integrate creative, healthy and constructive areas of the human being and have to understand the person as a multidimensional, holistic being with creative potentialities. Recent brain research results, attachment theory, transgenerational transmission and early traumata effects on the personality are considered. The authors stress the necessity of working with expressive therapies first for stabilization and second for a further development of the personality of the patient.

SW11.
THE ROOTS OF HUMAN AGGRESSION (organized by the WPA Section on Art and Psychiatry)

H.-O. Thomashoff (Vienna, Austria), E. Sukhanova (New York, NY, USA)

The future of human aggression will define if we will continue to exist. We have the potential to eliminate all life from earth including ourselves if we do not find ways to cope with aggression. Yet, on a smaller scale the topic is of crucial importance be it in society (e.g., violence in the educational system) or in our everyday practice in psychiatry (e.g., its relationship to depression). Integration of our knowledge, including the biological base (e.g., serotonin, prenatal stress), psychodynamics (splitting, processes in masses) and social consequences, can provide us with the expertise to cope with the phenomenon of human aggression far beyond the borders of our profession. As a result, we have to develop and make public the enormous potential of preventive measures to cope with the abundant aggression in human behavior. A cornerstone of this strategy must be direct approaches to policies for which the situation in campus security and student mental health is exemplary. Particularly in North America, there is a current trend of issuing specific policies to handle students who exhibit signs of mental distress. Because universities and colleges are often ill equipped to address such issues on their own, these policies may entail a host of legal and ethical concerns. The way these policies and practices are shaped by the existing social values and, in turn, influence the social perception of mental health and illness ware crucial. This is where our profession has to intervene.

WPA ZONAL SYMPOSIA/WORKSHOPS

ZS1.
RECENT ADVANCES IN MENTAL HEALTH CARE IN SUB-SAHARAN AFRICA (organized by the WPA Southern and Eastern Africa Zone)

ZS1.1.
RECENT POLICY INITIATIVES IN THE MANAGEMENT OF MENTAL HEALTH DISORDERS IN PRIMARY HEALTH CARE

F. Kigozi
Butabika National Mental Referral and Teaching Hospital, Kampala, Uganda

Recent epidemiological findings and projections indicate an increasing burden of diseases due to mental health and neurological disorders in Africa, a situation made worse by the ongoing civil strifes and rampant poverty especially in Sub-Saharan Africa. The HIV/AIDS pandemic, with at least 75% of global infected persons, death and orphans being in the same region, has further strained the over-stretched and under-provided mental health infrastructure. To address this increasing burden on mental health care amidst limited financial and human resources, most Sub-Saharan African countries have been lately undertaking reforms of the mental health policies and strategies to improve access and equity for mental health services for the communities in conformity with primary health care approach. The health policies emphasize decentralisation and integration of mental health

and psychiatric services at all levels of care and a deliberate attempt to develop partnerships with non-governmental organisations and the few available private sector health care providers. These initiatives have tremendously improved access to modern therapies for communities that until recently had no contact with mental health care providers especially in rural areas. The paper discusses these recent initiatives to operationalise the strategies, so as to improve the quality of life for the population and to break the vicious cycle of poverty and mental ill health.

ZS1.2.
APPROACHES IN THE EFFECTIVE MANAGEMENT OF CHILD AND ADOLESCENT MENTAL HEALTH PROBLEMS UNDER RESOURCE CONSTRAINTS

S. Rataemane
University of Limpopo, Pretoria, South Africa

Childhood and adolescence mental health problems constitute a huge but hidden load of psychiatric morbidity in developing countries. The commonest problems are mental retardation, learning disorders, mental illness associated with epilepsy, infections and head injuries; post-traumatic stress disorder and other anxiety disorders, depression, attention-deficit/hyperactivity disorder and hyperactivity associated with other disorders. Psychotic disorders are few in early childhood, but more common in adolescence, associated with substance abuse and early manifestations of either schizophrenia or bipolar mood disorder. This array of problems needs highly skilled and well-trained psychologists, psychiatrists, occupational therapists, social workers and remedial teachers. Most developing countries have a paucity of specialized personnel to offer such services. This presentation explores an interdisciplinary approach based on training of other health workers in early detection and immediate management of such disorders based on individual training and referral protocols where relevant. Possibility of management and training through telemedicine technology will also be explored.

ZS1.3.
PROGRESS IN THE MANAGEMENT OF DISASTERS IN SUB-SAHARAN AFRICA: THE KENYAN EXPERIENCE

F.G. Njenga
Upper Hill Medical Center, Nairobi, Kenya

The African landscape is replete with natural and man made disasters. Droughts, floods, disease and earthquakes are almost as common as wars, both international and national. Several African countries not at cross border wars are either in civil or political unrest and displacement or are just entering or exiting from such traumas. The Sudan, Somalia, Kenya, Northern Uganda are good current examples of this phenomenon for East Africa, while Liberia and Sierra Leone contribute examples from West Africa. The HIV/AIDS pandemic in Botswana and South Africa provides additional evidence for the urgent need for action in all parts of Africa, even without considering the effects of wars in Central Africa (Congo, Rwanda and Burundi). All these disasters demand different sets of skills in their management for many different reasons, including firstly the diverse nature of the problems, but also including the very variable nature of resources available in the different parts of the continent. This presentation discusses the challenges posed by the foregoing situations so common in Africa.

ZS1.4.
UPDATE ON PARTNERSHIP APPROACHES WITH ALTERNATIVE CARE PROVIDERS IN MENTAL HEALTH SERVICES

D. Basangwa
Uganda Butabika Hospital, Kampala, Uganda

The burden of mental illness in Sub-Saharan African countries is worsened by the persistent civil wars and the ensuing massive displacement of the citizens both internally and externally. The latter has fuelled the spread of HIV/AIDS and the prevalence of alcohol and substance abuse disorders. Furthermore, in spite of the above challenges, the region has chronic shortage of well trained human resources and a scarcity of financial resources. Most rural communities continue to be denied access to modern mental therapeutic interventions and often seek attention from alternative health care providers who are readily available within the neighbourhood. As a response to these challenges, most countries have developed strategies which involve non-governmental organization (NGO) health care providers as well as alternative health care providers as key allies in the decentralized health care system. Several research findings indicate that between 30 and 60% of psychiatric patients attending various clinics in Uganda have consulted or continue to seek the services of the alternative health care providers over the last 30 years or so. The presentation highlights the various recent transformations and steps which the Health Sector in Uganda has adopted in an effort to address access to coordinated health services including the use of alternative care providers as key allies.

ZS2.
CURRENT MENTAL HEALTH ISSUES IN THE NORTHERN EUROPEAN REGION (organized by the WPA Northern Europe Zone)

ZS2.1.
CHALLENGES IN DANISH PSYCHIATRY, AT PRESENT AND IN THE YEARS TO COME

A. Fink-Jensen, M. Kastrup
Psychiatric Centre Rigshospitalet, Copenhagen, Denmark

Danish psychiatry is influenced by the major organisational changes that the administrative system in Denmark has been through, and regional mental health plans and a national plan for the discipline have been developed. We see an increasing emphasis on the need for resources directed to psychiatric research and increased collaboration between psychiatric and somatic disciplines, in clinical practice, training and research. We observe a need for documentation of treatment and the further development of indicators to be used in the documentation of the effect of any intervention (pharmacological, psychotherapeutic, etc.). The focus is on optimising quality of services and a movement towards increased specialization in the provision of psychiatric services. Attention is increasingly paid to ensuring continuity of care and coordination of interventions across the different sectors involved in the provision of treatment and care. Furthermore, there is a strengthening of the collaboration between professional and user and relatives groups and organizations. One aim hereof is to support anti-stigma programmes and increased inclusion of psychiatric patients, e.g., in relation to the labour market. A major professional challenge is the need for recruiting young medical graduates to psychiatry as the number of specialists is declining. We elucidate strategies developed to reach these goals.

ZS2.2.
FUTURE CHALLENGES FOR NORWEGIAN PSYCHIATRY

J.O. Johannessen
Division of Psychiatry, University Hospital, Stavanger, Norway

After a period with emphasis on quantitative resources and decentralised reorganisation, the future focus in the development of Norwegian psychiatry will be on the quality of the services. The main emphasis will be on: a) prevention, anti-stigma work and mental health promotion; b) the development of a system for measuring and monitoring our treatment results; c) a compatible system for quality indicators/performance measures, including result indicators; d) the implementation and use of evidence based clinical practices; e) early intervention strategies, especially focusing on serious mental illness in young people; f) Competence development and educational programs for professionals working in the mental health field, in accordance with the above; g) Strengthening of the national research strategies; h) user participation; i) securing the place for the "softer" treatment modalities, such as the psychotherapies, milieu-therapy, music therapy, etc.; j) reducing the use of compulsory treatment and involuntary admissions. We discuss strategies for fulfilling these goals.

ZS2.3.
FUTURE CHALLENGES FOR PSYCHIATRY IN FINLAND

J. Korkeila
Department of Psychiatry, University of Turku; Harjavalta Hospital, Hospital District of Satakunta, Finland

In Finland, the whole system of health services is undergoing a phase of transition from a decentralised municipality-based organisation towards larger and more centralised basic units. A new health care law is pending. This legal reform seeks to unite primary and specialised health care. It is currently unclear what this reform will mean for psychiatric services. The draft of the law includes an adequate description of the problems, but lacks any effort for a sound solution. However, a national project, Mind 2009, sets out to establish criteria for high quality services. Another project, MASTO, seeks for means to enhance treatment and decrease disability pensions due to major depression. Psychiatrists in Finland are worried that they cannot in practice offer the best possible therapy. The major challenges for the future are maintenance and improvement of quality of services in the context of struggle for budgetary and human resources. It is vital for the accountability and respect for psychiatric services to a) implement and develop evidence based guidelines, and b) outline indicators for and measures of treatment outcomes in daily clinical practice. The justification of psychiatry can only be based on our ability to provide added value to the patients' health status and our sensitivity to the values of patients.

ZS3.
IMPROVING TREATMENT AND CARE FOR PEOPLE WITH COMORBID MENTAL AND SOMATIC DISORDERS
(organized by the WPA Southern Europe Zone)

ZS3.1.
COMORBIDITY IN PSYCHIATRY: PROBLEMS OF ASSESSMENT AND PHILOSOPHICAL PERSPECTIVES

G. Stanghellini
Department of Biomedical Sciences, University of Chieti, Italy

I will raise two methodological questions. The first is the following: is it still epistemologically acceptable to assess all sorts of symptoms as if they were of equal diagnostic rank? Should all symptoms that are present in a clinical picture be considered unrelated characteristics lying on a horizontal plane? Or should we look for understandable connections (meaningful connections) between the components of a psychopathological disorder, thus reintroducing a vertical dimension? Should we try to organize different kinds of symptoms in theoretical constructs for which the guideline is the meaning-relation of such symptoms? The second question is the following: should we continue to fall for the comorbidity swindle, e.g., viewing Axis I and Axis II phenomena as two distinct psychopathological realms? Should we still believe that psychopathological symptoms can be reliably and validly assessed regardless of the personality background in which they occur? Is the anger in a borderline person the same anger of a narcissistic or of a schizophrenic person? Or, also in this case, should we admit that any diagnostic procedure that presumes to discern impersonal psychopathological phenomena, disembodied from their personal and historical settings, is methodologically unreliable, lacking clarity and distinction? Maybe, looking for meaningful connections between personality structures and acute symptoms is not simply a surplus of knowledge or a futile exercise of interpretation. On the contrary, it may turn out to be an epistemological necessity in view of a syntagmatic (how a phenomenon is connected with other phenomena in a structure or in a process), and not a paradigmatic (what a phenomenon is in itself and how it relates to similar phenomena) definition of psychopathological symptoms and syndromes.

ZS3.2.
FROM PSYCHOSOMATIC TO PSYCHOLOGICAL MEDICINE: WHAT'S THE FUTURE?

M.L. Figueira, S. Ouakinin
Department of Psychiatry, Hospital Santa Maria, University of Lisbon, Portugal

The use of terms and concepts in the field of psychosomatic medicine, psychological medicine and consultation-liaison psychiatry overlap. There is no international agreement on how to define the concept of "psychosomatic medicine". Psychosomatic medicine considered as a specific field within psychiatry is limited to a set of clinical procedures from diagnosis to treatment, and it is a very useful tool to help patients suffering from chronic diseases and from comorbid physical and psychiatric disorders. In parallel, there is a vast and growing field of research in psychobiological mechanisms that are putative causal factors of emotional disorders. In these regard, there are innovative hypotheses that could generate new paradigms for the future understanding of psycho-somatic relations. In our view, this is the key issue that could overcome the terminological debate and lead to the real integration of mind and body. Among several domains of research, we

chose the field of psychoneuroimmunology as one of the most promising psychophysiological pathways for emotional and physical illness, which may fulfill the integration of external factors (the environmental ones) and individual determinants of resilience/vulnerability, of psychological, endocrine or neuroimmunologic nature. From our point of view, the future of psychosomatic medicine depends on interdisciplinary research, and on pregraduate and postgraduate teaching in medical schools of the new scientific foundations for an old medical approach, in the Hippocratic tradition, and the integration of different levels of individual functioning on a systemic basis.

ZS3.3.
THE CHANGING MORBIDITY AND MORTALITY OF MENTAL PATIENTS: THE IMPACT OF MODERN THERAPEUTIC MODALITIES

K.N. Fountoulakis
Aristotle University of Thessaloniki, Greece

The new therapeutic modalities which were introduced during the last 25 years changed radically the way both therapies and patients and their families deal with mental illness. The widespread use of these treatments is likely to have caused a decrease in suicidal rates and an overall improvement of the quality of life of millions of patients. However, still there is a gap to be covered. Mental patients have higher rates of medical morbidity and overall mortality, with a lower life expectancy which reaches almost 25 years for patients with schizophrenia. So, while modern treatment modalities improve the overall psychiatric symptomatology, they fail to bridge this gap and maybe some of their effects, like the induction of the metabolic syndrome, could be responsible for it. We present the design and application of a multidisciplinary strategy to deal with all health aspects and problems as well as of individual peculiarities and behaviours of patients aiming to the improvement of their global health and survival.

ZS3.4.
STIGMA RELATED TO THE TREATMENT AND CARE FOR PEOPLE WITH COMORBID MENTAL AND SOMATIC DISORDERS

L. Küey
Istanbul Bilgi University, Istanbul, Turkey

Recent research has clearly demonstrated the epidemiological dimensions and burden of the problems associated with the high rates of medical comorbidity, disability, and mortality among people with mental disorders. This burden, along with the high treatment gaps, constitutes a public health/mental health problem. The problems associated with these high rates of comorbidity in such patient groups have multidimensional consequences, including the challenges related to their care and management. While the national and international systematic efforts tackling the stigmatization attached to mental disorders have a history of almost a couple of decades, the stigma concerning the management of the somatic illnesses of patients with mental disorders is an issue that has only recently raised concern. The attitudes and behaviors of the general health/mental health professionals regarding somatic illnesses and care for patients with mental disorders are weakly researched areas. The stigma attached to patients with mental disorders in general mirrors the stigma placed on the physical health problems of these patients. The stigma placed on the treatment of this complex situation is the focus of this review. Factors related to patients/caregivers and physicians/psychiatrists/mental health professionals and health system contributing to the poor medical management of medical comorbidities in people with mental illnesses are discussed. Integrative services, and optimism and hope among health professionals are the essential factors for reducing such stigma and, hence, promoting better health care.

ZS4.
DISASTER MANAGEMENT: THE SOUTH ASIAN SCENARIO
(organized by the WPA Southern Asia Zone)

ZS4.1.
TRAINING ISSUES IN DISASTER MANAGEMENT: SOUTH ASIAN PERSPECTIVE

H. Gambheera
Institute of Psychiatry, Angoda, Sri Lanka

Disasters are events affecting a social group which produce such material and human losses that the resources of the community overwhelmed and, therefore, the usual social mechanisms to cope with emergencies are insufficient. A sizable proportion of people exposed to a disaster, develop psychiatric illness. Such mental health problems have aroused an increasing public interest due to their dramatic impact and have become a rapidly growing subject among the mental health professionals. South Asian region consist of developing countries and ill equipped with resources both infrastructure and trained human resources. Resources allocated for mental health is even less and human resources are rather scanty. Mental health services are grossly underdeveloped in most of the countries in this region. But approximately three quarters of disasters occur in developing countries. However, researches in 'disaster mental health' have been conducted mainly in developed countries and availability of literature also limited to those countries. Frequent disasters either natural or man made in South Asia have drawn the attention of Mental Health Professionals towards post disaster Psychological sequelae. There has also been a significant improvement in political involvement on this subject in this region. Training on identification and management of disaster affected population involve many layers of mental health professionals and general population. Even though there is a significant awareness of the subject there is a severe scarcity of training materials and human resources. Therefore as the initial step, training of trainers in our region need external resources. As Community Psychiatric Services in our region have also not developed adequately, health professionals in any field at grass roots level has to be trained specially in identification of psychologically affected disaster victims. Expertise is necessary in capacity building of mental health professionals in the management of psychologically affected people.

ZS4.2.
DISASTER AND ITS EFFECTS ON WOMEN AND CHILDREN: SOUTH ASIAN PERSPECTIVE

R.A. Kallivayalil
Medical College, Trichur, India

Disaster has profound psychological and emotional effects on women and children, who belong to the vulnerable sections of the society in South Asia. This is particularly so, because social security schemes and universal insurance coverage are minimal in these countries, hence leading to financial difficulties for the survivors. Faced with disasters, the emotional and physical growth of children may get stunted. Resistance and resilience are positive qualities in children, which enable them to cope. In developing countries, children often resort to magical thinking which leads to a feeling of control over

their lives. Games and play are strength for children. This may lead to a faster healing from trauma. Hence, play therapy may be quite helpful. The strong family bonds in South Asia is a very positive factor. Joint families and extended families exist in much larger proportion in this part of the world compared to the West. On the face of disaster, the other family members like parents, brothers, sisters, uncles and aunts come to the rescue of women and children. Teachers also have a paramount role. They can often act effectively as therapists. There is severe shortage of mental health personnel in South Asia. Hence there is need to train teachers in disaster management as they have very prominent and intimate role in the affairs of the students whom they teach. Such training will help the early recognition of PTSD or co-morbid psychiatric disorders. Women is playing a bigger role in the South Asian society these days. They need to be helped to assume the leadership role in families, where the father figure is no more following a disaster. Better education, training and empowerment of women can be very crucial in disaster management.

ZS4.3.
DISASTERS IN SOUTH ASIAN REGION: ARE WE MORE SUSCEPTIBLE?

F. Artiaga-Soriano
Department of Psychiatry, University of the East Memorial Medical Center, Quezon City, Philippines

There have been a number of natural disasters in South-East Asia. This region is always subjected to typhoons, cyclones, flooding, earthquakes, landslides, and volcanic eruptions. Is this region particularly susceptible to disasters compared with others, what made it so and will it become increasingly so in the years to come? With these constant structural battering, how will the people react, cope or mitigate the situation? Not to mention the man-made disasters or human induced disasters, such as heavy environmental pollution, industrial and technological disasters, traffic accidents, epidemics and fires; and the armed conflict related disasters, such as wars, genocide, social violence and other politically instigated disasters. Vulnerability to disaster is "the extent to which an individual, community, sub-group, structure, service or geographic area is likely to be damaged or disrupted by the impact of disaster hazard". Then, the psychosocial and physical reactions will follow which may usher another disaster. The key issues in vulnerability are related to social, economic, and political factors more than they are to the geographic factors. Vulnerability is especially about people, their perceptions and knowledge. People's ideas on the roots of (their) vulnerability to disaster and their psychological response determine the solutions they choose. Critical to discerning the nature of disasters, is an appreciation of the ways in which human systems place people at risk in relation to each other and to their environment, a relationship that can best be understood in terms of an individual's, a household's, a community's, or a society's vulnerability.

ZS5.
DEVELOPING A NETWORK OF DEPRESSION CENTERS
(organized by the WPA United States of America Zone)

ZS5.1.
DEVELOPING AND ORGANIZING A NATIONAL NETWORK OF DEPRESSION CENTERS

J. Greden, M. Riba, M. McInnis, R. Subbian
University of Michigan Depression Center, Ann Arbor, MI, USA

Major depressive disorder, bipolar disorder and related conditions affect an estimated 340 million people worldwide and account for >10% of the global burden of disease. These disorders remain underdiagnosed and undertreated worldwide. Personal, societal, and financial consequences are huge, suicide rates unacceptably high and unchanging, and co-occurrence negatively impacts the treatment of other medical conditions such as cancer and heart disease. Collaborative networks are required to attack these burdens, adopting strategies from other medical specialties, notably cancer. Only then will data sets and sample sizes achieve the large numbers required to answer perplexing treatment debates. Only then will specialists' expertise be promptly translated into the primary care medical settings where most patients are treated. Only then will stigma be counteracted. Goals are to develop comprehensive centers in selected academic institutions, to link these with each other and with community clinicians, to create a network of satellite centers affiliated with each core center, and to expand and integrate the entire network on a global basis. The seeds of this movement have been planted with establishment of the University of Michigan Comprehensive Depression Center. Other centers are being developed and linked and network standards are being formulated.

ZS5.2.
NATIONAL NETWORK OF DEPRESSION CENTERS: OPPORTUNITIES FOR IMPORTANT PROJECTS AND COLLABORATIONS

G.W. Dalack
Department of Psychiatry, University of Michigan Medical School, Ann Arbor, MI, USA

The mental health needs of American military veterans returning from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) are recognized to be substantial and are well-described in recent literature. Psychiatric morbidity, particularly post-traumatic stress disorder, depression and substance use disorders, will have significant impact on their physical health status as well. Holistic, effective interventions for veterans will, of necessity, require assessing and addressing the needs of their families, who will surely be affected by the deployment and the health status of the returning veteran. These sequelae of service, particularly combat-related service, on soldiers and their families will need a coordinated response among VA, academic and community mental health services agencies. Such a coordinated response may initially take place at a local level, but rapid scaling up across a regional or national network will be critical to timely delivery of best practice services to the largest population possible. In this paper, we describe our ongoing efforts to develop and coordinate a mental health services program among our Department of Psychiatry, the University of Michigan Depression Center, and our affiliate VA Healthcare System. This program is targeted to provide outreach and education to returning veterans and their families, serv-

ices to families (particularly children at risk), and facilitate the coordination of care for veterans between VA and academic and community-based service providers. These activities provide a model for the development of best practices that we may scale up across the region and country within the US National Network of Depression Centers.

ZS5.3.
THE DEVELOPMENT OF A DEPRESSION CENTER IN MEXICO

F.J. Schnaas
American British Cowdray Medical Center, Mexico City, Mexico

The private health care delivery system in Mexico has grown exponentially in the last 15 years, following the trend of the United States of America. The American British Cowdray Medical Center is the oldest private hospital in Mexico, 120 years old. The medical center has a close affiliation with UNAM (Autonomous National University of Mexico), making it a strong teaching hospital. Three years ago the Neurologic Center was created, bringing together neurosurgery, neurology and psychiatry under one administration. Mood and anxiety disorders are the two leading causes of disability due to mental health problems in Mexico. On average, people with these disorders have higher levels of disability than those observed in individuals with chronic physical conditions such as hypertension, diabetes, or arthritis. Depression has become a major problem in Mexico, since the suicidal rate has increased over 459% from 1980 to 2002, evidently without relationship with the growth in the general population. The desire to create a depression center in Mexico which belongs to the private sector derives from the need to provide the users of this sector with a top of the line diagnostic and therapeutic service. As the only depression center in Mexico, it has the purpose of outreaching the community at large through educational programs at different levels. At the same time, it has the purpose of doing clinical research and to contribute to an international network of depression centers, with the perspective of a country with an emergent economy.

ZS5.4.
INDIVIDUALIZING TREATMENT WITH A COMPUTER ASSISTED APPLICATION

D. Nahum
Department of Psychiatry, University of Kentucky, Louisville, KI, USA

Depression centers by definition are established to meet the needs of large numbers of depressed individuals and yet have to accomplish this one patient at a time, in an efficient way. Depressed patients share biological features but express their illness in very different ways. The topic of this paper is to understand and define these differences that make our patients unique and making best use of this information in the treatment. To this end we describe a tool which we developed, an automated assessment of ego functions. Psychiatry is fortunate to have a vast history with a long list of pioneers who have made significant contributions. It can however be difficult to make practical use of the techniques which are based on these contributions, because they require a large investment of time for training and application. They are better suited for gentler times, and not our fast paced modern times with the constant pressure for quick results, often leading to reductionism. A way of addressing this caveat is to apply modern day computer technology to past concepts, and increase their practicality while significantly reducing demands on our time. Our automated assessment of 12 ego functions is based on the works of Bellak and Goldsmith. The computerized interview is based on a shortened version of the Ego Function Assessment (EFA), which has been validated by previous research studies, and provides the clinician with an assessment and a printout of detailed patient responses. The assessment of ego functions continues in the clinical interview. Together these 12 ego functions (reality testing, judgment, sense of reality, regulation and control of drives, object relations, thought process, adaptive regression in the service of the ego, defensive functions, stimulus barrier, autonomous functions, synthetic functions and mastery competence) give us a very rich picture of patients' strengths, vulnerabilities and ability to cope with demands of their life. EFA is a bridge between descriptive and dynamic psychiatry and etiologic propositions. They permit idiographic characterization (individual profile) and classification within a diagnostic group (numeric rating in a class defined as normal, neurotic borderline or psychotic).

ZS6.
PSYCHIATRIC TREATMENT IN CENTRAL AND WEST AFRICA: OPTIONS, OUTCOME AND CHALLENGES (organized by the WPA Central and Western Africa Zone)

ZS6.1.
PSYCHIATRIC TREATMENT IN LOW-INCOME COUNTRIES: CHALLENGES AND OPTIONS

J. Adeyemi
Department of Psychiatry, University of Lagos, Nigeria

The recent epidemiological reports from parts of Central and West Africa indicate that the prevalence of mental disorders is comparable to the rest of the world. However, the low gross domestic product, a health policy skewed towards infective and maternal health, poor infrastructure, misapplication of resources and inadequate manpower make the zone one of the worst locations in terms of access to equitable mental health services as well as treatment. The millennium development goals seem to have only peripheral relevance to mental health issues, thereby limiting hope for the care of psychiatric patients in low resourced countries. This paper examines the interplay of factors that sustain the prevailing psychiatric treatment situation in the zone, illustrates the impact of interventions on psychiatric case identification and treatment decisions, highlights the resources with potential to change the low psychiatric treatment penetrance through extended applications of the principles of primary health care. These may include taking cognizance of the subsisting cultural resources as agents for the extension of psychiatric treatment. The integration of mental health services into the available health care resources can provide the necessary leverage to improve the psychiatric treatment needs of under-developed countries.

ZS6.2.
FROM THE ASYLUM "THROUGH THE VILLAGE" TO THE COMMUNITY: ARO HOSPITAL IN TRANSITION

T. Adebowale
Federal Neuropsychiatric Hospital, Aro, Abeokuta, Nigeria

Starting as a colonial local government prison, the Neuropsychiatric Hospital Aro was transformed into an asylum and then a psychiatric hospital. The ingenuity of Adeoye Lambo, faced with the service challenge at the time, brought the "Aro village" system of care into existence in Nigeria and into global prominence as a reference centre in community mental health care. The completion of the Aro hospital complex and the full modernisation of inpatient care in the hospital

gradually distanced the community and even the relatives from care of patients. The establishment of a directorate of community mental health services in 2006 by the hospital management resulted in the articulation of a community mental health programme for the hospital. The programme, which includes intensive media (television) as well as face-to-face mental health education and information campaigns, from July 2007 is at an early phase of implementation. There is active education of existing service users and relatives on the benefits of use of services close to their place of residence. We found increased service utilisation related to increased mental health awareness and a trend towards appropriate service utilisation following commencement of community programme. Mental health professionals need to shift from mental hospital based practice to service provision in the community and for the existing federal neuropsychiatric hospitals to make definite commitments towards development of community mental health services in their zones.

ZS6.3.
MEDICATION ADHERENCE IN NIGERIAN PSYCHIATRIC OUTPATIENT CLINICS

A. Adewuya
Department of Psychiatry, Lagos State University Teaching Hospital, Ikeja, Lagos, Nigeria

The aims of this study were to assess the rate of adherence to medications amongst psychiatric outpatients in Nigeria and examine factors associated with medication non-adherence amongst this group. Psychiatric outpatients (n=342) from three centres were assessed for medication adherence using the Morisky Medication Adherence Questionnaire. Details regarding sociodemographic variables (age, sex, education, religion, marital status, employment, income, medication cost), illness related variables (diagnosis, duration, number of episodes/admissions, insight, severity of symptoms, mental state, functional status), medication related variables (type, mode of administration, side effects, attitudes to medication) and perception related variables (self-stigma, perceived causation and prognosis) were also obtained. There were 76 (22.2%) participants with good medication adherence, 102 (29.8%) with moderate adherence and 164 (48.0%) with poor adherence. The significant independent correlates of poor medication adherence included being employed (OR 3.42; 95% CI 2.17-5.39), poor social support (OR 5.86; 95% CI 2.87-12.17), high self-stigma (OR 4.70; 95% CI 2.24-9.96) and perceived spiritual causation of mental illness (OR 3.74; 95% CI 1.87-7.74). The majority of psychiatric outpatients in south-western Nigeria had poor medication adherence. Our findings stress the importance of patients' perception and social environment in determining treatment adherence and the necessity of educating the patient. Clinicians' attention to psychological barriers early in treatment may improve medication adherence and ultimately affect the course of illness.

ZS6.4.
IMPACT OF ATYPICAL AND CONVENTIONAL ANTIPSYCHOTICS ON THE QUALITY OF LIFE OF PATIENTS WITH SCHIZOPHRENIA: A PRELIMINARY REPORT FROM LAGOS TEACHING HOSPITALS

A. Erinfolami, B. Ola, A. Olagunju
Department of Psychiatry, University of Lagos; Department of Psychiatry, Lagos State College of Medicine, Ikeja, Lagos, Nigeria

In sub-Saharan Africa, the use of atypical antipsychotics is still limited, because of their prices and availability. Studies addressing the impact of different antipsychotic therapies on the subjective quality of life of African schizophrenic patients are few. This study seeks to compare the subjective quality of life of schizophrenic patients treated with either conventional or atypical antipsychotics. One hundred patients meeting ICD-10 criteria for the diagnosis of schizophrenia were included in this two-centre study. In each centre, 20 schizophrenic patients were treated with haloperidol, 15 with risperidone and 15 with olanzapine for a 6-week period. The symptomatology of the patients was assessed using the Positive and Negative Syndrome Scale (PANSS); quality of life was assessed by the WHOQoL-BREF. The atypical antipsychotic group had significantly higher scores in general quality of life as well as in different life domains: physical health, environment, psychological and social relationship in everyday life. In the individual comparisons of the atypical and conventional antipsychotics, patients on olanzapine or risperidone had higher quality of life scores than patients on haloperidol.

ZS7.
MOOD DISORDERS IN IRAN: AN UPDATE (organized by the WPA Central and Western Asia Zone)

ZS7.1.
A BIBLIOMETRIC ANALYSIS OF RESEARCH ON MOOD DISORDERS IN IRAN

M. Amin Esmaeili, S.S. Gudarzi, N. Mahdavi
Mood Disorder Section, Iranian Psychiatric Association

The studies on the burden of disease in Iran revealed that psychiatric disorders ranked the second among all medical illnesses. Depressive disorders were shown to be the most disabling disease among women. To define a prospective view of the studies on mood disorders in Iran, we performed a bibliometric study on the relevant literature. All the papers from Iran which were published in the national and international scientific journals were assessed. Two Iranian databases, Iranmedex and Iranpsych, and two International databases, Medline and Embase, were searched. All the articles were assessed by three psychiatrists with good inter-rater reliability. In total, 973 articles achieved the inclusion criteria. The subject of articles was depressive disorder (78.4%), bipolar disorder (7.8%) and suicide (10.2%). An increasing trend in publications on mood disorders in Iran was found. Most of the studies have targeted depressive disorders. The most substantial increase was found in epidemiological studies (representing 53.8% of the total). The methodology of the studies was descriptive in 32.8% of cases, descriptive/analytic in 39.5% and analytic in 28%. An increase in published research on bipolar disorders has only started since 2000. The rate of publications in international journals has shown a sharp increase since 2000. Nevertheless, considering the prevalence of mood disorders in Iran, the whole scientific output remains insufficient.

ZS7.2.
DEPRESSION IN THE IRANIAN CULTURAL CONTEXT

H. Davidian
University of Tehran, Iran

The prevalence of depressive disorders in the general population in Iran is about 10%. About 10% of the patients seen by general practitioners suffer from depression, 50% of whom remain undiagnosed. 30-60% of the patients admitted to general hospitals for physical illnesses

suffer from comorbid depression. In a survey, 9% of the patients admitted to a psychiatric hospital suffered from a depressive syndrome. Among these, 13% were diagnosed as having major depression, 2.5% minor depression, 39.8% bipolar depression, and 0.2% dysthymia. In a survey, ten frequently encountered symptoms coming across in the mental state examination were sadness, joylessness, lack of energy, loss of interest, worthlessness, loss of ability to concentrate, disrupted social relationships, anxiety, hopelessness and tension. The patients complained more of physical than psychological signs and symptoms. Such physical complaints were headache, "pressure in the head", palpitations, pain in different parts of the body, tremors, fatigue, sleep disorders. The patients were shown to use metaphors or figurative language to express their feelings; in case of depression, for example, they complained of "heart being heavy or dark" or "as if a dark cloud is over their head". In a ten year follow-up study of depressed patients, the overall outcome was assessed as being good in 30.2%, moderate in 58.2%, and favorable in 11.6% of the cases. The rate of completed suicide was 2%.

ZS7.3.
IN 60s THEY CALLED ME SCHIZOPHRENIC, IN 80s THEY CALLED ME DEPRESSED, AND SINCE 90s THEY STARTED CALLING ME BIPOLAR!

S.S. Gudarzi
Mood Disorder Section, Iranian Psychiatric Association

There has been an increasing trend toward a dimensional approach in psychiatry in recent years. Nevertheless, the clinical utilization of the dimensional approach may gradually increase the risk of overdiagnosis of bipolar disorders. The new generation of psychiatrists tends to diagnose more "form fruste" of bipolar disorders. The alchemists that started the beginning of the 20th century with "even a trace of schizophrenia is schizophrenia", converted to "even a trace of depression is depressive disorder" during 80s and 90s, now tend to diagnose "a trace of mania as bipolar disorders". It seems wise to provide the new generation of psychiatrists with the instruments to promptly diagnose their clients, avoiding the repetition of the miseries and fallacies in the history of psychiatry. The responsibilities to diagnose and treat mental illnesses, however, are not limited to psychiatrists. The majority of mentally ill people are seen by non-psychiatrists. Still the dominant viewpoint of these physicians is "depressionoscopism". To support these concepts, we present the studies from Iran where general practitioners are highly qualified in the "*over*use of antidepressants (especially SSRIs)" in treating different forms of depressions but generally illiterate about non-manic depressive bipolar disorders, where the overall underdiagnosis of bipolar disorders in the nation is masked by the increasing rate of diagnosis in the university hospitals. This author suggests an educational approach that trespasses the prototypes of manic-depressive illness, informing medical students at medical schools, and other physicians at CME courses, of the bipolar spectrum disorders, mixed states, bipolar depression, the co-occurrences and the cost of misdiagnosis of bipolar spectrum disorders.

ZS7.4.
TRACING THE EPIDEMIOLOGY OF DEPRESSION IN IRAN: A REFLECTION IN ANY MIRROR

S.A. Jalili
University of Tehran, Iran

There has been an increasing trend in the research on the epidemiology of depression in Iran in the last five decades. The studies on the burden of illness from Iran reveal that depressive disorders rank among the five top in the total burden. The reported prevalence rates, however, vary widely based on the temporal variation and the place of the study. The pioneering studies by Bash et al. from 1964 to 1973 reported an increasing rate from 12% to 19%. Davidian reported the frequency of 54% in 1974. In 1990, a study on the rural residents reported a prevalence of 14% in all ages. A research on the population of a rural area, using both a questionnaire and interview by a psychiatrist, showed the prevalence of 54%. There are still many other reports on the prevalence of depression from Iran that fall between the above statistics. Variations in the studied ethnic population and the place of the sampling (rural vs. urban) can explain the differences to some extent. However, we believe that the difference in the instruments applied for the data collection is the prime reason behind all the variations in the statistics. The differences in the figures may limit the prompt follow-up of the population, measuring the burden of the diseases and planning the current and future policies. This may not be limited to a country in the region. Where it is of utmost importance to save resources, countries with identical cultures and ethnicities may agree on the most valid tools. This will reduce the redundancies and enable the researchers in the same region to compare their data.

ZS8.
WORKING WITH THE COMMUNITY (organized by the WPA Australasia and South Pacific Zone)

ZS8.1.
THE PACIFIC ISLANDS MENTAL HEALTH NETWORK

F. Hughes
Auckland University of Technology, Auckland, New Zealand

The Pacific Islands Mental Health Network (PIMHnet), a joint initiative of the WHO Regional Office for the Western Pacific and the WHO Headquarters in Geneva, was launched during the Meeting of Health Ministers for the Pacific Island Countries on 14 March 2007 in Vanuatu. PIMHnet seeks to bring the Pacific Island countries together so they can pool resources and share information, knowledge and experiences to improve mental health and treatment services. While most Pacific countries have a health system oriented towards primary health care, mental health is often not part of those services. "In some Pacific Island countries, mental health care means putting people in institutions, rather than treating and supporting them in the best environment for their well-being" said Dr Shigeru Omi, WHO Regional Director for the Western Pacific. This paper outlines the work of the network and the need for greater integration with wider health initiatives in the Pacific to maximise not only the financial but also human resource.

ZS8.2.
ESTABLISHING A SUBACUTE PSYCHIATRIC UNIT IN PARTNERSHIP WITH A COMMUNITY DISABILITY SUPPORT SERVICE

S. Stafrace, E. Crowther
The Alfred, Alfred Health; Mental Illness Fellowship of Victoria, Melbourne, Australia

Prevention and Recovery Care Units (PARC) have been set up in Melbourne as an alternative to psychiatric hospitalization for patients recovering from acute mental illness or experiencing early relapse. The PARC in South Yarra is a ten-bed facility located in an apartment block. It was established as a partnership between a clinical service,

Alfred Psychiatry, and a psychiatric disability rehabilitation service, the Mental Illness Fellowship of Victoria. The initiative was challenging from several perspectives. The setting up of a clinical service in a suburban setting compelled the local community to confront its own stigmatization of mental illness. The partnership itself obliged two organizations with different values and modes of service delivery to overcome their own prejudices to deliver integrated services. A governance framework has been required that values client functional outcomes, symptom relief and safety in equal measure. In this paper, the process by which the partnership was developed is described. The model of care and the governance framework are outlined. Activity and lessons learned from the first twelve months of operations are presented. In 2007-08, an average of 6 separations per month with an average length of stay of 21 days was mostly sourced from the inpatient unit, which accounted for 78% of referrals, indicating that there was greater demand for support for recovery than for prevention.

ZS8.3.
ACCESS TO ONE'S OWN HEALTH RECORDS: A PILOT STUDY OF UPTAKE, ACCEPTABILITY AND HEALTH OUTCOMES IN SEVERE MENTAL ILLNESS

M. Orr
National Institute for Health Innovation, University of Auckland, New Zealand

People experiencing severe mental illness often suffer complex disadvantages, including stigma, limited opportunities, financial constraints, side effects of medication, and poor physical health. Many affected individuals are keen to learn about their illness and its treatment, but access to reliable, personalized information is often difficult and subject to delay. We aim to assess whether direct on-line computer access to medical records can overcome some of these difficulties. The software chosen for this project (SmartMed) facilitates access to health information via a secure server. Participants have the option to comment upon (but not modify) their health information. In order to assess impacts, we will study how much use is made of the system, consumer satisfaction, use of health services, and changes in illness severity measured with the Health of the Nation Outcome Scales (HoNOS). These results will be complemented by interviews to capture expectations and experiences of people given such access. The study will provide an indication of how much use is made of such a system, and how it may help close the gap between consumers and health professionals. We expect to learn whether access is perceived to be helpful in terms of supporting self-esteem or recovery. Similarly, for mental health services, we will determine whether information provision assists communication with consumers, and whether its use impacts outcomes, in terms of symptoms, functioning, health service utilisation, and treatment adherence.

ZS8.4.
INTEGRATED CARE FOR HOMELESS PEOPLE WITH MENTAL ILLNESS

J. Freidin
Homeless Outreach Psychiatric Service, Melbourne, Australia

On the night of the 2006 census, approximately 106,000 Australians were homeless, a situation associated with poorer health, employment, relationship and criminal outcomes. Mental illness is a significant factor in causing or maintaining homelessness, with symptoms of mental illness often resulting in conflict with family, co-tenants or landlords. Mental illness can also be caused or exacerbated by living homeless, with the constant social instability and potential for victimisation, potentially triggering the onset or relapse of mood or psychotic disorders, particularly when coupled with substance abuse. People living homeless with a mental illness are in general transient, often unwell due to long periods without treatment, and reluctant to engage in mental health care; so they are poorly served by traditional mental health systems that rely on people attending a clinic to access support. A new initiative established co-location and partnership of mental health staff alongside accommodation and support staff at drop-in and crisis accommodation services to ensure improved identification of mental illness, rapid responsiveness and joint assessment and intervention supported by formal and informal education and consultation. People engaged in collaborative care with staff from both clinical and welfare services for at least one month had markedly more stable and permanent accommodation. The initiative resulted in significantly fewer referrals to mental health crisis services and a 50% reduction in admissions of these clients to inpatient psychiatry.

ZS9.
GOVERNMENT INITIATIVES FOR BETTER MENTAL HEALTH OF CANADIANS
(organized by the WPA Canada Zone)

ZS9.1.
GOVERNMENT INITIATIVES FOR BETTER MENTAL HEALTH OF CANADIANS

J. Arboleda-Florez
Queen's University, Kingston, Ontario, Canada

Following years of concern about the increasing prevalence of mental conditions and their costs in the country, the Government of Canada decided to establish a national fact-finding Mental Health Task Force headed by a highly-reputable Senator to study the issues. This Senatorial Group traveled the country for about four years and held open-town meetings with stakeholders, including patients and their families, clinicians, administrators, media representatives, advocates, members of law enforcement agencies, academics and a multitude of ordinary Canadians, who came to express their concerns and their hopes for better mental health in the Country. The Report of the Task Force, "Out of the Shadows at Last", is a photograph of the problems besieging mental patients in Canada. The Report has more than a hundred recommendations, with one of the most important being the establishment of a National Mental Health Commission. The federal government of Canada has already moved to implement and fund the Commission. This Commission has as a major mandate the study of the mental health of Canadians and the determinants of mental conditions in the country, including prevalence and social constructs such as stigma and discrimination. The Commission also heralds a new era of cooperation among levels of government and the general public. Initiatives for the promotion of mental health, the prevention of mental conditions and their proper treatment are already been considered.

ZS9.2.
THE PRIMARY AND SPECIALIST MENTAL HEALTH CARE SYSTEM IN CANADA

A. Lesage
Fernand-Seguin Research Centre, L.-H. Lafontaine Hospital, Social Psychiatry Unit, Montreal, Canada

Recent national mental health surveys in Canada, like the Canadian Community Health Survey cycle 1.2 (CCHS 1.2) on mental health and well-being, have indicated, like in other European and North

American countries, that the majority of adults with common mental disorders do not seek care for mental health reasons. However, examination of administrative databases as part of an effort to establish a Canadian national mental health surveillance system like for diabetes, provide a different picture of primary and specialist de facto system. CCHS 1.2 showed, over the course of one year, that about 5% of Canadians, with little variation across provinces, reported seeing a general practitioner for mental health reasons; and that about 40% reported seeing a health professional for mental health reasons if they showed symptoms of DSM-IV anxiety, depressive or substance abuse disorders. However, examination of physician billings administrative databases in five Canadian provinces indicated that over 15% of the population were identified with a mental disorder, essentially anxiety or depressive disorders, in the course of one year. Over the course of 3 to 5 years, nearly one third of the population was identified. The latter is closed to lifetime prevalence of common mental disorders. In the urban area of Montreal, a city of 1.8 million inhabitants, administrative databases used for surveillance and planning allowed to delineate that primary care general practitioners were solely involved for the majority of people identified with anxiety disorders and half of those with depressive disorders, but that specialist services were involved in over 80% of those diagnosed by at least one physician with schizophrenia. The implications of the findings will be discussed: a) the myth in Canada that primary care general practitioners do not identify and treat the majority of their patients with common mental disorders; b) the '*de facto*' Canadian system where patients with the most severe disorders are seen by specialists and where depression is the condition in which most shared mental health care seems to occur; c) the fact that challenge for mental health care based in primary care is not detection, but quality of care, including access to all forms of potentially effective treatments.

ZS9.3.
IMPLEMENTING MENTAL HEALTH REFORM IN CANADA: DEVELOPMENT OF COORDINATED ACCESS TO HOSPITAL AND COMMUNITY SERVICES

R. Milev, K. Carmichael, A. Mathany, P. Kennedy
Department of Psychiatry, Queen's University, Kingston, Ontario, Canada

According to government policies, mental health care in Canada is seen as a continuum of services, provided at three levels: first line (primary), intensive, and specialized (tertiary) services. Given the numerous providers of mental health services, it is sometimes challenging to achieve the integration required for a seamless and efficient care. We examine the process used to develop a system-wide coordinated access to mental health and addiction services in a geographically defined area in Ontario, Canada. Development of a common referral form and release of information consent form were amongst the first steps completed to implement coordinated access. Commitment to the principle of "best fit/match" introduced a review process to ensure that, with very few exceptions, individuals referred for mental health or addiction services received care from one or more of the service providers. Some outcome measures, such as wait time for an appointment, patient and referral sources' satisfaction etc., have been monitored. Common standards for initial risk assessments, and routine clinical examinations will be determined as the work progresses. A variety of measures to ensure patient flow, such as regular review of patient loads, step-down to other services or primary care etc., assure the ability of each service to provide the most efficient care.

ZS9.4.
EVALUATING MENTAL HEALTH REFORM IN CANADA

H. Stuart, T. Krupa, M. Koller
Department of Community Health and Epidemiology, Queen's University, Kingston, Ontario, Canada

By the late 1960s, Canada's asylum bed capacity had reached its zenith, with almost 77,000 beds. Over the next two decades, these were reduced by 70%. Health ministries were increasingly investing in general hospital psychiatric beds and community based services. In 2001, in preparation for a second wave of bed closures, the Ontario Ministry of Health funded a series of surveys to assess the system's capacity to provide additional community services to patients scheduled for resettlement. In our region, only about a third of clients received an intensity of care that matched their clinical needs. Agencies subsequently received additional funding to enhance intensive community based services and supports. In 2006, we replicated our original study to determine whether clients were receiving more appropriate care and using fewer hospital resources following the receipt of funding for system enhancement. This paper highlights the methods used to evaluate system-wide reforms and summarizes the findings from these evaluations.

ZS9.5.
THE MENTAL HEALTH REFORM AND TEACHING OF PSYCHIATRIC RESIDENTS

R. Tempier
University of Saskatchewan, Canada

The new Mental Health Commission of Canada (MHCC) has recently launched three key initiatives: an anti-stigma campaign, a national strategy for mental health and a knowledge exchange centre (KEC). The anti-stigma campaign should be based on strong education principles and will last for the next 10 years, aiming to show that mental illness is an illness like others. The KEC should bring to the public evidence-based best practice information on areas of need. Psychiatric residents, according to the Royal College of Physicians and Surgeons of Canada (RCPSC), should identify and appropriately respond to stigma, long-term illness and rehabilitation. The RCPSC states that psychiatrists need to be proficient in systems of care and delivery, and that residents should be skilled on how to address the increasing need for psychiatric services to work more closely with primary care providers. Finally, as medical experts, future psychiatrists will be health advocates advancing the health and well-being of patients, community and populations and have a leadership role in mental health services. We will envision on whether the MHCC, and the possible consequent reforms that could potentially follow, will have an impact on psychiatric education, and if yes, what will be the magnitude of such an impact.

ZS10.
PSYCHIATRIC CARE IN EASTERN EUROPE: AN UPDATE
(organized by the WPA Eastern Europe Zone)

ZS10.1.
PSYCHIATRY: PRESENT STATE AND CHALLENGES IN EASTERN EUROPE

A. Soghoyan
Yerevan State Medical University, Yerevan, Armenia

The WPA Zone 10 is located in Eastern Europe and the northern-central part of Asia. The countries of this zone represent different ethnics and cultures, but have in common 70 years of Soviet background as well as the knowledge of Russian language. Having survived a centralized system of management in both politics and health care, in their transition period they are experiencing similar problems. They are included in two categories: low income countries (Azerbaijan, Tajikistan, Kyrgyz Republic, Turkmenistan) and middle low income countries (Armenia, Georgia, Kazakhstan, Uzbekistan). These countries have a huge potential of mental health professionals, and their number of psychiatric beds is close to middle income countries of Europe and far different from other low income and middle low income countries. On the other hand, they are economically unable to cover expenses for the existing mental health facilities and services. In such a situation, there is a huge need of continuously implemented reforms, which is not a priority in the agenda of governmental structures for most of the countries. Interested international agencies and organizations could play an important role to solve the problems mentioned above.

ZS10.2.
PSYCHIATRY AND MENTAL HEALTH CARE REFORMS IN EASTERN EUROPE

V. Krasnov
Moscow Research Institute of Psychiatry, Moscow, Russia

Traditionally Eastern European psychiatry has predominantly developed along the clinical approaches elaborated by German, French and Russian psychopathological schools. The Kraepelinian nosological conception, Jaspers' psychopathology and the dynamic analysis of clinical conditions according to Russian and French clinicians have been for years the basis of clinical knowledge and skills, with the predominance of a paternalistic model of psychiatric care. The rise of British-American doctrine in psychiatry during the last decades has stimulated a change in psychiatric care and research and the development of more strict legislative and ethical rules. This process coincided with the dramatic events connected with the transition period after the breakdown of the Soviet Union, with the establishment of new states and new societies. The crisis in transition society has revealed the vulnerability of people's mental health, as evidenced not only through changes in the incidence of the main mental disorders but also by the upward trend in alcohol and drug use, higher suicide rate, increased prevalence of cardiovascular diseases, and fall in life expectancy, especially among men. Despite a tendency towards social and economic stabilization in the last few years, indicators of mental and general health in Russia and most of post-soviet countries have so far remained worse than they were in the 1970s and the 1980s, and also worse than current indicators in Western Europe and United States of America. Despite such circumstances, a lot of new approaches are emerging, with the development of new psychosocial interventions and the organization of mental health care at the primary care level.

ZS10.3.
MORAL DYLEMMAS AND DUTIES OF PSYCHIATRISTS IN A POST-TOTALITARIAN SOCIETY

G. Naneishvili, Z. Beria
Georgian Society of Psychiatrists, Tbilisi, Georgia

The expertise of independent forensic psychiatrists has become the object of attack after the Revolution of Rose (2003) in Georgia. We can speak about full state control, unconcealed and open pressure on experts. There are cases of threatening, blackmailing and intimidation from the side of Prosecutor's offices. Criminal prosecution of outstanding psychiatrists has paralyzed the system of independent psychiatric expertise. One of the most characteristic examples of such tendency was the prosecution of well-known Georgian experts, so-called "case of 11 psychiatrists" in 2004. This was followed by a second case in 2006. In the first case, the Tbilisi Chief Prosecutor was requiring a "politically correct diagnosis" for a patient applying threats and blackmail. He tried to bring a suit against the disobedient experts. Thanks to the intervention of foreign colleagues, this case has been solved. The second case was more dramatic. The State Department of Forensic Psychiatry carried out a re-examination of a patient, ignoring the opinion of three commissions involving 27 famous Georgian psychiatrists, and took an opposite decision, convicting the members of one commission (except its chairman) for the previous diagnosis. These facts represent a clear-cut persecution and constraint of psychiatrists' professional freedom, a violation of human rights and the total destruction of independent expertise functioning in Georgia.

ZS10.4.
COST EFFECTIVENESS OF PSYCHIATRIC CARE IN ARMENIA

H. Davtyan
Avan Clinic of Psychiatric Medical Center, Avan, Armenia

Armenia is a developing country, and management of financial resources is a sensitive issue for planning and effective implementation of mental health related projects. We analyzed financial flow and dynamics of psychiatric care in Armenia during the last three years, on the basis of data provided by the Republic of Armenia Ministry of Health. In 2005, the budget for mental health care was 5.4% of the whole health care budget. Comparative analysis showed that 89% of this budget was used for inpatient care and 11% for outpatient care. In 2006, the mental health budget was 4.4% of the total health care budget, and 92% was used for inpatient care. The corresponding figures in 2007 were 4% and 87%. Inpatient care includes the treatment of acute cases, chronic patient treatment and nursing, compulsory care in forensic cases and management of cases of substance abuse. Expenditure for chronic patient treatment and compulsory treatment in forensic cases was stable during the three years, representing 70% of the mental health budget. The average cost of one day treatment increased by 3% during the period. In spite of the reduction of the percentage of the total health budget allocated to mental health care, the absolute financing has increased during the last three years. At the same time, the trend towards an increase of the budget proportion allocated to outpatient care appears promising.

ZS10.5.
STIGMA IN UKRAINE AND POST-SOVIET COUNTRIES: THE ROLE OF THE MEDIA IN DESTIGMATIZATION

T. Beradze
Ukrainian Psychiatric Association, Kiev, Ukraine

This presentation covers the specific and unique aspects of stigmatization of mental disorders in Ukraine, and the actions which are being carried out to fight against this stigma by reaching the public through the mass media. The strong negative attitudes and stereotypes about mental health issues in the post-Soviet era are even more severe in this country, due to a series of historical reasons. We have to deal with several unique types of stigma, usually not existent in other countries. The role of media in destigmatization is discussed on the basis of personal experience.

ZS11.
EMPATHY IN PSYCHIATRY: A EUROPEAN PERSPECTIVE (organized by the WPA Western Europe Zone)

ZS11.1.
EMPATHY AND COUNTER-TRANSFERENCE: A CONTEMPORARY VIEW OF PSYCHOANALYSIS IN PSYCHIATRY

F. Quartier
University Hospital, Geneva, Switzerland

Empathy is to counter-transference what a precious metal is to an alloy. It is an essential ingredient in any therapeutic relationship. But it is not enough on its own to give a therapeutic twist to the relationship with the patient. The psychoanalytic approach enables us to look from all angles at empathy, which can either block or enrich the dialogue with the patient from the therapist's point of view. This is what counter-transference is about: what can I do for the best of this patient who is an individual who can suffer, love, sometimes hate, just like me? What can I, a therapist with my own baggage and with the experience I have at this moment, do to help him or her? Counter-transference is like a compass which stops us from running off on the wrong track. It is also a precious instrument for assisting the patient to find himself and, from our side, not to take a single, symptomatic vision of his problems.

ZS11.2.
EMPATHY: HOW CAN IT BE TAUGHT AS WELL AS CAUGHT

J. Cox
University of Gloucestershire, UK

This paper reviews the teaching of medical humanities and the evidence that the access to literature, art or music can increase the empathic practices of doctors in general and psychiatrists in particular. The bio-psychosocial model of Engel was directed to medicine as a whole, and this framework, when expanded to include spirituality (the quality of being spiritual), as understood by Buber and Teilhard de Chardin, is relevant to the recruitment and retention of psychiatrists. The paper will include direct reference to the author's training as a singer, and his brother's direct use of Shakespearean metaphor in the practice of forensic psychotherapy.

ZS11.3.
THE ROLE OF MODULARITY IN EMPATHY RESEARCH

W. Gaebel
University of Dusseldorf, Germany

Modularity denotes a neuroscientific approach towards the functioning of the human brain in health and disease, in that it puts neurobehavioral modules defined by experimentally verifiable physiological functions into the center of investigations. Modules are considered to fulfill specific functions and seem to be organized on different levels of the nervous system, ranging from cell-cell interactions to centers of organized brain activity and the temporal binding of distant modules in complex cognitive representations. Empathy, on the other hand, is a clinical construct which serves to describe the ability of individuals to recognize the feelings of others. As this mental capacity depends on the availability of several cognitive domains, like facial affect recognition and others, the question arises whether empathy has features of a single module, or whether empathy is composed of separable cognitive subfunctions depending on the individual "empathy task". Furthermore, the issue of the kind and degree of modularity in empathy is of importance regarding the role of empathy in pathological conditions like autism, psychopathy, and schizophrenia. Especially considering psychotherapeutic approaches, an empathy module consisting of several discernible submodules may pose novel challenges to the development of psychotherapy in these conditions, but may also offer new therapeutic avenues.

ZS11.4.
EMPATHY, EMOTIONAL REPRESSION AND ALEXITHYMIA: PSYCHODYNAMIC APPROACH AND THERAPEUTIC CONSEQUENCES

M. Corcos
Institut Mutualiste Montsouris, Paris, France

Alexithymia is a transnosographical psychopathological dimension rooted in the first phases of the psycho-affective development. This dimension seems to correspond to a regressive or constitutional psychic functioning allowing to freeze the affects in traumatic situations. The current neurophysiologic construct of alexithymia is conceptually paradoxical with respect to the concept of "operatory thinking" on which it is grounded. It will increase conceptual validity if it includes other components: an internal pole of self representation (of one's emotions and imaginary life), an external pole of otherness representation (figuration of the others' affective states) and a cognitive dimension associated with a thought clutched to facts. Coexistence of alexithymia with other defence mechanisms illustrates the richness, the diversity and the adaptation of psychic functioning. On the opposite, when alexithymia is the sole durable mechanism it exposes to psychosomatic regression when the psychic apparatus is overwhelmed.

ZS12.
THE FUTURE OF CHILD PSYCHIATRY IN NORTH AFRICA
(organized by the WPA Northern Africa Zone)

ZS12.1.
CHILD AND ADOLESCENT PSYCHIATRY IN MOROCCO

G. Benjelloun
Child Psychiatry Unit, Hopital des Enfants, Casablanca, Morocco

There is no known prevalence rate of mental disorders in children in Morocco. Investigations focusing on mental retardation, alone or associated with other handicaps, report a figure of 22.7%. The national epidemiologic survey of mental disorders in the general population aged 15 years or above reported that 42% of the population suffers from one or more mental disorders. As child psychiatrists, we are faced with many difficulties: lack of specific services in the public sector, lack of coordination of professionals, serious lack of professionals specialized in childhood in the public sector. Many treatments are not available in Morocco, such as methylphenidate and some antipsychotics. There is also a scarcity of information and preventive activities, as well as an insufficient sensitivity of professionals with respect to child health problems. There is also no specific training curriculum in child psychiatry. Our institution is the first and only child psychiatric research and care center in Morocco. The staff includes four child psychiatrists, two psychologists and two nurses. We saw 853 children with various mental disorders from February to May 2008.

ZS12.2.
CHILD PSYCHIATRY IN TUNISIA

A. Bouden
Department of Child and Adolescent Psychiatry, Razi Hospital, La Manouba, Tunisia

Up until recently, child psychiatry was not assigned high priority in Tunisia, as in other developing countries faced with major health concerns such as epidemic diseases or infant mortality. Since 1997, specific academic training and education in child psychiatry was provided. However, child psychiatry is still the "poor parent" of mental health care: 20 specialists, of whom 4 work in other countries (one per million); 50 beds in two cities (Tunis and Sfax). All the community facilities (day-care) are run by non-governmental organizations, especially for mental retarded (90%) and autistic and psychotic children and adolescents. In Tunisia, the need for child psychiatric care is increasing, because our country is a very "young" one (37% under 18 and 5% over 65 years) and because of the decreased pressure of traditional health problems (infectious) and the increasing demands in quality of life and "success", especially in studies (compulsory education until 15 years of age, 100% of children attend school).

ZS12.3.
CHILD AND ADOLESCENT PSYCHIATRY IN EGYPT

T.A. Okasha
Institute of Psychiatry, Faculty of Medicine, Ain Shams University, Cairo, Egypt

Half of the world's population are children or adolescents. Nearly 5% of them suffer from mental disorders and another 5% have conduct disorders. Mental retardation adds further to the heavy burden that these disorders represent for the sufferers, their families and their communities, and so do neurological disorders of childhood and adolescence, often accompanied by behavioural disturbances. Only a small proportion of children and adolescents affected by mental disorders receive adequate care. Even in highly developed industrialized countries, mental disorders in this age are often not recognized nor taken seriously. This presentation reviews psychiatric services for children and adolescence in Egypt. In Egypt, 24.2% of the population is below 15 years of age, 61.7% is between 15 and 64 years and 4.1% is above the age of 64. There are 62 outpatient mental health facilities in Egypt, but only two for child and adolescent mental health.

ZS12.4.
PSYCHIATRIC PROBLEMS OF WAR DISPLACED CHILDREN IN DARFUR, SUDAN

A. Abdelrahman
University of Khartoum, Sudan

The Sudan witnessed many civil wars over the last 50 years, which affected its development seriously and caused many national difficulties. Darfur had been through war for the last 3 years, which resulted in displacement of a sizable part of its inhabitants. Those who mostly suffered from the effect of this displacement were vulnerable people, including women, elderly and children. The aim of this study is to assess the psychiatric morbidity among children of displaced population. One camp with a population of about 50,000 people was surveyed using random sampling, and targeting children aged 5 years and above. The Strength and Difficulties Questionnaire (SDQ) was used. The parent version of SDQ was completed by parents for children aged 5-11 years, while individuals over 11 years completed the Adolescent version. Over 2,400 children and adolescents were studied by trained field surveyors, who helped those who could read and write. Additional questions were added to the study tool, including previous area of settlement, duration of stay in the camp, attending school in the camp, wetting at night and other relevant issues. A preliminary analysis showed that over 20% of the individuals are suffering from some psychiatric morbidity.

ZS13.
RECENT RESEARCH ADVANCES IN LATIN AMERICA
(organized by the WPA Southern South America Zone)

ZS13.1.
TRANSFORMATION OF MENTAL HEALTH CARE SYSTEMS IN ARGENTINA THROUGHOUT HISTORY

A.H. Cía
Association of Argentinean Psychiatrists, Buenos Aires, Argentina

Argentina has been a pioneer country in the development of psychiatry in South America. Since 1860, this speciality has started to develop around the figure of Lucio Meléndez, first director of the Hospicio de las Mercedes and first full professor and chair of Mental Illnesses. He was succeeded by his student Domingo Cabred, who was very active in the foundation of hospitals, and introduced open-door wards in the country. Other landmarks to mention were the establishment of the school of criminology, the development of neurobiological research, brought by the neuropathologist Christofredo Jacob, and the creation of the first chair of child psychiatry in the world by Lanfranco Ciampi, in the city of Rosario. The early introduction of psychoanalysis and its popularity over the decades have made Argentina one of the most "psychoanalysed" countries. Other psy-

chotherapeutic schools, such as the systemic and the cognitive-behavioral ones, have a growing influence at present. Great figures, such as Enrique Pichon Riviere and Mauricio Goldemberg, and the implementation of therapeutic communities in different parts of the country during the 1970s, contributed to strengthening the Argentine school of psychiatry, which had been severely hit by the 1976-1983 state terrorism. Lately, the field of mental health has developed significantly in the country, with several interesting ongoing experiences of institutional transformation, prevention, deinstitutionalization, and total integration of the patients in their family and the society.

ZS13.2.
CHALLENGES TO REDUCE THE 10/90 GAP: MENTAL HEALTH RESEARCH IN LATIN AMERICAN AND CARIBBEAN COUNTRIES

J. Mari
Department of Psychiatry, Federal University of Sao Paulo, Brazil

This study aimed to analyze the status of mental health research in 30 Latin American and Caribbean countries (LAC). Medline and PsycInfo databases were searched to identify the LAC authors. Their publications were classified according to the topic, type of research and target population studied. Scientific indicators of these countries were assessed in other two different databases: Essential Scientific Information and Atlas of Science Project, both from Institute for Scientific Information. All papers identified were classified according to 11 themes (childhood disorders, dementia, depression/anxiety, eating disorders, epilepsy, learning disorders, personality disorders, psychoses, substance misuse, suicide and others), type of research conducted and mental health vulnerability of populations studied. Indexed publications were concentrated in six countries: Argentina, Brazil, Chile, Colombia, Mexico and Venezuela. Most studies dealt with the burdensome mental disorders but neglected important topics such as violence and other priorities. These findings suggest that mental health research is mostly concentrated in a few LAC countries. These countries would contribute to reduce the research gap, if they provide research training to their neighbors and engage in bi- or multilateral research collaboration on common region priorities. Burdensome conditions such as violence, suicide, dementia and childhood disorders are under-researched, as well as vulnerable populations such as disabled, elderly, women, children and persons exposed to violence. There is a scarcity of studies on mental health systems and policies, clinical trials, epidemiology and cost of interventions, and a scarce production of knowledge aimed to reduce the burden of mental disorders and to inform decision makers.

ZS13.3.
THYROID DISORDERS AND DEPRESSION: RESEARCH IN LATIN AMERICA

L. Risco
Society of Neurology, Psychiatry and Neurosurgery, Santiago, Chile

There is multiple evidence that the relationship between thyroid disorders and depression has significant clinical importance. The efficacy of the augmentation of antidepressant treatments with thyroid hormones, the role of thyroid disorders as a risk factor for rapid cycling in bipolar disorders, the prevalence of thyroid disorders in patients with depression are some samples. Research in this area is moving forward in Latin America. We present the results of studies carried out in Chile on the prevalence of thyroid disorders in patients with mood disorders from a high complexity psychiatry unit, the results of thyrotropin releasing hormone (TRH) challenge in patients with a first episode of major depression who never received drug treatment before, and findings obtained by single photon emission computed tomography (SPECT) in depressed patients receiving antidepressants and thyroid hormones.

ZW1.
BIPOLAR DISORDERS IN THE CHILD AND ADOLESCENT POPULATION: A LATIN AMERICAN PERSPECTIVE (organized by the Northern South America Zone)

E. Belfort (Caracas, Venezuela), J.C. Martinez (Santiago, Chile), E. Saad (Guayaquil, Ecuador), E. Camarena (Mexico City, Mexico)

This workshop aims to describe the prevalence and clinical manifestations of bipolar disorders in children and adolescents in Latin America, analysing the relevant bio-psycho-social, demographic and cultural aspects. The difficulties in the diagnosis and the frequent comorbidities are emphasized. A proposal is provided for multidisciplinary treatments and care strategies. The issue of suicide and the relevant risk factors is also covered.

NEW RESEARCH SESSIONS

NRS1.
ANXIETY DISORDERS

NRS1.1.
THE RELATIONSHIP BETWEEN FUNCTIONAL OUTCOMES AND TREATMENT OF ANXIOUS AND PAINFUL SOMATIC SYMPTOMS IN PATIENTS WITH GENERALIZED ANXIETY DISORDER

D.V. Sheehan, A.L. Meyers, A. Prakash, M.J. Robinson, R. Swindle, J.M. Russell, C.H. Mallinckrodt
Department of Psychiatry, University of South Florida College of Medicine, Tampa, FL; Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN, USA

The study aimed to examine the relationship between global functional impairment and the treatment of anxious symptoms and painful somatic symptoms (PSS) in patients with generalized anxiety disorder (GAD). Data from two double-blind, placebo-controlled trials in adult outpatients meeting DSM-IV criteria for GAD were pooled. In the first trial (9-week, fixed-dose treatment period), patients were randomized to duloxetine 60 mg QD (n=168), duloxetine 120 mg QD (n=170), or placebo (n=175). In the second trial (10-week, flexible-dose treatment period), patients were randomized to 60-120 mg QD of duloxetine (n=168) or placebo (n=159). Path analysis was used to assess the relative contributions of changes in psychic and somatic anxiety and PSS on improved functional outcomes. Path analysis revealed that 37% of the total improvement in functional impairment (Sheehan Disability Scale total score) due to duloxetine treatment was independent of improvement in the Hamilton Anxiety Rating Scale (HAMA) psychic and somatic anxiety subscale scores or Visual Analog Scale for Overall Pain (VAS) score. Improvement in psychic anxiety accounted for 47% of the total treatment effect on improvement of functional impairment, whereas 7% and 9% of the improvement in functional impairment was accounted for by improvements in somatic anxiety

and overall pain, respectively. Thus, in patients with GAD, most of the treatment effect of duloxetine in improvement of functional impairment was mediated through improvement in psychic anxiety, with smaller contributions through improvement in somatic anxiety and PSS. Some of the improvement in functional impairment for duloxetine was independent of improvement through any of these domains.

NRS1.2. PANIC ATTACKS AND THE HOMEOSTATIC ALARM SYSTEM

G. Perna, D. Caldirola, F. Lopes, L. Bellodi
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

Most of the scientists involved in investigations on panic attacks agree on the fact that these attacks are false alarms. However, the nature of this false alarm is controversial. The false suffocation alarm theory developed by Donald Klein is the strongest candidate, since several data support the existence of a link between panic and respiration, and recent studies, investigating the complexity of respiratory physiology, revealed consistent irregularities in respiratory pattern and suggested that these abnormalities might be a trait marker of the panic disease. The high irregularity observed, together with the unpleasant respiratory sensations in patients with panic disorder, could be the result of the activation of a suffocation false alarm. Basic physiological functions in the organism and their alarm systems are strictly interrelated in a global network with reciprocal modulations and, since also abnormalities in cardiac and balance system function have been repeatedly described in patients with panic disorder, perturbations of these other basic systems or a more general dysfunction of our homeostatic brain might also explain respiratory findings. A recent brain imaging study reported an increase in brainstem volume in patients with panic disorder, supporting the idea that the homeostatic brain might play a role. Regulatory physiologic processes take place continuously beyond the consciousness and only occasionally they pervade the conscious awareness as "primal emotions". Panic attacks could be the expression of primal emotion arising from phylogenetically ancient brain circuits processing physiological perceptions/sensations linked to homeostatic functions. Among brain structures, parabrachial nucleus and insula might filter and integrate interoceptive information from our basic homeostatic functions and thus play a central role in panic attacks.

NRS1.3. PTSD SYMPTOMS FOLLOWING REPRODUCTIVE LOSS AND NORMAL CHILDBIRTH: RELEVANCE OF GENDER-RELATED CULTURAL BELIEFS, PERSONALITY, AND INTIMATE PARTNER SUPPORT

C. Tang, E. Yan, T. Chung
Department of Obstetrics and Gynecology, Chinese University of Hong Kong, Hong Kong, China; Department of Psychology, National University of Singapore, Singapore; Department of Social Work and Social Administration, University of Hong Kong, Hong Kong, China

Childbirth is a complex event that may lead to both positive and negative psychological responses. Recently, studies have focused on posttraumatic stress disorder (PTSD) associated with normal childbirth as well as with reproductive loss such as stillbirth, pregnancy loss, premature birth, and perinatal loss. This study examined the extent to which gender-related cultural beliefs, personality, and intimate partner support would associate with PTSD symptoms following normal childbirth and reproductive loss. A total of 309 Chinese women were interviewed following normal childbirth and another 376 Chinese women were interviewed following reproductive loss. It was estimated that 14% of the normal childbirth group and 33% of the reproductive loss group would be classified as experiencing probable PTSD using the DSM-IV criteria. Compared to the normal childbirth group, the reproductive loss group reported significantly greater number of overall PTSD symptoms, especially intrusive and avoidance symptoms. The two groups did not differ on hyperarousal symptoms. The amount of variance in the overall PTSD symptoms that was accounted for by demographics and psychocultural factors was 51% for the normal childbirth group and 49% for the reproductive loss group. For the normal childbirth group, the best predictors for overall PTSD symptoms were neurotic personality and spousal emotional support. For the reproductive loss group, the best predictors for overall PTSD symptoms were number of living children, cultural conception of ideal womanhood, and neurotic personality. Results provided pertinent information that could assist in the detection of adjustment problems following normal childbirth and reproductive loss.

NRS1.4. A DIAGNOSIS OF ANXIETY DISORDER IS ASSOCIATED WITH AN INCREASED RISK FOR DEPRESSION IN THE POST-PARTUM PERIOD

M. Mauri, S. Banti, C. Borri, C. Rambelli, D. Ramacciotti, M. Montagnani, A. Oppo, S. Montaresi, S. Ricciardulli, S. Di Biase, I. Giunti
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Italy

This study aimed to investigate o investigate the predictive role of a diagnosis of anxiety disorder on depressive symptoms and post-partum depression (PPD). 1066 women (12th-15th gestational week) were recruited. Depressive symptoms were assessed by the Edinburgh Postnatal Depression Scale (EPDS) and Axis-I disorders were diagnosed with the Structured Clinical Interview for Axis-I Disorders (SCID-I). 231 women (21.7%) met criteria for current anxiety disorders (ADs). The most frequent anxiety disorders were specific phobia (SpP) (n=114; 10.7%), panic disorder (PD) (n=43; 4%) and social phobia (SP) (n=41; 3.8%). Obsessive-compulsive disorder (OCD) was present in 17 women (1.6%) and generalised anxiety disorder (GAD) in 20 women (1.9%). A diagnosis of PD, OCD, GAD and SP during the first trimester of pregnancy was associated with a higher risk of developing depressive symptoms at the first month post-partum (EPDS score ≥13). Women with PD and SP were more likely to present postnatal DSM-IV depressive disorders (minor depressive disorder and major depressive disorder) (mDD and MDD) (DP: RR=7.6; 95% CI=2.62-22.0) (SP: RR=7.3; 95% CI=2.5-21.0). Having at least one anxiety disorder was associated with a greater likelihood of having major or minor depressive disorder during the post-partum period, even after the adjustment for the confounding factor of having a lifetime history of MDD (RR=3.86; 95% CI 1.58-9.42). These data suggest that anxiety disorders are associated with a greater likelihood of having depressive symptoms and disorders during the early post-partum period.

NRS2.
GENETICS AND MOLECULAR BIOLOGY

NRS2.1.
GENETIC PREDICTORS OF ILLNESS AND TREATMENT RESPONSE IN PSYCHIATRY

A. Serretti
Institute of Psychiatry, University of Bologna, Italy

The recent rapid developments in psychiatric genetic research produced more confusion than clarity in many researchers even in the same field. The supposed effect of gene variants in psychiatric disorders changed during the last couple of decades. Initial findings suggested that single gene variants could be a sufficient cause of bipolar disorder or schizophrenia. The following disillusionment led to the hypothesis of genes as at least a cause of a subtype of each disease. Also this hypothesis was not confirmed and during the last few years the huge technical advances flooded journals with a large number of scattered associations in many different directions. For schizophrenia a few susceptibility genes (including dysbindin, neuroregulin-1, DAOA, DISC-1) have been consistently replicated across different samples. A similar situation exist for bipolar disorder (BDNF, DAOA, FAT, HTTLPR among the others). Depression, anxiety, and the rest of adult and child disorders, as well as personality disorders, are much less informative. Focusing on pharmacogenetics, again a large number of studies have been performed, both in schizophrenia and mood disorders. Globally, results are not so strong and universally replicated to be applied in clinical practice. However they are so frequently reported that cannot be due to chance. In conclusion, gene variants influence human behavior, liability to disorders and treatment response, many of them are supposed to do so in a subtle, interconnected and environment modulated way. The final stage of research will be an individualized profile of susceptibilities to be used in clinical practice.

NRS2.2.
CAN MITOCHONDRIAL ANTIOXIDANTS BE NOVEL BIOLOGICAL TARGETS OF PHARMACOLOGICAL TREATMENT IN AGE-ASSOCIATED NEURODEGENERATIVE MENTAL DISORDERS?

G. Aliev, J.C. Shenk, E. Gasimov, K. Fischbach
Department of Biology, College of Sciences and Electron Microscopy Research Center, University of Texas at San Antonio, TX, USA; Department of Cytology, Histology and Embryology, Azerbaijan Medical University, Baku, Azerbaijan

Recent research demonstrated that cerebral hypoperfusion-induced oxidative stress and mitochondrial failure are key factors in the development of age-associated diseases, triggering mild cognitive impairment (MCI) and eventual conversion to Alzheimer's disease (AD) and other neurodegenerative and/or mental illnesses. Mitochondrial integrity is associated with cellular viability. We studied cellular and subcellular features of hippocampal neurons and microvessels mitochondrial lesions, oxidative stress markers and protein immunoreactivity in human AD samples and animal models that mimic MCI and/or AD. In addition, we studied the effects of dietary antioxidant treatment on neuronal mitochondrial ultrastructure in rats and apolipoprotein E4 (APOE4) transgenic mice. In situ hybridization, using mitochondrial DNA (mtDNA) probes for human wild type, 5kb deleted and mouse mtDNA, was performed in conjunction with immunocytochemistry using antibodies against amyloid β precursor protein (AβPP), 8-hydroxyguanosine (8OHG), all three isoforms of nitric oxide synthase (neuronal, inducible and endothelial NOS) and cytochrome c oxidase (COX). Mitochondrial degeneration was analyzed by electron microscopy in young and old rats with and without dietary supplementation of the mitochondrial antioxidants lipoic acid (LA) and acetyl-L-carnitine (ALCAR). Transgenic mice overexpressing either AβPP or ApoE4 were also studied. In addition, we used [14C] iodoantipyrene autoradiography to investigate the role of age-dependent ApoE4 effects on cerebral blood flow (CBF) as an initiator of brain hypoperfusion in APOE4 transgenic mice compared to age-matched wild-type (WT) mice. A significantly higher degree of mitochondrial damage was present in neurons and cerebrovascular wall cells in human AD samples and in aged AD animal models compared to age-matched controls and non-treated subjects. Neuronal mitochondrial damage was associated with damage in vessel wall cells, especially vascular endothelial cells and their mitochondria. Diet supplementation of aged and young animals increased the number of intact mitochondria and decreased the electron density of mitochondria associated with vacuoles and lipofuscin. These abnormalities coexisted with overexpression of AβPP, inducible NOS immunoreactivity and amyloid deposition in regions of the cytoplasm of endothelial cells characterized by the presence of large, lipid-laden vacuoles. Feeding old rats ALCAR + LA significantly reduced the number of severely damaged mitochondria and increased the number of intact mitochondria in all cellular compartments of the brain. In situ hybridizations revealed deleted mtDNA positive signals in the damaged mitochondria of neurons, vascular endothelium and perivascular cells. APOE4 associated factors gradually reduced CBF to create brain hypoperfusion when compared to WT; the differences in CBF were greatest as animals aged from 6-weeks to 12-months. Mitochondrial decay, characterized by mtDNA deletions and expression of oxidative stress markers, appears to be a key reason for the energy deficiency and oxidative stress in aging and age-associated diseases that selectively affect the brain vascular tree and vulnerable neurons. Our findings indicate that the APOE4 genotype-induced mitochondrial changes and associated structural damage may explain the age-dependent pathology seen in AD. Thus, pharmacological agents focused on amelioration of mitochondrial degeneration may be the most promising avenue for treatment of age-associated neurodegenerative disorders such as AD and/or other demented conditions.

NRS2.3.
MAO-A AND SLC6A4 GENOTYPING AND TESTIMONY AT CRIMINAL TRIALS

W. Bernet, S. Montgomery, J. Walker
Vanderbilt University School of Medicine, Nashville, TN, USA

Should testimony regarding behavioral genomics be presented at criminal trials? There are three ways in which a specific individual's genetic make-up may be relevant to his or her behavior: 1) the person's genotype may exactly designate a psychiatric or medical diagnosis that clearly explains the person's abnormal behavior (e.g., Huntington's disease, an autosomal dominant neurodegenerative disorder that causes psychosis, dementia, and sometimes violent behavior) 2) the person's genotype may support a psychiatric diagnosis that has been made on clinical grounds (e.g., a person homozygous for the short allele of the SLC6A4 serotonin transporter gene is more likely to become depressed and suicidal after stressful situations than a person who is homozygous for the long allele; the genotype does not make the diagnosis of severe depression, but it supports the diagnosis that was made on clinical grounds); 3) the person's genotype may help to explain a person's violent or criminal behavior (e.g., a male who has the low activity allele of the MAOA gene and who experi-

enced serious child maltreatment is more likely to manifest violent and antisocial behavior as an adult than a male who has the high activity allele; the genotype does not make a specific diagnosis or support a specific diagnosis, but it helps to explain that a particular person may have a predisposition to violence). Testimony regarding gene x environment interactions may be appropriate in the penalty phase of a trial regarding mitigation and perhaps in juvenile court. The authors have genotyped 24 criminal defendants for the MAOA and SLCA4 genes and will present examples of testimony regarding behavioral genomics at criminal trials.

NRS2.4.
THE RELATIONSHIP BETWEEN NON-VERBAL IQ AND GENDER IN AUTISM: IMPLICATIONS FOR GENETIC MODELS

P. Szatmari, R. Banach, A. Thompson, J. Goldberg, L. Tuff, L. Zwaigenbaum, W. Mahoney
Department of Psychiatry and Behavioural Neurosciences and Department of Pediatrics, McMaster University, Hamilton, ON; Department of Pediatrics, University of Alberta, Edmonton, AB, Canada

Autism is more prevalent among males than females by a ratio of about 4 to 1. It has also been reported that affected females are more severely impaired than males with autism, most commonly with respect to IQ. It is possible that females at risk for autism are protected, so that only those with the greatest genetic load are affected. Consequently, when females do have autism, they are more severely affected. According to this model, affected male siblings of females with autism would share the same genetic liability as their sisters and so would also have a lower IQ or more symptoms than male siblings of male probands. We were able to test this hypothesis with 194 families with a single child with autism (simplex, SPX) and 154 families with more than one child with autism (multiplex, MPX). The children with autism were examined on several measures of severity. The results indicate that affected girls from SPX families had lower nonverbal IQ than affected boys from SPX families, but no such differences were seen among MPX families and no such differences were seen on other metrics of severity. Similarly, the affected brothers of girls with autism were no different from affected brothers of male probands. These data suggest that the etiologic mechanisms in SPX and MPX families might be different, and more specifically that the effect of gender on IQ in SPX families likely reflects a non-transmissable genomic, environmental or epigenetic effect rather than a genetic one. This finding has important implications for linkage and association studies.

NRS2.5.
THE FINNISH NEURODEVELOPMENTAL BIRTH COHORT STUDY (FNBC)

H. Karlsson and the FNBC Study Group
Department of Psychiatry, University of Helsinki, Finland

The World Health Organization predicts that by the year 2030 depression and ischaemic heart disease will be the leading causes of disability adjusted life years (DALYs) in high-income countries. There is increasing evidence that psychosocial factors are crucial in the development of psychiatric and cardiovascular disease, that childhood disadvantage is a strong predictor for coronary heart disease and depression, that maltreatment and early life stress increases the risk of depression and coronary heart disease, and that there is a strong interaction between psychiatric and cardiovascular morbidity. Early experiences and attachment patterns play a crucial role in the psychobiological programming of the developing individual, and especially the development of the stress system plays a central role in linking experience and later morbidity. Recent evidence underlines the importance of the interplay of genes and environment in the development of the nervous system and predisposition to diseases of body and mind. For example, there is an interplay between childhood trauma and monoamine oxidase A gene (MAO-A) in relation to antisocial behavior, as well as between stress or trauma and the gene encoding for the serotonin transporter gene (SLC6A4) in depressive disorder. The aim of our multidisciplinary research group is to collect a large (n=5000) birth cohort starting at pregnancy (from age 6 months) which combines data from genetic analyses, functional and structural brain research, psychiatric assessment, attachment research, assessment of life events, registers and biological parameters, in order to understand the determinants and emergence of depression and cardiovascular disease.

NRS3.
SCHIZOPHRENIA

NRS3.1.
DELAY OF SCHIZOPHRENIA DIAGNOSIS: A STUDY ON PATIENTS ADMITTED TO A MENTAL HOSPITAL IN FINLAND BETWEEN 1980 AND 2003

R.K.R. Salokangas, M. Helminen, H. Rantanen, A.-M. Koivisto, M. Joukamaa
Department of Psychiatry, University of Turku; Psychiatric Clinic, Turku University Central Hospital; Turku Psychiatric Clinic; Tampere School of Public Health, University of Tampere; Department of Psychiatry, Tampere University Hospital, Tampere, Finland

A number of patients with schizophrenia have been in hospital treatment before the schizophrenia diagnosis. This time lag between the first-ever admission (FeA) and the first admission with schizophrenia diagnosis (FAsch) may delay beginning of adequate treatment. From the National Finnish Hospital Discharge Register, we identified all 27,490, 15- to 64- year-old patients admitted for the first time with schizophrenia diagnosis to mental hospital in Finland between 1980 and 2003. Since 1969, all their admissions to mental hospitals were recorded. For a sub-sample, the patients' family background was identified from the Population Register. Changes in the proportion of patients with FeA before FAsch and in the time lag between FEA and FAsch, and their association with patients' background, were explored by the Cox regression analysis. The proportion of patients with FeA before FAsch increased from 36% in 1980 to 75% in 2003 ($p<0.0001$). In all patients, the delay between FeA and FAsch increased from 475 days (in 1980) to 1952 days (in 2003) ($p<0.0001$). In patients with FeA before FAsch (n=15,606), the corresponding figures were 1338 days and 2588 days ($p<0.0001$), respectively. The increasing proportion of patients with FeA before FAsch and the increasing length of time between the FeA and the FAsch may indicate a delay in the implementation of appropriate intervention in schizophrenia, but may also be related to changes in classification systems and reluctance to make the diagnosis of schizophrenia because of its poor prognostic implications.

NRS3.2.
EARLY DETECTION AND INTERVENTION FOR THE PREVENTION OF PSYCHOSIS: A NATIONAL MULTI-SITE EFFECTIVENESS TRIAL OF INDICATED PREVENTION IN THE UNITED STATES

W.R. McFarlane, W. Cook, C. Carter, B. Cornblatt, B. McFarland, K. Milner, S. Adelsheim
Maine Medical Center, Portland, ME; University of California, Davis, CA; Zucker Hillside Hospital, Queens, NY; Mid-Valley Behavioral Care Network, Salem, OR; Washtenaw Community Health Organization, Ypsilanti, MI; The Mind Institute, Albuquerque, NM, USA

The Early Detection and Intervention for the Prevention of Psychosis Program (EDIPPP) is a multi-site effectiveness study to develop the evidence necessary to validate as standard practice early intervention to prevent psychosis. EDIPPP provides community and professional education for identifying at-risk youth and obtaining rapid access to treatment for those identified. The clinical approach includes evidence-based family psychoeducation, family-aided assertive community treatment, supported education and employment, and psychotropic medication by symptom indication. The model program in Maine has achieved high rates of community referrals, patient engagement, retention, symptom reduction, improved functioning, and low rates of conversion. There is also evidence of a relative reduction in incidence of psychosis. Six organizations across the United States have been selected to test the EDIPPP system. The research design includes recruiting 375 at-risk youth, total n=900, ages 12-25, in defined catchment areas, determining level of risk with the SIPS/SOPS criteria, assignment to treatment vs. control conditions by severity of positive symptoms, and testing by regression discontinuity, incidence differences between control and experimental catchment areas, and cost-effectiveness. This is possibly the largest and most comprehensive trial of an indicated prevention strategy for psychosis.

NRS3.3.
FIVE-YEAR FOLLOW-UP OF INTEGRATED CARE VS. BEST CLINICAL PRACTICE FOR SCHIZOPHRENIA: A PROSPECTIVE CONTROLLED STUDY

U. Malm, B. Ivarsson, I.R.H. Falloon
Institute of Neuroscience and Physiology at Sahlgrenska Academy, University of Gothenburg, Sweden

The main objective of this study was to evaluate the durability of effects of integrated care practice (ICP) over a five-year follow-up. An additional aim was to explore differences in process elements between programs studied. Two community-based intervention programs (ICP) and best clinical practice, BCP were compared in a prospective study of 96 patients with schizophrenic disorders. Repeated assessments of symptoms, social function and consumer satisfaction as well as program compliance over 5 years were carried out. Days-in-hospital and number of visits-in-community care were collected. Analyses were by intention-to-treat and attention-to-content-of-care. Ninety-five out of 96 patients were assessed at the 5-year endpoint of study. The two-year benefits of significantly improved social function and consumer satisfaction in the ICP group vs. the BCP group were maintained. The program adherence was found to be 80% in the optimal clinical provider ICP-team management. Unique elements only in the ICP practice were continuous social network resource groups, procedures for shared decision making and a shared work book for clinicians and users - and a quality algorithm including quarterly assessments of outcomes and yearly audits. These findings suggest that ICP yields an improved social function and increased consumer satisfaction vs. BCP. The durability of effects over a five-year follow-up period was confirmed.

NRS3.4.
EFFECTIVENESS OF AN OCCUPATIONAL GOAL INTERVENTION (OGI) IN SCHIZOPHRENIA FOR EXECUTIVE DYSFUNCTION AND OCCUPATIONAL OUTCOMES: A RANDOMIZED CONTROLLED TRIAL

N. Katz, N. Keren
Hebrew University, Jerusalem; Ono Academic College, Kiryat Ono; Kaplan Hospital, Rehovot, Israel

The study compared the impact of an occupational goal intervention (OGI), a strategy training method, with that of frontal executive program (FEP), a neuropsychological remedial treatment, on executive dysfunctions and occupational outcomes in schizophrenia. The OGI program uses a five stage process strategy to treat in a variety of graded and meaningful occupational tasks. We conducted a randomized controlled trial. Eighteen schizophrenic participants (DSM-IV diagnosis) at a day hospital, aged 20-55 years, were randomly assigned to the two experimental groups and a control group. Testing was performed at three points in time: prior to treatment (T0), following treatment (T1) and 6 months later (T2). Standardized instruments were used: for executive functions, WCST, BADS, EFPT; for occupational outcomes, ACS, RTI, RNL. All participants received 18 treatment sessions, 2 or 3 meetings of 1-1.5 hours a week over a period of about 6-8 weeks. Participants in the OGI and FEP groups improved significantly on executive function measures at T1 in comparison to the control group. The majority of the participants in both groups improved or maintained their executive functioning achievements at follow-up (T2). For occupational outcomes at T1, significant improvement was found in the OGI group on most measures, while no significant difference was found in the other groups. The majority of the participants maintained their achievements when tested 6 months later (T2).

NRS3.5.
DAY CENTRES FOR PEOPLE WITH SEVERE MENTAL ILLNESS: AN INTERVENTION PROJECT

M. Eklund, E. Strömberg
Department of Health Sciences, University of Lund, Sweden

This project addresses the possibility for people with severe mental illness (SMI) to lead an active daily life with meaningful daily activities. It aims at evaluating existing day centres (DC) in comparison with no structured daily activity, in terms of the visitors' satisfaction with daily activities, perceived status, motivation, wellness and social interaction. Ninety-three visitors at DCs and 82 comparison individuals with no regular daily activity were included. The DCs were categorised in two groups, work-oriented and meeting-place-oriented. People visiting these two categories were compared regarding the target variables, and so were the DC group as a whole and the comparison group. Preliminary results indicated no differences between those visiting the work-oriented and the meeting-place DCs regarding satisfaction with daily activities, perceived status, or wellness. The motivational drives for visiting a DC differed, however. Those who visited work-oriented DCs more often went there because they learnt something and because they wanted better social status. Regarding differences between the DC group as a whole and the comparison group, the only significant one was that the DC group was more active during the day. Visiting a DC was not associated with better wellbeing or

satisfaction in any respect, neither were there any substantial differences between people visiting work-oriented and meeting-place DCs. Variables such as the social network, needs, and engagement in the DC still remain to be analyzed, however, and results from these might change the result picture. Still, the findings indicate that interventions aiming at enriching DCs with meaningful daily activities might be warranted, and a project with this aim is currently prospected.

NRS4.
MAJOR DEPRESSION AND SUICIDALITY

NRS4.1.
SIMILARITIES IN PKA, PKC, cAMP, PHOSPHODIESTERASE AND BDNF CHANGES IN THE BLOOD BETWEEN HIBERNATION IN BEARS AND MAJOR DEPRESSION IN HUMANS

J. Tsiouris, W. Spivack, M. Flory, R. Kascsak
New York State Institute for Basic Research in Developmental Disabilities, Staten Island, NY, USA

Phenotypic similarities have been observed between major depression with melancholic features and hibernation in bears (who do not become hypothermic during hibernation). Metabolic similarities between the two conditions have been reported, including reversive hypothyroidism, low respiratory quotient, decreased neurotransmitter levels, increased serum cortisol, a2 macroglobulin, acute phase protein levels and oxidative stress response. Studies reported changes in the levels of protein kinase A (PKA), protein kinase C (PKC), cyclic adenosine monophosphate (cAMP) signaling pathways and brain derived neurotrophic factor (BDNF) in unipolar and bipolar depression in humans. Levels of PKA, PKC and phosphodiesterase (PD) were determined by ELISA (Assay Design, Inc.) in white blood cells lysates, isolated from serial blood samples drawn from three female bears in captivity during active and hibernating states. Changes in the levels of BDNF in the bears' serum were measured during active and hibernating states after polyclonal and monoclonal antibodies to the bears' BDNF have been developed. There was no cross creativity of the existing BDNF antibodies to bear BDNF. The similarities in PKA, PKC, PD, cAMP and BDNF changes in levels observed in the bears during hibernation with those reported during major depression in humans are presented.

NRS4.2.
THE EFFECT OF PEER SUPPORT ON THE PREVENTION OF POST-PARTUM DEPRESSION AMONG HIGH-RISK WOMEN: A MULTI-SITE RANDOMISED CONTROLLED TRIAL

C.-L. Dennis, E. Hodnett, L. Kenton, J. Weston, J. Zupancic, D.E. Stewart, A. Kiss
Lawrence S. Bloomberg Faculty of Nursing, University of Toronto, Canada; Faculty of Medicine, Department of Psychiatry, University of Toronto, Canada; Faculty of Medicine, Department of Neonatology, Harvard University, Boston, MA, USA; Faculty of Medicine, Department of Research Design and Biostatistics, Sunnybrook Health Sciences Centre, Toronto, Canada

This study aimed to evaluate the effectiveness of telephone-based peer support in the prevention of post-partum depression (PPD). A multi-site randomised controlled trial was conducted in seven health regions across Ontario, Canada. Women in the first 2 weeks post-partum identified as high-risk for PPD using the Edinburgh Postnatal Depression Scale (EPDS) were recruited and randomised to either a control group (standard postpartum care) or intervention group (standard care plus peer support). In this trial, peer support consisted of individualized, telephone-based mother-to-mother support, initiated within 48 to 72 hours of randomisation, provided by a trained volunteer recruited from the community who previously experienced and recovered from self-reported PPD. Following web-based screening of 21470 women, 701 (72%) eligible mothers were recruited. Follow-up rates for the 12 and 24 weeks post-partum assessments for all trial outcomes were >85%. At 12 weeks post-partum, significantly fewer women randomised to the intervention group had an EPDS score >12 (13.5%) than those in the control group (24.8%; χ^2=12.2, p=0.0005, OR=2.1; 95% CI=1.38-3.20; NNT=8.92). A positive trend favouring the intervention group was found for maternal anxiety but not loneliness or health service utilisation. For ethical reasons, participants with clinical depression at 12 weeks were referred for treatment, resulting in no group differences at 24 weeks. Of the 221 women in the intervention group who received and evaluated their peer volunteer experience, >80% were satisfied and would recommend this support to a friend. These findings suggest that telephone-based peer support may be effective in preventing PPD among women at high-risk.

NRS4.3.
ADAPTING PSYCHOTHERAPY TO IMPROVE PERINATAL DEPRESSION TREATMENT ADHERENCE AND EFFECTIVENESS

H.A. Flynn, E. Henshaw, H.A. O'Mahen
University of Michigan Department of Psychiatry, Ann Arbor, MI, USA; Exeter University, Exeter, Devon, UK

Few women suffering from perinatal depression receive effective psychiatric treatments in the US, leaving them and their children vulnerable to poor outcomes. There is an urgent need to understand how best to adapt psychotherapy for use in these settings. This paper presents recent results from an intervention development project. This study is aimed at improving adherence and effectiveness of cognitive behavioral therapy (CBT) for perinatal depression by adapting both the delivery method and content of CBT using a mixed methods study design. Pregnant and postpartum women (n=139) were recruited in five obstetrics clinics in the US. Using a stratified purposeful sampling method, a total of 23 women with current depression completed semi-structured interviews. Data analysis was conducted in an ongoing fashion by iteratively incorporating findings into the modified CBT manual by expert consensus process. Prominent themes regarding modification of CBT content that emerged included: the need to include a specific social support module; specific focus on cognitions related to guilt and anxiety about parenting; and specific focus on birth-related trauma experiences. No women preferred treatment in a psychiatric setting. The adapted 8 session perinatal CBT manual was tested in an open pilot trail of 11 pregnant women with MDD, with 90% adherence to all sessions and significant mean decreases in Edinburgh Postnatal Depression scores. Thus, the adapted CBT resulted in excellent adherence, and is being tested in a larger trial. A customized psychotherapy for this population has the potential to improve depression outcomes for women and their children.

NRS4.4.
DEPRESSIVE PERSONALITY AND TREATMENT OUTCOME IN MAJOR DEPRESSIVE DISORDER

R.M. Bagby, L.C. Quilty, K.M. Godfrey, D.D. Vachon, A.G. Ryder
University of Toronto, Canada; Purdue University, West Lafayette, IN, USA; Concordia University, Montreal, Canada; Sir Mortimer B. Davis Jewish General Hospital, Montreal, Canada

Depressive personality disorder (DPD) is currently included in the DSM-IV Appendix B, "Criteria Sets and Axes Provided for Further Study". Evidence of the clinical utility of DPD will likely play an important role in the determination of whether it warrants inclusion in future editions of DSM. The current investigation examines the capacity of DPD traits to predict overall and preferential treatment outcome for patients with major depression (MDD) (n=120), using data from a randomized control trial which included cognitive behavioural therapy (CBT), interpersonal therapy (IPT) and anti-depressant medication (ADM) treatment arms. Patients were treated for 16-20 weeks with CBT, IPT or ADM and completed the Structured Clinical Interview for DSM-IV Axis II Personality Disorders Questionnaire, the 17-item Hamilton Rating Scale for Depression, and the Beck Depression Inventory II prior to and following treatment. Higher scores on a dimensionalized measure assessing DPD traits were associated with poor treatment outcome in IPT, but not CBT or PHT. This result remained after controlling for variance associated with other personality disorder (PD) traits; none of the other 10 DSM-IV personality disorders predicted treatment outcome.

NRS4.5.
SLEEP PROBLEMS AND SUICIDALITY IN THE NATIONAL COMORBIDITY SURVEY REPLICATION

M. Wojnar, M. Ilgen, J. Wojnar, R. McCammon, M. Valenstein, K. Brower
Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA; Department of Psychiatry, Medical University of Warsaw, Warsaw, Poland; VA Serious Mental Illness Treatment Research and Evaluation Center, Ann Arbor, MI, USA

Links between sleep problems and suicidality have been frequently described in clinical samples; however, this issue has not been well-studied in the general population. Using data from a nationally representative survey, we examined the association between self-reported sleep difficulties and suicidality in the United States. The WHO Composite International Diagnostic Interview was used to assess sleep problems and suicidality in the National Comorbidity Survey Replication (NCS-R). Relationships between three measures of sleep (difficulty initiating sleep, maintaining sleep, early morning awaking), and suicidal thoughts, plans, and attempts were assessed in logistic regression analyses, while controlling for demographic characteristics, 12-month diagnoses of mood, anxiety and substance use disorders, and chronic health conditions. In multivariate models, the presence of any of these sleep problems was significantly related to each measure of suicidality, including suicidal ideation (OR=2.1), planning (OR=2.6), and suicide attempt (OR=2.5). Early morning awakening was associated with suicidal ideation (OR=2.0), suicide planning (OR=2.1), and suicide attempt (OR=2.7). Difficulty initiating sleep was a significant predictor of suicidal ideation and planning (ORs: 1.9 for ideation; 2.2 for planning), while difficulty maintaining sleep during the night was a significant predictor of suicidal ideation and suicide attempts (ORs: 2.0 for ideation; 3.00 for attempt). In conclusion, among community residents, chronic sleep problems are consistently associated with greater risk for suicidality. Efforts to develop comprehensive models of suicidality should consider sleep problems as potentially independent indicators of risk.

NRS5.
ANTIPSYCHOTIC TREATMENT

NRS5.1.
DISEASE BURDEN AND CLINICAL OUTCOMES ASSOCIATED WITH LONG-TERM ANTIPSYCHOTIC TREATMENT FOR SCHIZOPHRENIA: KEY FINDINGS FROM THE IC-SOHO STUDY

M. Dossenbach, E. Herman, J. Pecenak, U. Groleger, A. Szulc, Y. Dyachkova, T. Treuer, A. Lowry, on behalf of the IC-SOHO study group
Eli Lilly, Ges.m.b.H, Vienna, Austria; Private Psychiatric Practice, Prague, Czech Republic; Department of Psychiatry, University Hospital, Bratislava, Slovakia; University Psychiatric Hospital, Ljubljana, Slovenia; Department of Psychiatry, Medical University, Bialystok, Poland; Lilly Hungaria Kft, Budapest, Hungary; Intercontinental Information Sciences, Eli Lilly, Sydney, Australia

Non-interventional, naturalistic studies facilitate examination of current clinical practices, and afford us an understanding of the impact of the biopsychosocial aspects of schizophrenia. Here we describe disease burden and patient outcomes from a pan-regional (n=27 countries) observational study, with an emphasis on the comparative effectiveness and tolerability of antipsychotic monotherapy. Outpatients initiating or changing antipsychotic therapy for schizophrenia (n=7658) were assessed at 0, 3, 6, 12, 18, 24, 30, and 36 months. Treatment was at the psychiatrist's discretion, including flexible dosing and use of concomitant therapies. Longitudinal clinical, pharmacological, functional, and social data collected over 36-months will be presented. At entry, 76% of patients were prescribed antipsychotic monotherapy, most commonly with olanzapine (n=3222), risperidone (n=1117), quetiapine (n=189), or haloperidol (n=257). Patients prescribed olanzapine were more likely to maintain their baseline monotherapy ($p<0.001$), and did so for a longer period ($p<0.001$) compared with other antipsychotics. The median times to discontinuation (months) were: olanzapine 30.0, risperidone 23.1, quetiapine 13.9, haloperidol 12.5. Response data were favourable for olanzapine and risperidone, median time to response (months): olanzapine 5.2, risperidone 6.3, quetiapine 11.3, haloperidol 11.7. However, olanzapine-treated patients were more likely to respond, and did so significantly more rapidly than patients on other monotherapies. Treatment-emergent adverse events varied: olanzapine patients had greater odds for significant weight gain ($p<0.001$), haloperidol patients for motor dysfunction ($p<0.002$). The IC-SOHO study provides important insight into the variability of clinical and functional outcomes associated with long-term antipsychotic treatment in less-studied outpatient communities in a naturalistic setting.

This study was funded by Eli Lilly.

NRS5.2.
A PROSPECTIVE, MULTICENTRE, OPEN-LABEL STUDY TO EVALUATE THE EFFECTIVENESS AND THE EFFECT ON COGNITIVE FUNCTIONING OF ARIPIPRAZOLE IN A BROAD RANGE OF PATIENTS WITH SCHIZOPHRENIA

J. Peuskens, A. de Patoul, W. Kerselaers, V. Halkin
UPC Sint Jozef, Kortenberg; Bristol-Myers Squibb, Braine-l'Alleud, Belgium

This study aimed to evaluate the effectiveness and effect on cognitive functioning of a 12-week treatment with aripiprazole in a broad range of schizophrenic patients. In an open-label prospective study, a total of 361 in/outpatients meeting DSM-IV criteria for schizophrenia received aripiprazole (10-30 mg qd). Effectiveness was assessed by the Clinical Global Impression-Improvement (CGI-I) scale. Secondary outcome measures were Patient Global Impression – Improvement (PGI -I) scales. Cognitive functioning was evaluated with the Verbal Fluency (VF) and the California Verbal Learning Tests (CVLT). At study endpoint, the mean CGI-I score was 3.0 (95% CI: 2.8, 3.2; LOCF), demonstrating the effectiveness of aripiprazole as the upper bound of the 95% CI was less than 4 (the score of "no change"). Both patient and caregiver PGI-I scores (LOCF: 95% CI: 2.79, 3.09 and, 95% CI: 2.74, 3.17, respectively) corroborate this finding. Verbal fluency (letter fluency and category fluency) showed an increase from baseline to week 12, on average 2.9±0.4 (LOCF). A mean increase was observed on all CVLT indices at weeks 4 and 12. For total recall the increase was 9.4±0.6 (LOCF) words and for semantic clustering 0.3±0.1 (LOCF). For the discriminability index the improvement was 3.3±0.5 (LOCF). In conclusion, aripiprazole was effective in a broad range of patients with schizophrenia. Cognitive function assessments (CVLT, VF) demonstrated an improvement over the 12-week treatment phase. The existence and/or quantification of a potential practice effect should be clarified.

NRS5.3.
PRESCRIPTION DRUG COST-SHARING AND ANTIPSYCHOTIC DRUG TREATMENT: UNINTENDED ADVERSE CLINICAL EFFECTS

J. Hsu, M. Price, V. Fung
Center for Health Policy Studies, Kaiser Foundation Research Institute, Oakland, CA, USA

Health plans are increasingly using cost-sharing for patients with psychiatric conditions. There is limited information on the potential clinical ramifications. We investigated the impact of a $1,600 annual drug benefit cap in 2001, changing to a $1,000 annual cap in both 2002 and 2003, compared with a concurrent control group with no benefit limits. All 4,973 subjects were 65+ years with Medicare insurance and were members of an integrated, prepaid delivery system. We used regression models to examine the association between having a cap and drug consumption, and to assess the association between having a cap and drug adherence. We adjusted for individual characteristics and time. In 2001, 48% of subjects had a $1,600 annual cap, and the others had no benefit limit. In the multivariate model, subjects with a cap consumed 21% less than their expected drug consumption if they had no cap ($p<0.0001$): 14% less in 2001; 25% less in 2002; and 27% less in 2003. Adherence was lower in cap vs. non-cap subjects: e.g., OR=0.82 (95% CI 0.74-0.90) for all antipsychotics; OR=0.80 (95% CI 0.65-0.99) for subjects originally on a conventional antipsychotic at the beginning of the study period; and OR=0.82 (95% CI 0.74-0.91) for subjects on atypical antipsychotics. Compared to non-cap subjects, cap subjects had higher out-of-pocket drug costs (144% higher, $p<0.0001$): 93% higher in 2001; 176% higher in 2002; and 189% higher in 2003. In patients with Medicare insurance receiving antipsychotics, drug caps were associated with less drug consumption, lower treatment adherence, and higher out-of-pocket costs.

NRS5.4.
ARIPIPRAZOLE, OLANZAPINE AND OLANZAPINE-CLOMIPRAMINE COMBINATION IN SCHIZOPHRENIA WITH OBSESSIVE-COMPULSIVE SYMPTOMS

M. Fawzi, M. Fawzi Jr.
Department of Psychiatry, Faculty of Medicine, Zagazig University, Egypt

This study aimed to compare the clinical efficacy of aripiprazole, olanzapine and olanzapine-clomipramine combination in schizophrenia patients with obsessive- compulsive symptoms (OCS). Forty-five adult attenders of two psychiatric clinics, fulfilling ICD-10 criteria for schizophrenia, having a score of at least 16 on the Yale-Brown Obsessive-Compulsive Scale (YBOCS), and with no history of recently taking psychiatric drugs, were randomized in a 6-month open-label study to aripiprazole (15 mg/day), olanzapine (10 mg/day), or olanzapine (10 mg/day) plus clomipramine (150 mg/day). Efficacy was assessed by Positive and Negative Syndrome Scale (PANSS), Clinical Global Impressions (CGI) scale and YBOCS. Thirty-four patients (75.6%) completed the study. Differences between groups in dropout rates were insignificant. Completers in all groups showed a significant decrease in PANSS, CGI and YBOCS scores at end-point compared to baseline. There were no statistically significant differences between groups with respect to decrease in PANSS scores. However, the reduction of CGI and YBOCS scores at end-point were significantly in favor of the aripiprazole group. These findings, despite the high dropout rate, suggest that OCS in schizophrenia patients may be more responsive to aripiprazole than to olanzapine, even when combined with clomipramine, a standard treatment for OCD.

NRS5.5.
ONCE-WEEKLY D-CYCLOSERINE EFFECTS ON NEGATIVE SYMPTOMS AND COGNITION IN SCHIZOPHRENIA

D.C. Goff, C. Cather, J.D. Gottlieb, J.P. Walsh, L.H. Raeke, D. Schoenfeld, M.W. Otto, M.F. Green
Schizophrenia Program, Massachusetts General Hospital, Freedom Trail Clinic, Boston, MA, USA

Daily dosing with D-cycloserine has inconsistently improved negative symptoms in schizophrenia patients, whereas intermittent dosing significantly facilitated desensitization in two studies of patients with phobic anxiety. In animal models, single dose administration enhances memory consolidation, but tachyphylaxis develops with repeated dosing. The objective of this study was to assess whether once-weekly dosing with D-cycloserine produces persistent improvements in negative symptoms and cognition. Stable adult schizophrenia outpatients treated with any antipsychotic except clozapine were randomly assigned, double-blind, to D-cycloserine 50 mg/day, or placebo administered once-weekly for 8 weeks in a parallel group design. Symptom rating scales and a cognitive battery were administered at baseline and at week 8. The Logical Memory Test, modified to measure recall after 7 days, was administered weekly and at follow-up, 2 weeks after completion of the trial. Primary outcome measures were the change from baseline to week 8 on the Scale for the Assessment of Negative Symptoms (SANS) total score and on a composite cognitive score. Fifty

patients were enrolled; 38 were randomized and 33 (87%) completed the trial. D-cycloserine significantly improved SANS total scores at week 8 compared to placebo. Cognitive performance did not improve with D-cycloserine at 8 weeks. Delayed thematic recall from week 1 on the Logical Memory Test was significantly improved with D-cycloserine compared to placebo; this effect was lost with repeated dosing. Performance on immediate thematic recall and item recall on the Logical Memory Test did not differ between treatments. Thus, once-weekly dosing with D-cycloserine for 8 weeks produced persistent improvement of negative symptoms compared to placebo. Consistent with animal models, a single dose of D-cycloserine facilitated memory consolidation tested after 7 days on a test of thematic recall, but this effect disappeared with repeated dosing, possibly due to tolerance. These results suggest that the glutamatergic pharmacology of negative symptoms and memory consolidation may follow distinctly different patterns of response.

NRS6.
MENTAL HEALTH SERVICE ISSUES

NRS6.1.
MENTAL HEALTH SERVICE SYSTEM DEVELOPMENT IN ASIA-PACIFIC: KNOWLEDGE AND SKILLS TRANSFER ACROSS BORDERS

B. Singh, Chee Ng, Yun Xin, Ma Hong, Liu Jin
University of Melbourne, Australia; Institute of Mental Health, University of Beijing, China

The systematic reform of the Victorian mental health service system, which exemplifies centrally-driven service reform by the state government with bipartisan support, was largely achieved between 1993 and 1996, with institutions gradually being closed and their patients, staff and resources moved to the community. Independent evaluation in 2006 indicates the effectiveness of such service reform, resulting in enhanced and accessible services for more people for equivalent levels of resources. Mental health professionals were trained in community-based service delivery, particularly in case-management. Such an approach coordinates all aspects of care, including medical and psychosocial treatment of psychiatric illness, and can be implemented by allied health and non-medical professionals. Following a period of bilateral expertise exchange, China embarked on a national program of rapid mental health reform in 2005, with the development of the "686" community-based mental health service program, involving 60 sites in the thirty urban and rural provinces of China. Each site covered a population of about 400,000, with a total coverage of 42.9 million. Over 400 training sessions have been conducted for psychiatrists, community doctors, case management doctors, policemen, community officers, and patients' families, in all exceeding 50,000 people trained. An information system for psychiatric patients has been established. 81,441 people with psychoses were recorded by late 2007; 30,261 patients had been followed up regularly and received rehabilitation services; 11,641 patients have received free drugs and 2,083 have received free treatment. Data collected from 42 sites showed that the incidence of patients' disruptive social behaviour had also decreased markedly. Building on the previous partnership, productive collaboration between both countries also occurred to provide a coordinated psychosocial mental health response for the earthquake disaster in 2008. Over the three years of co-operation, the Australian and Chinese partners have developed a model for successful collaboration, one based on mutual respect, exchange of expertise and a deep appreciation of cultural difference and its influences on all aspects of health system development. This collaboration has contributed to the largest global national mental health program of reform ever undertaken: building a national community mental health service system for China.

NRS6.2.
CREATING COMMUNITY: EFFECTS OF MENTAL HEALTH SUPPORTED HOUSING

J.G. Grant, A. Westhues
School of Social Work, University of Windsor; Lyle S. Hallman Faculty of Social Work, Wilfrid Laurier University, Waterloo, Canada

Safe, secure, and affordable housing is recognized as one of the vital factors for recovery from mental illnesses. While adequate supply, quality, and affordability of housing for mental health service users remain central concerns, there are increased choices for housing in Canada. With increased choices comes a need for increased understanding of the effectiveness of these models and of the factors related to choice of housing model by service users. Limited research has been conducted into the comparison of different models of supported/supportive housing and results have been inconsistent as to preferences and outcomes. We present the results of a longitudinal study of two forms of mental health supported housing in Ontario, Canada: a 30-unit apartment building with 24-hour on-site staffing, and a 10-unit building with minimal on-site staffing. Both projects have as a central aim the development of community among tenants. Measures of social support, perceptions of health and mental health, and feelings of mastery were conducted upon moving into the housing, at 6 months residency, and at 12 months residency. Qualitative measures of tenant goals and satisfaction have also been made, and reasons for choice of the particular model of housing have been explored.

NRS6.3.
PREVALENCE OF PHYSICAL COMORBIDITY AND IMPLEMENTATION OF HEALTH PROMOTION STRATEGIES IN SOUTH VERONA PATIENTS WITH FUNCTIONAL PSYCHOSES

L. Burti, L. Berti, G. Imperadore, M. Mazzi, M. Tansella
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, Psychotherapy Unit, University of Verona, Italy

Epidemiological studies investigating the mortality and physical health of mental patients have provided substantial evidence of excess mortality and substantially higher prevalence of physical comorbidity in this population as compared to the general population. These findings have been related to the higher prevalence of risk factors like high blood pressure, high plasma cholesterol and obesity, unhealthy life stiles, medication side-effects. Unfortunately, while scientific research has also addressed the assessment of strategies to increase knowledge about health, to change unhealthy behaviours and to promote health, the number of clinical trials and intervention studies is still scanty and their scientific strength is relatively modest. The present research project aims at both studying the prevalence of physical comorbidity in mental patients with an ICD-10 diagnosis of affective and non-affective functional psychotic disorder in contact with the South-Verona Community Mental Health Service (Phase 1), and implementing health promotion strategies related to dietary habits and physical exercise, and studying their efficacy with a randomised controlled study (Phase 2). The intervention program builds upon the experience acquired in an exploratory project on health education for diet followed by practical demonstrations and exercise

and coupled with a group-walking program performed in the South-Verona Day Centre in 2006, with the participation of both mental health workers and patients, designed and implemented in collaboration with the Department of Prevention of the local health authority.

NRS6.4.
PATTERNS OF ADMISSION TO ACUTE PSYCHIATRIC INPATIENT FACILITIES: A NATIONAL SURVEY IN ITALY

G. de Girolamo, A. Preti, P. Rucci, G. Santone, A. Picardi, R. Miglio, R. Bracco, B. Norcio, for the PROGRES-Acute group
Health Care Research Agency, Emilia-Romagna Region, Bologna, Italy; Department of Psychology, University of Cagliari, Italy; Department of Psychiatry, School of Medicine, University of Pittsburgh, PA, USA; Psychiatric Clinic, United Hospital of Ancona and Polytechnic, University of Marche, Ancona, Italy; Mental Health Unit, Center of Epidemiology, Health Surveillance and Promotion, Italian National Institute of Health, Rome, Italy; Faculty of Statistics, University of Bologna; Department of Mental Health, Local Health Unit, Trieste, Italy

A proper understanding of patterns of care represents a crucial step for improving clinical decision-making and enhancing service provision. Only few studies, however, have explored patterns of psychiatric admissions nationwide, and none in Italy. Socio-demographic, clinical, and treatment-related information were collected for 1,577 patients admitted to 130 public and 36 private inpatient facilities in Italy during an index period in the year 2004. All patients were also rated using the 24 item BPRS and the PSP rating scales. Non-affective psychoses (36%) were the most common diagnoses and accounted to a large extent for compulsory admissions. Private facilities were more likely to admit patients with organic mental disorders and substance abuse/dependence and less likely to admit patients with non-affective psychoses. Overall, 77.8% of patients had been receiving treatment by a mental health professional in the month prior to admission. In 54% of cases, the admission was solicited by patients' family members. Main factors preceding admission were impairment in work or social functioning, social withdrawal, and conflict with family members. Agitation, delusions and/or hallucinations, and presence of multiple problems were associated with compulsory admissions, whereas depressive and anxiety symptoms were associated with voluntary admissions. In conclusion, in a mixed, public-private psychiatric care system, as the Italian one, public and private facilities admit patients with widely different clinical characteristics and needs. Family support represents an important resource for most patients, and interventions specifically addressed to relieving family burden are warranted.

NRS6.5.
CONSUMER AND CARER PERSPECTIVES ON PSYCHOTROPIC PRESCRIBING AND ADMINISTRATION: FINDINGS FROM RESEARCH

K. Usher, K. Foster
James Cook University, Cairns, Australia

The effective prescribing, taking, and administration of psychotropic medications involves the perspectives of a number of key stakeholders, including the clinician, consumer and carer. Guidelines for prescribing and administration of psychotropic medications generally focus on the knowledge, skills and responsibilities of the clinician. However, a comprehensive approach to psychotropic prescribing and administration requires that the perspectives of consumers and carers are understood and addressed in order to enhance consumer and carer satisfaction and attain optimal medication adherence and efficacy. This paper draws on findings from research and the authors' clinical experience to identify key consumer and carer issues regarding psychotropic medication and make recommendations to enhance prescription and administration guidelines for clinicians. Issues relating to psychotropic medications for special populations including young people, indigenous persons and the older person are also addressed. Consumer perspectives on taking psychotropic medications include both positive and negative factors such as pain and side effects, stigma, assessment and education on medications and their effects/side effects, modes of administration, non-adherence, and availability of social support. The quality of the relationship with the clinician is a particularly important factor. Carer perspectives identify that subjective distress relating to carer responsibilities and the effects of the consumer's mental health problem, medication administration and monitoring responsibilities, and needs for information and education on the mental health problem and medications, are key issues. A respectful and inclusive approach by clinicians is particularly valuable for both consumers and carers.

NRS7.
SUBSTANCE ABUSE

NRS7.1.
PRENATAL EXPOSURE TO FAMINE IS ASSOCIATED WITH ADDICTIVE BEHAVIOR LATER IN LIFE

E.J. Franzek
Bouman Mental Health Care, Rotterdam, The Netherlands

Prenatal exposure to severe famine has been associated with an increased risk of schizophrenia and affective disorders. We studied the relationship between exposure to famine during the Dutch hunger winter of 1944-45 and addiction later in life. Patients were native Dutch addicted patients from the Rotterdam Addiction Treatment Program and controls were native inhabitants of Rotterdam born between 1944 and 1947. Exposure to the whole hunger winter (<1400 kcal/day) and the peak of the hunger winter (<800 kcal/day) was determined for each trimester of gestation. For each trimester the exposed/unexposed ratios were compared between patients and controls and quantified as odds ratios (OR). The odds of first-trimester gestational exposure to famine was significantly higher among patients receiving treatment for an addictive disorder (OR=1.34; 95% CI=1.10-1.64). Stratification by sex showed significant results among men (OR=1.34; 95% CI=1.05-1.72), but not in women (OR=1.26; 95% CI=0.88-1.81). The odds of exposure to the peak of the hunger winter were even more significant (OR=1.61; 95% CI=1.22-2.12). The study confirms the adverse influence of severe malnutrition on brain development and maturation, and the influence of prenatal insults on mental health in later life, and gives rise to great concern about the possible future consequences for the hunger regions in our world.

NRS7.2.
THE USE OF THE MOOD DISORDERS QUESTIONNAIRE IN A RESIDENTIAL ALCOHOLISM TREATMENT PROGRAM

D.K. Hall-Flavin, M.A. Frye, D.A. Mrazek, D. McGovern, T.D. Schneekloth, V.M. Karpyak, L.L. Loukianova, J. Biernacka, M. Drews
Mayo Clinic Department of Psychiatry and Psychology and Mayo Clinic College of Medicine, Rochester, MN, USA

Despite the high prevalence of comorbid bipolar disorder and alcohol dependence, and particular risk for bipolar women, little is known about the relationship between the two disorders and the needs of comorbid individuals in addiction treatment. Accurate identification of comorbidity is critical to the understanding of effective treatment interventions. We recently reported on a retrospective study noting a strong signal between female gender, alcoholism severity, and bipolar disorders in our Intensive Addiction Program. Conclusions were limited, however, due to surprisingly low numbers of patients identified with bipolar disorder, out-of-step with extant epidemiologic data. In response to this and in an effort to improve our practice, we report on preliminary data from an ongoing descriptive pilot study conducted over a three month period of time involving all patients admitted to the Mayo Clinic Intensive Addiction Program. This is an abstinence-oriented 28-day outpatient residing program emphasizing a multidisciplinary treatment approach. Nearly two-thirds of patients report alcohol to be their only drug (one-third) or primary drug of dependence among other drugs (and additional one-third). Using the Mood Disorders Questionnaire, a self-administered well-validated screening instrument, 12 of 52 patients (24%) consecutively admitted to IAP during the three-month period screened positive. Each individual who screened positive was administered the Mini International Psychiatric Inventory, with the substantial majority demonstrating evidence of a bipolar spectrum disorder. This is a substantially higher prevalence than that we previously noted.

NRS7.3.
LONG-TERM CHANGE IN ALCOHOL USE AND OTHER PSYCHIATRIC DISORDERS AMONG ALCOHOL IMPAIRED DRIVERS

S.C. Lapham
Pacific Institute for Research and Evaluation, Albuquerque, NM, USA

The public health impact of alcohol-impaired driving worldwide is significant. Road traffic crashes are among the leading causes of morbidity and mortality globally, and alcohol misuse underlies a substantial proportion of these tragedies. This report presents results of a 15-year follow-up study of a cohort of first-time driving while impaired offenders, who were arrested and first observed from 1989-1991 when they were court-mandated to undergo substance abuse evaluation in New Mexico. A subset of 716 offenders (286 males and 430 females) was interviewed 15 years after screening, where current and 12-month diagnoses of substance use and other psychiatric disorders were ascertained using the Composite International Diagnostic Interview. Among these subjects, 14% reported current alcohol use disorders, 10% current drug use disorders, and 10% continued driving after drinking (DD). Other psychiatric disorders included phobia (20%), nicotine dependence (14%), depressive disorder (12%), post-traumatic stress disorder (9%), and anxiety or panic disorder (7%). Women were more likely than men to report current psychiatric disorders and nicotine dependence. Age at interview was not associated with recent symptoms, except for current drug dependence or abuse, which was more common among younger participants. No differences were reported for current DD by gender or age at interview. Our results show that a significant proportion of this cohort has lifelong problems related to their alcohol, drug use, and psychiatric disorders that commonly accompany addictive disorders.

NRS7.4.
A DOUBLE-BLIND, PLACEBO CONTROLLED RANDOMIZED CLINICAL TRIAL OF LONG-ACTING IMPLANTABLE FORMULATION OF NALTREXONE (PRODETOXONE) FOR HEROIN DEPENDENCE: RESULTS OF INTERIM ANALYSIS

E. Krupitsky, E. Zvartau, V. Egorova, D. Masalov, M. Tsoi, A. Burakov, N. Bushara, T. Romanova, E. Verbitskaya, T. Slavina, G. Woody
State Pavlov Medical University, St. Petersburg, Russia; Bekhterev Research Psychoneurological Institute, St. Petersburg, Russia; Department of Psychiatry, University of Pennsylvania, Philadelphia, PA, USA

This study aimed to test the efficacy of a long-acting surgically implantable formulation of naltrexone (prodetoxone) vs. oral naltrexone and placebo for relapse prevention to heroin addiction. 190 heroin addicts who recently completed detoxification at addiction treatment units in St. Petersburg, Russia were randomized to a 6 month course of biweekly drug counseling and one of three medication groups: naltrexone implant (every other month) + oral placebo daily (NI+OP) (66 subjects), placebo implant (every other month) + oral naltrexone (PI+ON) (50 mg/day) (62 subjects), and double placebo (implant and oral) (PI+OP) (62 subjects). Medications were administered under double-dummy/double-blind conditions. Urine drug testing and brief psychiatric evaluations (depression, anxiety, anhedonia, and craving for heroin) were done at each biweekly visit. Oral medication compliance was evaluated using a urine riboflavin marker. 218 patients were asked if they would be interested in participating, 207 met the study entrance criteria, 192 gave informed consent and 190 were randomized. Kaplan-Meier survival analysis revealed a significantly greater retention in the NI+OP group compared to two other groups ($p<0.001$). At the end of six months, 54.5% of patients of the NI+OP group had not relapsed, compared to 17.7% in the PI+ON group and 12.9% in the PI+OP group ($p<0.001$). Treatment effectiveness score summarizing both heroin positive and missing urines was significantly better in NI+OP group. The number of side effects was limited, with no difference between groups. In conclusion, long-acting sustained release naltrexone implant is safe and more effective than oral naltrexone and placebo for treatment retention and relapse prevention to heroin dependence.

NRS7.5.
CURRENT AND FUTURE DIRECTIONS FOR EFFECTIVE TREATMENT OF COCAINE DEPENDENCE

J. Milby
University of Alabama at Birmingham, AL, USA

Treatments for cocaine dependence, which have been found effective in randomized controlled clinical trials, include: the community reinforcement approach with contingency managed monetary vouchers for measured abstinence; relapse prevention psychotherapy, with and without pharmacotherapy; behavioral day treatment using contingency management of monetary vouchers for weekly objective recovery goal

attainment and abstinence contingent housing and work/training; contingency managed work place for abstinent contingent access to paid work; and behavioral day treatment. Recent ineffective efforts to develop effective cocaine blocking medication, and research on the treatment success of disulfiram, with alcoholic and non-alcoholic cocaine dependent patients, are also to be considered. Current work pointing the way to likely future clinical developments is reviewed. Bachelors and masters degree trained counselors, supervised by doctoral clinicians, are being used to implement manualized effective interventions with quality control to reduce costs. Dismantling research is discovering effective component(s) of current effective treatments which can be used as briefer, less expensive, but still effective intervention. Work is underway to develop stepped care approaches, which utilize derived components from effective treatment as initial less complicated and expensive intervention, where patients who fail to respond can be transferred to the full intervention from which components were derived. Lastly, recent work on medication is reviewed, including efforts to develop blocking medications, a cocaine vaccine, use of old drugs with new applications, like disulfiram, and use of effective psychological interventions as a floor treatment for pharmacotherapy.

NRS8.
ETHICAL AND LEGAL ISSUES

NRS8.1.
THE ROLE OF PERCEIVED NORMS IN THE STIGMATIZATION OF MENTAL ILLNESS

R. Norman, R. Sorrentino, D. Windell, Y. Ye, A. Szeto, R. Manchanda
University of Western Ontario and Prevention and Early Intervention Program for Psychoses, London, Ontario, Canada

Although the concept of stigma emphasizes the role of perceived social consensus or norms in determining reaction to those with a stigmatizing identity, the importance of such perceived norms has not been extensively investigated in the context of the stigmatization of mental illness. Instead, research on the stigma of mental illness has almost exclusively focused on the importance of an individual's beliefs about mental illness and the mentally ill as determinants of social distance. We present evidence from three studies testing the hypothesis that individual differences in perceptions of both descriptive and injunctive norms add significantly to the prediction of behavioral intention, beyond the level possible using measures of beliefs about mental illness. Two of the studies involved university students and one used data from community services clubs. In each case, perceptions of relevant norms added significantly to the prediction of preferred level of social distance to a hypothetical individual with either depression or schizophrenia.

NRS8.2.
THE SIGNIFICANCE OF THE NEW UN CONVENTION ON THE RIGHTS OF PERSONS WITH DISABILITIES FOR THE PRACTICE OF INSTITUTIONAL PSYCHIATRY

M. Perlin
New York Law School, New York, NY, USA

As of May 2008, the UN Convention on the Rights of Persons with Disabilities becomes international law. The Convention, for the first time, applies international human rights protections to persons with disabilities, including people with psychosocial disabilities who are institutionalized. Among the specified rights are: respect for inherent dignity; non-discrimination; freedom from torture or cruel, inhuman or degrading treatment or punishment; freedom from exploitation, violence and abuse; and a right to protection of the integrity of the person. It is still highly unclear how these rights will be interpreted by regional human rights courts and commissions, but it *is* clear that the articulation of these rights will bring new focus on institutional psychiatry worldwide. This paper will discuss the implications of this new Convention and its meaning for psychiatrists who work in institutional settings. Among the questions to be raised are the following. Will the articles of this Convention be interpreted broadly or narrowly? Will the interpreting courts rely on the already-existing bodies of caselaw based variously on the UN Mental Illness Principles of 1991, the European Convention on Human Rights and/or American constitutional caselaw in deciding such cases? How will legal representation be provided in such cases? What will (or what should) the role of organized psychiatry be (if any) in such cases?

NRS8.3.
THE WILL TO LIVE AS AN INDICATOR OF WELL-BEING AND PREDICTOR OF SURVIVAL IN OLD AGE

S. Carmel
Center for Multidisciplinary Research in Aging, Faculty of Health Sciences, Ben-Gurion University of the Negev, Beer-Sheva, Israel

Conceptually, the will to live (WTL) is defined as the psychological expression of a natural instinct of human beings, the striving for life, which is comprised of rational and irrational components, and can be self-assessed. Considering that the WTL not only expresses a state of general well-being, but also one's commitment to life and desire to continue living, we hypothesized that it is a unique indicator of elderly persons' well-being and survival. These hypotheses were put to test in four large scale national studies of Israelis, one of which used a longitudinal design. The findings from these studies systematically show that the will to live significantly correlates with well established indicators of well-being. It weakens with age, being weakest among the oldest-old. Furthermore, relatively weak social groups in the population, such as women and new immigrants, report a weaker WTL in comparison to their counterparts. The WTL was also found as a good predictor of long-term survival (7.5 years), especially among elderly women after controlling for age, health and psychosocial variables. Based on the systematically repeated findings, we conclude that the will to live is an important indicator of general well-being, due to its diagnostic and prognostic values, and recommend using it in daily practice.

NRS8.4.
MENTAL HEALTH AND DOMESTIC VIOLENCE FATALITIES: RECOMMENDATIONS FROM REVIEW BOARDS

J. Wilson
University of Oklahoma, Oklahoma City, OK, USA

Multidisciplinary domestic violence fatality review boards are part of a growing global movement to prevent family fatalities by analyzing deaths that occur among family and intimate partners. Multidisciplinary teams at local, state, and national levels gather aggregate data on all domestic violence fatality cases and select a number of cases to review in-depth. Case data is gathered by staff from a broad array of confidential and public records. Records and chronologies of events leading up to the fatality are reviewed by board members to answer the following questions: How could this death have been prevented?

What were the missed opportunities? What are key opportunities for intervention? What systems have to change to prevent deaths such as this? What are emerging best practices for professionals to prevent the fatality? After much discussion among board members, recommendations for change are made to appropriate systems and professional groups. National and international fatality annual reports are published by the US National Domestic Violence Fatality Review Initiative. National and international fatality review board case data reveal that three areas in psychiatric/mental health care are problematic in domestic violence fatality cases: screening/assessment (history of violence, suicide/homicide potential, relational difficulties during disengagement, triangular relationships, and substance abuse), referral, and documentation. Because health care providers are often first responders to victims and perpetrators of domestic violence, fatality review boards are recommending changes in psychiatric/mental health practices that involve training and education in lethality assessments, community referrals/partnerships, and documentation essentials.

NRS8.5.
VIOLENT BEHAVIOURS IN PATIENTS HOSPITALIZED IN ACUTE INPATIENT UNITS IN ITALY: RESULTS OF A NATIONAL SURVEY

G. de Girolamo, B. Biancospino, S. Delmonte, R. Miglio, G. Santone, A. Preti
Health Care Research Agency, Emilia-Romagna Region, Bologna; Department of Mental Health, Local Health Unit of Ferrara; Department of Mental Health, Local Health Unit of Modena, Italy; Faculty of Statistics, University of Bologna; Psychiatric Clinic, United Hospital of Ancona and Polytechnic University of Marche, Ancona; Department of Psychology, University of Cagliari, Italy

Violence by acute psychiatric inpatients represents a challenging problem in clinical practice. Socio-demographic, clinical and treatment information were collected for 1,324 patients discharged from a representative sample of public (n=130) and private (n=36) Italian acute psychiatric units during an index period in 2004. Ten percent (n=129) of patients showed verbal hostility or violence against objects and 3% (n=37) acted violence against staff or other patients. This rate is lower as compared to other recent surveys carried out in European countries. Compared with non-violent subjects, violent patients were more likely to be male, younger, single and unemployed (or receiving a disability pension). They had more frequently a diagnosis of schizophrenia or substance abuse, and poor insight and compliance, leading to compulsory admissions. Antipsychotic polytherapy was more frequent among violent patients; 51% of them was physically restrained during hospitalization. Being single, receiving a disability pension, having a secondary school degree, a diagnosis of organic brain disease and compulsory admission were positive predictive factors for violent behaviours. Violent patients were more likely to have higher BPRS score and lower SOFAS score (that is, worse interpersonal functioning) at discharge, and to be discharged to a "restrictive" and controlled setting (not at home). These data suggest that in Italy there is a lower percentage of violent and hostile behaviours in acute inpatients units as compared to similar wards surveyed in other countries; the reasons of this difference are not completely clear, and it is important to clarify this issue for preventive and treatment-related reasons. Violent patients with severe mental disorders represent a persistent problem during hospitalization; specific prevention and treatment programmes are required.

NRS8.6.
MORAL TREATMENT AND ITS RELEVANCE FOR PSYCHIATRY TODAY

L.C. Charland
University of Western Ontario, London, Ontario, Canada

Moral treatment was an extremely popular and, by all accounts, very successful form of psychological therapy that emerged towards the end of the 18th and the beginning of the 19th century. Its most famous medical proponents were Vincenzo Chiarugi, of the St. Bonifazio Hospital in Florence, Philippe Pinel, of the Salpêtrière Hospital in Paris, and Johann Reil, Professor of Medicine at Halle. Historical debates about alleged rivalries and sympathies among these medical innovators continue, as do debates about the priority of their respective innovations. Yet, on the whole, virtually all of these historical discussions tend to overlook a crucial inner struggle in the emergence of moral treatment. This is the interface between moral treatment and ethics, i.e., between "moral" treatment as a psychological, medical, mode of intervention, and "moral" treatment as an instrument of ethical reform. It is instructive to revisit this hidden struggle as we reflect on the legacy and relevance of moral treatment for psychiatry today. The struggle raises, in an acute way, the problem of how values ought to figure in approaches to psychotherapy that profess to be "scientific".

NRS9.
PSYCHOTHERAPIES

NRS9.1.
THE ROLE OF PATIENT ATTACHMENT STYLE IN PREDICTING TREATMENT RETENTION AND OUTCOME IN SHORT-TERM PSYCHOTHERAPY

A. Winston, C. Eubanks-Carter, N. Calico, J. Muran
Department of Psychiatry and Behavioral Sciences, Beth Israel Medical Center, New York, NY; Department of Psychiatry, Albert Einstein College of Medicine, Bronx, NY, USA

Although much progress has been made in recent years in the development of empirically supported psychotherapies, a significant number of patients either achieve poor outcomes or terminate treatment prematurely. In order to improve the efficacy of existing treatments, it is critical to identify and understand patient variables that predict treatment response. Reviews of the psychotherapy literature suggest that the largest proportion of outcome variance is accounted for by characteristics of the patient. One patient variable that has been found to predict therapy process and outcome is attachment style. The present study will seek to replicate and extend these findings by examining whether attachment style as measured by the Relationship Scales Questionnaire (RSQ) predicts outcome in a sample of 81 patients (56 treatment completers and 25 dropouts) who were randomly assigned to either cognitive behavioral therapy (CBT) or brief relational therapy (BRT). Analyses will examine the relation between pre-treatment RSQ variables and treatment retention, symptom reduction, and improvement in interpersonal functioning. We will also examine the extent to which attachment styles changed over the course of therapy, and whether this change varied as a function of treatment condition.

NRS9.2.
MULTIMODAL PSYCHOANALYTIC DIAGNOSIS

J. Blackman
Eastern Virginia Medical School, Norfolk, VA, USA

Psychoanalytic diagnosis for treatment selection is more accurate if several analytic theories are applied simultaneously. Assessment of deficits in autonomous ego functions (such as reality testing and synthesis), ego weaknesses (in impulse control, affect regulation and containing primary process), and irregularities in self/object formations (such as in individuation, self stability) contribute to the diagnoses of borderline and psychotic disorders. For these, appropriate techniques include mirroring, encouragement of mentalization, clarification of internal objects, and medication. Severe superego faults often contraindicate any treatment. Further, assessment of intrapsychic conflicts, including those among drive wishes, superego elements, affects, and defenses (pathological compromise formations) are indications for interpretive technique. Mixtures of deficits and conflicts call for flexible technique. Charts of 28 ego function deficits, 14 ego weaknesses, 20 self/object deficiencies, and 10 possible superego deficiencies have been developed to delineate deficit-based disorders. For conflict-based disorders, we can show the developmental elements of persistent drive wishes that conflict with 10 types of superego functions associated with 54 types of affect, leading to over 100 typical defensive maneuvers; these comprise pathological compromise formations that make up certain symptoms and character traits. Using this schema, one should medicate deficiencies (in ego functions and/or ego strengths) and institute supportive techniques, rather than just medicating affects (such as depressive affect) or symptoms (such as obsessions). Self/object problems call for a variety of relational techniques. On the other hand, if there are not many deficiencies, and conflicts prevail, interpretive techniques would be first line treatment.

NRS9.3.
PHENOMENOLOGY OF PERSONAL IDENTITY IN PSYCHOSIS: A POSSIBLE TOOL FOR A PSYCHOTHERAPEUTIC APPROACH

A. Ballerini
University of Florence, Italy

The famous formula "*Cogito ergo sum*" falls into a new question: "I exist, but who am I?," even if Descartes' formula refers to an identity that is ahistorical, so to speak, since *cogito* is instantaneous. But the issue of personal identity poses at least two problems that admit paradoxical solutions: the problem of persistence in time and that of how we define ourselves. It seems that our identity is subjected to a constant dialectic tension between continuity and change (because there is no identity without duration, but neither does it exist without the constant incorporation of new events which can cause a change to come about); between identity as being-the-same and being-oneself, and between the person's original individuality and everything that depends on the inter-subjective context. From the study of a series of patients, the author observes that the splitting apart of these different components of identity, in particular the evanescence of being-the-same, is due to the loss of the sense of belonging to the I of experiences, and the vain pursuit of a being-oneself, of an unreachable *ipse*, marks the psychotic crisis of identity.

NRS9.4.
TESTING THE FAMILY OPTIONS INTERVENTION FOR PARENTS WITH MENTAL ILLNESSES AND THEIR FAMILIES

J. Nicholson
Department of Psychiatry, University of Massachusetts Medical School, Worcester, MA, USA

The parental role and child rearing responsibilities of adults with serious mental illnesses are often overlooked, with unfortunate consequences for their illness trajectories and prognoses, and negative impact on outcomes for their children. Family Options is a family recovery intervention drawn from principles of psychosocial rehabilitation and wraparound in children's systems of care. Parents with serious mental illnesses work with family coaches and a team of supports and resources to achieve their individual and family goals. Data are obtained in a mixed-methods, quasi-experimental study with seven data collection points over 18 months for the intervention group (n=22 mothers) and a comparison group (n=48) with similar characteristics. Baseline data confirm the complex challenges faced by mothers, whose predominant self-reported diagnoses include major depressive disorder and bipolar disorder. Almost 80% have been psychiatrically hospitalized, and 75% have been physically and emotionally abused. Preliminary findings on within-group changes in the intervention group indicate that at 6 months post-enrollment, mothers have significant reductions in mental health symptoms, significant improvements in functioning, and significant increases in social supports and resources. Mothers report continued improvement in mental health symptoms and functioning at 12 months post-enrollment, along with significant improvement in their recovery. Qualitative data regarding mothers' perceptions of their experiences with and the impact of participation in Family Options on themselves and their children complement the quantitative analyses and findings, and provide for the description of appropriate (i.e., "best-served") intervention participants.

NRS10.
BIPOLAR DISORDER

NRS10.1.
RAPID AND NON-RAPID CYCLING IN A COHORT OF 8,129 BIPOLAR YOUTHS: A COMPARISON OF TREATMENT AND HOSPITALIZATION

R. Castilla-Puentes
Department of Psychiatry, University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, NC and Center for Clinical Epidemiology and Biostatistics, University of Pennsylvania School of Medicine, Philadelphia, PA, USA

Most studies on bipolar disorder (BD) in youth do not include a comparison between rapid-cycling and non-rapid-cycling patients. This study aimed to compare pharmacological treatment and hospitalization in youths with rapid cycling vs. non-rapid cycling BD using information from a large US managed care database. The Integrated Health Care Information Services (IHCIS) managed care database includes complete medical history for more than 30 million managed care lives; data from more than 35 U.S. health plans covering 8 census regions; and patient demographics, including morbidity, age and gender. From June 30, 2000 to July 1, 2003, a total number of 8,129 youth patients (age ≤18 years) with BD were identified (using ICD-9 codes). Youths with rapid cycling (at least 4 episodes per year) were

compared with those without rapid cycling. Among youths with rapid cycling, 58.6% were females, 75.9% were between 12 and 17 years of age, and all a had history of at least one hospitalization for any reason. Youths with rapid cycling (n=58), compared with those without rapid cycling (n=8,071), had a higher rate of hospital admission for any reason, for depression, and for medical conditions. They also exhibited a significantly higher use of antidepressants, antipsychotics and mood stabilizers. Our findings support the notion that youths with rapid cycling require more hospitalizations and pharmacological treatment than those with non-rapid cycling.

NRS10.2.
WELL-BEING AND FUNCTIONING IN EUTHYMIC BIPOLAR PATIENTS

G. Maina
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Bipolar disorder negatively impacts the individual, reducing health-related quality of life (HRQoL) in all phases of the disorder. Well-being and functioning of patients with bipolar disorder are impaired even during euthymia. A number of studies have shown substantial functional impairment among patients with bipolar disorder, even among subjects whose symptoms have remitted. Despite some variability, all studies have concluded that objective indicators of functioning (e.g., work productivity, medical comorbidity, institutionalization) and generic measures of health status indicate substantial disability compared with normal comparison subjects. Concerning the relationship of HRQoL and functioning to bipolar illness characteristics, some studies have shown clinical improvement with age in bipolar disorder. However, the cumulative effect of multiple episodes, slower recovery from episodes, age-related cognitive impairment, and medical comorbidity may reduce HRQoL and functioning. A recent Italian investigation provides evidence that type II bipolar disorder is associated with poorer HRQoL compared to type I even during sustained periods of euthymia and excluding residual symptoms. Interventions targeting rehabilitation and/or functional enhancement may be helpful to improve HRQoL, especially among patients with bipolar II disorder.

NRS10.3.
ANXIETY AND DEPRESSION IN CAREGIVERS OF BIPOLAR PATIENTS IMPAIR ADHERENCE IN FAMILY-INCLUSIVE TREATMENT

A.M. Lee, A. Steele, J. Shafiroff, A. Norinsky, L. Cohen, S. Tross, I. Galynker
Beth Israel Medical Center, New York, NY, USA

In order to involve informal caregivers in bipolar patient care in a way that is both beneficial and practical in a clinic setting, we recruited patients and caregivers into family-inclusive treatment (FIT). We report findings at 3 month follow-up. FIT consisted of medication management by a psychiatrist, as-needed communication between psychiatrist and caregiver regarding patient symptoms, and quarterly visits including the caregiver. Patients and caregivers were assessed using the Center for Epidemiologic Studies Depression Scale (CES-D) and the State-Trait Anxiety Inventory (STAI). Fifty-two patient-caregiver pairs were recruited, but 31 dropped out in the first quarter. There was no difference in baseline depression or anxiety symptoms between patients who dropped out and those who stayed enrolled. In families who remained in treatment, significant changes were found in patient depression (p=0.033) and anxiety (p=0.003), but not in caregiver symptoms. Baseline anxiety and depression scores of caregivers who dropped out were significantly higher than those of caregivers who remained in treatment (anxiety, p=0.007; depression, p=0.046). Moreover, scores of caregivers who dropped out did not significantly differ from patients' baseline scores. Our results suggest that FIT may ameliorate depression and anxiety symptoms in bipolar patients. However, families in which caregivers had more severe symptoms tended to drop out. This suggests that caregivers of patients with bipolar disorder frequently have symptoms requiring intervention, and that symptom status of caregivers may have a major impact on treatment adherence in bipolar patients.

NRS10.4.
SUICIDAL BEHAVIORS IN UNIPOLAR AND BIPOLAR DISORDER

G.F. Placidi, F. Turchi
Department of Psychiatry, University of Florence, Italy

About one million suicides and ten million suicide attempts occur worldwide each year. Lifetime suicide attempt rates of 29.2% in bipolar disorders and 15.9% in major depressive disorder are reported in population studies. We have compared unipolar and bipolar subjects with and without a history of a suicide attempt, assessing suicidal behaviour qualitatively and quantitatively, in order to identify possible differences in demographic, psychopathological and familial risk factors. Inpatients (age 18-65) with a DSM-IV mood disorder (n=92) diagnosis evaluated with SCID I were enrolled. Acute psychopathology, hopelessness, traits of aggression end impulsivity, symptoms severity, psychotic features, suicidal ideation and suicidal intent were measured. Of the enrolled patients, 48.4% had attempted suicide (75% of bipolar I patients, 51.9% of bipolar II patients and 36.6% of unipolar patients). Attempters did not differ from non-attempters on lifetime aggression, impulsivity and psychotic features. This study confirms the higher risk for suicidal behavior in bipolar than in unipolar disorder, while the higher proportion of suicide attempts in bipolar I patients is a new finding requiring further investigation.

NRS11.
EATING AND PERSONALITY DISORDERS

NRS11.1.
PREDICTORS AND MODERATORS OF TREATMENTS FOR OBESE PATIENTS WITH BINGE EATING DISORDER

C.M. Grilo
Yale University School of Medicine, New Haven, CT, USA

Cognitive behavioral therapy (CBT) is currently the best-established treatment for binge eating disorder (BED) and support exists for alternative treatments, including behavioral weight loss (BWL). Even in studies with the best outcomes, however, many patients do not achieve remission and most patients lose little weight. Thus, it is important to find ways to predict treatment outcomes, as this may both inform treatment planning and lead to more effective decision-making about treatment prescriptions for patients with BED. Predictors and moderators of outcomes were examined in four recently completed randomized controlled clinical trials at Yale University for obese patients with BED (n=373). The controlled trials tested different methods of delivering manualized CBT and BWL treatments and utilized various controls (wait-lists, medications, and placebos). Finding reliable patient predictors of outcomes proved to be difficult,

and reliable moderators of treatment were not identified (i.e., pre-treatment variables that interact with different treatments to predict outcome). In contrast, patients' initial responses to treatment demonstrated robust predictive utility. Rapid response (defined as 65-70% reduction in binge eating by the fourth treatment week determined using receiver operating characteristic curves) robustly predict clinical outcomes at post-treatment and through 12-months of follow-up. Rapid response had different prognostic significance and distinct courses for CBT than either medication or BWL treatments. Rapid response has utility for predicting treatment outcomes, provides evidence for specificity of treatment effects, and has implications for stepped care treatment models for BED.

NRS11.2. THE ROLE OF PERINATAL FACTORS IN THE DEVELOPMENT OF EATING DISORDERS: OBSTETRIC COMPLICATIONS, SEASON OF BIRTH, AND EXPOSURE TO VIRAL INFECTIONS

A. Favaro, E. Tenconi, P. Santonastaso
Department of Neurosciences, University of Padua, Italy

In a recent study, we found a significant relationship between the number of perinatal complications and the risk of developing eating disorders (ED). However, the pathogenetic pathway that explains this association is unknown. In order to clarify the role of perinatal complications, we aimed at exploring two pathways: the relationship between ED, perinatal complications, and exposure to viral infections during pregnancy; the consequences of the occurrence of perinatal complications on temperamental characteristics and executive functioning in patients with ED. As regards the first study, we examined the epidemics of seasonal viral infections (rubella, influenza, measles and varicella) during the pregnancy of a large cohort of patients with anorexia nervosa (AN) and bulimia nervosa (n=780) born between 1971 and 1979. The control group was composed by all the asymptomatic subjects (n=830) participating to an epidemiological study in the same area. For the second study, we recruited patients with a lifetime diagnosis of AN (n=80). All subjects underwent assessment as regards cognitive flexibility (Wisconsin Card Sorting Task), decision making (Iowa Gambling Test), and central coherence (Rey-Osterrieth Complex Figure Test). Reliable information about perinatal complications was obtained. Inflexibility significantly correlated with the number of perinatal complications. In addition, the presence of a traumatic experience during pregnancy was associated with a greater number of pregnancy and delivery complications, higher inflexibility, and lower central coherence. Further studies on larger samples are needed to confirm these findings and to explore the link between viral exposure and maternal stress during pregnancy and neurodevelopment.

NRS11.3. IMPACT OF LIFETIME DYSFUNCTIONAL EATING BEHAVIOURS AND COGNITIONS ON POST-PARTUM OUTCOMES

M. Mauri, C. Borri, S. Banti, V. Camilleri, S. Cortopassi, A. Oppo, A. Bettini, B. Ciaponi, C. Cirri
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Italy

This study aimed to investigate the impact of lifetime dysfunctional eating behaviours and cognitions on pregnancy and post-partum outcomes, assessing women with/without Axis-I eating disorders (EDs). Secondary aim was to examine the extent to which depression and anxiety in the post-partum period can be predicted by specific EDs, behaviours and cognitions. 1066 women (12th-15th week of gestation) were administered the Structured Clinical Interview for Anorexic-Bulimic Spectrum (ABS-SR lifetime version) and a brief instrument for maternal antenatal and birth-related complications. Axis-I disorders were diagnosed with the SCID-I, depressive symptoms with the EPDS, anxiety symptoms with the STAI I-II. 87 (8.2%) women had a past history of EDs, 10 (0.9%) had a current ED; 674 women (63,2%) completed the ABS-SR: 67 (9.9%) had ABS≥45, 607 (90.1%) had ABS<45. We found no association between current or lifetime EDs and obstetrical outcomes, including low birth-weight (<2500 g). ABS ≥45 may predict postpartum depressive and anxious phenomenology (RR=4.05 95% CI=1.78-9.2; RR=2.99 95% CI=1.68-5.32). For those women with ABS≥45, dysfunctional behaviours and cognitions linked to body dissatisfaction, weight-gain phobia and secondary social phobia were associated with an increased risk of developing post-partum depressive symptoms. In the total sample, impulse dyscontrol and personality traits such as perfectionism or dependency were associated with an increased risk of post-partum depressive phenomenology. These data suggest that detecting dysfunctional women's lifestyles related to body shape, weight control and personality traits of perfectionism, dependency or impulsivity during pregnancy might help to identify a population at increased risk of developing postpartum depression.

NRS11.4. STRUCTURED ADMISSIONS TO PREVENT CRISIS ADMISSIONS IN BORDERLINE PERSONALITY DISORDER

V. Mannali, J. Prentice, E. Macrae
New Craigs Hospital, NHS Highland, Inverness, Scotland, UK

Borderline personality disorder (BPD) patients are known for crisis presentations and high frequency use of psychiatric services. Crisis, chaotic, lengthy and repeated admissions, at times involving Mental Health Act detentions, characterize the BPD group, with doubtful benefit from such admissions. Our team's nearly three years experience with planned, structured, 5-day admissions for this patient group shows promising findings. These patients with a DSM-IV diagnosis of BPD who have had several crisis admissions in the past were given multidisciplinary eclectic therapy with a cognitive behavioural therapy overlay during these structured admissions. Medication reviews were avoided during these admissions to keep the focus on the behavioural contract and management. Structured admissions actively involve nursing staff, occupational therapists and physiotherapists. During this period, the BPD group on this treatment package showed a significant reduction in the use of inpatient and other psychiatric services and improvement in the Global Assessment of Functioning. For the wards, marked reduction in nursing hours and inpatient costs has been seen. Further multicentred studies in a large BPD population would enhance comparative knowledge on this management protocol in patients with BPD and are likely to offer research opportunities to look at possible prognostic factors.

NRS11.5. INSIGHT AND OBSESSIVE SYMPTOMS IN BORDERLINE PERSONALITY DISORDER: PSYCHOPATHOLOGY AND CLINICAL FEATURES

S. Bellino
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Borderline personality disorder (BPD) consists of a pervasive pattern of instability in identity, interpersonal relationships, and affectivity

and poor control of impulsivity. Thought disturbances are common and are mainly represented by obsessions and reference ideas. Obsessive thoughts can be part of a comorbid obsessive-compulsive disorder (up to 22% of BPD patients), or simply symptoms related to personality disorder. The degree of insight is heterogeneous and variable during the course of the disorder. Delusions can take the place of obsessions in brief psychotic episodes. The object of this study is to assess the frequency, severity, and degree of insight of obsessive symptoms and to examine the relation between degree of insight and response to combined therapy with selective serotonin reuptake inhibitors and interpersonal therapy (IPT). Consecutive outpatients receiving a DSM-IV-TR diagnosis of BPD are being enrolled. Subjects with a lifetime codiagnosis of dementia, schizophrenia, or bipolar disorder are excluded. Patients are evaluated with a semistructured interview, the HDRS, the HARS, the BPD Severity Index (BPDSI), the Y-BOCS, and the SOFAS. Degree of insight of obsessive thoughts is assessed with the Overvalued Idea Scale (OVIS). Patients are being treated for 32 weeks with a combination of fluoxetine 40 mg/day and IPT modified for BPD. Data will be analysed with ANOVA to test score changes during treatment. A regression analysis will be performed choosing BPDSI as dependent variable and a series of clinical factors including OVIS score as independent variables.

NRS12.
CULTURE AND MENTAL HEALTH

NRS12.1.
COMMON MENTAL DISORDERS, SERVICE UTILIZATION AND PSYCHOTROPIC MEDICATION USE IN AN IMMIGRANT POPULATION: FINDINGS FROM THE ISRAEL NATIONAL HEALTH SURVEY

A.M. Ponizovsky, A. Grinshpoon
Research Unit, Mental Health Services, Ministry of Health, Jerusalem; Tirat Carmel Mental Health Center, Ministry of Health, Tirat Carmel, Israel

Using the Israel National Health Survey (INHS), a component of the 27-country World Mental Health Survey (WHO/WMHS), we compared immigrants' 12-month prevalence of mental disorders, service utilization and psychotropic drug use with that of the general population. A representative sample of non-institutionalized residents, aged 21 and older, was drawn from the National Population Register. DSM-IV disorders were assessed using a revised version of the Composite International Diagnostic Interview. Respondents were asked to report any health service and psychotropic drug use in the past 12 months. During the 12 months preceding the INHS, immigrants and veteran Israelis were equally likely to have a common mental disorder (OR=0.9; 95% CI 0.7-1.1) and to utilize both formal and informal health services (OR=0.9; 95% CI 0.7-1.2). However, among respondents who did not meet the DSM-IV criteria for a specific mental disorder, the veteran Israelis reported markedly less use of psychotropic drugs than the immigrants (OR=0.5; 95% CI 0.4-0.7), in particular less anxiolytics (OR=0.5; 95% CI 0.4-0.7), mood stabilizers (OR=0.4; 95% CI 0.2-0.8) and hypnotics (OR=0.4; 95% CI 0.3-0.6). The results suggest that the mental health indicators among the immigrants are no worse than that of their veteran counterparts. The immigrants' higher use of psychotropic drugs could mean that thanks to the medication their psychological distress symptoms do not reach the threshold at which a specific mental disorder would be diagnosed.

NRS12.2.
HELP SEEKING BEHAVIORS, ATTITUDES TOWARD HELPING PROFESSIONALS, AND CULTURAL BELIEFS ABOUT MENTAL HEALTH PROBLEMS IN EGYPTIAN, KUWAITI, PALESTINIAN AND ISRAELI-ARAB UNIVERSITY STUDENTS

A. Al-Krenawi
Spitzer Department of Social Work, Ben-Gurion University of the Negev, Beer-Sheva, Israel

This study is the first to use identical data collection processes and instruments in Egypt, Kuwait, Palestine, and Israeli Arab communities regarding help seeking behaviors and attitudes towards perceived cultural beliefs about mental health problems. Data is based on a survey sample of 716 undergraduate students in the four countries, 61% female and 39% male. Results indicate that respondents within the various countries, based on nationality, gender and level of education, vary in terms of recognition of personal need, beliefs about mental health problems (i.e., stigmatization), and the use of traditional healing methods vs. modern approaches to psychiatric therapy.

NRS12.3.
CARRYING THE BURDENS OF POVERTY, PARENTING, AND ADDICTION: DEPRESSION SYMPTOMS AND SELF-SILENCING AMONG ETHNICALLY DIVERSE WOMEN

T. Grant, D. Jack, A. Fitzpatrick, C. Ernst
Department of Psychiatry and Behavioral Sciences, University of Washington School of Medicine, Seattle, WA; Fairhaven College of Interdisciplinary Studies, Western Washington University, Bellingham, WA; Department of Epidemiology, University of Washington, Seattle, WA, USA

Depression among women commonly co-occurs with substance abuse; a dual diagnosis of these conditions may jeopardize treatment prognosis. Self-silencing theory suggests that certain cognitive schemas can create a vulnerability to depression by directing a woman to defer to the needs of others and censor self-expression. This study describes 233 ethnically diverse low-income women who abused alcohol/drugs during pregnancy and were enrolled in a community case management intervention. On the Addiction Severity Index, participants reported a high prevalence of risk factors for depression and substance abuse, including disrupted parental attachment, childhood physical or sexual abuse, and difficult adult life circumstances in addition to their substance abuse. Depression was the most frequently reported psychiatric symptom. Self-silencing mean scores were high relative to scores reported for other populations. Univariate analyses indicated significant ethnic group differences on self-silencing.

NRS12.4.
FIRST EPISODE PSYCHOSIS AND MIGRATION: FINDINGS FROM A 5-YEAR FIRST CONTACT STUDY IN BOLOGNA, ITALY

D. Berardi, I. Tarricone, E. Rossi, A. Castellani, D. Pecile, V. Castorini, V. Bandieri, R. Michetti, S. Melega
Institute of Psychiatry, University of Bologna; Local Health Unit, Bologna, Italy

A growing amount of evidence indicates that immigration is a risk factor for the development of psychosis. Social exclusion and the consequent reduction of access to care can lead to urgent health problems and hospitalization, and this may explain the excess of psy-

chosis that is observed among migrants. This study aimed to compare social-demographic and clinical characteristics at the first episode of psychosis in natives and migrants referring to a community mental health centre. A retrospective chart review study was carried out in patients (age 18-30 years) having their first contact with the centre between January 1, 2002 and December 31, 2006, with an ICD-10 diagnosis of schizophrenia, schizotypal disorder or delusional disorder. Socio-demographic characteristics, substances abuse history, previous hospitalization and pathway to care were recorded through an ad-hoc schedule. Psychiatric diagnoses were assessed by SCAN. Fourteen migrants and 44 natives were included. Natives were more frequently unmarried (98% vs. 71%, χ^2=9.3, p=0.01), living in parental family (82% vs. 54%, χ^2=8.6, p=0.04) and substance abusers (52% vs. 15%, χ^2=5.6, p=0.02). Migrants' pathways to care never involved general practice or general hospitals (0% vs. 39%, χ^2=7.2, p=0.007). Seventy-nine percent of natives and 54% of migrants met ICD-10 criteria for schizophrenia (χ^2=3.1, p=0.08). These data suggest that first episode psychosis migrants differ on pathways to care, psychopathology, social functioning and substance abuse. Diagnosis and management of psychoses in migrants may require specific skills and interventions.

NRS13.
BRAIN IMAGING

NRS13.1.
ROLE OF INDIVIDUAL DIFFERENCES IN THE RESPONSE TO EMOTIONAL CHALLENGE: EVIDENCE FROM BRAIN IMAGING STUDIES IN HEALTHY AND CLINICAL GROUPS

F. Dolcos, R. Morey, R. Cabeza, G. McCarthy
Department of Psychiatry, University of Alberta, Edmonton, Canada; Department of Psychiatry and Center for Cognitive Neuroscience, Duke University, Durham, NC, USA; Department of Psychology, Yale University, New Haven, CT, USA

Increased susceptibility to emotional distraction is often a debilitating feature of affective disorders, but little is known about the neural circuitry associated with individual differences predicting the response to emotional challenge. Here, we used brain imaging and behavioral tools to investigate the role of individual differences in the response to emotional distraction in both healthy and clinical groups. Functional magnetic resonance imaging data were acquired while subjects performed a working memory (WM) task with negative emotional and neutral distracters, presented during the delay interval between the memoranda and probes. Behavioral data concerning participants' patterns of response in the affective and cognitive domains were also recorded, using a battery of tools that assessed both general (e.g., cognitive/attentional) and specific (e.g., emotional) aspects of processing. Behavioral findings from healthy participants revealed that subjects showing increased susceptibility to emotional distraction during the WM task also tended to have higher attentional impulsivity and emotional arousability scores. These behavioral differences were associated with opposing patterns of brain activity in the amygdala (enhanced) and dorsolateral prefrontal cortex (decreased) in response to emotional distraction, consistent with the role of these regions in emotion detection and cognitive control, respectively. Similar investigation in post-traumatic stress disorder (PTSD) patients showed an exacerbated response to emotional distraction relative to trauma-exposed controls, consistent with increased distractibility to trauma-related inputs and impaired cognitive control in PTSD. Collectively, these findings identify specific neural signatures of the response to emotional challenge, which may be used as neurobiological markers for enhancing diagnostic accuracy and treatment efficacy.

NRS13.2.
SELF-REGULATION OF EMOTION NETWORKS THROUGH NEUROFEEDBACK

D. Linden, S. Johnston, S. Boehm, R. Goebel, D. Healy
School of Psychology and North Wales Clinical School, University of Bangor, UK; University of Maastricht, The Netherlands; University of Cardiff, UK

Current functional neuroimaging techniques allow us to assess the brain changes produced by behavioural therapy and other psychological interventions. The recent development of functional magnetic resonance imaging (fMRI)-based neurofeedback now opens up the possibility of direct modulation of brain regions that may be relevant for the pathophysiology of mental disorders. We trained four healthy participants to modulate activity in limbic emotion networks through neurofeedback. Emotion-responsive brain areas were identified through the presentation of pictures with negative, positive and neutral valence from the International Affective Pictures System during fMRI at 3 Tesla. All subjects showed activity in the bilateral amygdala and insula for the contrast negative vs. neutral pictures. Amygdala or insula clusters were then selected as target areas for neurofeedback. The fMRI signal from these areas was presented to participants in real time, combined with the instruction to upregulate it during epochs of 20 seconds, alternating with resting epochs of equal duration (5 blocks per run). Although no emotional material was presented during the neurofeedback session, participants were able to upregulate the target areas to criterion (2% signal increase) within the first or second run. This is the first report of fMRI-neurofeedback with the flexible optimization of target areas from run to run. We also present data on subjective strategies and self-assessed mood effects. Because limbic areas are centrally implicated in a wide range of mental disorders, the feasibility of self-regulation demonstrated here will be of potential relevance for the integration of neurofeedback with clinical intervention programmes.

NRS13.3.
STUDY OF LANGUAGE RELATED WHITE MATTER FIBER TRACT PROJECTIONS IN SCHIZOPHRENIA USING DIFFUSION STOCHASTIC TRACTOGRAPHY

M. Kubicki, D. Markant, T. Ngo, C.-F. Westin, R.W. McCarley, M.E. Shenton
Brigham and Women's Hospital and Harvard Medical School, Boston, MA; Veterans Affairs Boston Healthcare System and Harvard Medical School, Brockton, MA, USA

White matter connections between Broca's and Wernicke's areas, which travel through the arcuate fasciculus (AF), are involved in language processing, and may underlie aspects of formal thought disorder in schizophrenia pathophysiology. However, extraction of these tracts remains technically challenging. In this study, high-resolution 3T diffusion data, and a novel white matter tractography method, was used to study these fiber tracts. Diffusion weighted images and magnetic resonance images were obtained from 20 controls and 20 patients with chronic schizophrenia, matched on age, handedness, parental socioeconomic status, and IQ. For all subjects, inferior frontal gyrus and superior temporal gyrus were automatically extracted on the left and the right side. After co-registration of structural and diffusion images, a novel stochastic tractography method that models diffusion uncer-

tainty, which, in turn makes it possible to track through regions of low anisotropy, where streamline methods fail, was applied to extract left and right AF. After fiber extraction, mean connectivity, mean fractional anisotropy (FA), mean diffusivity, as well as mean parallel and perpendicular diffusivity were calculated, and compared between groups. Volume of left inferior frontal gyrus (which includes Broca's area) was decreased in schizophrenia. In addition, FA, FA weighted by connectivity and perpendicular diffusivity were decreased in schizophrenia, compared to controls. Results demonstrate that stochastic tractography methods extract tracts that could not otherwise be extracted. Results also document decreased white matter integrity of AC, a fiber tract involved in language processing, in schizophrenia.

NRS13.4.
EEG ALTERATIONS IN THE PRODROMAL PHASE OF SCHIZOPHRENIA

U. Gschwandtner, M.O. Pflüger, V. Semenin, M. Gaggiotti, A. Riecher, P. Fuhr
Psychiatric Outpatient Clinic and Department of Neurology, University Hospital of Basel, Switzerland

This study explored EEG alterations in individuals with an "at risk mental state" for psychosis and in patients with a first episode of psychosis (FE) in comparison to healthy controls (HC), with the aim to predict the development of psychosis. Seventy-three patients (42 ARMS, 31 FE) and 35 HC were investigated. ARMS patients were followed up in order to monitor transition to psychosis. At study baseline EEG was recorded using the 10/20 system. Two neurologists, blinded to the subjects group, analyzed the EEGs visually for presence of generalized or focal slowing and epileptiform discharges. For statistical analyses we used chi square tests, logistic regression, ANOVA, and receiver operating characteristics (ROC). Patients showed significantly more pathological EEG findings than healthy controls ($p<0.05$), with twice as many pathologies in ARMS than in FE patients. The pathological patterns consisted of pathological slow wave activity, sharp waves and pathological rhythmic patterns located more frequently in temporal or fronto-temporal regions ($p<0.01$) as compared to the parietal or occipital part of the brain. Prediction of transition to psychosis could be enhanced from 59% to 73% by considering EEG pathology in addition to psychopathology alone. These results show that some patients who seem to be in the prodromal phase of schizophrenia may suffer from a subtle organic brain dysfunction and can be detected by EEG. A pathological EEG is significantly associated with a decreased risk for transition to psychosis.

NRS14.
COGNITIVE NEUROSCIENCES

NRS14.1.
COGNITIVE VULNERABILITY TO DEPRESSION IN ADOLESCENCE

J. Abela, B. Hankin
Rutgers University, Piscataway, NJ; University of Denver, CO, USA

This study examined the vulnerability to depression during the transition from early to middle adolescence as well as the emergence of sex differences in depression, from the perspective of cognitive vulnerability-stress theories. During an initial assessment, 376 adolescents (ages 11-13) completed self-report measures assessing cognitive vulnerability factors and depressive symptoms and received a semi-structured clinical interview assessing current depressive episodes. Every three months for the subsequent two years, adolescents completed self-report measures assessing depressive symptoms and negative events and received a semi-structured clinical interview assessing onset of depressive episodes in past three months. At the two-year follow-up, adolescents once again completed measures assessing cognitive vulnerability factors. Higher cognitive vulnerability predicted a greater likelihood of experiencing a future depressive episode and greater increases in depressive symptoms following negative events. Although there were no sex differences in either negative event frequency or depression rates at the initial assessment, sex differences in both variables emerged during the two-year follow-up interval, with girls reporting higher negative event frequency and higher depression than boys. Although there were no sex differences in levels of cognitive vulnerability at the initial assessment, girls reported higher levels of cognitive vulnerability than boys at the two-year follow-up. Results suggest that cognitive vulnerability factors predict clinically significant depressive symptoms/episodes during the transition from early to middle adolescence. Regarding the emergence of sex differences, results suggest that cognitive vulnerability interacts with the increasing frequency of negative events experienced by girls during this developmental transition to explain, in part, the emergence of such differences.

NRS14.2.
ASSESSMENT OF COGNITIVE FUNCTIONING IN HIV-SEROPOSITIVE SUBJECTS ON ANTIRETROVIRAL REGIMENS WITH DIFFERENT CNS PENETRATION-EFFECTIVENESS RANK

F. Starace, M. Gargiulo, M. de Stefano, A. Chirianni
Consultation Psychiatry and Behavioural Epidemiology Service, and Division of Infectious Diseases, Cotugno Hospital, Naples, Italy

Over the last 10 years, the use of antiretroviral (ARV) combination therapy has led to long-lasting suppression of systemic HIV replication in most HIV-seropositive persons, resulting in a marked improvement of HIV-associated diseases, including dementia. However, the prevalence of minor neurocognitive disorder (MND) has remained stable or even increased. One possible explanation for such finding has recently emerged, as higher cerebrospinal fluid (CSF) viral load was found in subjects on antiretroviral regimens with lower central nervous system penetration-effectiveness (CPE) rank. Moreover, subjects attaining viral suppression in CSF have been shown to obtain greater neurocognitive improvement. The aim of the present study was to assess cognitive functioning in HIV-seropositive subjects on ARV regimens with different CPE rank. We hypothesised that subjects on ARV drugs with higher CPE could have a better neuropsychological performance than those taking ARVs with lower CPE. A comprehensive neuropsychological battery, exploring cognitive domains affected by HIV infection, depressive symptoms and functioning in daily living, was administered to 100 HIV-seropositive persons with undetectable viral load and stable ARV regimen for at least three months. Subjects with higher CPE rank were compared with those with lower CPE rank (cut-off: 1.5, according to National Guidelines for HIV Therapy) in terms of cognitive performance on each neuropsychological test. A preliminary analysis, performed on the first 31 subjects recruited (age: 46.0±6.2 years; education 8.9±3.7 years), showed no statistically significant difference between the two groups, although a trend was found in the expected direction on Color Trails 2 (115.13±28.13 vs. 122.22±30.03), Auditory Verbal Learning Test 1-5 (43.73±7.04 vs. 38.67±9.13) and Symbol Digit Modalities Test (40.47±13.27 vs. 33.67±5.63). Further

analyses are being performed to explore relationships between ARV regimens, CPE rank and scores on quality of life and activities of daily living scales.

NRS14.3.
RELATIVE CONTRIBUTIONS OF REALITY DISTORTION AND INSIGHT TO QUALITY OF LIFE IN STABLE SCHIZOPHRENIA

P. Rocca
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Over the past few decades, quality of life (QOL) has been increasingly used as a part of a multidimensional assessment of outcome in the evaluation of the impact of psychosis on patients' daily lives. In their meta-analysis, Eack and Newhill showed that positive symptoms were related to poor QOL in studies of schizophrenia outpatients, even if the relationship was not particularly strong. Positive symptoms had the strongest negative relationship with health-related QOL and had the smallest association with subjective QOL and general wellbeing. Contradictory findings have been reported concerning the relationship between insight and QOL in patients with schizophrenia. Whereas previous studies showed an association of increased insight with better expert-rated QOL, other studies demonstrated an inverse relationship between insight and subjective QOL and other ones failed to find an association. The relationship between positive symptoms and insight appeared to be a core feature of schizophrenia and not modified by treatment status. In a cross-sectional survey, we sought to investigate whether reality distortion (delusions, hallucinations) would significantly predict QOL in a sample of patients with stable schizophrenia and whether it continued to predict QOL when insight was also considered. Our results support the view that both reality distortion and insight interact in influencing QOL. Insight seems to be a mediator of the relationship between reality distortion and QOL. However, our investigation has not supported a simple explanation for this relationship, as a complex pattern of relationships emerged between the examined variables.

NRS14.4.
EFFECT OF BRIGHT LIGHT AND MELATONIN ON COGNITIVE AND NON-COGNITIVE FUNCTION IN ELDERLY RESIDENTS OF GROUP CARE FACILITIES: A RANDOMIZED CONTROLLED TRIAL

E.J.W. Van Someren
Department of Sleep and Cognition, Netherlands Institute for Neuroscience and VU Medical Center, Amsterdam, The Netherlands

Cognitive decline, mood, behavioral and sleep disturbances, and limitations of activities of daily living commonly burden elderly patients with dementia and their caregivers. Circadian rhythm disturbances have been associated with these symptoms. The study aimed to determine whether the progression of cognitive and non-cognitive symptoms may be ameliorated by individual or combined long-term application of the two major synchronizers of the circadian timing system: bright light and melatonin. A long-term, double-blind, placebo-controlled, randomized trial was performed from 1999 to 2004 with 189 residents of 12 group care facilities in the Netherlands (mean age 85.8±5.5 years; 90% female and 87% with dementia). A random assignment was made by facility to long-term daily treatment with wholeday bright (±1000 lux) or dim (±300 lux) light and by participant to evening melatonin (2.5 mg) or placebo for a mean of 15±12 months (maximum period of 3.5 years). Standardized scales for cognitive and non-cognitive symptoms, limitations of activities of daily living, and adverse effects were administered every 6 months. Light attenuated cognitive deterioration by a mean of 0.9 points (95% CI 0.04-1.71) on the Mini-Mental State Examination. Light also ameliorated depressive symptoms by 1.5 points (95% CI 0.24-2.70) on the Cornell Scale for Depression in Dementia, and attenuated the increase in functional limitations over time by 1.8 points per year (95% CI, 0.61-2.92) on the nurse informant activities of daily living scale. Melatonin shortened sleep onset latency by 8.2 min (95% CI, 1.08-15.38) and increased sleep duration by 27 min (95% CI, 9-46). However, melatonin adversely affected scores on the Philadelphia Geriatric Centre Affect Rating Scale, both for positive affect (-0.5 points; 95% CI, -0.10 to -1.00) and negative affect (0.8 points; 95% CI, 0.20-1.44). Melatonin also increased withdrawn behavior by 1.02 points (95% CI, 0.18-1.86) on the Multi Observational Scale for Elderly Subjects scale, although this effect was not seen if given in combination with light. Combined treatment also attenuated aggressive behavior by 3.9 points (95% CI, 0.88-6.92) on the Cohen-Mansfield Agitation Index, increased sleep efficiency by 3.5% (95% CI, 0.8%-6.1%), and improved nocturnal restlessness by 1.00 minute per hour each year (95% CI, 0.26-1.78). In conclusion, light has a benefit in improving cognitive and non-cognitive symptoms of dementia. To counteract the adverse effect of melatonin on mood, it is recommended only in combination with light, and/or at a lower dose.

NRS15.
MENTAL HEALTH ISSUES IN YOUNG PEOPLE

NRS15.1.
OBSTACLES TO RECEIVING MENTAL HEALTH SUPPORT IN THE WAKE OF VIOLENCE EXPOSURE: THE CASE OF ARAB AND JEWISH ADOLESCENTS

N.B. Guterman, M.M. Haj-Yahia, L. Ismayilova
University of Chicago School of Social Service Administration and Chapin Hall Center for Children, Chicago, IL, USA; Paul Baerwald School of Social Work and Social Welfare, Hebrew University of Jerusalem, Jerusalem, Isreal; Columbia University School of Social Work, New York, NY, USA

Although violence exposure among adolescents predicts a wide array of serious mental health consequences, evidence indicates a low likelihood that adolescents will receive professional mental health support in the wake of violence exposure, particularly when the violence exposure occurs outside the home. Such findings suggest a significant unmet mental health need, and raise questions about the potential obstacles that may impede adolescents' receipt of mental health support when exposed to violence. This study reports findings from 3,877 Jewish and Arab adolescents in grades 9 to 12 living in Israel and the West Bank who were surveyed about their receipt of professional mental health support in the wake of violence exposure outside the home. Study participants were drawn from twenty high schools in Israel, the West Bank, and East Jerusalem. Of those surveyed, 85% of the Arab adolescents and 84% of the Jewish adolescents reported at least one type of direct exposure to violence outside the home within the past year. Of those exposed, 25% of the Arab adolescents received recommendations to see a mental health professional, and 17% of the Jewish adolescents received such recommendations. Only 12% of Arab adolescents and 11% of Jewish adolescents receiving such recommendations actually spoke with a mental health professional about their violence exposure. While a majority of the Arab adolescents across residences most commonly did not seek help because

they "did not want anyone to know what happened" (62%), "did not want anyone to know what had happened bothered me" (63%), and that "by not talking about the incident, my feelings would go away" (62%), Jewish adolescents stated that they did not seek help from others because they "did not feel they needed help" (69%), or that what happened, they felt "was not very important" (54%). These findings suggest that, in addition to external obstacles, adolescents across national groups face a variety of internal obstacles to receiving mental health support after they have been exposed to violence outside the home, suggesting important considerations for improving the access of mental health services to violence exposed adolescents.

NRS15.2.
NO-SHOW IN ADOLESCENT PSYCHIATRIC CARE

R. Kaltiala-Heino, M. Selander
Department of Adolescent Psychiatry, Tampere University Hospital, Pitkäniemi, Finland

No-show causes considerable economical losses in public health care, and treatment not received does not help. Adolescent psychiatric patients are often assumed to be especially prone to no-show behaviour due to the nature of their developmental phase. This study aimed to analyse the no-show behaviour among adolescent psychiatric outpatients. One hundred consecutive no-show cases were identified from the lists of all professionals in an adolescent psychiatric outpatient unit. The following patient from each list who had shown up was included as a control. Information of the patients' sociodemographic characteristics, symptoms, diagnoses, treatment received and family situation, and the attitudes towards treatment of the adolescents and their parents were collected, from file information with the help of a structured form. No-show behaviour increased towards older adolescents and was more common among adolescents living without an adult guardian. No-show was associated with a diagnosis of schizophrenia, and frequent no-show with anxiety disorders. No-show was associated with internalising symptoms and neuroleptic and antidepressive medications as well as with family interventions and critical attitudes of the parents. No-show did not associate with externalising symptoms and conduct disorders, and it was least common among adolescents taken into care by child welfare. Proactive approaches to ensure compliance and a clear plan of how to intervene in no-show are recommended to ensure effectiveness of treatment and minimise financial losses.

NRS15.3.
COMPULSIVE BUYING BEHAVIORS AMONG CHINESE COLLEGE STUDENTS IN HONG KONG AND MACAU

E. Yan, A. Wu, C. Tang
Department of Social Work and Social Administration, University of Hong Kong; Department of Psychology, University of Macau; Department of Psychology, National University of Singapore

This study examined compulsive buying behaviors among Chinese college students residing in Hong Kong and Macau. A total of 605 college students (232 males and 373 females) provided information on their demographic and personality characteristics, beliefs about materialism and credit card use, as well as their experience in compulsive buying and credit card use. Credit card use was common in the sample: 52% of the participants reported having one or more credit cards at the time of the interview. Using the cut-off scores suggested by Faber and O'Guinn, 15% of the sample was classified as compulsive buyers. Compared to non-compulsive buyers, compulsive buyers were more likely to be male, and to report enjoy the processing of making payment for their goods. Preliminary results of hierarchical multiple regression analysis showed that the various factors accounted for 24% of the variance in college students' tendency to engage in compulsive buying. Specifically, stronger compulsive buying tendency was predicted by a younger age, higher level of trait anxiety and trait depression, stronger materialistic beliefs, and a strong tendency to involve in irrational credit card use.

NRS15.4.
ARIPIPRAZOLE AS ADD-ON TO FLUVOXAMINE IN ADOLESCENTS WITH REFRACTORY OBSESSIVE-COMPULSIVE DISORDER

M. Yeghiyan, K. Gasparyan, M. Tozalakyan
Yerevan State Medical University and Child and Adolescent Mental Health Clinic, Yerevan, Armenia

Selective serotonin reuptake inhibitors (SSRIs) are the first-line treatment for obsessive-compulsive disorder (OCD) in adults. However, approximately 40-60% of patients do not respond adequately to these drugs. Augmentation of SSRI therapy with atypical antipsychotics has been reported to be effective in some cases. This study aimed to evaluate the efficacy of combined use of fluvoxamine and aripiprazole in adolescents with refractory OCD. We conducted an open study of 13 adolescents (15-18 years old) with refractory OCD. Aripiprazole was added after 12 weeks of unsuccessful treatment with fluvoxamine (50-150 mg/day). The doses of aripiprazole ranged between 5 and 10 mg/day. We used the CY-BOCS and the Zung Depression Self Rating Scale assess the response after augmentation. Eight patients reported an improvement of symptoms. The mean reduction in the global score of CY-BOCS was significant (p=0.003). There was also a reduction in associated depressive symptoms as measured by the Zung Scale. Due to the small sample size and the open design, the results of this study should be regarded as preliminary. Controlled studies with large samples are needed.

POSTER SESSIONS

PO1.
PSYCHOTIC DISORDERS, MOOD DISORDERS, BIOLOGICAL PSYCHIATRY

PO1.1.
PRODROMAL FEATURES IN ADOLESCENCE AS PREDICTORS OF FIRST EPISODE PSYCHOSIS IN THE NORTHERN FINLAND 1986 BIRTH COHORT

P. Mäki, J. Miettunen, M. Kaakinen, I. Moilanen, A. Taanila, G. Murray, P.B. Jones, M. Joukamaa, M. Heinimaa, J. Veijola
Department of Psychiatry, University of Oulu, Finland; University Hospital of Oulu, Finland; Department of Public Health Science and General Practice, University of Oulu, Finland; Clinic of Child Psychiatry, University of Oulu, Finland; Department of Psychiatry, University of Cambridge, UK; Tampere School of Public Health, University of Tampere, Finland; Department of Psychiatry, University of Turku, Finland; the Academy of Finland

The aim of this study was to identify, in the general population of adolescents, whether a questionnaire psychopathology assessment could

predict the onset of psychosis. Members (n=9,215) of the Northern Finland 1986 Birth Cohort, an unselected general population cohort, were invited to participate in a field survey during 2001, at ages of 15-16 years. The study included a 21-item PROD-screen questionnaire screening prodromal symptoms for last six months. The Finnish Hospital Discharge Register was used to find out new cases of hospital treated mental disorders during 2002-2005. Of the subjects, 17 (0.3%) were treated due to first episode psychosis and 95 (1.5%) due to non-psychotic disorder during the follow-up period. Those who developed psychosis had more positive, negative and general symptoms than those who developed non-psychotic disorder and also those without disorder. Negative symptoms were reported by 53% of the later psychotic subjects, by 10% of those hospitalized for non-psychotic disorder and by 8% of the 'healthy', without psychiatric hospital treatment (Fisher's exact test: psychosis vs. healthy $p<0.0001$, psychosis vs. non-psychosis $p<0.001$, and non-psychosis vs. healthy $p=0.35$). This study may be the only one exploring prospectively symptoms predicting onset of psychosis in general population of adolescents. The findings emphasize the importance of negative symptoms in the development of psychosis.

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PO1.2.
BIOLOGICAL AND PSYCHOSOCIAL FACTORS INCREASING RISK FOR TRANSITION OF ULTRA-HIGH RISK STATE INTO PSYCHOSIS: STUDY RATIONALE AND DESIGN

M. Kotlicka-Antczak, J. Rabe-Jabłońska, A. Pawełczyk, T. Pawełczyk, M. Urban
Chair of Psychiatry, Medical University of Lodz, Poland

In contemporary psychiatry, significant diagnostic and therapeutic problems are related to the individuals presenting an ultra-high risk (UHR) state for psychosis. Just about half of the UHR subjects develop clear psychotic symptoms; however, there is still no tool which would facilitate distinguishing individuals in the prodromal phase of psychosis from "false positives". The aim of the study is to find biological and psychosocial factors which increase probability of transition of the UHR state into psychosis. We planned a 3-year follow-up observation of 100 subjects fulfilling criteria of "at risk mental state" with the use of the following procedures: Comprehensive Assessment of At Risk Mental State (CAARMS); Global Assessment of Functioning Score (GAF); Recent Life Changes Questionnaire (RLCQ); urine test to explore substance abuse; socio-demographic and family data, obstetric history (medical documentation); childhood psychomotor development (medical documentation); Scale for Assessment of Premorbid Schizoid-Schizotypal Traits (PSST); Premorbid Adjustment Scale (PAS); MATRICS battery (every 12 months); Penn Emotion Recognition Task (ER40); smooth pursuit eye movement; University of Pennsylvania Smell Identification Test (UPSIT); leg flexion nociceptive reflex threshold. We expect to determine ranks of several factors affecting probability of transition of the UHR state into psychosis.

PO1.3.
IS THERE ANY RELATIONSHIP AMONG PARENTAL STYLES, PREMORBID FUNCTIONING AND CLINICAL PRESENTATION IN A COHORT OF FIRST EPISODE PSYCHOTIC PATIENTS? RESULTS FROM THE PICOS PROJECT

S. Bissoli, A. Lasalvia, K. De Santi, C. Bonetto, M. Bertani, D. Cristofalo, L. Lazzarotto, G. Marrella, R. Mazzoncini, N. Pellegrini, S. Tosato, M. Tansella, M. Ruggeri, on behalf of the PICOS-Veneto Group
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, University of Verona, Italy

Specific bonding patterns in the early life stages may be key factors for the development of mental disorders in the adulthood. Little research has been conducted on the relationship between parental bonding and the development of psychosis. This study aims to evaluate in patients with first-episode psychosis whether a dysfunctional parental style is associated with a worse premorbid functioning and a greater severity in psychopathology and social disability. This study was conducted in the context of the Psychosis Incident Cohort Outcome Study (PICOS), a large multicenter research in the Veneto Region (Italy). Patients were assessed with a set of standardized measures, including the Parental Bonding Instrument (PBI), the Premorbid Social Adjustment scale (PSA), the Positive and Negative Syndrome Scale (PANSS) and the Disability Assessment Schedule (WHO-DAS II). So far, a cohort of 193 psychotic patients (males 58%, mean age: 31±9.2 years) has been assessed. Patterns of parental styles found in the sample displayed a significant difference respect to the normative sample (care mother 27.0, care father 24; protection mother 13.5, protection father 12.5): the dysfunctional bonding style "affectionless control" was reported for mothers in 48.8% of patients, for fathers in 56.2%. "Neglectful parenting" was the style associated with higher negative symptoms and greater social disability. These findings point out the need for a preventive perspective. Supporting parental strategies and improving parental abilities in those whose offspring is at higher risk of psychosis may be useful to reduce the impact of this additional risk factor.

PO1.4.
THE POOLED WORLDWIDE DATASET FROM TWO OBSERVATIONAL SCHIZOPHRENIA OUTPATIENT HEALTH OUTCOMES STUDIES: RATIONALE AND BASELINE PATIENT CHARACTERISTICS

J. Karagianis, D. Novick, J. Haro, M. Dossenbach, R. Walton, S. Holt, on behalf of the SOHO and IC-SOHO study groups
Eli Lilly Canada, UK and Austria; Memorial University of Newfoundland, St. John's, Newfoundland, Canada; San Joan de Déu-Serveis de Salut Mental, Fundacio San Joan de Déu, Sant Boi de Llobregat, Barcelona, Spain; Intercontinental Information Sciences; Eli Lilly Australia Pty Limited, Australia

The Schizophrenia Outpatient Health Outcomes (SOHO) study was a three-year, prospective, observational study conducted in Western Europe, examining health outcomes in schizophrenia outpatients initiating or changing antipsychotic medication. The same design was used in a parallel study, Intercontinental SOHO (IC-SOHO), conducted in 27 countries in 4 continents. Both studies' datasets were combined to produce the worldwide-SOHO (W-SOHO) dataset. This paper presents the W-SOHO baseline patient characteristics. Outpatients, aged ≥18 years, initiating or changing antipsychotic therapy (olanzapine vs. non-olanzapine) for schizophrenia were enrolled into

the SOHO studies and followed up to 36 months. The W-SOHO dataset contains data from more than 17,000 patients in 17 countries. 43.3% of patients were female and 86% had received prior antipsychotic therapy. The mean ± standard deviation (SD) age was 38.0±12.8 years and the mean ± SD duration of illness was 10.3±10.6 years. The mean ± SD overall Clinical Global Impression – Schizophrenia (CGI-SCH) severity score was 4.4±1.0. The most common reasons for the initiation/change of antipsychotic therapy at baseline were insufficient effectiveness (65.7%) and intolerability (33.4%) to the previous medication. During the previous six months, 52.3% of the patients had taken oral typical antipsychotics, 42.2% had received atypical antipsychotics, and 15.3% had not taken antipsychotic medication. At study entry, 78.5% of the patients commenced antipsychotic monotherapy (atypicals 68.2%) and 21.2% commenced combination antipsychotic therapy. The W-SOHO dataset contains important information from diverse, real-life settings about the clinical and functional outcomes associated with the long-term antipsychotic treatment of schizophrenia.

This study was financially supported by Eli Lilly and Company.

PO1.5.
PATHWAYS TO CARE, DURATION OF UNTREATED PSYCHOSIS AND DURATION OF UNTREATED ILLNESS IN ITALY: A RETROSPECTIVE SURVEY

D. Giacco, V. Vinci, A. Fiorillo, F. Catapano
Department of Psychiatry, University of Naples SUN, Naples, Italy

This study aimed at investigating pathways to care, duration of untreated psychosis (DUP) and duration of untreated illness (DUI) in a sample of individuals aged between 14 and 35 years meeting broad diagnostic criteria for psychosis in the absence of a primary mood disorder. Pathways to care during first episode psychosis, DUP and DUI were investigated by ad-hoc schedules administered to patients and their key-relatives. The initial sample consists of 22 patients, of which 64% are male, with a mean age of 27.3±4.3 years. Onset of psychosis occurred at 20.3±4.1 years and was characterized by negative symptoms, bizarre behaviours and persecutory delusions in more than half of the sample. At onset of psychosis, 36% of patients attempted suicide, 26% were hospitalized, 45% were using cannabis. DUI and DUP were 205.7±171.6 and 60.5±84.8 weeks, respectively, being longer than those reported in the literature. First contact with professionals was with neurologists in 45% of cases, with psychiatrists in 27% of cases, and with general practitioners in 27% of cases; 82% of patients were treated with antipsychotics, 64% with antidepressants, 54% with anxiolytics and 36% with mood stabilizers; 9% of patients did not receive any pharmacological treatment. These results emphasize the necessity to train mental health professionals on definition, recognition and treatment of first episode psychosis. The reduction of DUI and DUP may benefit from educational campaigns on the main aspects of psychotic disorders carried out in young people and relatives, as well as from education of medical professionals, such as general practitioners and neurologists.

PO1.6.
GENDER DIFFERENCES IN THE ONSET OF PSYCHOSIS: FINDINGS FROM THE PICOS PROJECT

M. Bertani, A. Lasalvia, S. Bissoli, C. Bonetto, D. Cristofalo, K. De Santi, L. Lazzarotto, G. Marrella, R. Mazzoncini, N. Pellegrini, S. Tosato, M. Tansella, M. Ruggeri, on behalf of the PICOS-Veneto Group
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, University of Verona, Italy

Data relates to a first episode psychosis study. The main goal is to investigate differences between males and females at the onset of the illness. In order to confirm the strongest evidence reported in the international literature, we analysed socio-demographic data, age of onset, obstetric complications, premorbid adjustment, duration of untreated psychosis, level of symptomatology and cannabis use. The analyses are conducted on subjects at their first psychotic episode enrolled in the PICOS (Psychosis Incident Cohort Outcome Study), a large multicentre research taking place in the Veneto Region (Italy), aiming to characterise patients experiencing their first episode of psychosis and to develop a comprehensive predictive model of outcome, by integrating clinical, social, genetic and magnetic resonance imaging data. Information was collected by using a set of standardized and validated instruments. Schizophrenic males are younger than females at the onset of the illness, have a poorer premorbid adjustment and more severe obstetric complications. Males who used cannabis during the last twelve months have an earlier age of illness onset; at the beginning of the illness males show more severe negative symptoms, while females display more affective symptoms. We did not find significant sex differences in the duration of untreated psychosis. Our data support the presence of significant differences between schizophrenic males and females. These results confirm data reported in the international literature, pointing out that the expression of the illness seems to be the same in different geographical settings.

PO1.7.
REMISSION AND RECOVERY OF SCHIZOPHRENIA OVER THE WORLD: RESULTS FROM THE WORLDWIDE SCHIZOPHRENIA OUTPATIENTS HEALTH OUTCOMES (W-SOHO) STUDY

J.M. Haro, J. Karagianis, J. Bertsch, M. Dossenbach, D. Novick
Research & Development Unit, San Joan de Deu-SSM, Sant Boi, Barcelona, Spain; Eli Lilly Canada Inc., Toronto, Ontario, Canada; Eli Lilly Ges.m.b.H, Austria; Eli Lilly and Company, Windlesham, UK

The Worldwide-Schizophrenia Outpatients Health Outcomes (W-SOHO) study is a three year follow-up study on the outpatient care of schizophrenia that included over 17,000 patients from 37 countries classified into six regions (North Europe, South Europe, Latin America, Southeast Asia, Central and Eastern Europe, and North Africa/Middle East). Patients were recruited by their treating psychiatrists when starting or changing antipsychotic medication. Evaluation was conducted during the normal course of care and was scheduled every six months after the baseline visit. Remission was defined adapting the Andreasen criteria to the CGI-SCH scale. Recovery was defined as two years of clinical remission with good social functioning. Approximately two thirds of the patients achieved remission during follow-up. Women, younger patients, patients receiving treatment for the first time, and those having good social functioning at baseline had a higher frequency of remission. Remission rates showed vari-

ability among regions, with the highest rates in Southeast Asia, Latin America, North Africa and the Middle East. Approximately 20% of the patients achieved recovery. Patients in North Europe had the highest frequency of recovery, while patients in South Europe, Africa and Middle East had the lowest. These data suggest that clinical remission after a psychotic episode is common in schizophrenia, but recovery is infrequent. Both show relevant differences across regions of the world.

PO1.8. SYMPTOMATIC REMISSION IN DEFICIT AND NON-DEFICIT SCHIZOPHRENIA: DATA FROM A MULTICENTRE PROSPECTIVE 5-YEAR FOLLOW-UP STUDY

U. Volpe, S. Galderisi, G.B. Cassano, A. Rossi, A. Vita, S. Pini, P. Stratta, A. Mucci, L. De Peri, M. Maj
Department of Psychiatry, University of Naples SUN; Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa; Department of Experimental Medicine, University of L'Aquila; Department of Mental Health, University of Brescia; Department of Psychiatry, University of Milan, Italy

Operational criteria for symptomatic remission in schizophrenia have been recently proposed. However, no study has investigated the remission rate in homogeneous schizophrenia subgroups. The aim of the present study was to investigate the rate of symptomatic remission in a population of subjects with deficit (DS) or non-deficit schizophrenia (NDS). Fifty-four subjects, diagnosed as suffering from schizophrenia according to DSM-IV criteria, were recruited by four Italian University departments and categorized, by means of the Schedule for Deficit Schizophrenia, as having DS (n=29) or NDS (n=25), both at baseline and after 5-year follow-up. Extensive psychopathological evaluation was carried out at study start- and end-point. Symptomatic remission was defined using SANS and SAPS subitems, according to operational criteria. Subjects with DS had higher negative symptom scores both at baseline and at follow-up ($F_{1,51}$=16.29; p<0.00001), with respect to the NDS group. At the beginning of the study, no subject with DS met criteria for symptomatic remission and only 13.64% of NDS subjects did; at 5-year follow-up, in both groups, there were more subjects in symptomatic remission with respect to baseline, although the number was significantly lower in DS with respect to NDS subjects (DS=16% vs. NDS=44%; p<0.05). In agreement with previous studies, DS patients showed the worst long-term prognosis. Our study supports the idea that clinical remission might represent an achievable goal of treatment in schizophrenia, particularly for the non-deficit type.

PO1.9. CO-OCCURRING SYMPTOMS IN PEOPLE WITH SCHIZOPHRENIA: DO THEY AFFECT RECOVERY?

C.K. Gale, T.G. Patterson, R. Mullen
Department of Psychological Medicine, Dunedin School of Medicine, University of Otago, Dunedin, New Zealand

People with schizophrenia frequently describe being worried, anxious and depressed. The effect of these symptoms on their sense of recovery and on outcomes remains uncertain. As part of an ongoing project, we wished to describe the symptoms people with schizophrenia and schizoaffective disorders have, and consider how this affects their level of function. We have interviewed 75 patients of a general adult community mental health team with schizophrenia or schizoaffective disorder using a modified version of the CIS-R. We also asked them if they considered that they were in recovery, and estimated their level of disability using the WHODAS-II. We will be presenting preliminary analyses. We intend to present the frequency of symptoms (and the number of co-occurring symptoms) for the respondents. We will describe the correlation between symptoms and recovery and disability, and offer a discussion of the possible nature of their interrelationships.

PO1.10. SCHIZO-OBSESSIVE DISORDER: A DISEASE IN SEARCH OF A DIAGNOSIS

D. Ray, A. Mallik
Apollo Gleneagles Hospital and Kothari Hospital, Kolkata, West Bengal, India

Obsessive/compulsive features are known to be associated with schizophrenia. The authors propose that concealed in this continuum is a separate and syndromal nosological entity. 100 consecutive patients (63 males and 47 females) without past history of diabetes insipidus, spina bifida and without family history of obsessive-compulsive disorder, who received a DSM-IV-TR diagnosis of schizophrenia, were followed up in 4 psychiatric centers over a 6-month period. Psychotropics like clozapine which are known to induce obsessive/compulsive psychopathology were avoided. Baseline and fortnightly Yale-Brown Obsessive Compulsive Scale (Y-BOCS) was employed. The scale for Assessment of Positive Symptoms (SAPS) and the scale for Assessment of Negative Symptoms (SANS) were also administered fortnightly. Seven patients (2 males and 5 females) were subsequently excluded as they had to be administered clozapine. Obsessive-compulsive features were found in 30.1% (28/93) patients. The incidence and severity of these symptoms were significantly higher in females than in males. Positive formal thought disorder, delusions, inattention and poverty of speech showed a statistically significant positive correlation with the severity of obsessive-compulsive symptoms. The case for a "schizo-obsessive disorder" as an independent diagnostic entity is becoming progressively stronger and may also have a different set of neurobiological substrates specific to it.

PO1.11. COGNITIVE BIZARRENESS: A MARKER OF PSYCHOSIS ACROSS DIAGNOSTIC CATEGORIES

A. D'Agostino, I. Limosani, M.L. Manzone, G. Faraci, A. Ghizzoni, S. Scarone
University of Milan, San Paolo Hospital, Milan, Italy

Research in familial aggregation and genetic patterns underlying mental disorders set a serious challenge to the Kraepelinian dichotomy in terms of etiopathogenesis. Measurable phenomenological traits of affective and non-affective psychoses can also be usefully investigated to shed light on similarities and differences between these conditions. In this study, cognitive bizarreness was evaluated in the dream and waking fantasy reports of 30 acutely manic inpatients with psychotic symptoms, 30 actively psychotic schizophrenic inpatients and 30 normal controls matched in terms of age, gender and sex. The material was scored by two highly-trained judges who evaluated the degree of bizarre elements referred to the formal architecture of verbalized thoughts. The trend shown by the statistical analysis of the data indicated a substantial similarity in terms of cognitive bizarreness in all reports, with the only outlier being the normal controls' waking mentation. Cognitive bizarreness can be interpreted as the phenomenological correlate of the specific activation pattern

occurring in the brain during REM sleep, where dream imagery is more vivid and storylines more articulated and incongruous. This pattern is underpinned by a rise in cholinergic and a fall in aminergic activity through neural pathways distinct from those activated during waking. The role of dopamine in sleep remains unclear, but it has been related extensively to both schizophrenia and bipolar disorder. Psychotic mentation can be interpreted as a correlate of the same type of neurobiological activation, and appears to be shared amongst acutely manic bipolar patients and actively psychotic schizophrenic subjects.

PO1.12. VALIDATION OF A NEW ANXIETY SCALE IN SCHIZOPHRENIA (THE EAS SCALE)

P.M. Llorca, O. Blanc, I. De Chazeron, H. Caci, J. Lesturgeon, C. Lançon, F.-J. Bayle
CHU and Centre Hospitalier Sainte-Marie, Clermont-Ferrand; CHU, Hôpital Archet, Nice; CH Sainte Marguerite, Marseille; Hôpital Sainte-Anne, Paris, France

Anxiety is a major symptom in schizophrenia, but specific and simple evaluation tools are lacking. We aimed to develop a scale for the assessment of anxiety in schizophrenia (the EAS scale). The analysis of several scales allowed us to select and reformulate 29 items. A draft of the scale was submitted to a Delphi committee. Structured expert advice was incorporated and 147 schizophrenic patients (DSM-IV criteria) (104 males, 43 females, mean age 40.0±10.2 years) were evaluated by using the revised scale. Structure analysis revealed three moderately correlated factors: expressed and perceived anxiety, including 14 items; somatic anxiety, including 7 items; and anxiety and environment, including 3 items. Five items were deleted without modifying the scale structure. A further analysis confirmed the relevance of these three factors. The EAS appears to be a useful tool to evaluate anxiety in schizophrenia. Further studies are required to test its sensitivity.

PO1.13. CONTRIBUTIONS OF PSYCHOPATHOLOGY AND COGNITIVE IMPAIRMENT TO SOCIAL FUNCTIONING IN PATIENTS WITH SCHIZOPHRENIA

G. Piegari, A. Mucci, M. Capuano, E. Plaitano, E. Ardizio, S. Galderisi, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Social functioning and interpersonal interaction are often impaired in patients with chronic schizophrenia, and it is well known that people with psychoses have several cognitive deficits. It is unclear how much of this social impairment can be attributed to the symptomatology and how much to cognitive dysfunctions. In the present study, relationships between social functioning, psychopathology and cognitive deficits were investigated in 88 subjects with chronic schizophrenia or schizoaffective disorder. A comprehensive neuropsychological battery was used to assess general cognitive abilities, attention, secondary verbal and visuospatial memory, verbal fluency and executive functions. Psychopathological dimensions were derived from scores on Andreasen's scales for negative and positive symptoms. Social functioning was investigated by the Assessment of Disability interview. Multiple regressions analyses were carried out, in which indices of social functioning were the dependent variables and psychopathological dimensions, neuropsychological indices, type of antipsychotic treatment, duration of illness, age and education were the independent variables. Verbal memory, executive function and sustained attention indices explained 20% of the global disability variance, while negative symptoms explained 9% of the variance. Visuospatial memory and executive functions explained 15.5% of the variance of subjects' availability to start work, while verbal memory and executive functions explained 27.8% of the variance of subjects' ability to start and maintain affective relationships. Our findings suggest that cognitive impairment is an important feature of schizophrenia, whose relationships with social functioning is stronger than that of psychopathology.

PO1.14. THE SELF-MEDICATION HYPOTHESIS IN FIRST EPISODE PSYCHOSIS: CIGARETTE SMOKING AND COURSE OF COGNITIVE DEFICITS

A. Zabala, J. Ballesteros, J.I. Eguiluz, R. Segarra, E. Elizagarate, J. Ezcurra, A. González Pinto, M. Gutiérrez
University of the Basque Country, Leioa; Hospital de Cruces, Vizcaya; Psychiatric Hospital, Alava; Hospital Santiago Apóstol, Álava, Spain

This study aimed to validate the self-medication hypothesis, which suggests that the higher prevalence of cigarette smoking in schizophrenia (70-90% vs. 25-30% in general population) reflects an attempt to ameliorate some of the cognitive deficits inherent to the illness. First episode psychosis (FEP) patients were assessed using a computerized neuropsychological battery (attention and working memory) at baseline, month 6 and month 12. Patients included fitted in the same smoking category throughout the study: non-smokers (n=15) and smokers (n=26; >15 cigarettes/day). No differences in socio-demographic, baseline clinical data or type of antipsychotic drug were observed between the two groups. Smokers showed a better baseline performance on the following tests: Stroop-I reaction time (p=0.030) and percentage of errors (p=0.006); Continuous Performance Test (CPT)-OX percentage of commissions (p=0.004) and omissions (p=0.015). While the course tended to remain stable for smokers, non-smokers showed a linear tendency toward improvement, obtaining significant intra-group differences for CPT-OX reaction time (p=0.027) and percentage of omissions (p=0.016); Stroop-I percentage of errors (p=0.006) and CPT-OX percentage of commissions (p=0.048) and omissions (p=0.013). Smokers did not show any intra-group difference. Baseline results support the hypothesis of self-medication, as FEP patients who were nicotine users showed a better cognitive performance. The instauration of antipsychotic treatment seemed to offer to non-smoking patients the same cognitive gain previously obtained by smokers via nicotine consumption. Therefore, it is possible that nicotine mimics the positive effects of atypical antipsychotics on cognition.

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PO1.15.
FLEXIBILITY AND VARIABILITY IN LEXICON USAGE AMONG YORUBA SPEAKING NIGERIAN OUTPATIENTS WITH SCHIZOPHRENIA

Abiodun O. Adewuya, Abiola O. Adewuya
Department of Psychiatry, Lagos State University College of Medicine, Ikeja, Lagos; Department of Linguistics, University of Ibadan, Nigeria

The studies on language dysfunction in schizophrenia are few, inconclusive and have all been done in the Western culture. There may be cross-cultural and cross-lingual differences in problems with speech of patients with schizophrenia. This study aims to examine the flexibility and variability in the use of words among a group of Nigerian patients with schizophrenia compared with healthy controls. The spoken samples of 48 outpatients with schizophrenia and 48 matched controls were assessed using the mean segmental type token ratio (MSTTR). The sociodemographic and clinical variables of the patients with schizophrenia were also compared with their MSTTR scores. The MSTTR score for the patients with schizophrenia was significantly lower compared with those of healthy controls ($p<0.001$). The factors independently associated with lower MSTTR in patients with schizophrenia included younger age at onset of illness, presence of negative formal thought disorder and simple or hebephrenic subtype of schizophrenia. Problems with flexibility and variability in lexicon usage among patients with schizophrenia are a cross-cultural phenomenon. The MSTTR may have value in predicting clinical judgements of thought disorder or in identifying deviant language. These may have broad potentials for application in longitudinal and pathogenetic studies of schizophrenia.

PO1.16.
INSIGHT AND NEUROPSYCHOLOGICAL FUNCTIONING IN INDIVIDUALS WITH SCHIZOPHRENIA

S. Aldebot, A.G. Weisman de Mamani, S. Vinogradov
University of Miami, Coral Gables, FL; San Francisco VA Medical Center, San Francisco, CA, USA

Many individuals suffering from schizophrenia have limited or no insight into the fact that they have a mental illness. Some researchers propose that decreased insight may be due to impairments in neuropsychological functioning. Evidence suggests that executive functioning in strongly linked to dimensions of insight. However, other studies found no relationship between insight and neuropsychological functioning. These inconsistent results may be due to the extent or the manner in which neuropsychological functioning was assessed. Further, it remains unclear which aspects of executive functioning are related to impaired insight. Our research uses the MATRICS Consensus Cognitive Battery (MCCB) to evaluate key cognitive domains relevant to schizophrenia, including speed of processing, attention/vigilance, working memory, verbal learning, visual learning, reasoning and problem solving and social cognition. This research aims to replicate findings by Lysaker and colleagues and others linking decreased insight with neuropsychological deficits in individuals with schizophrenia. Further, this research aims to better clarify which domains of neuropsychological functioning seem to be related to insight. Data for this study is available on 65 patients with schizophrenia.

PO1.17.
WHAT PEOPLE WITH SCHIZOPHRENIA THINK ABOUT THEIR MENTAL DISORDER: AN ITALIAN PARTICIPATORY RESEARCH

L. Magliano, C. Malangone, A. Fiorillo, M. Maj, on behalf of the Users' Opinions Questionnaire Working Group
Department of Psychiatry, University of Naples SUN, Naples, Italy

This study aimed to explore the views of 241 users with schizophrenia about their own disorder. Patients' knowledge of their diagnosis, confidence that they will be well again, and perception of limitations in their own life as a result of the disorder were explored in relation to patients' opinions about the social consequences of schizophrenia. Seventy-two respondents (30%) reported they had been informed by psychiatrists that they have schizophrenia. One-hundred and sixty-three respondents (68%) thought that it is completely or partially true that persons with schizophrenia are easily recognizable because of their behaviours (36%), movements (18%), appearance (17%), speech (12%) and walking style (10%). Ninety-six users (40%) reported that they believe that it is completely true that they will be well again. One-hundred and forty-two respondents (58%) affirmed that it is completely or partially true that people are frightened by persons with schizophrenia and 144 (61%) that these patients are kept at a distance by others. Respondents who were confident that they would be well again had a lower duration of contact with psychiatric services and a less pronounced perception of affective and social difficulties related to schizophrenia. Respondents who did not feel limited in their life by the disorder reported less social distance and more optimism about the usefulness of treatments. Study results were presented to a total of 183 persons, including 123 patients, 46 professionals and 14 relatives or volunteers, and suggestions were collected regarding how these results should be used. Participatory studies may provide ideas for a more constructive interaction between patients and professionals.

PO1.18.
LONG-ACTING INJECTABLE ANTIPSYCHOTICS DELAY RELAPSE IN OUTPATIENTS WITH SCHIZOPHRENIA

I. Bellido, C. Lopez, M.V. Bellido, A. Gomez-Luque
Department of Pharmacology and Clinical Therapeutics, and Department of Psychiatry, School of Medicine, Malaga, Spain

The compliance, efficacy and safety of oral vs. depot antipsychotic treatments in outpatients with schizophrenia were compared. A longitudinal, observational study was done with outpatients with a diagnosis (DMS-IV and ICD-10) of schizophrenia or schizoaffective disorder, without hospitalization during the previous 6 months. The patients were consecutively included into the study to receive oral (O-A) or long-acting injectable (depot-A) antipsychotics and were followed for up to 12 months. Clinical stage evolution, compliance, efficacy and safety assessments (including PANSS, CGI-SSI, hospitalization rates, and adverse events) were recorded before and after 6 and 12 months of treatment. Sixty outpatients (aged 34.5±8.9, male 73%), with a diagnosis of schizophrenia (75%) and schizoaffective disorder (25%), were treated with O-A (41.7%) or depot-A (58.3%) antipsychotics for at least one year. Depot-A treated patients showed a significant ($p<0.05$) higher compliance compared to O-A patients, lower PANSS (total, positive and negative) scores and CGI-SSI score ($p<0.01$), and a reduced incidence of relapse and re-hospitalization (% depot/% oral) at 6 months (22.9%/52.0%), between 6-12 months

(28.6%/44.0%), and after 12 months (48.6%/4.0%). No differences between typical (pipotiazine, flufenazine, zuclopenthixol) and atypical (risperidone) antipsychotic treatments were observed.

PO1.19.
THE IMPACT OF ANTIPSYCHOTIC MEDICATION ON SYMPTOMATIC REMISSION AND RECOVERY IN SCHIZOPHRENIA: 36-MONTH RESULTS FROM THE WORLDWIDE SCHIZOPHRENIA OUTPATIENTS HEALTH OUTCOMES (W-SOHO) STUDY

D. Novick, J. Karagianis, J. Bertsch, M. Dossenbach, J.M. Haro
Eli Lilly and Company, Windlesham, UK; Eli Lilly Canada Inc., Toronto, Ontario, Canada; Research and Development Unit, San Joan de Deu-SSM, Sant Boi, Barcelona, Spain; Eli Lilly Ges.m.b.H, Austria

The study aimed to analyse the impact of olanzapine, risperidone, quetiapine, amisulpride, haloperidol, other oral typicals, depot haloperidol and other depot typical medications on symptomatic remission and recovery during 3 year follow-up. Worldwide SOHO is a 3-year, prospective, observational study of antipsychotic treatment outcomes. Over 17,000 patients were enrolled across 37 countries. Symptomatic remission was defined as a) achieving a level of severity of mild or less (<4 on a scale from 1 to 7) in the CGI positive, negative, cognitive, and overall severity score that had been maintained for six months or longer, and b) not having any inpatient psychiatric admission during that period. Recovery was defined as simultaneously achieving symptomatic and functional remission during a minimum period of 24 months and until the end of the study. A logistic regression model was used to adjust for differences at baseline. 11,344 patients were included in the analysis. Approximately 66% of the patients achieved remission and 20% achieved recovery. Compliance with antipsychotic treatment and taking olanzapine at baseline were both associated with a higher frequency of remission. Taking anticholinergics antidepressants, mood stabilizers and anxiolytics at baseline was associated with a lower frequency of remission The odds ratios ranged from 0.57 (95%CI 0.50-0.65) for other oral typicals to 0.77 (0.70-0.84) for risperidone compared to olanzapine. In conclusion, 66% of patients achieved remission and 20% achieved recovery. Patients starting olanzapine treatment at baseline had a higher frequency of remission and recovery. The results should be interpreted conservatively given the observational study design.

PO1.20.
LONG-ACTING INJECTABLE RISPERIDONE IMPROVES NEGATIVE SYMPTOMS IN STABLE SUBJECTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER: A 52-WEEK ITALIAN STUDY

V. Delcuratolo, A. Rossi, M.M. Bernareggi, M.G. Giustra, on behalf of Risperidone Long-Acting Trial Italian Investigators
Mental Health Department, Barletta, Bari; Department of Experimental Medicine, University of L'Aquila; Medical Affairs, Janssen-Cilag, Cologno Monzese, Milan, Italy

According to a recently published consensus, negative symptom of schizophrenia should be important treatment targets, due to their impact on functional ability and quality of life. The objective of this analysis from a 1-year open label, single-arm trial was to investigate the efficacy and tolerability of long-acting injectable risperidone (RLAI) in stable schizophrenic and schizoaffective subjects with predominantly negative symptoms at baseline switching from any previous antipsychotic treatment. Subjects with PANSS negative subscale score ≥21 and higher than their PANSS positive subscale score were included. 155 subjects (77.4% schizophrenic) were the subset of population eligible for this analysis (mean age 45.6±10.7 years). Negative symptoms were significantly reduced from 29.3±5.5 at baseline to 22.4±6.7 ($p<0.0001$) at 52 weeks. Significant improvements were also noted for total PANSS and PANSS subscale scores ($p<0.0001$). the GAF score increased from 46.4±10.5 at baseline to 55.8±12.5 at 52 weeks ($p<0.0001$). The personal attitude towards RLAI treatment as measured by the DAI-30 questionnaire increased from 42.7±5.1 at baseline to 43.7±5.5 at 52 weeks ($p<0.05$). Treatment with RLAI was well tolerated: 11.0% of subjects experienced at least one adverse effect, amenorrhea and extrapyramidal signs the most common. 62.2% of adverse effects were mild, and 78.3% did not require treatment change. No significant weight gain was observed. Thus, RLAI treatment resulted in a significant improvement in negative symptoms severity and was well tolerated in subjects with predominantly negative symptoms who switched from stable antipsychotic regimen.

PO1.21.
LONG-ACTING INJECTABLE RISPERIDONE IN SUBJECTS IN THE EARLY PHASES OF SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER: A 52-WEEK ITALIAN STUDY

F. Scapati, A. Rossi, M.M. Bernareggi, M.G. Giustra, on behalf of Risperidone Long-Acting Trial Italian Investigators
Mental Health Department, Taranto; Department of Experimental Medicine, University of L'Aquila; Medical Affairs, Janssen-Cilag, Cologno Monzese, Milan, Italy

The first few years of schizophrenia have been proposed as a critical period during which an aggressive relapsing course may lead to accruing morbidity and persistent deficits. The objective of this analysis from a 1-year open label, single-arm trial was to assess whether long-acting injectable risperidone (RLAI) can be used safely and effectively as a treatment in early psychosis. Subjects with a recent diagnosis of schizophrenia or schizoaffective disorder (i.e., within the previous 3 years) were switched to RLAI from any previous antipsychotic treatment. Thirty subjects (22 males) with a mean age of 38.2±10.0 years and with 66.7% of schizophrenia diagnosis were the subset of population eligible for the analysis. Prior to study entry, 56.7% of subjects were treated with antipsychotic monotherapy. The total mean PANSS score and all its subscale scores improved significantly ($p\leq0.0001$), with 72.4% of subjects showing a ≥20% improvement on total PANSS score during RLAI treatment. The GAF score increased from 50.3±10.1 at baseline to 62.0±13.1 at 52 weeks ($p\leq0.0001$). Treatment with RLAI was well tolerated: 33.3% subjects experienced at least one adverse effect, with extrapyramidal signs the most common. 60.0% of adverse effects were mild and 90.0% did not require RLAI treatment change. No significant weight gain was observed. Direct initiation of RLAI resulted in a significant symptom improvement and a good safety profile in the early phases of schizophrenia and schizoaffective disorder.

PO1.22.
ASSOCIATION BETWEEN DURATION OF UNTREATED PSYCHOSIS AND REMISSION IN SUBJECTS WITH SCHIZOPHRENIA OR SCHIZOAFFECTIVE DISORDER TREATED WITH LONG-ACTING INJECTABLE RISPERIDONE: A 52-WEEK ITALIAN STUDY

G. Giardina, A. Rossi, M.G. Giustra, M.M. Bernareggi, on behalf of Risperidone Long-Acting Trial Italian Investigators
Mental Health Department, Taranto; Department of Experimental Medicine, University of L'Aquila; Medical Affairs, Janssen-Cilag, Cologno Monzese, Milan, Italy

The duration of untreated psychosis (DUP) is the time from the first psychotic symptom to initiation of treatment. A longer DUP leads to a poorer prognosis and a reduced likelihood of achieving remission. The objective of this analysis from an open label, single-arm 1-year trial with long-acting injectable risperidone (RLAI) was to investigate in a subset of subjects with different DUP which factors are predictors of remission. DUP was categorised in <0-years, <1-year, <2-3-years and ≥4-years. A Wilcoxon Rank-Sum Test was used to test the correlation between individual factors and remission criteria, whereas a binary logistic regression model was used to test the power of the predictors to estimate remission. Among 77 full remitters, 52 had a DUP<0-years, 10 DUP<1-year, 4 DUP<2-3-years and 9 DUP≥4-years. In a bivariate correlation model, neither PANSS nor GAF or DAI-30 scores were significantly correlated with DUP among remitters. However, in non-remitters, both PANSS and GAF scores correlated significantly with DUP ($p<0.01$ and $p<0.05$, respectively). In a logistic regression model, when DUP<1-year, PANSS and GAF scores were the strongest predictive factors for remission, representing 17% and 4%, respectively, of the explained variance (27.1%, $p<0.01$). When DUP ≥2-years, no factor predicted remission. These preliminary data could potentially suggest that a shorter or longer DUP is an important variable in the prediction of remission.

PO1.23.
HOW MAINTENANCE TREATMENT WITH RISPERIDONE AFFECTS QUALITY OF LIFE IN SCHIZOPHRENIA

N.H. Kim, I.G. Son
Daegu Mental Hospital, Daegu, South Korea

The purpose of this study was to evaluate how maintenance treatment with risperidone affects quality of life in people with schizophrenia. We studied 39 patients with a DSM-IV diagnosis of schizophrenia. We investigated their sociodemographic features, and recorded their clinical characteristics, laboratory data, PANSS scores and UKU side effects before and after a 26-week period of maintenance treatment with risperidone. Quality of life was assessed by the KmSWN, which consists of 18 items and a 6 point score, administered three times over a 26-week period. We observed a mild systolic pressure decrease and a mean weight gain of 2.3 kg at the 26-week follow-up, but did not detect abnormal blood glucose levels. We found a significant reduction in PANSS total score and UKU side effects. As the negative and general psychopathology symptoms and the side effects decreased, the subjective evaluation of the quality of life improved in our sample.

PO1.24.
SAFETY, TOLERABILITY AND TREATMENT RESPONSE OF FLEXIBLE DOSES OF PALIPERIDONE ER IN ACUTELY EXACERBATED PATIENTS WITH SCHIZOPHRENIA

A. Schreiner, G.M. Badescu, V. Jukic, A. Siracusano, V. Maciulis, D. Hoeben, M. Schmauss
Janssen Cilag, Neuss, Germany; Neurology and Psychiatry Clinical Hospital, Craiova, Romania; Vrapce Hospital, Zagreb, Croatia; Psychiatric Clinic, Tor Vergata University, Rome, Italy; Republican Vilnius Psychiatric Hospital, Vilnius, Lithuania; Janssen Cilag, Beerse, Belgium; Bezirkskrankenhaus, Augsburg, Germany

This study aimed to explore the tolerability, safety and treatment response of flexible doses of oral paliperidone ER in patients with schizophrenia suffering from an acute episode. This was a six-week prospective, open-label, international study. Endpoints were the rate of responders defined as a ≥30% improvement on the Positive and Negative Syndrome Scale (PANSS) from baseline to endpoint, the Clinical Global Impression-Severity Scale (CGI-S), weight change and adverse events (AEs). 294 patients were analyzed (53% male, mean age 40.3±12.4 years). 80% of patients completed the study. The most frequent reasons for early discontinuation were subject choice (9%) and lack of efficacy (6%). The mean dose of paliperidone ER was 7.5±2.1 mg/day. An improvement of ≥30% in total PANSS was observed in 66% of patients (95% CI 61%, 72%), with a decrease in mean total PANSS score from 100.2±17.2 at baseline to 72.7±20.3 at endpoint (mean change -27.5±20.1; 95% CI -29.8, 25.2, $p<0.0001$) and an onset of efficacy as of day 2. The percentage of patients rated as at least markedly ill in CGI-S decreased from 74.1% to 19.7%. AEs reported in ≥5% were insomnia (23%, only 5% assessed as causally related to study medication), tachycardia (9%), headache (7%), extrapyramidal disorder (7%), and anxiety (5%). Mean weight gain was 0.6 kg (95% CI 0.29, 0.98) from baseline to endpoint. This flexible dose study supports data from recent controlled studies that flexibly dosed paliperidone ER is safe, well tolerated and associated with a clinically meaningful treatment response in patients suffering from an acute schizophrenic episode.

PO1.25.
SAFETY, TOLERABILITY AND EFFICACY OF FLEXIBLE DOSES OF PALIPERIDONE ER IN NON-ACUTE PATIENTS WITH SCHIZOPHRENIA

A. Schreiner, M. Franco, D. Buccomino, E. Lara, F. Kühn, T. Tzotzoras, D. Hoeben, B. Millet
Janssen Cilag, Neuss, Germany; Rodriguez Chamorro Hospital, Zamora, Spain; Mental Health Center, Reggiano Gravina, Cosenza, Italy; Infante Santo Hospital, Lisbon, Portugal; Private Medical Practice, Oranienburg, Germany; Psychiatric Hospital, Thessaloniki, Greece; Janssen-Cilag, Beerse, Belgium; Service Hospitalo-Universitaire de Psychiatrie Adulte, Rennes, France

This study aimed to explore the tolerability, safety and efficacy of flexible doses of oral paliperidone ER in adult non-acute patients with schizophrenia requiring a change in their medication due to lack of efficacy with their previous oral antipsychotic. We report the results of an interim analysis of the prospective 6-month, open-label, international study. Patients completing the first 3 months of this study were analyzed. Endpoints were the change in the Positive and Negative Syndrome Scale (PANSS) from baseline to endpoint, Clinical Global Impression-Severity Scale (CGI-S), weight change and

adverse events (AEs). Eighty-one patients were included (57% male, mean age 41.3±13.6 years, 85% paranoid schizophrenia). 89% of the patients completed the first 3 months of the study. Reasons for early discontinuation were lack of efficacy (3.7%), subject choice (2.5%), loss to follow-up (2.5%) and AE (1.2%). The mean mode dose of paliperidone ER was 6 mg/day. Mean total PANSS decreased from 82.8±16.0 at baseline to 69.2±19.1 at endpoint ($p<0.0001$). The percentage of patients rated mildly ill or less on CGI-S increased from 19.8% to 49.4%. AEs reported in ≥3% were insomnia (4.9%), somnolence (4.9%), extrapyramidal disorder (3.7%), restlessness (3.7%) and psychotic disorder (3.7%). Mean weight change from baseline to endpoint was 0.34 kg ($p=0.71$). These interim open-label data support results from recent randomized controlled studies that flexibly dosed paliperidone ER is safe, well tolerated and effective in patients with schizophrenia requiring a change in medication due to lack of efficacy with their previous oral antipsychotic treatment.

PO1.26. DOPAMINE D2 RECEPTOR OCCUPANCY, CLINICAL EFFICACY AND SAFETY OF OLANZAPINE LONG-ACTING INJECTION

D. McDonnell, S. Andersen, E. Perrin, D. Lin
Lilly Research Laboratories, Eli Lilly and Company, Indianapolis, IN, USA; Lilly France, Suresnes, France

Occupancy at dopamine D2 receptors after administration of olanzapine long-acting injection (OLAI) was characterized to provide guidance for the subsequent evaluation of efficacy and safety in acutely-ill patients with schizophrenia. Striatal D2 receptor occupancy was assessed using positron emission tomography in 14 patients with schizophrenia who were initially stabilized on oral olanzapine and then treated with 300 mg/4-weeks OLAI for 6 months. In an 8-week, double-blind study, 404 acutely ill patients with a diagnosis of schizophrenia who were inpatients at study entry were randomized to receive 210 mg/2-weeks, 300 mg/2-weeks, 405 mg/4-weeks OLAI, or placebo/2-weeks. No oral antipsychotic supplementation was permitted. The primary efficacy measure was mean baseline-to-endpoint change in Positive and Negative Syndrome Scale (PANSS) total score. Mean striatal D2 receptor occupancy during the initial injections of 300 mg/4-weeks OLAI was approximately 50%, but reached approximately 60% after 6 months. Plasma olanzapine concentrations were closely correlated with D2 receptor occupancy. Since previous studies identified a threshold for antipsychotic effect at approximately 60% occupancy, higher doses of 210 mg/2-weeks, 300 mg/2-weeks, 405 mg/4-weeks OLAI were subsequently chosen for study. At these doses of OLAI, mean decreases in PANSS total score were significantly greater relative to placebo (all doses, $p<0.001$), and significant differences were observed as early as 3 days after starting treatment. These findings highlight the utility of receptor occupancy studies that, in conjunction with other measures such as pharmacokinetics, may provide initial guidance for establishing clinically appropriate dosing for new antipsychotic treatments.

PO1.27. 160-WEEK INTERIM RESULTS FROM AN OPEN-LABEL EXTENSION TRIAL OF OLANZAPINE LONG-ACTING INJECTION

J. Karagianis, D. McDonnell, S. Andersen, H. Detke, S. Watson
Eli Lilly Canada Inc., Toronto, Ontario, Canada; Lilly Research Laboratories, Indianapolis, IN, USA

The primary objective of this ongoing open-label study is to examine the long-term safety and tolerability of olanzapine long-acting injection (OLAI). Current results are from an interim analysis (maximum treatment duration=160 weeks). Patients were 18 to 75 years of age with schizophrenia or schizoaffective disorder (n=931) enrolled in an open-label extension study following one of three randomized, controlled studies of OLAI in which patients had been randomly assigned to oral olanzapine, OLAI, or placebo. During the open-label extension, all patients received flexibly-dosed OLAI at injection intervals of approximately 2-4 weeks. At time of analysis, rate of study discontinuation was 39.6%. The most common reasons for discontinuation were withdrawal of consent (20.1%), adverse event (6.3%), and lost to follow up (5.6%). Adverse events in ≥5% of patients were increased weight, insomnia, somnolence, anxiety, headache, and nasopharyngitis. Mean weight change was +1.4 kg, with 28.1% of patients experiencing ≥7% weight gain. Percentage of patients with a fasting glucose increase from normal to high at any time was 4.7%. Percentage of patients with a random total cholesterol increase from normal to high at any time was 5.2%. Percentage of patients with a random triglycerides increase from normal to high at any time was 11.9%. Baseline-to-endpoint mean change on the Clinical Global Impression Severity of Illness scale was 0.16, from a baseline of 2.92. In conclusion, study discontinuation rates have been low. Safety findings were consistent with those observed with oral olanzapine therapy, with the exception of those specific to intramuscular injection.

PO1.28. ATYPICAL ANTIPSYCHOTICS AND METABOLIC OUTCOMES IN CHINESE PATIENTS: A COMPARISON OF OLANZAPINE AND RISPERIDONE

E. Lee, C. Leung
Department of Psychiatry, Chinese University of Hong Kong, China

This cross-sectional comparison study explored the metabolic outcomes in Chinese schizophrenia patients treated with olanzapine or risperidone. Patients, aged from 18 to 65, receiving olanzapine or risperidone in the outpatient department of a university teaching hospital in Hong Kong were recruited from April to August in 2005. The clinical data, demographic data, physical parameters, fasting plasma lipid and glucose level were collected. Subjects were categorized into groups according to the number of the NCEP ATP III criteria met for metabolic syndrome and analyzed with ordinal regression analysis. Seventy-five subjects (45 olanzapine-treated and 30 risperidone-treated) with a DSM-IV diagnosis of schizophrenia completed the study. According to NCEP ATP III definition of metabolic syndrome, eleven (14.7%) subjects were found to have metabolic syndrome and 47 (62.7%) subjects fulfilled one or more criteria. There were twelve (50%) and three (12.5%) subjects, treated with olanzapine and risperidone respectively, found to have dyslipidaemia. One (4.2%) olanzapine-treated subject and two (8.3%) risperidone-treated subjects were found to have impaired fasting glucose. Female gender, mean dosage of antipsychotics, mean blood pressure, total choles-

terol level, HDL-cholesterol level, triglycerides level and post-treatment body weight were significant factors in predicting metabolic syndrome.

PO1.29. A RANDOMIZED, DOUBLE-BLIND STUDY EVALUATING THE EFFICACY AND SAFETY OF 12-WEEK TREATMENT WITH SERTINDOLE OR OLANZAPINE IN PATIENTS WITH SCHIZOPHRENIA IN ASIA

J.S. Kwon, J. Gobres, A. Ong, M. Debelle
Seoul National University Hospital, South Korea; Lundbeck Export A/S, Singapore; Lundbeck France SAS, France

Sertindole is an efficacious atypical antipsychotic drug associated with placebo-level extrapyramidal symptoms (EPS). Sertindole is associated with a dose-dependent prolongation in the QT interval but is not associated with excess cardiac or all-cause mortality. This study was designed as a prospective, randomised, parallel-group, active-comparator, and flexible-dose, multicentre study conducted in China, South Korea and Taiwan. Eligible patients were between 18 and 65 years of age, with schizophrenia according to DSM-IV-TR criteria, had a Positive and Negative Syndrome Scale (PANSS) total score between 60 and 120, and were intolerant to at least one other antipsychotic treatment. After a 2 to 5 day antipsychotic-free screening period, eligible patients were randomised in a 1:1 ratio to sertindole or olanzapine. The doses of both treatments were titrated over a 16 day period to a target dose of 16mg/day (sertindole) or 15mg/day (olanzapine), after which the dosing was flexible on the basis of response and tolerability, according to the investigator's judgement: 12, 16 or 20mg/day for sertindole; 10, 15, or 20mg/day for olanzapine. The primary efficacy analysis was the change from baseline in PANSS total score. Safety measures included adverse events, ECGs, laboratory parameters, and EPS.

PO1.30. AN OPEN TRIAL OF COGNITIVE-BEHAVIOURAL THERAPY, FLUVOXAMINE AND ZIPRASIDONE IN PATIENTS WITH SCHIZOPHRENIA AND OBSESSIVE-COMPULSIVE DISORDER

M. Yeghiyan, K. Gasparyan, A. Soghoyan, A. Mirzoyan
Yerevan State Medical University, and National Psychiatric Hospital, Yerevan, Armenia

Although obsessive-compulsive disorder (OCD) and schizophrenia are separate diagnostic entities, there is considerable overlap between the two disorders in terms of clinical characteristics, brain areas that are affected and pharmacotherapy. Around 8% to 46% of patients with schizophrenia also have OCD. The relationship between these two disorders is not fully understood, but in clinical practice a combination of an antipsychotic and a selective serotonin reuptake inhibitor is extensively used. Among 62 inpatients with chronic schizophrenia, we selected 9 patients with comorbid OCD. All patients received a combination of ziprasidone and fluvoxamine during 8 weeks. Five patients also received CBT (not less than 10 sessions). The Y-BOCS score was 18- 32 prior to treatment. The dosage of ziprasidone ranged between 80 and 160 mg daily; that of fluvoxamine from 50 to 100 mg daily. Six out of 9 patients presented an improvement of OCD symptoms. The results of this open pilot study require replication in a controlled study with a larger sample.

PO1.31. LONG-TERM EFFECT ON WEIGHT OF ARIPIPRAZOLE-CLOZAPINE IN SCHIZOPHRENIA PATIENTS WITH SUBOPTIMAL RESPONSE TO CLOZAPINE

W.W. Fleischhacker, M.E. Heikkinen, J.P. Olié, P. Dewaele, R. McQuade, D. Hennicken, W. Kerselaers, W. Landsberg
Department of Biological Psychiatry, University of Innsbruck, Austria; Helsinki City Health Centre, Department of Psychiatry, Community Mental Health Services, Helsinki, Finland; Hôpital Sainte-Anne, Paris, France; Bristol-Myers Squibb, Braine l'Alleud, Belgium; Otsuka Pharmaceutical Development and Commercialization Inc., Princeton, NJ, USA; Bristol-Myers Squibb, Uxbridge, UK

This study aimed to evaluate the long-term effect on weight of aripiprazole+clozapine in schizophrenia patients with suboptimal response to clozapine. It was a multicentre, randomized study including a double-blind treatment phase of 16-weeks, and an open-label extension phase of 12 weeks. Patients with schizophrenia (DSM-IV-TR) with ≥2.5 kg weight gain and suboptimal efficacy and/or safety on clozapine were recruited. Patients were randomized to aripiprazole, 5-15 mg/day, or placebo in addition to clozapine (stable dose). The primary endpoint was body weight change from baseline to week 16. All patients entering the open-label extension received aripiprazole, 10 mg/day, with incremental dose adjustments of 5 mg permitted within the dose range of 5-15 mg/day. Patients (n=207) were randomized (baseline mean weight=92.4 kg, mean weight gain on clozapine=+14.9 kg, mean clozapine dose=373.7 mg/day) and 90% and 94% completed the double-blind treatment phase for combination and monotherapy, respectively. Statistically significant differences between combination and monotherapy in reductions from baseline were observed in mean body weight (-2.5 kg and -0.4 kg; $p<0.001$), waistline (-2.0 cm and -0.0 cm; $p<0.001$), body mass index, fasting total and LDL cholesterol. Body weight reduction was maintained in180 patients entering the open-label phase; mean change in weight was -0.5 kg and -1.7 kg from the end of the double-blind phase, respectively, for previous combination and monotherapy arms. In conclusion, combining aripiprazole and clozapine results in clinical benefits in terms of weight, body mass index and fasting cholesterol in this patient group.

PO1.32. CLOZAPINE IN A PSYCHIATRIC EMERGENCY CARE UNIT

M. Raja, A. Azzoni, C. Ramelli
Psychiatric Service, Santo Spirito Hospital; Department of Psychiatry, S. Andrea Hospital, "La Sapienza" University, Rome, Italy

Clozapine is the most effective treatment in schizophrenia spectrum disorders and other disorders with psychotic symptoms. It is also effective in controlling aggressive or violent behavior and in preventing suicide in patients affected by schizophrenia or schizoaffective disorder. However, this drug remains underutilized. The aim of this study was to describe the effectiveness of clozapine in an emergency psychiatric setting. We carried out a retrospective study of admissions to a psychiatric intensive care unit of a general hospital in a 10 year period. 363 out of 4263 cases (8.5%) were treated with at least one dose of clozapine. In comparison with other cases, clozapine treated cases were younger, more frequently male, presented more severe psychopathology (as evaluated by the Clinical Global Impression, CGI)

and worse global functioning (as evaluated by the Global Assessment of Functioning, GAF), both at the admission and in the course of the last year. CGI improvement score was significantly higher in the clozapine treated group. The most serious side effects were neutropenia (6 cases), epileptic seizures (2), clonic jerks (4), pancreatitis (4), ileus (1). All these side effects disappeared completely in a few days, after withdrawal or dose reduction of clozapine. In conclusion, clozapine is very effective in the treatment of psychotic disorders. Its current underuse is not justified from a clinical point of view.

PO1.33. EFFECTIVENESS OF COMPULSORY TREATMENT WITH ANTIPSYCHOTICS

P.F.J. Schulte
Mental Health Services North-Holland North, Heiloo, The Netherlands

In 2008 the Dutch Society for Psychiatry presented a guideline for decision-making on compulsory hospitalization and treatment. As part of the preparation a systematic review was carried out to assess the effectiveness of compulsory treatment with antipsychotics, antidepressants and electroconvulsive therapy. A systematic search strategy in Medline revealed no randomized controlled trials and only one controlled trial. Two controlled trials were included after additional information by the authors. Hand search and inspection of the references added five controlled and two uncontrolled trials. We present here the controlled studies with antipsychotics.Three investigations found no difference in treatment outcome between compulsorily and voluntarily treated patients (the majority with psychosis and treated with antipsychotics). The fourth investigation compared involuntarily admitted patients (74.5% with schizophrenia or schizoaffective disorder) who accepted medication with those who were compulsorily treated with medication. The outcome was slightly better in the group with compulsory medication. Hoge et al (1990) found longer hospitalization and more seclusion and restraint in patients who refused medication after admission in comparison to non-refusing patients. In schizophrenic outpatients, a community treatment order (CTO, which includes in nearly all patients obligatory medication) leads to a decrease of number and duration of hospitalizations in the twelve months after start of the CTO in comparison to the twelve months before. A second investigation in psychotic outpatients with CTO found less hospitalizations in the group with depot antipsychotics in comparison to the group with oral antipsychotics. The Dutch guideline commission concludes that compulsory treatment with antipsychotics shows comparable effectiveness as voluntary treatment.

PO1.34. AN AUDIT OF ANTIPSYCHOTIC MEDICATION PATHWAYS IN FIRST EPISODE PSYCHOSIS

Y. Dundar, J. Underwood, S. Jefferies, Y. Denham, D. Vecchio
Department of Psychiatry, North Devon District Hospital; North Devon Specialist Team for Early Psychosis, Devon, UK

The National Institute for Health and Clinical Excellence (NICE) guidelines published in 2002 recommend for first-episode psychosis the prescription of atypical antipsychotics as first line at low dose as monotherapy, and to initiate clozapine in treatment-resistant patients. We aimed to compare current antipsychotic prescribing in early psychosis in North Devon with practice recommendations by NICE guidelines. We carried out a retrospective file audit on randomly selected young people (n=36) presenting with first-episode psychosis under the care of Specialist Team in Early Psychosis (STEP) in North Devon. Diagnoses were: psychotic episode (48.3%), drug-induced psychosis (37.9%), schizophrenia (3.4%), schizoaffective disorder (3.4%), mood disorder (3.4%) and psychotic depression (3%). In 32 (89%) cases an antipsychotic medication was indicated. Prescribing antipsychotic monotherapy was consistent with NICE guidelines in all cases; however, clozapine was not initiated in any of the four cases where there was no improvement for 6-8 weeks with two different antipsychotics. Consistent with NICE guidelines: atypical antipsychotic were used as first medication (93.8%), the prescription of low-dose atypical antipsychotic as first medication (81.3%), and antipsychotic dose range within the British National Formulary standard range (83.6%). These findings suggest that there is some inconsistency in prescribing practice. Introducing a standardized form for recording initiation and changes in medication would be useful to improve consistency and clarity of recording of medication. In addition, well-staffed early intervention teams with dedicated consultant input, specialised training, and procedures for involving and educating users, cares and general practitioners are essential in improving practice in an area where the diagnosis is often uncertain.

PO1.35. ATTITUDES TOWARDS MEDICATION IN BIPOLAR AND SCHIZOPHRENIC PATIENTS AT DISCHARGE FROM PSYCHIATRIC ACUTE INPATIENT UNIT

J. Salva, M. Silvestre, J.L. Galan, J. Larumbe, A. Ugidos, I. Leon
Hospital Universitari Son Dureta, Palma de Mallorca; Hospital Infanta Cristina, Badajoz; AstraZeneca Farmaceútica Spain; Hospital Psiquiatrico de Alava; Hospital Virgen Blanca, León; Mediclin-Quintiles, Madrid, Spain

The purpose of this study was to assess the attitudes towards medication in bipolar and schizophrenic patients at discharge from a psychiatric acute inpatient unit, and to explore factors associated with this attitude. This was an observational, cross-sectional and multicenter study. Patients were recruited consecutively in 5 inpatient acute units in 5 states of Spain. Assessments were carried out in the 24-48 hours prior to discharge. The average and median on the Drug Attitude Inventory (DAI) was 16.0; 66.7% of the patients had a DAI>15. We found a statistically significant relationship between DAI>15 and the length of the assessed admission (p=0.01), the last admission (p=0.007) and the last acute episode (p=0.04); the number of years since the prior admission (p=0.04), the numer of years since the prior acute episode (p=0.01), and the total score on the Scale to Assess Unawareness of Mental Disorder (SUMD), used for assessment of insight (p=0.001). There was no significant relationship between DAI>15 and age, duration of illness, educational level, number of acute episodes in the previous 5 years, psychoeducational therapy, and CGI-S and CGI-C scores. We did not identify any variable with influence on the DAI on the logistic regression analysis.

PO1.36. DURATION OF DRUG THERAPY IN PATIENTS WITH SCHIZOPHRENIA

J. McCombs, S. Zolfaghari, D. Stafkey-Mailey, V. Ganapathy
School of Pharmacy, University of Southern California, Los Angeles, CA, USA

This study aimed to compare time to all-cause discontinuation (TTAD) across drug therapies for patients with schizophrenia. Three years of commercial health plan data were used to identify non-institutionalized patients with schizophrenia initiating treatment using

antipsychotics, mood stabilizers or antidepressants were included. Episodes were divided into three categories: restarting treatment after a break in drug therapy >15 days using a drug used in the previous episode, switching therapy with or without a break in treatment, and augmentation therapy. First observed episodes were excluded. Ordinary least squares (OLS) regression models were estimated for TTAD adjusting for age, gender, drug use history, prior medical care use, and diagnostic mix. Only 39.5% of all episodes involved an antipsychotic. Antipsychotics were used predominately as augmentation therapy (60%) with the remaining episodes evenly divided between restart and switching. TTAD on initial therapy measured across all episode types was 170 for TAP; 171 for risperidone; 175 for olanzapine; 179 for antidepressants; 196 for mood stabilizers; 201 for quetiapine; 205 for aripiprazole; and 213 for ziprasidone. TTAD on initial therapy for AAP patients did not differ relative to TAP patients for restart (-10 to +9 days) or switching episodes (-23 to +27 days). Three AAPs displayed longer TTAD in augmentation: +23 for quetiapine ($p<0.05$); +41 for aripiprazole ($p<0.0001$) and +58 for ziprasidone ($p<0.0001$). In a commercially-insured population, AAPs achieve longer TTAD than TAPs in augmentation therapy.

PO1.37. REASONS FOR DISCONTINUATION AND CONTINUATION OF ANTIPSYCHOTIC THERAPY FROM PATIENT AND CLINICIAN PERSPECTIVES

H. Ascher-Svanum, V. Stauffer, B. Kinon, A. Nyhuis, D. Faries, G. Phillips, D. Perkins
Eli Lilly and Company, Indianapolis, IN; University of North Carolina, Chapel Hill, NC, USA

This study aimed to assess the reasons for discontinuation and for continuation of antipsychotic medication in the treatment of schizophrenia from patient and clinician perspectives. Two measures were developed to assess the Reasons for Antipsychotic Discontinuation/Continuation (RAD), one from patient's perspective (RAD-I), and the other from clinician's perspective (RAD-Q). These measures were administered to patients enrolled in a 12-week study of antipsychotic medication in the treatment of schizophrenia (n=630). Reasons for discontinuation of the antipsychotic used prior to the study start and reasons for continuation with the assigned antipsychotic during the study were assessed. Reported reasons were rated as being a primary reason, very important, somewhat important, or of minor importance. The top three primary reasons for medication discontinuation and continuation were identified from patient and clinician perspectives, and level of concordance between patients' and clinicians' reasons was assessed. The top primary reasons for medication discontinuation differed from the top primary reasons for continuation on the medication, with a high level of concordance between patients' and clinicians' perspectives. The top primary reasons for medication discontinuation were insufficient improvement of positive symptoms, medication-related adverse events, and medication cost. The top primary reasons for medication continuation were improvement in positive symptoms, subjective perception of improvement, and improvement in level of functioning. Medication efficacy appears to be the core driver of medication continuation and discontinuation, especially with regard to positive symptoms. Reasons for medication discontinuation differ somewhat from reasons for continuation, with a high level of concordance between patients' and clinicians' perspectives.

PO1.38. POST-TREATMENT COSTS FOR PATIENTS WITH SCHIZOPHRENIA

J. McCombs, S. Zolfaghari, D.R. Stafkey-Mailey, V. Ganapathy
School of Pharmacy, University of Southern California, Los Angeles, CA, USA

This study aimed to compare first year costs across drug therapies for patients with schizophrenia. Three years of commercial health plan data were used to identify non-institutionalized patients with schizophrenia initiating treatment using antipsychotics, mood stabilizers or antidepressants. Episodes were divided into three categories: restarting treatment after a break in drug therapy > 15 days using a drug used in the previous episode, switching therapy with or without a break in treatment, and augmentation therapy. First observed episodes were excluded. Ordinary least squares regression models were estimated for costs adjusting for age, gender, drug use history, prior medical care use, and diagnostic mix. 21,790 episodes of drug therapy were selected identified. Average cost across all episodes ranged from $24,910 for typical antipsychotics (TAPs) to $34,579 for mood stabilizers. Augmentation episodes were more costly than switching episodes (+$4,441, $p<0.0001$) or restart episodes (+$7,186, $p<0.0001$). The class of medications used in the prior 6 months was correlated with costs: +$2,572 for mood stabilizers; -$2,189 for TAP; and -$2,447 for atypical antipsychotics (AAPs)($p<0.0001$ for all three estimates). Patients with schizophrenia treated with quetiapine were significantly more costly than TAP patients for restart episodes (+$5,524, $p<0.05$) and switching episodes (+$8,039, $p<0.01$). There were no significant differences in post-treatment costs between patients receiving other AAPs and TAP. In a commercially-insured population, there are few significant differences in total post-treatment costs for AAPs patients relative to TAPs patients.

PO1.39. COMPARING ANTIPSYCHOTICS WITHIN NONCOMPLIANCE RISK GROUPS

J. McCombs, D. Stafkey-Mailey, V. Ganapathy
School of Pharmacy, University of Southern California, Los Angeles, CA, USA

Most studies report the average treatment effect across a study population, which assumes homogeneous treatment effects across all patient groups. If treatment effect varies in subgroups of patients, then the relationship between outcome and patient risk characteristics is obscured, making it impossible for physicians to use this evidence to select the most appropriate treatment for individual patients. Comparative effectiveness research must provide evidence that documents inter-individual differences in drug response. A prognostic propensity score (PPS) was developed, which is defined as the expected likelihood of treatment response (e.g., minimum duration of therapy) given the patient's covariates. Separate response functions are estimated for each treatment. A PPS value is then calculated for all patients and each treatment is compared to its alternatives within quintiles based on its estimated equation for likelihood of response. 5,094 patients with bipolar disorder were identified using a 3-year sample of paid claims from a commercial insurer. An initial PPS analysis was conducted using aripiprazole as the comparison drug. Aripiprazole demonstrated better outcomes than risperidone, olanzapine or typical antipsychotics across all quintiles defined based on the likelihood of response to aripiprazole. There were no significant difference between aripiprazole and either quetiapine or ziprasidone in any quintile. Additional analyses are underway. Initial results suggest that treat-

ment response is defined primarily by risk factors common across all drugs, but that aripiprazole, quetiapine and ziprasidone may be achieve higher rates of compliance, especially for hard-to-treat patients.

PO1.40.
EFFECT OF A NURSE TELEPHONE FOLLOW-UP ON THERAPEUTIC ADHERENCE OF PATIENTS WITH SCHIZOPHRENIA

J. Montes, J. Saiz Ruiz, J. Claret, J. Mauriño, T. Diez
Hospital del Sureste, Madrid; Hospital Ramón y Cajal, Madrid; Fundación Hospital de Día Nou Barris, Barcelona; Medical Department, AstraZeneca, Spain

Non-adherence rates for antipsychotic medications in patients with schizophrenia are about 50%, resulting in a significant social and economic burden. Our goal was to evaluate the effect of a nurse telephone follow-up as a strategy for improving therapeutic adherence in schizophrenia. A 16 week, open, multicentre, randomised controlled trial was carried out in ambulatory schizophrenic patients receiving an oral antipsychotic agent. Participants were randomised to receive monthly telephone calls from a nurse of health center or standard clinical follow-up. Phone calls were performed at weeks 4, 8, and 12 in the intervention arm, consisting of a brief interview to assess treatment compliance and DAI-10. A compliance ≥60% of doses was used to classify patients as compliant. Primary endpoint was the difference in the percentage of compliant patients after phone follow-up vs. control group at week 16. 865 patients (65% men, mean age: 40.1±11.6 years) were recruited. Baseline socio-demographic and main clinical characteristics were similar between groups. 88.2% patients in the intervention arm were compliant vs 90.0% in control arm. At week 16, 410 (96.7%) patients fulfilled compliance criteria in the intervention group vs. 402 (91.1%) in the control group. An absolute difference of 5.5% was found between groups (p=0.0007). The mean global CGI-SCH and DAI-10 scores were better in the intervention arm (p=0.009 and p<0.0001, respectively). Despite a high baseline rate of compliance, nurse telephone intervention increased antipsychotic adherence. A nurse telephone follow-up could be a complementary strategy to improve therapeutic adherence.

PO1.41.
CHARACTERIZATION OF ANTIPSYCHOTIC DRUGS: ERP AND LORETA FINDINGS

E. Merlotti, A. Mucci, P. Bucci, D. Russo, V. Montefusco, F. Centanaro, S. Galderisi, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Several studies have reported a favorable impact on neurocognitive functions by second-generation antipsychotics (SGA), with respect to first-generation antipsychotics (FGAs). Event-related potentials (ERPs) represent valuable tools in the assessment of cognitive effects of psychotropic drugs; however, few ERP studies investigated antipsychotic drug effects on neurocognition in human subjects and reported inconsistent results. The present ERP, double-blind, cross-over study was carried out in 12 male healthy subjects to investigate the effects of a single oral dose of haloperidol, placebo or risperidone on effortful and automatic allocation of attentional resources to auditory stimuli. ERPs were recorded from 30 unipolar leads, during a three-tone oddball paradigm in which rare targets were randomly intermixed with rare non-target and frequent standard tones. Subjects had to press a button when hearing a target tone, while ignoring both standard and rare-nontarget stimuli. N1 was identified for each stimulus, P3 for target (P3b) and rare-nontarget stimuli (P3a). Amplitude maps at peak latency were then compared across conditions. If a significant drug effect was obtained, changes in the cortical sources of the same component were explored by low-resolution electromagnetic tomography (LORETA). No change was observed for the P3b amplitude and N1 latency. The amplitude of N1 for attended stimuli and of P3a was significantly increased only by risperidone. No change was observed in ERP cortical generators. P3a, an index of automatic allocation of attentional resources, is increased only by risperidone, suggesting a favorable effect of this SGA on early selective attention processes and orienting response.

PO1.42.
ANTICIPATING AND IMPROVING DRUG RESPONSE BY TESTING FOR CYTOCHROME P450 POLYMORPHISMS

N. Fleeman, Y. Dundar, R. Dickson
School of Population, Community and Behavioural Sciences, University of Liverpool; North Devon District Hospital, Devon, UK

This study aimed to evaluate the effectiveness of testing for CYP450 polymorphisms in patients treated with antipsychotics. A systematic review considering analytic validity, clinical validity and clinical utility was carried out. Forty-one studies were found evaluating testing methods for various CYPs, most commonly CYP2D6. All found tests to be highly accurate, with sensitivity commonly being reported to be 100%, although not all aspects of analytic validity were reported. Fifty-two studies were found examining clinical validity, with most focussing on the relationship between CYP2D6 and adverse drug reactions, of which 22 were included in a meta-analysis. The only significant finding was that patients with the mut/mut genotype (associated with the poor metabolism of drugs) were more likely to have parkinsonism than patients with either the wt/wt or wt/mut genotypes (fixed effects OR=1.64; 95% CI: 1.04, 2.58). No studies were found that met the inclusion criteria for clinical utility. While there is some evidence for the analytic validity of CYP450 pharmacogenetic tests, the evidence for their clinical validity in schizophrenia is less convincing, although the numbers of patients with the mut/mut genotype included in these studies has been very small to date.

PO1.43.
NEUROCOGNITIVE FUNCTIONING AND FACIAL AFFECT RECOGNITION IN TREATMENT-RESISTANT SCHIZOPHRENIA TREATED WITH CLOZAPINE

J.P.M. de Sousa, J.E.C. Hallak
University of São Paulo, Ribeirão Preto, Brazil

There is considerable evidence of impaired neurocognition and emotional processing in schizophrenia, which is thought to be involved in patients' poor social outcome. Typical antipsychotics such as haloperidol and chlorpromazine are apparently unable to produce significant improvement in these processes, despite their efficacy for treating positive and negative symptoms. We investigated working memory, verbal fluency, attention, and facial emotion recognition abilities in a group of 15 treatment-resistant chronic schizophrenic patients on clozapine, compared to a group of healthy controls matched one by one in terms of age, gender, and educational level. Patients were slower than controls to perform the attention test (SCWT) and the facial emotion recognition task. No group differences were found, however, in the scores of those tasks or in the verbal fluency and working memory tests. Clozapine seems to enhance neurocognition and facial emotion

recognition abilities in the long-term treatment of schizophrenic patients, although speed-related deficits persist.

PO1.44. ASSESSMENT OF PATIENTS' SUBJECTIVE EXPERIENCE OF ANTIPSYCHOTIC TREATMENT IN SCHIZOPHRENIA

M. Dalmotto, R. Keller, G. Pastore, A. Gianara, E. Pirfo
Department of Mental Health, Local Health Unit 2, Turin, Italy

Several recent studies have demonstrated that subjective experience is a factor involved in compliance, especially in long-term treatment, but little information about this topic is currently available. Aim of this study was to investigate patients' subjective experience related to long-acting antipsychotic treatment in schizophrenia and compare outpatients treated with haloperidol decanoate to outpatients treated with long-acting risperidone. Fifty schizophrenic outpatients (age 18-65) treated with haloperidol decanoate or long-acting risperidone for at least three months were evaluated through the Drug Attitude Inventory (DAI-10) and an open question concerning their subjective experience about the treatment. General psychopathology was assessed by the SANS and SAPS. Demographic data were collected. Preliminary data support a positive subjective experience of long-acting antipsychotic medication injected intramuscularly, and the notion that patients prefer this treatment to the oral one. Patients treated with long-acting risperidone do not report more pain during injection than those treated with haloperidol.

PO1.45. SOCIAL FUNCTIONING AND QUALITY OF LIFE OUTCOME OF ATYPICAL AND TYPICAL ANTIPSYCHOTICS AMONG SCHIZOPHRENIA PATIENTS TREATED IN ROUTINE CLINICAL PRACTICE

C. Montemagni, P. Rocca, F. Bogetto
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Quality of life (QOL) and social functioning issues have been receiving more attention in patients with schizophrenia, due to a shift in outcome focus from improving symptoms to a more holistic view of the impact psychosis has on an individual's life. Despite the recent widespread use of the term "social functioning", there is a limited consensus concerning its definition. The boundary between social functioning and QOL as an outcome measure is also contested. The development of second-generation antipsychotics (SGAs), with presumed superiority to first-generation antipsychotics (FGAs) in efficacy and tolerability, offered renewed promise of gains in "real world" outcomes such as psychosocial functioning. A number of recent studies have therefore sought to assess QOL and social functioning of patients with schizophrenia, especially comparing FGAs with SGAs in their influence on these variables. Findings are mixed. Recently, the CATIE study failed to find significant differences between perphenazine, olanzapine, quetiapine, risperidone, or ziprasidone treatment groups in improving QOL after 6, 12, or 18 months. On the other hand, there is no body of knowledge of any differences in social functioning with SGAs and FGAs. In a cross-sectional survey, we sought to comparatively evaluate QOL and social functioning outcomes among schizophrenia outpatients stabilized on SGAs (n=101) or FGAs (n=67) drugs. Findings suggest that SGAs had several advantages over FGAs in instrumental role functioning, a domain of QOL outcomes, and social functioning.

PO1.46. IMPACT OF THE SPANISH CONSENSUS ON THE PHYSICAL HEALTH OF PATIENTS WITH SCHIZOPHRENIA

J. Saiz-Ruiz, J. Bobes, I. Barber, J. Luque
Ramon y Cajal University Hospital, University of Alcala; Psychiatry Department, University of Oviedo; Otsuka Pharmaceuticals; Bristol Myers Squibb, Spain

This study aimed to evaluate the impact of the Spanish Consensus on Physical Health in Patients with Schizophrenia on the psychiatrists' evaluation of physical health in patients with schizophrenia. This was an epidemiological, non-interventional, national, multicentre study, with two retrospective, cross-sectional data collection stages in which 238 psychiatrists evaluated 1,193 clinical records of patients with schizophrenia (ICD-10) visited in January and September 2007. The mean age of patients was 39.7±11.6 years; 66.1% were men, with a time from diagnosis of schizophrenia of 14.0±10.3 years. The percentage of patients with an evaluation of all physical health predictors before the consensus was 15.5%, whereas after the consensus it was 29.3% $p<0.0001$). The change that took place in the percentage of patients with evaluations for each of the parameters was also significant (weight: 58.9% vs. 72.6%; body mass index: 32.8% vs. 46.4%; waist circumference: 19.2% vs. 33.2%; lipid profile: 69.6% vs. 72.5%; glycaemia: 70.6% vs. 73.2%; $p<0.0001$). These results suggest that the dissemination of the Consensus on Physical Health in Schizophrenic Patients, and possibly other actions, have made psychiatrists more aware of an integral approach to patients with schizophrenia, promoting increased monitoring of the physical health of these patients.

PO1.47. MANAGEMENT OF OBESITY ASSOCIATED WITH ANTIPSYCHOTIC MEDICATION

D.A. Wirshing, Z.D. Erickson, S.J. Mena, L.H. Guzik, E. Vesterman, K. Tran
Department of Psychiatry and Biobehavioral Sciences, David Geffen School of Medicine at UCLA; Department of Psychiatry, VA Greater Los Angeles Healthcare System, Los Angeles, CA, USA

The primary objective of this research is to test the effectiveness of a year-long psychoeducational program on knowledge about healthy lifestyles in people with severe mental illness treated with antipsychotic medications, and to determine if the classes, along with a prescribed diet and exercise regimen, improve patients' metabolic profiles, cardiovascular risk factor status, and mental health compared to usual psychiatric treatment. A secondary objective of this program is to learn what the barriers are to achieving weight loss in this population, and to try to create a program that psychotic individuals will be able to master. Ultimately, we aim to create a weight loss program and educational classes that are easily implemented in any psychiatric setting and that can be taught by almost any mental health staff. 120 patients with severe mental illness, identified as having gained weight resulting in obesity (an increase in body weight of 7% or more, or a body mass index greater than 25) while taking an antipsychotic medication, will be referred for this one year randomized research program. Each patient's medications, mental status, cardiovascular risk factors and metabolic status will be carefully evaluated at baseline and then quarterly. Patients will be interviewed to assess their mental status, their insight into their mental illness, and their knowledge of healthy lifestyles, diet, exercise and nutrition. Patients will be ran-

domized to treatment with either usual psychiatric care or to the behavioral weight loss program.

PO1.48.
WEIGHT GAIN WITH CLOZAPINE: 8-YEAR COHORT NATURALISTIC STUDY AMONG HOSPITALIZED CHINESE SCHIZOPHRENIC PATIENTS

Ya Mei Bai, Jen-Yeu Chen, Tzu Ting Chen, Chao-Cheng Lin, Tung-Ping Su
Department of Psychiatry, Taipei Veterans General Hospital, Taipei; Department of Psychiatry, College of Medicine, National Yang-Ming University, Taipei; Department of Psychiatry, Yu-Li Veterans Hospital; Department of Psychiatry, National Taiwan University Hospital; Graduate Institute of Medical Informatics, Medical University, Taipei, Taiwan

Clozapine is associated with significant weight gain. However, it is still debatable whether the majority of weight gain occurs in the early phase of treatment or if weight gain is a persistent side effect. The inconsistent results in previous outpatient studies may be due to many confounding factors, such as variations in drug adherence, diet content, activity level and environmental factors. The objective of this study was to investigate long-term weight changes in hospitalized Chinese schizophrenic patients treated with clozapine. The subjects were admitted at the largest mental hospital in Taiwan during the entire study period. They had routine monthly body weight monitoring during hospitalization. Retrospective chart reviews were conducted to obtain demographic data, age at which clozapine treatment was initiated, and weight changes after the initiation of clozapine treatment. The study sample consisted of 349 hospitalized Chinese schizophrenic patients, including 204 males (58.8%), with an average age at clozapine initiation of 38.6±9.3 years and an average clozapine dosage of 318±9.3 mg/day. Body weight increased over time, and reached a plateau at month 42. Younger age at clozapine initiation ($p=0.0038$) and lower baseline body mass index (BBMI) ($p<0.0001$) were associated with more weight gain. The patients with BBMI<25 gained significantly more weight (10.98±8.48 kg) compared to patients with BBMIγ25 (1.17±13.29 kg) ($p=0.004$).

PO1.49.
EVALUATION OF DYSLIPIDAEMIA RISK AMONG PATIENTS TREATED WITH ARIPIPRAZOLE: META-ANALYSIS OF PLACEBO- AND OLANZAPINE-CONTROLLED STUDIES

J.-Y. Loze, S. Kaplita, Jian Han, R.A. Baker, R. Gismondi, B. Tekin, R. Cahn, R. Owen
Bristol-Myers Squibb, Paris, France; Otsuka, Paris, France; Bristol-Myers Squibb, Wallingford, VT, USA; Bristol-Myers Squibb, Princeton, NJ, USA

Aripiprazole is a novel antipsychotic with a distinct pharmacological profile that differs from currently available atypical antipsychotics. Unlike these other antipsychotics, it has not been associated with a worsening lipid profile, although these early assumptions have been based on analyses in a limited number of patients. Investigation in a wider group of patients is warranted. This study aimed to evaluate dyslipidaemia risk among patients with schizophrenia treated with aripiprazole or olanzapine. We used a pooled analysis of the aripiprazole clinical database, including studies of ≥7 days with at least an oral aripiprazole monotherapy arm. Mean changes from baseline to endpoint and shifts from normal to abnormal lipid levels were calculated. Five olanzapine-controlled studies (3 weeks to 3 years) of adult patients (≥18 years) were included. Aripiprazole showed significant improvements in mean changes (LOCF) in lipids vs. olanzapine ($p\leq0.01$). The incidence (OC) of switching to abnormal lipid levels from baseline normal was significantly lower with aripiprazole than olanzapine for most measures. Despite limitations inherent to pooled analyses, these findings lend further support to the differential profile of atypicals, as aripiprazole demonstrated a significantly favourable impact on total cholesterol, triglycerides, and HDL and LDL cholesterol compared with olanzapine.

PO1.50.
PHARMACOLOGICAL INTERVENTIONS FOR CLOZAPINE-INDUCED HYPERSALIVATION: A COCHRANE SYSTEMATIC REVIEW

R.J. Syed Sheriff, K. Au, C. Cahill, L. Duggan, Y. He, V. Udu, J. Xia
Health Services and Population Research Department, Institute of Psychiatry, London, UK; King's College Hospital, London, UK; St. Andrew's Healthcare, Northampton, UK; Department of Psychiatric Epidemiology, Shanghai Mental Health Center, Shanghai, China; Hackney Learning Disability Service, St. Leonard's Hospital, London, UK; Cochrane Schizophrenia Group, Leeds, UK

Clozapine, an atypical antipsychotic drug used in treatment resistant schizophrenia, frequently produces a distressing adverse effect hypersalivation (CIH). We aimed to determine the clinical effects of pharmacological interventions for CIH compared with placebo or no treatment. We searched the Cochrane Schizophrenia Group Trials Register, inspected references, contacted pharmaceutical companies, drug approval agencies and trialists. We focused on randomised controlled trials comparing pharmacological interventions with placebo or no treatment. All but one of the 15 trials was conducted in China. The general quality of reporting was poor, with many outcomes missing or unusable. The primary outcome, curative effect on hypersalivation, was measured by a non-validated scale in 14 trials. Antimuscarinics were the most investigated group of drugs. Two of these (astemizole and diphenhydramine) showed a significant benefit over placebo, while the data involving propantheline were heterogeneous. Oryzanol showed benefit over doxepin (antimuscarinic) as did suo quo wan, a Chinese traditional medicine. This review is currently insufficient to inform clinical practice. Reporting appeared poor and the trials were of inadequate length. Hyoscine, a widely used drug, was not trialled. Further trials are needed to better inform treatment of CIH.

PO1.51.
ARIPIPRAZOLE-INDUCED TARDIVE DYSKINESIA TREATED WITH QUETIAPINE: A CASE REPORT

N.B. Tomruk, E. Yildizhan, N. Alpay
Bakirkoy Research and Training Hospital for Psychiatry, Neurology and Neurosurgery, Istanbul, Turkey

Aripiprazole is a new atypical antipsychotic with a unique mechanism of action. It has a partial agonistic effect on the presynaptic D2 autoreceptor and antagonistic effect at postsynaptic D2 receptors. It also acts as a partial 5-HT1A agonist and 5-HT2A antagonist. There have been some case reports of aripiprazole-induced tardive dyskinesia (TD) or improvement of TD with aripiprazole. A case of aripiprazole-induced TD treated successfully with another atypical antipsychotic, quetiapine, is described and discussed. A 56 year old female patient diagnosed with schizoaffective disorder, with a 5 year history and four previous admissions, stable in the last year on aripiprazole

30mg/day, was hospitalized because of a relapse of psychotic, depressive symptoms and suicidality. Venlafaxine 150 mg/day had been added in the last two weeks before admission. Examination revealed TD in the orobuccolingual area. Aripiprazole and venlafaxine were stopped and quetiapine 200 mg/day was given. TD resolved within 3 weeks. TD is a serious, potentially irreversible side effect of antipsychotics. Although the risk is smaller, atypical antipsychotics still pose a risk. There were well-known risk factors in our patient: female gender, advanced age and affective illness. It is important to be aware that aripiprazole can be associated with TD and quetiapine may be effective in treatment.

PO1.52.
WEIGHT LOSS DURING THERAPY WITH OLANZAPINE ORALLY DISINTEGRATING TABLETS IN A PATIENT WITH SCHIZOAFFECTIVE DISORDER

O. Kozumplik, S. Uzun, M. Jakovljevic
University Department, Vrapce Psychiatric Hospital; University Department, Clinical Hospital Zagreb; School of Medicine, University of Zagreb, Croatia

Patient K-Z, with a diagnosis of schizoaffective disorder according to DSM-IV-TR, who was clinically stable on olanzapine standard oral tablet (SOT) treatment, was switched to olanzapine orally disintegrating tablets (ODT). Prior to initiation of olanzapine ODT, the patient had been taking olanzapine SOT at the dose of 10 mg/day for two years, and during this period had gained 16 kg. The patient was not taking any other medication during that period. The patient's weight was measured before switching to olanzapine ODT, after 1, 2, 3, 6, and 12 months of therapy with olanzapine ODT. During the observed period, the patient received olanzapine ODT at the dose of 10 mg/day for 6 months and 15 mg/day after that period due to worsening of psychotic symptoms. At 12 months, the recorded weight loss was 18 kg. The peak weight loss was observed at 6 months.

PO1.53.
EFFECTS OF ANTIPSYCHOTIC TREATMENTS ON SERUM PROLACTIN LEVELS: A COMPARATIVE NATURALISTIC STUDY

G. Pigato, A. Di Florio, G. Piazzon, G. Perini
Psychiatric Clinic, Neuroscience Department, Padua University Hospital, Padua, Italy

Hyperprolactinemia is a common finding in patients treated with first generation antipsychotics (FGAs). However, only a few comparative studies regarding the effect of second generation antypsychotics (SGAs) on prolactin (PRL) levels have been published. The aim of this study was to compare the effect of FGAs and SGAs on PRL serum levels. Fasting morning blood samples were analysed for PRL in a sample of 121 consecutive inpatients admitted to the Third Psychiatric Unit of Padua. Patients with pituitary disorders or treated with other medications that increase PRL levels were excluded. One-hundred two patients were eligible. Among them, 16 patients did not take any antipsychotic drugs (control group, CG). Oral risperidone increased prolactinemia in 85% of patients, while 92% of those treated with the long-acting formulation of risperidone exhibited hyperprolactinemia. There were no differences in the mean PRL levels between the two formulations. When compared with CG, women treated with risperidone had much higher levels of PRL than men. PRL elevation did not correlate with age, menopausal condition, antipsychotic daily dose and diagnosis. FGAs increased prolactinemia in 76% of patients. The mean PRL levels were significantly higher in FGA treated patients than CG ($p=0.04$). There was no difference between haloperidol and perphenazine. Olanzapine produced hyperprolactinemia in 54% of patients, but there was no difference in the mean PRL levels with respect to CG. Aripiprazole, clozapine and quetiapine did not increase significantly PRL. Patients treated with polypharmacy (FGSs+SGAs) did not exhibit significant hyperprolactinemia.

PO1.54.
METABOLIC ABNORMALITIES IN A SAMPLE OF OUTPATIENTS TREATED WITH ANTIPSYCHOTICS FOR SCHIZOPHRENIA: AN OBSERVATIONAL STUDY

M.F. Pantusa, S. Paparo, A. Salerno
Department of Mental Health, Rogliano, Cosenza, Italy

The metabolic syndrome is a cluster of risk factors which predispose an individual to cardiovascular morbidity and mortality. There is general consensus regarding the main components of the syndrome: glucose intolerance, abdominal obesity, hypertension, high fasting triglycerides and low levels of HDL cholesterol. Discerning the modifiable risk factors is crucial for developing cardiovascular disease prevention strategies in schizophrenia. We have collected socio-demographic, clinical and laboratory data of 30 schizophrenic outpatients (18 female, 12 male) treated with antipsychotics. Their mean age was 45.6 years, and the median duration of illness was 18.2 years. 76.6% of subjects were treated with only one antipsychotic (in 70% of cases, atypical antipsychotics); the remaining took a combination of two antipsychotics. Antipsychotics were combined with antidepressants (17%), benzodiazepines (20%) and mood stabilizers (13,4%). Ten schizophrenic patients (30%) fulfilled the criteria for the metabolic syndrome. The criteria related to elevated blood pressure (43.3%) and hypertriglyceridemia (36.6%) were the most commonly fulfilled. Interventions consisting of dietary counseling, physical activity, treating dyslipidemias and hypertension can ameliorate the abnormalities related to metabolic syndrome and decrease the risk of cardiovascular disease associated with schizophrenia.

PO1.55.
RISK OF METABOLIC, CARDIOLOGIC AND ENDOCRINOLOGICAL ABNORMALITIES IN PATIENTS UNDER LONG-TERM ANTIPSYCHOTIC TREATMENT

G. Cerveri, L. Volonteri, I. Netti, B. Papini, P.L. Ala, C. Mencacci
Department of Psychiatry, Fatebenefratelli Hospital, Milan, Italy

Atypical antipsychotics represent an important advance in the treatment of schizophrenia and related disorders. However, during the last several years, there has been a growing interest in metabolic, endocrinological and cardiologic abnormalities in schizophrenic patients under long-term atypical antipsychotic treatment. We conducted a 6-month prospective observational study over all schizophrenic patients under monotherapy antipsychotic treatment who visited our outpatient Clinic. Among 125 subjects evaluated, 65% presented a body mass index higher than 25; 12% exceeded the fasting glucose plasma level threshold value; 18% exceeded the glycated haemoglobin threshold value; and 20% exceeded the prolactin threshold value. The main risk factors for metabolic abnormalities were duration of illness and duration of treatment. This was a prevalence study, so it is impossible to establish whether the findings were due to the impact of antipsychotic treatment or to other illness-related factors.

PO1.56.
RISPERIDONE AND HYPERPROLACTINEMIA: IS PALIPERIDONE THE ANSWER?

S. Manfrinati, C.I. Cattaneo, N. Barucci, A. Colotto
Department of Mental Health, Aosta, Italy

The atypical antipsychotic risperidone significantly raises plasma prolactin levels. This often correlates with side effects such as amenorrhea, galactorrhea, gynecomastia, and sexual and reproductive dysfunction. Risperidone is now available in two different formulations (oral and injective). Paliperidone (9-OH risperidone) is also available. The aim of this study was to compare prolactinemia in patients treated with those drugs. Thirty outpatients (18 males, 12 females) with a diagnosis of schizophrenia according to DSM-IV-TR were randomized in three different groups (oral risperidone, injective risperidone and paliperidone). The mean dosage was respectively 5.5 mg/day, 37.5 mg/14 days and 7.8 mg/day. Plasma prolactin levels were dosed at baseline and after 3 and 6 months. Patients were also interviewed about drug-correlated side effects. Prolactin serum levels were increased in all groups. After 3 months, the oral risperidone group showed higher prolactin levels than the other two; the difference became significant after 6 months. These data suggest that the injective formulation of risperidone and paliperidone might have a slightly better tolerability, in terms of hyperprolactinemia and its consequences, than oral risperidone.

PO1.57.
OFF-LABEL USE OF ATYPICAL ANTIPSYCHOTICS IN A CRISIS INTERVENTION UNIT

B. Novak Sarotar, P. Pregelj, N. Segrec
University Psychiatric Hospital, Ljubljana, Slovenia

The aim of this study was to assess the off-label use of atypical antipsychotics (AA) in the Crisis Intervention Unit (CIU), Ljubljana, Slovenia. Hospital records of 150 consecutive patients who were admitted to the CIU during a period of 6 months (July-December 2007) were included in this retrospective observational study. Patients were screened for diagnosis (ICD-10), gender, age, suicidal behavior and for prescribed psychotropic medications. Off-label use of atypical antipsychotics for diagnoses other than psychosis was evaluated. Most patients suffered for stress related disorders (48%), depression (32%) and anxiety disorders (14%). Gender ratio was in favour of women (77%). Average age of patients was 52.1 years. 27% of patients were admitted after a suicide attempt, 46% reported suicidal thoughts. Off-label use of AA was noted in 65% of patients who suffered from stress related disorders, in 36% of patients with depression and in 49% of patients with anxiety disorders. Our results show that atypical antipsychotics are widely used for indications other than psychosis, even though the long-term effects of their use are not yet known and safety issues remain to be examined further.

PO1.58.
THE EFFECTIVENESS OF A PSYCHOEDUCATIONAL FAMILY INTERVENTION FOR SCHIZOPHRENIA IN PUBLIC MENTAL HEALTH CENTRES

A. Fiorillo, L. Magliano, C. Malangone, M. Maj, on behalf of the Family Interventions Working Group
Department of Psychiatry, University of Naples SUN, Naples, Italy

This study aimed at exploring the effectiveness of a psychoeducational family intervention for schizophrenia on patients' personal and social functioning as well as on relatives' burden and perceived support, in the routine of public mental health services. Thirty-four mental health professionals from 17 Italian mental health centres attended a training course in family supportive interventions and then selected a total of 71 families of patients with schizophrenia. Forty-two families were randomly assigned to a group that received the intervention for six months, and 29 families were assigned to a waiting list for six months. At baseline and six months later, validated assessments instruments were used to investigate patients' clinical status, personal and social functioning, and social network, as well as relatives' burden, social resources, and perception of professional support. In the intervention group, the number of patients with poor or very poor global personal and social functioning decreased significantly, from 17 (47%) at baseline to nine (25%) at follow-up. A significant improvement was found for the intervention group in patients' social relationships, interest in getting a job, maintenance of social interests, and management of social conflicts. Twenty-seven patients (74%) reported that their social relationships had improved during the six-month period. Family burden significantly improved in both the intervention and control groups. Relatives' social contacts ad perception of professional support significantly increased only in the intervention group. The results of this study suggest that a psychoeducational family intervention may have a significant impact on functional outcomes of schizophrenia when provided to patients and caregivers in real-world settings.

PO1.59.
EXPLORING CARE-RECEIVING STRESS: A TOOL TO ENHANCE INTERVENTIONS FOR FAMILIES AFFECTED BY SCHIZOPHRENIA?

C.C. Williams
Faculty of Social Work, University of Toronto, Canada

Research in the area of caregiving has contributed to several effective, evidence-based interventions to support families affected by mental illness. Unfortunately, this research has consistently excluded the perspectives of diagnosed family members who are clearly involved in caregiving dynamics. The purpose of this project was to seek that perspective from individuals diagnosed with schizophrenia in order to explore their perceptions of how caregiving affects them and their families. Interviews were conducted with twenty individuals diagnosed with schizophrenia (10 men, 10 women) representing a range of lengths of illness (4-26 years). The individuals participated in a semi-structured interview exploring definitions of care and experiences of receiving and giving care in the familial context. The participants discussed many positive aspects of caregiving, including feeling positive regard, respect and concern from and for their caregivers. They also, however, described a variety of negative experiences related to being care-recipients, that we describe as "care-receiving stress". Care-receiving stress described the tensions experienced by diagnosed individuals as they negotiate the requirements of dependence and the desire for independence while in the care-recipient role. This study suggests that care-receiving stress may be an overlooked contributor to caregiving burden in families affected by mental illness, as some identified coping strategies are behaviours known to increase family stress. Addressing care-receiving stress and caregiver burden in conjunction may be the key to developing interventions that benefit the entire family unit.

PO1.60.
COGNITIVE REHABILITATION OF PATIENTS WITH SCHIZOPHRENIA

A. Vita, M. Cisima, P. Cacciani, G. Deste, S. Barlati, A. Mosca, L. DePeri, E. Sacchetti
University of Brescia, School of Medicine; Department of Mental Health, Spedali Civili, Brescia, Italy

In recent years, several non-pharmachological methods have been proposed to remediate cognitive deficits in schizophrenia. Among these, integrated psychological therapy (IPT) has been applied with positive outcomes. In this study we analyzed the effectiveness of the "cognitive" subprograms of IPT on clinical, cognitive, and functional outcome domains in a group of patients with schizophrenia. Twenty-eight patients with a diagnosis of schizophrenia (DSM IV-TR) admitted to two residential rehabilitative centers entered the study. The first 8 patients of each Center followed the first 2 subprograms of IPT method ("cognitive differentiation" and "social perception"), the subsequent 12 (both centers) followed other non-cognitive rehabilitation interventions for the same amount of time. Statistical analysis of change over a 6 month period of clinical, cognitive and functional variables evaluated with a comprehensive battery of scales and tests revealed significantly better outcomes for the group treated with cognitive remediation as compared to the group treated with non-cognitive interventions in the following variables: negative symptoms (group × time interaction: $p < 0.001$), total PANSS ($p = 0.02$); working memory ($p < 0.03$), and global functioning ($p < 0.05$).

PO1.61.
REHABILITATION STRATEGIES FOR PERSONS WITH SCHIZOPHRENIA IN DEVELOPING COUNTRIES

A. Mallik, D. Roy
Kothari Medical Centre and Appolo Hospital, Kolkata, India

We discuss recent strategies of psychiatric rehabilitation of patients with schizophrenia in developing countries like India. In Mental Health Act of India 1987, rehabilitation has been given great importance and NIMHANS of India has taken certain strategies for health and welfare measures for people with mental disorders. In our country, custodial care of persons with schizophrenia is being shifted to therapeutic care and rehabilitation. Psychosocial intervention in schizophrenic patients is gaining importance. Three rehabilitation strategies have received considerable attention: social skills training, cognitive rehabilitation and vocational rehabilitation. Several factors are to be considered during rehabilitation: timing and duration, role of the patient and family members, individual differences and need based strategies. Traditional vocational training with emphasis on sheltered workshops and job training are not highly effective. The integrated placement and support model is an innovative approach and is gaining importance in our society.

PO1.62.
SOCIAL SKILLS AND NEUROCOGNITIVE INDIVIDUALIZED TRAINING IN SCHIZOPHRENIA

G. Piegari, S. Galderisi, A. Mucci, A. Acerra, L. Luciano, F. Santucci, M. Volpe, A. Valente, A.F. Rabasca, P. Mastantuono, M. Maj
Department of Psychiatry, University of Naples SUN, Naples; Mental Health Department, Avellino 1, Avellino; Mental Health Department, Benevento 1, Benevento, Italy

Impairment of social and cognitive functioning has been largely documented in patients with schizophrenia. Non-pharmacological interventions targeting cognitive deficits in schizophrenia have shown effect sizes from large to moderate, but it is not clear whether improvement on training tasks translates into better functional outcome. The efficacy of social skills training, a behavioral intervention that focuses on social functioning, is well established in patients with schizophrenia, but no consensus has been reached on the generalization of its effects into patients' everyday life. Based on these data, our group designed an individualized rehabilitation program including two one-hour sessions of computerized cognitive training and one two-hour session of social skills training per week (social skills and neurocognitive individualized training, SSANIT). In the present study, the efficacy of this rehabilitation program was investigated in 58 subjects with chronic schizophrenia or schizoaffective disorder. Patients were recruited in three mental health departments located in Southern Italy and randomly allocated to one of two rehabilitation programs: SSANIT or structured leisure activities (SLA) of each department (including highly structured laboratories, such as decoupage, carpentry, gardening, mosaics, wax or plaster handling). The active treatment phase lasted 6 months. The SSANIT program, as compared to the SLA, showed a greater efficacy on global and factor scores of the Assessment of Disability interview. According to our findings, the SSANIT program is more effective than the rehabilitation activities usually implemented in mental health departments.

PO1.63.
PSYCHOSOCIAL REMISSION IN SCHIZOPHRENIA: DEVELOPING A CLINICIAN RATED SCALE

Y. Barak, D. Aizenberg
Abarbanel Mental Health Center, Bat-Yam; Geha Mental Health Center, Petach-Tiqva, Israel

There is a growing awareness of the importance of psychosocial factors incorporated in treatment goals in schizophrenia patients. Remission, both symptomatic and psychosocial, is now an achievable goal in a substantial proportion of patients. Thus, the development of handy tools to quantify outcomes is called for. This study aimed to develop a brief, clinician rated scale for the assessment of psychosocial remission in schizophrenia (the PSRS). The scale is to match the quantification of symptomatic remission as delineated by the American Psychiatric Association (APA) task force. A "bank" of 124 questions pertaining to psychosocial remission was derived from published scales. Questions were divided into two domains: quality of life (QoL) and activities of daily living (ADL). Psychiatrists, residents, psychiatric nurses and community nurses were presented with the questions. All were asked to choose the 8 items they considered as reflecting the essence of psychosocial remission. Inter-rater reliability of the final scale version was assessed amongst psychiatrists. The questions' "bank" was reviewed by 429 mental health professionals. The four items found to be most frequently sanctioned in the QoL domain were: familial relations (endorsed by 78% of participants),

understanding and self-awareness (46%), energy (58%) and interest in every-day life (38%). The four items sanctioned in the I-ADL domain were: self-care (86%), activism (65%), responsibility for medications (54%) and use of community services (32%). Inter-rater reliability amongst 70 psychiatrists ranged from 0.67 to 0.83. In conclusion, the PSRS is an 8-item scale quantifying psychosocial remission in schizophrenia in a manner that complements symptomatic assessment of remission. The PSRS may be useful for both research and clinical evaluation.

PO1.64.
REMISSION IN SCHIZOPHRENIA: A NATIONAL SURVEY OF CLINICAL AND PSYCHOSOCIAL ASPECTS

D. Aizenberg, Y. Barak
Geha Mental Health Center, Petach-Tiqva; Abarbanel Mental Health Center, Bat-Yam, Israel

Clinical and psychosocial remission amongst schizophrenia patients is nowadays a defined goal of treatment. This necessitates incorporating quantifiable psychosocial variables with traditional symptomatic data, as both influence remission. This study aimed to assess psychosocial remission in schizophrenia (using the PSRS) along with the quantification of symptomatic remission in a large cohort of community dwelling schizophrenia patients. Psychiatrists, nurses and social workers endorsed the PSRS and the American Psychiatric Association symptomatic remission criteria (APA-SR) for schizophrenia patients they have been treating for 6 months or more. Data as to gender, age and pharmacological treatment of each patient were also collected. Of 445 participants who completed the survey, 268 (60%) were psychiatrists, 161 (36%) nurses and 16 (4%) social workers. Patients' mean age was 43.4±13.1 years; 61% were men and 39% were women. Fifty-five percent of patients received oral antipsychotic treatment, 23% long-acting typical antipsychotics and 22% long-acting risperidone. Overall, 37% of patients achieved symptomatic remission and 31% achieved psychosocial remission. Rates of symptomatic remission were significantly higher in patients treated with long-acting typical antipsychotics or long-acting risperidone compared with those receiving oral antipscychotics (51% and 48% vs. 29% respectively, p=0.0003). Rates of psychosocial remission were also significantly higher in the former (43% and 41% vs. 24% respectively, p=0.003). Thus, long-acting preparations were associated with higher remission rates.

PO1.65.
ACCEPTANCE OF AUDITORY HALLUCINATIONS: EVALUATING A GROUP ACCEPTANCE AND COMMITMENT THERAPY

K. Ratcliff, J. Farhall, F. Shawyer
La Trobe University, Melbourne, Australia

Auditory hallucinations in psychotic disorders are often distressing and may persist despite pharmacological intervention. A recent development in psychological intervention is the application of therapeutic techniques that emphasise mindfulness and acceptance. This approach encourages observation and disengagement from distressing psychotic symptoms such as hallucinations. Although small-scale individual and group interventions have been reported, we could find no group intervention study using Acceptance and Commitment Therapy (ACT) for psychotic symptoms. In addition, measurement of theoretically-relevant outcomes such as acceptance and valued action in relation to voices is not well developed. The Voice Acceptance and Action Scale (VAAS) was developed and piloted to provide a suitable instrument. The current study sought to: a) develop a group-format six-session intervention to assist adaptation to voices, and b) use the intervention, and data from additional patients, to further validate the VAAS. Two therapy groups, each with ten participants, were conducted, and a further 60 participants completed a set of measures including the VAAS.

PO1.66.
FACTORS PREDICTING REHOSPITALIZATION IN PATIENTS WITH SCHIZOPHRENIA

H. Gothe, I. Rudolph, A. Höer, A. Schmeding, G. Glaeske, B. Häussler
IGES, Institute for Health and Social Research Ltd., Berlin; Pharmafacts GmbH, Berlin; Janssen-Cilag GmbH, Neuss; ZeS, Centre of Social Policy Research, Faculty of Human and Health Sciences, University of Bremen, Germany

Schizophrenia is characterized by frequent exacerbations often leading to hospital readmissions. Despite the common awareness of the chronic relapsing course of schizophrenia, knowledge about potential predictors for rehospitalization is limited. This study aims at identifying the predicting factors from the analysis of population-based data sets over a four-year time frame. We conducted a retrospective cohort study using claims data of a German sickness fund (1.5 million beneficiaries). A sample of 2,023 patients with an index hospitalization due to schizophrenia was drawn (minimum observation time 360 days). Cox-regression analysis was performed to explore predictors for rehospitalization. 1,095 patients (54.1%) were readmitted to hospital after 635 days (median). After discharge, median duration until third, fourth and fifth hospitalization was 400, 287, 160 days, respectively. Patients with index hospitalizations showed a significantly higher risk for rehospitalization if they had an inpatient stay due to acute exacerbation compared to patients with rehabilitative care (relative risk (RR) 3.25; 95% CI 1.91-5.51; p<0.001). Further predictors of rehospitalizations were: substance abuse (RR 1.87; 95% CI 1.39-2.51; p<0.001) and duration of the index-case longer than 30 days. A lower risk was also observed in beneficiaries aged 60 years and older (RR 0.50; 95% CI 0.33-0.75; p=0.11). These data suggest that former hospitalization due to acute exacerbation, longer duration of previous hospitalization, younger age, and substance abuse are the main predictors for rehospitalization. The more hospital stays were observed, the shorter the intervals between two hospitalizations became. These findings from longitudinal analyses of routine care data confirm the clinically observable dynamics of the course of schizophrenia.

PO1.67.
RECOMMENDATIONS ON APPROPRIATE PROCEDURES FOR INVOLUNTARY HOSPITAL ADMISSION: A PROPOSAL FROM THE EUNOMIA STUDY

C. De Rosa, A. Fiorillo, F. Rossano, G. Onchev, J. Raboch, A. Karastergiou, Z. Solomon, A. Dembinskas, A. Kiejna, P. Nawka, F. Torres Gonzales, L. Kjellin, M. Maj, T. Kallert
Department of Psychiatry, University of Naples SUN, Naples, Italy; Department of Psychiatry, Medical University of Sofia, Bulgaria; Psychiatry Department, First Medical School, Charles University, Prague, Czech Republic; Psychiatric Hospital of Thessaloniki, Greece; School of Social Work, Tel Aviv University, and Ghea Mental Health Center, Tel Aviv, Israel; Psychiatric Clinic, Vilnius Mental Health Centre, University of Vilnius, Lithuania; Department of Psychiatry, Medical University, Wroclaw, Poland; Psychiatric Hospital, Michalovce, Slovak Republic; Department of Legal Medicine and Psychiatry, Medical Faculty, University of Granada, Spain; Psychiatric Research Centre, Orebro, Sweden; Department of Psychiatry and Psychotherapy, University of Technology, Dresden, Germany

The rates and procedures of involuntary hospital admissions are significantly different across Europe, despite family associations and political bodies have recently asked for their harmonization in the countries of the European Union. In the period 2002-2005, the European Commission, within the Fifth Framework Programme of Research, funded the study "European evaluation of coercion in psychiatry and harmonisation of best clinical practice" (EUNOMIA), coordinated by the University of Dresden and carried out at 12 European sites. National clinical practice recommendations on involuntary hospital admission were preliminarily developed by each participating centre and used to produce a shared document covering the following topics: a) clinical conditions and legal requisites for involuntary hospital admissions; b) relationship with patients and relatives; c) ethical aspects; d) therapeutic plan; e) rules for the staff. The shared document recommended that the involuntary hospital admission should be acted according to a national mental health law and when the following criteria are met: a) the patient is suffering from a serious mental disturbance; b) the patient needs urgent therapeutic hospital-based interventions; c) the patient does not accept such care. Furthermore, the document stressed the need to guarantee a continuity of care for the patient, through the cooperation of hospital and community teams and by clear statements on staff's rules. Training courses on hospital involuntary admission procedures should be provided to all involved professionals. The usefulness of meetings and focus groups on appropriate procedures for involuntary hospital admission with users' involvement has been highlighted by all the participating centres. This document, if applied on a large scale, could contribute to improve hospital mental health care in Europe.

PO1.68.
PATTERN AND CORRELATES OF COMPULSORY ADMISSION IN PATIENTS WITH ACUTE PSYCHOSIS

C. Montemagni, A. Badà, T. Frieri, V. Villari, P. Rocca
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Demographic characteristics, such as old or young age, male gender, single marital status, living alone, low social class, ethnicity and unemployment, have been found to be associated with increased likelihood of compulsory admission in psychiatry. Among compulsorily admitted psychiatric inpatients, the most frequent diagnosis is schizophrenia and symptoms such as challenging behavior are most frequently found. Few studies have looked at specific demographic, psychiatric and neuropsychological variables as predictors of compulsory admission in schizophrenia. In a cross-sectional survey, we examined the demographic, clinical and cognitive factors influencing compulsory admission in a sample of 71 patients fulfilled the diagnostic criteria for schizophrenia-spectrum disorders admitted to a psychiatric emergency service. The proportion of compulsorily admitted patients was 30%. Patients who were admitted compulsorily differed from the others by having higher levels of aggression, a greater impairment in executive function and a tendency to an impairment of facial affect recognition.

PO1.69.
ASSOCIATION OF VAL66MET POLYMORPHISM OF THE BDNF GENE WITH SCHIZOPHRENIA

A. Leszczynska-Rodziewicz , M. Skibinska, P. Kapelski, M. Dmitrzak-Weglarz, A. Szczepankiewicz, J. Rybakowski, J. Hauser
Department of Psychiatry, Poznan University of Medical Sciences, Poznan, Poland

Schizophrenia is one of the most disabling disorders, and is thought to have a genetic component in its etiology. We studied a sample of 535 schizophrenic patients (287 males, mean age 30 years, and 248 females, mean age 32 years) and 499 control subjects (177 males, mean age 41 years, and 322 females, mean age 40 years). A subgroup of 121 patients with early age of onset was identified. We studied the polymorphism in the BDNF gene: Val66Met (rs6265). We found an association of Val/Val genotype (p=0.026) and Val allele (p=0.045) with schizophrenia. There were also a trend towards an association of Val allele in the male subgroup (p=0.082) and Val/Val genotype in the female subgroup (p=0.09). Comparing genotype and allele frequency between the subgroup with late age of onset and controls, we found an association of Val/Val genotype (p=0.029) and Val allele (p=0.033).

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PO1.70.
EFFECT OF GENETICALLY DETERMINED DOPAMINE SIGNALING BY AKT1 AND DAT1 ON BRAIN ACTIVITY DURING WORKING MEMORY

L. Fazio, G. Caforio, A. Rampino, G. Blasi, P. Taurisano, A. Di Giorgio, R. Romano, A. Papazacharias, L. Lo Bianco, M. Rizzo, M.T. Attrotto, G. Ursini, L. Sinibaldi, G.M. Giannatempo, M. Nardini, B. Dallapiccola, A. Bertolino
Psychiatric Neuroscience Group, Department of Psychiatry and Neurology, University of Bari; IRCCS Mendel, Rome; IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy

Dopamine signaling is critically involved in the pathophysiology of schizophrenia. AKT1-dependent molecular pathways and the dopamine transporter (DAT) are involved in the regulation of synaptic dopamine levels. Both AKT1 and DAT have functional polymorphisms that seem to modulate working memory related brain activity in humans. The purpose of the present study with functional magnetic resonance imaging (fMRI) was to evaluate in healthy subjects the association between a genetically-based dose effect of dopamine signaling, as determined by AKT1 and DAT polymorphisms, on the activity of prefrontal cortex during working memory. One-hundred

five healthy subjects, genotyped for AKT1 rs1130233 and DAT1 3'VNTR polymorphisms (AKT1: A carriers=32, G/G=72; DAT: 9-repeat carriers=72; 10/10=32), underwent BOLD-fMRI at 3T while performing a version of the N-Back working memory task. SPM5 random-effects models were used for statistical analyses (all $p<0.005$). Genotype groups did not differ for a series of demographic variables. fMRI data analysis showed an interaction between AKT1 and DAT1 polymorphisms in left dorsolateral prefrontal cortex (DLPFC). A factorial ANOVA performed on BOLD signal change in left DLPFC revealed a non-linear interaction between DAT and AKT1 genotype. These results demonstrate an interaction between two genes regulating dopamine signaling on specific neuronal network subserving working memory. Our data can be helpful in studying complex genetics interactions in central nervous system phenotypes associated with dopamine signaling and with schizophrenia.

PO1.71.
ASSOCIATION OF COMT VAL^{158}MET GENOTYPE WITH HIPPOCAMPAL GRAY MATTER VOLUME IN SCHIZOPHRENIA

A. Di Giorgio, A. Papazacharias, G. Caforio, G. Blasi, G. Desimeis, R. Romano, P. Taurisano, L. Fazio, B. Gelao, L. Lo Bianco, M. Nardini, T. Popolizio, A. Bertolino
Psychiatric Neuroscience Group, Department of Psychiatry and Neurology, University of Bari; Section of Neuroradiology, IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy

Catechol-O-methyltransferase (COMT) Val^{158}Met genotype is a potential risk factor for schizophrenia and is thought to modulate dopamine regulated neuronal plasticity in prefrontal cortex and in hippocampus. Aim of the present study was to investigate the potential association of this polymorphism with hippocampal gray matter (GM) volume in schizophrenia. Twenty-eight controls and 26 patients with schizophrenia (DSM-IV criteria) matched by COMT Val^{158}Met genotype and by a series of socio-demographic variables were recruited. All patients were on stable antipsychotic treatment. Structural images were acquired on a GE 3T scanner using a gradient echo fast SPGR sequence with 124 sagittal slices of 1.3 mm thickness. Voxel Based Morphometry analysis and second level random effects analysis (factorial ANCOVA) were performed within SPM5 (all $p<0.005$). A region of interest approach centered on the HF (WFU PickAtlas) was used. We found a main effect of genotype, with Met/Met subjects showing reduced GM volume in left HF compared to Val homozygous subjects; a main effect of diagnosis, with healthy subjects showing greater GM volume than patients in left anterior HF; and a gene-by-diagnosis interaction, in that the effect of diagnosis on HF GM was evident only in Met/Met subjects. As suggested by the lack of correlation with chlorpromazine equivalents, these differences are unlikely explained by pharmacological treatment. These data indicate that genetically determined dopamine signaling may differentially contribute to modulate the phenotype of hippocampal morphometry in healthy subjects and in patients with schizophrenia.

PO1.72.
CATECHOL-O-METHYL-TRANSFERASE VAL158MET POLYMORPHISM IN RELATION TO SCHIZOPHRENIA WITH AGGRESSIVE BEHAVIOR IN A KOREAN POPULATION

Youl-Ri Kim, Sung Kil Min
Department of Neuropsychiatry, Seoul-Paik Hospital, Inje University; Department of Psychiatry and Institute of Behavioural Science in Medicine, Yonsei University College of Medicine, Seoul, South Korea

We examined the association between the catechol-O-methyltransferase (COMT) Val158Met polymorphism and schizophrenia with aggressive behavior. The sample included 61 aggressive (39 men, 22 women) and 104 non-aggressive patients (57 men, 47 women) with DSM-IV schizophrenia, who were recruited from psychiatric hospitals, and 415 healthy volunteers. Aggressive patients were characterized by at least two significant violent events per week that required repeated confinement in the 7 days prior to study inclusion as well as a past history of two or more assaults on others, while non-aggressive patients had no history of either assault or threatening behavior. In the case-control comparisons, there was no significant association between schizophrenia with aggressive behavior and the COMT Val158Met polymorphism. Looking only at the subgroup of schizophrenia patients with aggressive behavior, however, we found a dose-dependent relationship between the Met allele and verbal aggression. In this subgroup, the Met carriers showed a higher verbal aggression score than those with Val/Val. These findings support the hypothesized moderating role of the COMT in the aggressive behavior in some schizophrenia patients, though they do not support the existence of a direct association between the COMT Val158Met polymorphism and schizophrenia with aggressive behavior in the Korean population.

PO1.73.
DBNDD1, HSPS AND TAAR6 VARIATIONS INFLUENCE SCHIZOPHRENIC PHENOTYPE AND TREATMENT RESPONSE

A. Drago, C.-U. Pae, A.A. Patkar, L. Mandelli, D. De Ronchi, A. Serretti
Department of Psychiatry, Kangnam St. Mary's Hospital, Catholic University of Korea College of Medicine, Seoul, Korea; Department of Psychiatry and Behavioural Sciences, Duke University, Durham NC, USA; Institute of Psychiatry, University of Bologna, Italy

We studied a sample of 140 Korean schizophrenic inpatients (F=55%; age=34.8±12.2 years), and a set of variations running within three candidate genes. Genes were chosen on the basis of previous associations, reflecting three hypothesis: schizophrenia is based on glutamatergic disrupted transmission (DBNDD1), on a neurodegenerative path (HSPs), or on a disrupted net of neurotransmission (TAAR6). The Positive and Negative Syndrome Scale (PANSS) was administered by independent psychiatrists blind to the genotypes at intake and discharge. Retests were administered after a period of 45 days on average. Patients were treated with typical and atypical antipsychotics with low benzodiazepine doses as the only other treatment allowed. Sociodemographic, clinical and treatment related variables entered the analysis as covariates. DBNDD1 haplotype analyses identified a significant association between A-A (rs3213207(A/G), rs1011313(A/G)) haplotype and lower PANSS total and positive scores at baseline ($p=0.01$; $p=0.005$) and at discharge ($p=0.008$; $p=0.005$), HSPs A-C-G-G and G-

C-C-C haplotypes (rs2075799, rs1043618, rs562047, rs539689 respectively) were found to be associated with clinical baseline PANSS negative values (p=0.0001) and clinical improvement at the same cluster of symptoms, even though with milder statistical significance (p=0.04 and p=0.03 respectively). TAAR6 rs8192625 G/G genotype was found to be associated with worse clinical presentation (p=0.01), whilst no significant associations were found after haplotype analyses. Variations running in the DBNDD1, HSPs and TAAR6 genes seem to be associated with the clinical presentation of schizophrenic patients. DBNDD1, HSPs variations seem to influence the antipsychotic treatment response too, even though a false positive finding is a possibility with these levels of significance.

PO1.74.
ANTIPHOSPHOLIPID ANTIBODIES IN SCHIZOPHRENIC PATIENTS: A PILOT STUDY

E. Leuci, L. Manenti, C. Marchese, M. Amore, C. Maggini
Department of Psychiatry, Local Health Unit, Parma; Department of Nephrology, Local Health Unit, Reggio Emilia; Department of Psychiatry, University of Parma, Italy

Antiphospholipid antibodies (aPL) are well documented in psychotic patients taking neuroleptics, expecially chloropromazine, and were repeatedly described as present in one third of first episode acute psychotic patients. Circulating aPL, together with a local trigger, may induce vascular events such as venous thrombosis, pulmonary embolism, acute stroke. Moreover, aPL can mediate directly cellular damage and play a pathogenic role in neurological manifestations (epilepsy, migraine, movement disorders). In ten consecutive schizophrenic patients in chronic treatment with neuroleptics, we dosed aPL (IgG-IgM anticardiolipin antibodies, IgG-IgM antiβ2 glicoprotein I, Lupus anticoagulant). One patient resulted positive for IgG antiβ2 glicoprotein I. He was assuming chloropromazine. In the follow-up, this patient showed renal and acute respiratory failure suggestive of pulmonary microembolism. At the same time, he had a psychotic episode. We treated the patient with enoxaparin and haloperidol and the patient slowly ameliorated. Our preliminary results suggest that aPL prevalence in treated schizophrenic patients is probably overstimated, but our aPL positive patient had in the follow-up a life-threatening microembolic episode, confirming that aPL positive schizophrenic patients can have vascular accidents in the follow-up.

PO1.75.
EXPOSING DOPAMINERGIC NEURONS TO SERUM OF SCHIZOPHRENIC PATIENTS: IN SEARCH FOR A SERIC PATHOGENIC FACTOR

R. Nieto, H. Silva, C. Ibáñez, I. Díaz, R. Caviedes, P. Caviedes
Programa de Farmacología Molecular y Clínica, Instituto de Ciencias Biomédicas, Facultad de Medicina, Universidad de Chile; Clínica Psiquiátrica Universitaria, Hospital Clínico Universidad de Chile; Instituto Psiquiátrico Dr. José Horwitz Barak, Santiago, Chile

Several theories have been proposed in regard to the etiology and pathogenesis of schizophrenia. However, at present there are no clear explanations regarding the processes underlying this disease. Some authors have suggested the presence of pathogenic elements, still unidentified, in blood serum and cerebrospinal fluid. The efforts made to identify putative soluble pathogenic elements contrast with the lack of systematic research aimed to study the cellular and molecular targets where those elements could eventually exert their effect. The purpose of this study was to evaluate if soluble molecules present in the serum of schizophrenic patients can produce synaptic changes in dopaminergic neurons *in vitro*. To achieve this goal, we used the RCSN3 cell line, derived from the sustantia nigra of an adult rat. Cells were cultured in presence of serum obtained from patients suffering from their first schizophrenic episode, with little exposure to antipsychotics; as control, sister cultures were exposed to serum obtained from normal, healthy subjects. Dopamine secretion was measured in individual cells with amperometry, using carbon fiber microelectrodes. Neuronal function was also assessed through inmunofluorescence for several neuronal markers. The results suggest the presence of seric factors in schizophrenic patients that can deregulate dopaminergic secretion at the cell level.

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PO1.76.
REDUCTION OF D-SERINE IN NEONATAL MOUSE BRAIN CAUSED SCHIZOPHRENIA-LIKE BEHAVIORAL ABNORMALITIES IN ADULTHOOD: A NOVEL ANIMAL MODEL OF SCHIZOPHRENIA

H. Hagiwara, M. Iyo, K. Hashimoto
Division of Clinical Neuroscience, Chiba University Center for Forensic Mental Health, Department of Psychiatry, Chiba University Graduate School of Medicine, Chiba, Japan

A large evidence supports the glutamate and neurodevelopmental hypothesis in the pathophysiology of schizophrenia. Several lines of evidence suggest that D-serine, an endogenous co-agonist at the glycine modulatory sites on the NMDA receptors, plays a role in the pathphysiology of schizophrenia. In this study, we examined whether neonatal disruption of D-serine caused behavioral abnormalities relevant to schizophrenia in adulthood. Neonatal mice (7 days) were injected intraperitoneally (IP) with vehicle (1 ml/kg/day for 3 days) or phenazine methosulfate (PMS) (3.0 mg/kg/day for 3 days), a serine racemase inhibitor. Behavioral evaluation was performed in the juvenile (5 weeks old) and the adult (10-12 weeks old). Brain levels of D-serine in the PMS-treated mice (10 days old) were significantly lower than those of control mice. Spontaneous locomotion was not altered either in the juvenile (5 weeks old) or the adult (10-12 weeks old). Prepulse inhibition deficits were observed in the PMS-treated adult, but not juvenile mice. The present study suggests that reduction of D-serine in the brain during developmental stage may cause behavioral abnormalities relevant to schizophrenia in the adulthood. This could be a new animal model of schizophrenia.

PO1.77.
SENSITIVITY TO LIGHT AND DOPAMINERGIC SYSTEM IN THE SCHIZOPHRENIC SPECTRUM

M. Valdagno, L. Padula, A. Tanini, L. Bossini, P. Castrogiovanni
Department of Neuroscience, Psychiatry Division, University of Siena, Italy

An altered sensitivity to light has been detected in many psychiatric disorders. The altered photosensitivity found in panic disorder has been ascribed to be an alteration of dopaminergic system, which is known to be involved in the pathogenesis of schizophrenia. This study aims to compare sensitivity to light of patients with schizophrenia, as well as their first-degree relatives, with that of subjects of the general population. We recruited 20 patients with a diagnosis of schizophrenia according to the criteria of DSM-IV-TR and 20 first-degree relatives of patients. We administered in both groups the MINI, the SCI PAS and the QVF to assess photosensitivity. In both

patients and their relatives, the average QVF scores of photophobia and photophilia were significantly different from those reported in the general population, in terms of both excessive photophobia and reduced photophilia. These data urge us to reflect on photosensitivity as a possible trait transmitted in families with schizophrenia independently from the diagnosis of Axis I disease.

PO1.78. PROCESSING OF NEGATIVE AND POSITIVE EMOTION IN PATIENTS WITH SCHIZOPHRENIA: A FUNCTIONAL MAGNETIC RESONANCE STUDY

V. Latorre, V. Mazzola, A. Umiltà, V. Gallese, L. Tomasèvic, A. Petito, A. Bellomo, T. Popolizio, M. Nardini, G. Arciero, A. Bertolino
Department of Neurological and Psychiatric Sciences, University of Bari; Institute of Post-Rationalist Psychotherapy, Rome; Department of Neurosciences, University of Parma; Department of Medical Sciences, University of Foggia; IRCCSS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy

Schizophrenia is characterized by socio-cognitive deficits, impaired recognition of affect facial expression and distortion and misattribution of mental states to others. The neural underpinnings of this deficit are still unclear. Previous functional magnetic resonance imaging (fMRI) studies demonstrated, in healthy subjects, an involvement of mirror neuron system during observation and imitation of emotional faces. In our study, fMRI was used to measure neural responses to dynamic smiling and crying facial expressions in 14 patients with schizophrenia and 13 healthy volunteers during an implicit emotional task. fMRI data analysis was conducted using SPM5. Preliminary results show a different brain response in the mirror neuron system in schizophrenic patients compared to healthy subjects observing negative emotional facial expressions. These data may suggest a mirror neuron system involvement in socio-cognitive deficits in schizophrenia.

PO1.79. EMOTION PERCEPTION (VOCAL AND FACIAL CHANNELS) IN ACUTE AND STABLE SCHIZOPHRENIA

F. Castagna, C. Montemagni, P. Rocca
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Emotion perception (facial expression and prosody) refers broadly to aspects of perceiving and expressing emotion and represents a specific impairment in schizophrenia, that is directly related to functional outcome. In schizophrenic patients, a greater impairment in facial emotion recognition is evident regarding the perception of negative emotional stimuli compared to positive ones. These deficits are present at onset of illness, have been observed in both medicated and unmedicated subjects with schizophrenia, and seem to be stable during the course of illness, although there is some evidence that patients in remission perform better than in acute phase. Possible factors influencing this ability have been largely explored, but with mixed results. These discrepancies may be attributable, at least in part, to differences between patient samples (stage of illness and treatment settings) and methodological differences. Finally, it is still debated whether facial affect preception deficits are part of a more generalized performance deficit or specific to the processing of emotional stimuli. Auditory perception of affect, or emotional prosody, has received less attention. A recent meta-analysis reports that schizophrenic patients are impaired in the perception and expression of emotional prosody. In a cross-sectional survey, 65 schizophrenic patients in stable phase and 50 in acute phase were examined by means of Comprehensive Affect Testing System (CATS), an ensemble of computerized tests, assessing the ability to recognize facial identity, facial emotions and prosody. Emotion perception, both facial and vocal, was impaired in both groups, although a more severe impairment was observed in the acute one.

PO1.80. NEW RESEARCH ON SLEEP IN SCHIZOPHRENIA: IS PARANOID SCHIZOPHRENIA CLOSE TO AFFECTIVE DISORDERS?

N. Ilankovic, A. Ilankovic, T. Lakovic, V. Ilankovic, L.M. Ilankovic
Institute of Psychiatry; Milutin Milankovic Health College; Faculty of Special Education and Rehabilitation, Belgrade, Serbia; University Psychiatric Clinic, Munich, Germany

Emil Kraepelin introduced a disorder called "paranoid depression", but "paranoid" became linked to schizophrenia, not to mood disorders. We carried out a polysomnographic (PSG) measurement of sleep in schizophrenic patients to investigate models of sleep disturbances in different types of schizophrenia. Neurophysiologic measurement of sleep using electroencephalography (EEG), electrooculography (EOG) and electromyography (EMG) was carried out in 30 patients with an acute schizophrenic state (F 23.1 and F 23.2 in ICD-10) and in 30 patients with a chronic/residual schizophrenic state (F 20.5 in ICD-10). The electrophysiological profile of sleep (EPS) was derived from these measures and contained 130 variables of nocturnal sleep. The most discriminative variable in this battery was the Index of Endogenous Periodicity/Perturbation (IEP-P1): IEP-P1=REM-1/NREM-1, where REM-1 and NREM-1 are the first periods of REM and NREM sleep, respectively. The index was found to be low in acute schizophrenic states, and high in paranoid and chronic (residual) schizophrenia states. In the latter group, the IEP-P1 (>2.40) was similar to that observed in affective disorders. This finding may have implications for the study of the pathophysiology of paranoid schizophrenia.

PO1.81. A STUDY OF A FAMILY WITH ALL MEMBERS AFFECTED BY PARANOID SCHIZOPHRENIA

G. Skartsila, P. Theofanidis, A. Theodoridou, E. Karatasiou-Ntokatzi, C. Siotis, C. Vainas
Agia Aikaterini Private Psychiatric Clinic, Thessaloniki, Greece

In our study we focused on a family in which all three members were diagnosed with paranoid schizophrenia. It was a one-parent family: the 54-year-old mother and her two children (son aged 29, daughter aged 25), both of whom were admitted to our clinic during a psychotic episode. The father, the only healthy family member, had passed away 10 years earlier. Due to lack of insight and denial to cooperate with psychiatric services, the mother was admitted to a psychiatric hospital after a court order. In this case we were concerned not only about the psychiatric problems, but also about the lack of supportive environment, disrupted family communication, and dysfunctional cohabitation. During hospitalization, psychosis was treated in each family member separately. We started a collaboration with the psychiatric hospital. Therapists from both institutions applied systemic family therapy, which resulted in an improved quality of life for the family members.

PO1.82.
PREDICTING SUICIDAL BEHAVIOR: INTERNAL CONSISTENCY AND PREDICTIVE VALIDITY OF PARAPSYCHOTIC SYMPTOM SCALE

I. Galynker, M. Johnson, R. Mojtabai, C. Katz, L. Cohen, A. Ruminjo, G. Davis, T. Abera, A. Novinsky
Beth Israel Medical Center, Department of Psychiatry; Baruch College, Department of Statistics and Computer Information Systems, New York, NY, USA

Suicide is a major public health problem and we cannot presently predict which patients with suicidal ideation will attempt suicide or predict suicide in those who hide ideation. We have identified a clinical state (Parapsychotic Panic State) experienced by many suicide attempters. To examine this possible trigger state, we have developed the Parapsychotic Symptom Scale (PPSS) and tested it for its relevance to suicidality. The first iteration 20-item PPSS was constructed based on clinical material and, after analysis for internal consistency and test re-test reliability on 36 subjects, was expanded to a 39 items. The interim principal components analyses were performed for 71 and 120 subjects. Data on suicide attempts for low and high PPSS scorers were obtained for 22 randomly selected subjects. PPSS had high internal consistency and test re-test reliability. For the 39-item PPSS (Chronbach's alpha 0.95), initial factor analysis revealed four factors that explained 62% of variance. Principal components analysis of 120 subjects suggested a primary latent factor explaining 39.7% of the variation and possibly a secondary factor explaining an additional 6.8%. PPSS scores correlated with suicidal ideation (r=.34) and thoughts of death (r=.48). In 22 randomly selected subjects, suicide attempts occurred in 0% of low-scorers and 50% of high-scorers. Our preliminary data indicates that PPSS scores correlate with suicidal ideation and a high PPSS score discriminates suicide attempters from ideators. Parapsychotic panic may be a trigger state that occurs before individuals attempt suicide.

PO1.83.
SUICIDE ATTEMPT AND AGGRESSIVE BEHAVIOR IN THE ONSET OF SCHIZOPHRENIA

A. Baloescu, G. Marian
Euroclinic Hospital; Obregia Clinical Hospital, Bucharest, Romania

This study aimed to explore the incidence of suicide attempts and aggressive behavior in patients with onset of schizophrenia. The sample included 182 patients (157 male, 25 female), with a mean age of 22.7 years, hospitalized for onset of schizophrenia or schizophreniform disorder according to ICD-10 criteria. This study investigated different social and demographic variables, including employed/unemployed, level of education, family characteristics, type of onset, modalities of self- harm/hetero-aggression. The risk factors investigated included social and demographic information, family (psychiatric disorders, suicide, alcohol misuse), personal (broken home, parental loss, education, IQ, recent loss), clinical history. Self-aggressive behavior was observed in 8.3% of cases. Suicide attempts were by hanging, jumping, voluntary ingestion of medication, odd or bizarre modalities. The onset with aggressive behavior against others was identified in 3.2% of cases.

PO1.84.
DREAM REPORTS OF PSYCHOTIC PATIENTS CANNOT BE DISTINGUISHED FROM EACH OTHER

I. Limosani, A. D'Agostino, M.L. Manzone, G. Faraci, A. Ghizzoni, S. Scarone
Department of Psychiatry, San Paolo Hospital, University of Milan, Milan, Italy

This study investigated whether it is possible to distinguish one psychotic subject from another on the basis of their dreams, and whether or not this depends on a specific understanding of their psychopathological traits. A total of 40 dream reports was collected from 10 psychotic inpatients. Sixteen evaluators were divided into 4 groups which differed in terms of specific psychiatric competence and direct acquaintance with the patients: 8 psychiatrists (half of which knew the patients), 4 professional nurses who knew the patients well and 4 randomly selected assessors who had no relationship to the field of mental health. Four reports belonging to each patient were handed to the evaluators as a set of 40 anonymous dreams in which potential identifiers such as names of dream characters had been erased; the evaluators were asked to identify the 4 dreams each different subject had reported. A numerical index was calculated for each assessor in order to compare the probabilities of assigning dreams to the correct authors. One-way ANOVA showed that there were no significant differences between the 4 groups and none of the evaluators succeeded in grouping the reports at better than chance level. These results support the hypothesis that dreams do not yield decisive information on specific aspects of subjectivity. The thorough understanding of the individual psychopathological traits of psychotic subjects is not sufficient to distinguish one patient from another by their dream reports, indicating that shared as opposed to individual features are predominant in dream mentation.

PO1.85.
EGO DISORDERS IN A TRANSCULTURAL COMPARISON

F. Napo, A. Heinz
University of London, UK

To diagnose schizophrenic psychosis, professionals use of the concept of "ego disorders", including problems with ego boundaries and passivity experiences. The difficulties for a transcultural use of this concept lay in the fact that it is based on Western-European understanding of a person. In non-European cultures, self reference can alternatively be expressed in social relationships instead of using the personal pronoun of the first person as in European cultures. To further examine differences between Western and African concepts of personhood and self reference and their relation with ego disorders, we are currently studying patients with psychosis in a West African, Malian cultural context. Our research strategy includes ethnographic research techniques and clinical assessments. We examine how African community psychology influences the subjective experience of the so called "ego disorders". On the other hand, we interview professionals like psychiatrists and psychologists and examine how they describe, name and treat psychotic illness in Mali.

PO1.86.
VALACYCLOVIR-ASSOCIATED PSYCHOSIS AND MANIC SYMPTOMS IN AN ADOLESCENT FEMALE WITH GENITAL HERPES SIMPLEX: A CASE REPORT

S. Aslam, K. Carroll, B. Naz, A. Alao
Division of Consultation Liaison Psychiatry, SUNY Upstate University, Syracuse, NY, USA

We report the first case of valacyclovir-induced psychosis with symptoms of mania in an adolescent female with no psychiatric history. The patient presented with irritable mood, decreased need for sleep, auditory hallucinations, and grandiose delusions 72 hours after starting oral valacyclovir for newly acquired genital herpes. She was on no other medications. Delirium was ruled out by history and physical examination, urine toxicology was negative, head computed tomography scan was unremarkable, as were thyroid hormones and basic laboratories. The symptoms continued after stopping the valacyclovir, but improved with risperidone. After withdrawal of risperidone, the patient has been symptom free for 4 months. According to the Naranjo Adverse Drug Reaction (ADR) probability scale, this case report scores as a possible drug reaction. Although there are no reports of neuropsychiatric side effects with valacyclovir, there are for structural analogs acyclovir and ganciclovir. These cases were primarily in elderly patients who are immunocompromised, have renal dysfunction and receive the medication by the intravenous route. Other antiviral medications, such as interferon, have also been shown to induce mood symptoms, including depression and mania. Genital herpes is a common and painful infection, with no known cure. Three medications, acyclovir, valacyclovir and famciclovir, have been shown to reduce the duration and severity of the disease. Clinicians should be aware that valacyclovir and its analogs may induce psychosis with manic symptoms in young, healthy patients with no previous psychiatric history. Further research is needed to demonstrate a clear association, causal relationship and possible mechanism for the reaction.

PO1.87.
THE ASSOCIATION BETWEEN CLINICAL OUTCOMES AND PAINFUL PHYSICAL SYMPTOMS IN ASIAN PATIENTS WITH MAJOR DEPRESSIVE DISORDER: A THREE-MONTH OBSERVATIONAL STUDY

Q. Ang, Y. Wing, Y. He, A. Sulaiman, N. Chiu, Y. Shen, G. Wang, C. Zhang, K. Lee, P. Singh, R. Granger, J. Raskin, M. Dossenbach
Eli Lilly Asia Inc., Shanghai, China; Shatin Hospital, Chinese University of Hong Kong, China; Jiaotong University, Shanghai, China; University of Malaya, Kuala Lumpur, Malaysia; Christian Hospital, Changhua, Taiwan; Tzu Chi General Hospital and University, Hualien, Taiwan; An Ding Hospital, Beijing, China; Harbine Hospital, Harbine, China; University Hospital, Dongguk, Korea; Eli Lilly Australia Ltd., Sydney, Australia; Eli Lilly Canada, Toronto, Canada; Asian Operations, Eli Lilly and Company, Hong Kong, China

Patients with major depressive disorder (MDD) often report painful physical symptoms (PPS), which have been associated with poorer clinical and functional outcomes in non-Asian populations. Here we report comparative changes in pain and depression severity, quality of life, and treatment outcomes in Asian patients with MDD, with and without PPS, after 3 months observation in a naturalistic psychiatric care setting. Patients were classified as PPS positive (PPS+) if they achieved a mean score ≥2 on the modified Somatic Symptom Inventory (SSI) at baseline. Depression severity was assessed using the Clinical Global Impression of Severity (CGI-S) and 17-item Hamilton Depression Rating Scale ($HAMD_{17}$); a visual analog scale (VAS) assessed pain severity; and the EuroQoL (EQ-5D) assessed patient well-being. The study enrolled 909 MDD patients from 6 Asian countries. At baseline, PPS+ patients (51.8%, N=471) were, on average, experiencing greater depression severity compared to PPS- patients ($p<0.001$). After 3 months, PPS+ patients had improved less on depression ($HAMD_{17}$, $p<0.001$; CGI-S, $p<0.001$), pain (VAS, $p=0.008$), and quality of life measures (EQ-5D, $p=0.004$) than PPS- patients. Moreover, fewer PPS+ patients achieved remission (46.5% vs. 69.4% PPS-, $p<0.001$). As PPS was associated with greater depression severity, poorer quality of life and poorer outcomes in Asian MDD patients, clinical management should focus on addressing both the mental and physical symptoms associated with this disorder.

PO1.88.
DEPRESSIVE THINKING: COGNITIVE PATTERNS IN THE DEPRESSIVE PHASE AND IN DEPRESSION-FREE INTERVALS

K. Stürz, S. Senn, E. Deisenhammer, N. Pfaffenberger, V. Günther
Department of General Psychiatry, Clinical Psychology Unit, Innsbruck University Hospital, Innsbruck, Austria

The way of thinking of depressed persons is characterized by dysfunctional cognitions. In these persons, early acquired and often unconscious cognitive maladaptive schemas form the underlying structure of the "cognitive building". Self verbalizations such as "cognitive errors" are superficial, and can be accessed by the depressed individual in a conscious way. The aim of the present study is to test the hypothesis that, due to their stability, maladaptive schemas continue to be present not only in the depressive phase but also in the depression-free intervals, while negative self-communications decrease with abatement of depressive symptoms. Eleven inpatients with major depressive disorder were assessed at admission to hospital and at discharge from hospital with the Young Scheme Questionnaire and the Hamburg Cognitive Inventory for assessing self communication. In agreement with the hypothesis, 14 of the 18 Young's schemas remained unchanged from t1 to t2. Interestingly, there were marked changes between the depression-free period and the depressive phase in the schemas of subjugation, insufficient self-control, pessimism and punitiveness. As expected, in the depression-free intervals the self verbalization was characterized by a significant increase in positive self communication. Despite evident improvement in depressive self communication in the depression-free intervals, many of the maladaptive cognitive schemas activated in the depressive phase also remained in the depression-free intervals and these may provide the breeding ground for the development of depression. This vulnerability should be especially kept in mind in the psychotherapeutic after-care of depressed individuals.

PO1.89.
BRIEF DEPRESSIVE EPISODES AND OUTCOME IN MOOD DISORDERS: A NATURALISTIC STUDY

S. Pozzoli, M.C. Palazzo, F. Colombo, A. Albano, E. Cattaneo, G. Colombini, B. Dell'Osso, A. C. Altamura
Department of Psychiatry, University of Milan, Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan, Italy

Recurrent brief depression (RBD) is a mood disorder defined by brief depressive episodes ($BDE_{S)}$ occurring monthly for at least 12 months and lasting less than 2 weeks. In this study, we analysed the occurrence of BDE_S, and the relationship with work and social impairment or sub-

jective distress in patients with major depressive disorder (MDD) or bipolar disorder (BD). The present results refer to the first 3 months of follow-up. The study sample included 17 patients with a lifetime diagnosis of MDD or BD (10 subjects with MDD and 7 with BD) according to DSM-IV-TR criteria, divided in two sub-groups on the basis of the presence of BDE_S (present: N=9, absent: N=8). Diagnoses were assessed by the SCID-I. Patients were assessed at baseline and monthly for BDE_S, substance/alcohol abuse, suicidal ideation and behaviour by means of the Mini-International Neuropsychiatric Interview, for depressive symptoms by means of the HAM-D, for manic symptoms by means of the YMRS and for quality of life by SF-36. The two groups were homogenous in terms of clinical and demographic variables at baseline. Subjects with BDE_S showed a more frequent presence of suicidal ideation (χ^2=5,13; p=0.05) and higher risk of suicidal behaviour (χ^2=8,24; p=0.009) than subjects without BDE_S in the 3 month follow-up. These preliminary results suggest that the occurrence of BDE_S might worsen the outcome in patients with MDD or BD.

PO1.90.
THE DISTRIBUTION AND CHARACTERISTICS OF DEPRESSIVE AND ANXIETY DISORDERS IN AUSTRALIAN WOMEN

L.J. Williams, J.A. Pasco, F.N. Jacka, M.J. Henry, S. Dodd, M. Berk
Department of Clinical and Biomedical Sciences: Barwon Health, University of Melbourne, Geelong, Australia

In this study, we aimed to estimate the prevalence, age distribution, age of onset, and comorbidity of common psychiatric disorders in Australian women aged 20-94 years. Given the burden of common psychiatric disorders, it is important to have a thorough knowledge of their distribution and characteristics in the community. Depressive and anxiety disorders were diagnosed utilising a structured clinical interview (SCID-I/NP). The lifetime and current prevalence of psychiatric disorders was determined from the study population (n=1092) and standardised to the 2006 census data for Australia. Prevalence by age, comorbidity and mean age of onset was also determined. Approximately one in three women (34.6%) reported a lifetime history of any common psychiatric disorder, with depressive disorders (30.0%) being more prevalent than anxiety disorders (13.3%). Of these, major depressive disorder (23.4%), panic disorder (5.4%), and specific phobia (3.3%) were the most common disorders. The lifetime prevalence of other disorders was low (<3%). 14.3% of women were identified as having a current illness (8.8% depression and 8.0% anxiety disorders). All disorders declined in prevalence with increasing age. Approximately 10% of women with a lifetime history of any psychiatric disorder met criteria for at least one other lifetime psychiatric disorder and 3% had two or more concurrent psychiatric disorders. The median age of onset for depressive disorders was 27.0 years (IQR 19.0-40.0) and 19.0 years (IQR 13.0-36.0) for anxiety disorders. These findings are consistent with those of other prevalence studies conducted in Western societies and demonstrate the burden of common psychiatric disorders in the Australian population.

PO1.91.
A POPULATION-BASED FAMILY STUDY OF MINOR DEPRESSION

S. Newman, R. Bland
Department of Psychiatry, University of Alberta, Edmonton, Canada

A population-based family study of minor depression was conducted, in which subjects were interviewed using the Diagnostic Interview Schedule (DIS). Minor depression only (MDO) was diagnosed if there was a lifetime history of what the DIS refers to as a "depressive spell", provided there was no lifetime history of either DSM-III major depression or dysthymia. There were 75 probands with a lifetime history of MDO, 612 controls with no lifetime history of MDO, major depression or dysthymia, and 1750 first-degree relatives (FDRs). Logistic regression was performed with the presence/absence of MDO in a proband/control as the "exposure", and MDO in an FDR as the "outcome". The odds ratio for the association between MDO in a proband and MDO in an FDR, after adjusting for sex of the FDR, was 1.42 (95% CI: 0.87-2.33; p=0.16). The study had 80% power to detect an odds ratio as small as 1.84, which is the magnitude of odds ratio seen for the familial aggregation of major depression. In conclusion, in this study, MDO does not appear to be a familial disorder, which raises questions about the validity of "minor depression" as a distinct psychiatric syndrome.

PO1.92.
FREQUENCY AND ASSOCIATED FACTORS FOR DEPRESSION IN PREGNANT WOMEN ATTENDING ANTENATAL CLINICS OF A TEACHING HOSPITAL

N. Ali, B. Ali, I. Azam, H. Hamza, S. Moin
Department of Family Medicine, and Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan

The study was done to estimate the frequency and associated risk factors for depression in pregnant women. A cross-sectional pilot study was conducted in pregnant women attending antenatal clinics of the Aga Khan University Hospital in Karachi, Pakistan from September 2005 till January 2006. After taking consent, 167 pregnant women completed a questionnaire on socio-demographic variables, home environment and family relationships. The Hospital Anxiety Depression Scale (HADS) was used to assess depression. Depression was defined as having a score of ≥8 on related questions. Overall, 83 of the 167 screened were found to have depression (49.7%; 95% CI: 42.1%, 57.3%). Mean age of participants was 27.9 years. More than two third were Urdu speaking, and 70% were graduate or above. Associated risk factors identified were age between 31-35 years (aOR=3.68, 95% CI: 1.32, 10.20; p=0.06), dissatisfaction with life (aOR=3.68; 95% CI: 0.94, 14.42; p =0.06) and mental torture at home (aOR=2.27; 95% CI: 0.97, 5.32; p=0.06). Though the results cannot be generalized, they do suggest that further studies in ante partum depression need to be carried out. The antenatal programs need to incorporate screening for depression and provision of non-pharmacological measures to ensure the health of both mother and baby.

PO1.93.
ANTENATAL DEPRESSION AND ANXIETY AFFECT POST-PARTUM PARENTING STRESS: A LONGITUDINAL, PROSPECTIVE STUDY

S. Misri, K. Kendrick, T.F. Oberlander, L. Tomfohr, H. Zhang, R.E. Grunau
Reproductive Mental Health Program, Department of Psychiatry, British Columbia Women's and Health Center; University of British Columbia, Vancouver, Canada

Studies have shown that post-partum depression is strongly associated with parenting stress, which leads to insecure attachment, negative mother-baby interaction and impaired child development. However, the association between antenatal depression and post-partum parenting stress has not been investigated as yet. This study consisted of 95 pregnant women recruited as part of a larger study examining the

effects of prenatal selective serotonin reuptake inhibitor (SSRI) exposure on infants. The subjects comprised three groups: depressed pregnant mothers treated with SSRIs (n=40), depressed non-medicated pregnant mothers (n=13), and healthy pregnant controls (n=42). Mother's mood was prospectively monitored at 26 weeks of gestation and 3 and 6 months post-partum using the Hamilton Depression Scale (HamD). Assessments of parenting stress were conducted with the Parenting Stress Index (PSI) at 3 and 6 months post-partum. Regression analysis showed that depressive symptoms at 26 weeks were significantly associated with postpartum parenting stress (p=0.001) after controlling for current depression, medication use, age, education, ethnicity and number of children. Furthermore, for each 10-point increase on the HamD in pregnancy, there was an average 12.44-point increase in postpartum PSI scores. Antenatal depression is associated with postpartum PSI scores. The greater the severity of antenatal depression, the higher the postpartum PSI scores.

PO1.94.
POSTNATAL DEPRESSION AND ITS RELATION TO THE BABY'S GENDER

S. Banti, M. Mauri, A. Oppo, C. Borri, C. Rambelli, D. Ramacciotti, G.B. Cassano
Psychiatric Institute, University of Pisa, Italy

Postnatal depression (PND) constitutes a major public health problem considering its high prevalence and its effects on mother-child interaction and on neurobehavioral development of the infant. There are some reports claiming that baby's gender is a possible risk factor for PND. This study aimed to evaluate the prevalence rate of PND at the first postpartum month and the baby's gender as possible risk factor in a sample of Italian mothers. The present report is extrapolated from an observational naturalistic study during pregnancy and the postnatal period, carried out during a 18 month period. Data were collected by the SCID-IV, the EPDS (a self-instrument to screen for the depression in the postpartum period) and the PDPI-R (a checklist for the detection of PND risk factors). The authors evaluated the prevalence rate of PND in the first month postpartum period in a cohort of 751 women and measured the possible impact of the child's gender on this disorder. The DSM-IV rate prevalence of PND was 3.4%, and, in contrast with recent literature data, there was not a relationship between baby gender and PND. Instead, the strongest PND risk factors seemed to be the temperament of the child and the stress related to the child's care.

PO1.95.
THE PORTUGUESE VERSION OF THE POSTNATAL DEPRESSION SCREENING SCALE – SHORT FORM

C. Zubaran, K. Foresti-Zubaran, M. Schumacher, A. Amoretti, L. Müller, M. Thorell, G. White, J.M. Madi
School of Medicine, University of Western Sydney, Australia; School of Medicine, University of Caxias do Sul, Brazil; School of Health Sciences, Massey University, New Zealand

The aim of this study was to demonstrate the validity and reliability of the Short Form of the Postnatal Depression Screening Scale (PDSS) among 101 mothers in Southern Brazil. Research volunteers completed the PDSS and the Structured Clinical Interview for Mental Disorders (SCID) during the first 10 weeks of the postpartum period. In addition to the analysis of demographic characteristics, evaluation parameters and statistical analysis included reliability and relative operating characteristic (ROC) analyses as well as correlational investigations. The Portuguese version of the PDSS-SF attained significant Cronbach's alphas (0.71 or superior). The ROC analysis of the PDSS-SF performance revealed that the scale formed by the items selected in the original English version of this instrument produced the best cut-off score (≥18), which accounted for 78% of sensitivity and 84% of specificity. Nonparametric correlation procedures revealed a significant correlation between the screening performances of the PDSS-SF and the assessment based on the SCID. Thus, the Portuguese version of the PDSS-SF proved to have sound psychometric properties, which attest to the substantial reliability of the abbreviated form of the PDSS. The results of the correlation analyses between the PDSS-SF and the SCID assessment also indicate a significant concurrent validity. The Portuguese version of the PDSS presented a better performance with a proposed cut-off score of ≥18. Additional investigations with different versions of the PDSS-SF may be needed to consolidate its screening role as an abbreviated postpartum screening tool.

PO1.96.
PREVALENCE AND ASSOCIATED FACTORS OF POST-PARTUM DEPRESSION AND ANXIETY IN TWO PERI-URBAN COMMUNITIES OF KARACHI, PAKISTAN

N. Ali, B. Ali, I. Azam
Department of Family Medicine, and Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan

Post-partum depression has been widely investigated because of its grave consequences; but there is paucity of data in the local context. This is a nested cross-sectional study that investigates the prevalence of depression/anxiety and their associated factors in post-partum women. A cross-sectional survey was conducted in two peri-urban, multiethnic, underprivileged communities of Karachi, a mega city of Pakistan. This was a house-to-house questionnaire based survey done by trained community women; 420 consenting post-partum women were interviewed and data was collected for socio-demographic, home environment, family relationship variables and levels of anxiety and depression. Mothers with depression/anxiety were identified in a two step process: an indigenous, validated screening instrument Aga Khan University Anxiety and Depression Scale was used, and diagnostic confirmation was obtained through an interview based on DSM-IV criteria for anxiety and depression. Only 267 women could be followed for a whole year. A prevalence of anxiety/depression of 28.8% was found. Domestic abuse, difficulty in breast feeding and non-acceptance of current pregnancy were found to be significantly associated with postpartum anxiety/depression in the multivariate analysis. Domestic abuse and not having the right to plan pregnancy are related to the patriarchal culture and lack of empowerment of women. The association of difficulty in breast feeding needs to be explored further to determine the role of post-partum anxiety/depression in difficulty in breast feeding or vice versa, as a temporal relationship cannot be determined in a cross-sectional survey.

PO1.97.
POSTNATAL DEPRESSION: MYTH OR REALITY?

Y.K. Miao, P.K. Wong, W.L. Szeto, G.C. Yiu
Department of Psychiatry, United Christian Hospital, Hong Kong, China

The Comprehensive Child Development Service in Kowloon East of Hong Kong is a multi-disciplinary service which collaborates with the department of health and the obstetrics and gynecology unit and pediatric unit of a general hospital. Target recipients are pregnant and

postnatal women, and mothers with children under 5 years old. The study aimed to review the profiles of new referrals to CCDS, and to explore common diagnostic groups and their clinical differences in both antenatal and postnatal groups. Cases referred to CCDS from October 2006 to February 2008 were prospectively enrolled and Axis I psychiatric diagnosis was made by specialist psychiatrists according to ICD-10. Risk factors, including marital status, unplanned pregnancy, maternal past family psychiatric history, personal past psychiatric history and complications in previous pregnancies were analyzed and compared across diagnostic subgroups. A hundred and five cases were recruited, with 51.4% referred from the maternity and child health care centre of the department of health and 15.2% from the obstetrics and gynecology unit. The majority of clients were permanent residents of Hong Kong (73.3%), while 24.8% were new immigrants from China. Two main diagnostic groups emerged: depressive spectrum group (depressive episode and recurrent depressive episodes) and anxiety spectrum group (phobic anxiety, other anxiety disorder, obsessive-compulsive disorder and reaction to stress). There were 17 clients in the antenatal group, 58.8% diagnosed as anxiety spectrum disorder, and 17.6% as depressive spectrum disorder. In the postnatal group, 53.4% were diagnosed as anxiety spectrum disorder and 43.2% as depressive spectrum disorder. There were 11.7% of the clients with obsessive-compulsive features. There were no statistical differences in the risk factor profile between the two diagnostic groups. The long held impression of depressive disorders as the only significant mental disorder of pregnancy and perinatal period was a misconception. A notably higher percentage of our clients suffer from anxiety spectrum disorder, with a significant proportion having obsessive-compulsive features. Screening, detection and intervention for anxiety disorders in pregnant and postnatal women should also be an important component of perinatal psychiatry programmes.

PO1.98.
EDINBURGH POSTNATAL DEPRESSION SCALE: PSYCHOMETRIC CHARACTERISTICS IN A SAMPLE OF BRAZILIAN WOMEN

P. Figueira, H. Correa, L. Malloy-Diniz, M. Romano-Silva
Federal University of Minas Gerais, Belo Horizonte, Brazil

This study aimed to evaluate the psychometric characteristics of the Edinburgh Postnatal Depression Scale (EPDS) in a sample of women in Belo Horizonte, Brazil and its potential use as a screening instrument for post-partum depression. EPDS was administered to 245 mothers who had delivery at a private hospital. All participants were also administered a structured psychiatric interview, the MINI-Plus 5.0, following DSM-IV criteria. We calculated the sensitivity and specificity, and use the receiver operator characteristic (ROC) curve to find the best cutoff point. The best cutoff point for screening post-partum depression was ≥10. Our findings confirm that EPDS is an effective screening tool for post-partum depression and can be successfully used in primary care practices.

PO1.99.
PREVALENCE AND SOCIODEMOGRAPHIC CORRELATES OF PREMENSTRUAL DYSPHORIC DISORDER IN AL-AIN, UNITED ARAB EMIRATES

O.T. Osman, S. Sabri, D. Rizk, H. Al Raesi, A. Shamsan
Department of Psychiatry, Faculty of Medicine, United Arab Emirates University, Al-Ain, United Arab Emirates

This is an epidemiologic survey of the prevalence and impact of premenstrual dysphoric disorder (PMDD) among adult women attending the primary care clinics in the gulf city of Al-Ain in the United Arab Emirates. Five hundred and eight women in their reproductive years were selected at random from 5 clinics and were administered two screening instruments for PMDD. The prevalence of severe forms of PMDD was 4.3%. Moderately severe cases were 8.1%. There was a significant association between the disorder and several socio-demographic factors. There was no statistical difference in prevalence of the disorder between United Arab Emirates national and expatriates. Logistic regression analysis revealed a significant association between the presence of the disorder and four specific life stressors reported over the past 12 months. The prevalence of PMDD is consistent with the reported international rates and is higher among the highly educated and single. United Arab Emirates nationals report less disability in association with the disorder.

PO1.100.
PREVALENCE OF DEPRESSION IN STABILIZED SCHIZOPHRENIC PATIENTS: FOCUS ON ANTIPSYCHOTIC TREATMENT

S. Majadas, J. Olivares, M. Conde, L. Nov, L. Agüer, A. Mas-Yebra, J. Galán
AstraZeneca Spain S.A.; Servicio de Psiquiatría, Hospital de Meixoeiro, Vigo; CSM Sur. Hospital Virgen del Rocío, Sevilla; CSM Ibiza, Baleares; CSM Arganzuela, Madrid; CSM Martí Julia, Santa Coloma de Gramanet, Spain

This was an observational cross-sectional study, whose aim was to evaluate the prevalence of depressive symptoms in stabilized schizophrenic patients and explore its correlation with antipsychotic treatment, among other factors. Ninety-five patients with a diagnosis of schizophrenic disorder in stabilization were evaluated in a cross-sectional assessment. The Calgary Depression Scale for Schizophrenia (CDSS) was used to evaluate depression. Other assessments included PANSS, SANS, BARS and SAS. The use of antidepressants or of more than one antipsychotic during the previous 3 months was considered as an exclusion criterion. Ninety patients were eligible for the analysis. Their mean age was 35.0 years and 58.9% of them were men. The mean CDSS score was 3.8 (CI 95%: 3.00, 4.52). Thirty-one percent of the sample were depressed, using a cut-off 5 in the CDSS. 9.5%, 43.8% and 55.6% were classified as depressed in the quetiapine, risperidone and olanzapine treated groups, respectively ($p<0.05$ for quetiapine vs. risperidone and olanzapine). The mean CDSS in the quetiapine group was significantly lower than in the risperidone group ($p<0.01$). No significant differences were found among antipsychotic treatment groups in other assessments (PANSS, SANS, BARS and SAS).

PO1.101.
PERSISTING SUICIDALITY IN RECOVERED PATIENTS WITH SCHIZOPHRENIA

A. Shrivastava, M. Thakar, N. Shah
Silver Mind Hospital and Mental Health Foundation of India, Mumbai, India; University of Western Ontario, London, Canada; NHS London, UK; University of Mumbai, India

This study aimed to assess suicidality in recovered patients with schizophrenia in Mumbai, India. First-hospitalized patients with a DSM-III-R diagnosis were included and followed up for ten tears. We measured outcome by standard available tools (PANSS, CGI, GAF, QOL) as well as a new scale validated in Indian culture, the Global Assessment Scale for Schizophrenia. One hundred and seven patients were available for assessment and 67 patients (62%) showed recovery. Out

of these recovered patients, 10% reported a suicidal crisis and 40% reported contemplating suicide in the previous twelve months. It appears that schizophrenia is a complex neurobehavioral disorder, which is closely associated with suicide behavior. Adequate assessment and management of suicidality needs to be a continued process in recovered patients also.

PO1.102. AGE AT ONSET IN BIPOLAR DISORDERS

C. Park, M.-H. Park
Yong-In Mental Hospital, Yong-In; Department of Psychiatry, Kangnam St. Mary's Hospital, Catholic University of Korea, Seoul, Korea

In recent years, it has been suggested that, if bipolar disorder occurs early in one's life, functional and symptomatic prognoses are poorer. This study examined the relationship between early onset of bipolar disorder and four major clinical features of bipolar disorder: rapid cycling, psychotic symptoms, comorbid drug abuse, and suicide attempt. The subjects were selected from the patients who were discharged after hospitalization between January 1, 2004 and May 31, 2005 and diagnosed as having bipolar disorder according to DSM-IV criteria. Through the process, 53 patients with bipolar disorder were selected. These patients were examined for the following data: the type of bipolar disorder, comorbid Axis I disorders, the age of onset of the disorder, the acuteness of the disorder, and the duration of the disorder. Also examined was the occurrence of rapid cycling, psychotic symptoms, comorbid drug abuse, and suicide attempt. The patients for whom the onset of the disorder was before the age of 19 were classified as early onset group. Of the 53 patients, 19 (35.9%) belonged to the early onset group. As for the average duration of the disorder, there was no statistically significant difference between the early onset (10.7±12.3 years) and the late onset group (7.8±9.7 years) (p=0.166). There was a higher incidence of psychotic symptoms in the early onset group (78.9% vs. 47.1%, p=0.024). There was no statistically significant difference between the groups regarding the occurrence of rapid cycling and suicide attempt. The incidence of comorbid drug abuse and addiction was higher in the early onset group, but the difference was not statistically significant (36.8% vs. 14.7%, p=0.09). Logistic regression showed a correlation between early onset and psychotic symptoms (p=0.029). This study is limited in that it was retrospective and based on the examination of medical records, and the number of subjects was not large. Prospective research using larger number of subjects and dealing with diverse clinical variables such as the severity of symptom is warranted.

PO1.103. CLINICAL AND NEUROCOGNITIVE PREDICTORS OF FUNCTIONING IN BIPOLAR DISORDER

C.M. Bonnin, A.R. Rosa, J. Sanchez-Moreno, A. Martinez-Aran, C. Torrent, E. Vieta
Bipolar Disorders Programme, Institute of Neuroscience, Hospital Clinic, University of Barcelona, Spain

Very few prospective studies have examined the relationship between clinical and neurocognitive status and functional outcome at 3-year follow-up in patients with bipolar disorder. We assessed 25 patients with DSM-IV bipolar I or II disorder recruited from the Barcelona Bipolar Disorders Programme. A comprehensive neuropsychological battery and all the relevant clinical and demographic data were collected at baseline and during follow-up. The patients were reassessed with the Functioning Asessment Short Test (FAST) after an average time of 3 years. Multivariate analysis was applied to find out the main predictors of poor functional outcome. There were no statistically significant predictors of overall functional impairment as measured with the FAST total score. However, poor occupational functioning was significantly predicted by executive tests such as the inverse digits subtest (WAIS) (p=0.035) and by the number of hospitalizations (p=0.043). These data suggest that executive dysfunction and a high number of hospitalizations are significantly associated to poor occupational functioning at 3-year follow-up in bipolar patients. Patients presenting with clinically relevant executive impairment and high number of episodes involving hospitalization should be carefully monitored and treated in order to avoid further functional impairment.

PO1.104. PSYCHIATRIC AND MEDICAL COMORBIDITY IN DIFFERENT CLASSES OF AGE: A RETROSPECTIVE STUDY IN BIPOLAR PATIENTS

M. Buoli, G. Colombini, L. Lietti, M. Serati, G. Camuri, V. Vecchi, B. Dell'Osso, A.C. Altamura
Department of Psychiatry, University of Milan, Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena, Milan, Italy

Several data indicate that the clinical course of bipolar patients (BPs) is often complicated by comorbid psychiatric disorders and concomitant medical conditions. The aim of this study was to detect differences in terms of psychiatric and medical comorbidity between young BPs (≤30 years), adult BPs (>30 and ≤45 years) and senior BPs (>45 years). 188 BPs were subdivided into three groups of age: ≤30 years (n=12), >30 and ≤45 years (n=55) and >45 years (n=121). Patients presented a diagnosis of bipolar disorder according to DSM-IV-TR criteria (SCID) and were treated within the University Department of Psychiatry of Milan. Psychiatric and medical comorbidity was compared between the 3 sub-groups of patients using chi-square tests. The type of abuse was different between the three sub-groups, with a prevalence of heroine in young BPs, alcohol in young and adult BPs and benzodiazepine in senior BPs (χ^2=35.54, df=12, p=0.003). Of interest, young BPs showed more frequently a polyabuse compared to adult and senior BPs (χ^2=12.16, df=2; p=0.002). The comorbidity with medical conditions was more frequent in senior BPs (χ^2=62.58, df=36; p<0.021), with high rates of diabetes and blood hypertension. Results from the present study seem to suggest different profiles of psychiatric and medical comorbidity in BPs of different classes of age, which should be taken into account for the choice of pharmacological treatments and global management of these patients.

PO1.105. THE CLINICAL PRESENTATION OF BIPOLAR DISORDER MANIA IN HIV POSITIVE PATIENTS IN UGANDA

E. Nakimuli-Mpungu, S. Musisi
Makerere University, Kampala, Uganda

This is the first controlled systematic study of the demographic and clinical characteristics of bipolar mania and secondary mania in persons with HIV/AIDS in Uganda and Africa. Of 151 patients studied, 28 (18.5%) were HIV positive with bipolar mania, 62 (41.1%) were HIV positive with secondary mania and 61 (40.4%) were HIV negative with bipolar mania. The HIV positive patients regardless of mania status had comparable age at assessment, HIV disease stage and severity of manic symptoms. However, those with bipolar mania had more immune suppression and more cognitive impairment, sug-

gesting that these patients may be already cognitively and functionally impaired by their mental illness by the time they acquire HIV infection. These findings may be used to guide clinicians and policy makers in recognizing and designing appropriate interventions for this vulnerable group of patients. Further studies to delineate the phenomenology of mania in HIV/AIDS patients are warranted.

PO1.106. OVERWEIGHT AND OBESITY IN BIPOLAR DISORDER

V. D'Ambrosio, G. Maina
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Patients with bipolar disorder (BD) may be at greater risk of overweight and obesity than individuals in general populations. The increased risk of weight gain in these patients could be due to the illness itself or to mediating factor (food intake, lifestyle with increased inactivity) and/or to medication used to treat the disorder. This study explores the relashionship between body weight and BD in drug-naïve patients. We conducted a retrospective study evaluating clinical charts of drug-naïve patients with BD (DSM-IV-TR) and comparing baseline socio-demographic and clinical characteristics of overweight vs. non-overweight bipolar patients. Weight, height and body mass index (BMI) were obtained from 76 clinical charts of bipolar patients referred to a mood and anxiety disorders unit from 1998 to 2006. Two comparison groups were selected: 152 healthy controls and 65 patients with obsessive-compulsive disorder (DSM-IV-TR). 40.8% of drug-naïve patients with BD were overweight, compared with 3.3% of healthy subjects and 10.8% of OCD drug-naïve patients. Mean BMI for BD patients was significantly higher than control groups. The highest proportions of depression at index episode were in the overweight group (83.3%), with a significant difference with the non-overweight patients (58.1%).

PO1.107. AN INVESTIGATION OF TEMPERAMENTAL TRAITS OF PATIENTS WITH SOMATOFORM DISORDER: DO THEY BELONG TO THE BIPOLAR SPECTRUM?

B. Amann, R. Mergl, F. Padberg, C. Torrent, G. Laakmann
Hospital Benito Menni, Research Unit, CASM, Sant Boi de Llobregat, Barcelona, Spain; Psychiatric Liaison Unit, University Hospital Grosshadern, Munich, Germany; Bipolar Disorder Program, Hospital Clinic, IDIBAPS, Barcelona, Spain

This study examined temperamental traits and current mood states of 44 general hospital inpatients diagnosed with somatoform disorder, in order to investigate whether these patients show characteristics of the affective disorder spectrum. Abnormal temperaments were significantly more often observed in patients with somatoform disorder than in controls, with the cyclothymic temperament showing hereby the highest specificity for somatoform disorder. Based on the idea of a continuum between temperament and affective disorders, the higher prevalence of abnormal temperamental traits in patients with somatoform disorder should trigger further research on this issue, possibly leading to novel treatment options in the future.

PO1.108. ATTENTION-DEFICIT/HYPERACTIVITY DISORDER IN ADULTS. PREVALENCE, DIAGNOSTIC STABILITY AND IMPACT OF TEMPERAMENTAL TRAITS IN AN ITALIAN SAMPLE OF BIPOLAR PATIENTS IN REMISSION

S. Bernardi, S. Pallanti
Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, USA; Department of Psychiatry, University of Florence, Florence, Italy; Institute of Neurosciences, Florence, Italy

The prevalence of the bipolar disorder (BD) with comorbidity of attention-deficit/hyperactivity disorder (ADHD) in adults ranges between 9% and 94%. This variability could be related to several biased factors, such as the use of inadequate ADHD diagnostic tools, obtaining inaccurate retrospective diagnosis of childhood onset ADHD, time length of recall and overlapping clinical features between BD and ADHD. Moreover, ADHD treatment eventually taken, as well as temperamental and resiliency characteristics, may constitute a modulating factor, because of its hypothesized effect on bipolar onset. The first 100 BD outpatients consecutively referred to an outpatient unit, in remission for at least 3 months, were assessed for a lifetime ADHD. The SCID Interview, the Wender-Utah Rating Scale, the CARS-Mania Scale, the Barratt Impulsiveness Scale (BIS-11), the Scale to assess Unawareness of Mental Disorders were applied as primary measure. Secondary measures to assess temperamental traits were, for reactive control, resiliency, and emotionality, the scales developed by Eisenberg and colleagues. To measure effortful control, subjects and parents completed a short form of the Early Adolescent Temperament Questionnaire-Revised. Eighteen (18%) subjects fulfilled the diagnostic criteria for ADHD at present or during the whole life. In the ADHD+ subgroup, 10 (55.5%) had an adulthood-persistent ADHD diagnosis. Notably, eight subjects (44.4) reported ADHD onset after the seventh year, none after the tenth. The CARS-M scale showed a significantly higher score for the ADHD- patients ($p<0.01$). Resiliency and Reactive Control scale scores were significantly higher in the group with a past history of ADHD when compared with the group with current ADHD diagnosis. Subjects with current ADHD showed a higher score on the BIS-11 and the Negative Emotionality scale, but the difference was not statistically significant.

PO1.109. PREDICTORS OF FUNCTIONAL IMPAIRMENT IN REMITTED BIPOLAR PATIENTS

A.R. Rosa, M. Reinares, C. Franco, M. Comes, C. Torrent, J. Sánchez-Moreno, A. Martìnez-Aran, F. Kapczinski, E. Vieta
Bipolar Disorders Program, Clinical Institute of Neuroscience, Hospital Clinic of Barcelona, Spain; Bipolar Disorders Program, Molecular Psychiatry Laboratory, Hospital Clinic of Porto Alegre, Brazil

Recent studies have suggested that functional impairment in bipolar disorder may be strongly associated with residual depressive symptoms. However, there is a notable disparity between functional recovery and symptomatic recovery. This study was carried out to investigate clinical factors as potential predictors on functional impairment in a well defined euthymic bipolar sample. Seventy-one patients were recruited from the Bipolar Disorder Program at the Clinic Hospital of Barcelona. A Structured Clinical Interview for DSM-IV-TR, HAM-D and YMRS were used to diagnostic assessment and euthymia criteria. The Functioning Assessment Short Test (FAST) was employed to

assess functional impairment. The FAST is a reliable and valid, interview-administered scale, rapid and easy to apply (3-6 min). It consists of 24 items which allow to assess six specific areas of functioning such as autonomy, occupational functioning, cognitive functioning, financial issues, interpersonal relationships, and leisure time. The sample comprised 36 (51%) men, aged 48±13.56 years. Several clinical variables were associated with poor functioning on a linear regression model, such as age, depressive symptoms, number of previous mixed episodes and number of previous hospitalizations. This model explained 44% of the variance (F=12.54, df=58, p<0.001). Thus, in this study, specific clinical and socio-demographic characteristics were identified as predictors of functional impairment in remitted bipolar patients. Poor functioning was identified in patients with older age and more severe illness course.

PO1.110.
ACUTE TREATMENT OF DEPRESSION WITH SSRIs OR SNRIs. A COMPARATIVE ANALYSIS OF REMISSION AND COST-EFFICACY USING DATA OF MULTI-ARM RANDOMISED CONTROLLED TRIALS SPONSORED BY THE INDUSTRY

J. Ballesteros, L.F. Callado, J.R. Rueda, M. Gutiérrez
Departments of Neuroscience, Pharmacology, and Preventive Medicine and Public Health, University of the Basque Country; Centro de Investigación Biomédica en Red de Salud Mental, CIBERSAM, Spain

Arguments about whether serotonin-norepinephrine reuptake inhibitors (SNRIs) should be considered along with selective serotonin reuptake inhibitors (SSRIs) as first line antidepressants have been revived by recent pooled analyses of industry data showing the non-inferiority, or even the superiority, of SNRIs over SSRIs. However, those analyses compared two arms (SNRIs vs. SSRIs) even when randomized controlled trials (RCTs) with a most informative three arms design were available (placebo vs. SSRIs vs. SNRIs). We have reanalysed those RCTs that yield appropriate evidence on the efficacy (remission at 8 weeks) of venlafaxine and duloxetine as compared to both SSRIs (fluoxetine, escitalopram, sertraline, and paroxetine) and placebo. Secondary analyses included the direct comparisons of venlafaxine and duloxetine vs. paroxetine and fluoxetine, and the indirect comparison between venlafaxine and duloxetine that was checked for consistency with two further head-to-head trials. Additionally, we estimated their cost-efficacy according to Spanish median reference costs for an acute treatment lasting 8 weeks. Sixteen RCTs were included. Paroxetine (risk difference compared with placebo; RD=0.09), sertraline (RD=0.08), venlafaxine (RD=0.12), and duloxetine (RD=0.11) outperformed placebo (p<0.05), whereas fluoxetine (RD=0.04) and escitalopram (RD=0.04) were similar to placebo (25.8% remission). As formerly reported, venlafaxine and duloxetine outperformed fluoxetine (p<0.05) but not paroxetine (p=0.34 and p=0.50, respectively). Venlafaxine was similar to duloxetine as estimated by indirect comparison (RD=0.01 favouring venlafaxine, p=0.66). This was in good agreement with the available direct comparison (RD=0.03 favouring venlafaxine, p=0.42). Both direct and indirect estimates were highly consistent (p=0.73). In the cost-efficacy space, venlafaxine outperformed duloxetine for SNRIs, whereas paroxetine and sertraline dominated for SSRIs.

PO1.111.
THE EFFICACY OF AGOMELATINE ACROSS DISTINCT CLINICAL POPULATIONS OF DEPRESSED PATIENTS

S.H. Kennedy, H. Loo, J.P. Olié, S.A. Montgomery
University Health Network, University of Toronto, Canada; Service Hospitalo-Universitaire de Santé Mentale et Thérapeutique, Paris, France; S.H.U. Sainte-Anne, Santé Mentale et Thérapeutique, Hôpital Sainte-Anne, Paris, France; Imperial College School of Medicine, University of London, UK

Agomelatine, a MT_1/MT_2 agonist and 5-HT_{2C} antagonist, has antidepressant efficacy in major depressive disorder (MDD). The aim of this study was to evaluate its efficacy across various MDD subpopulations, based on age, gender, severity and level of anxiety. We completed a meta-analysis of pooled data from three pivotal placebo-controlled studies (721 patients: 358 agomelatine 25 mg or 50 mg once daily and 363 placebo). The treatment period was 8 or 6 weeks. The primary outcome efficacy measure was the final total score on 17-item Hamilton Depression Rating Scale (HAMD). Analyses are presented according to age, gender, anxiety level (high=item 10+11≥5) and severity. In the overall population, agomelatine was significantly superior to placebo in primary and secondary outcomes of the HAMD total score (delta=2.86±0.56, p<0.001) and in the analysis of the mood item (delta=0.029, p<0.001). Agomelatine maintained the treatment effect in the severely depressed subpopulation. Agomelatine was superior to placebo (p<0.001) on the anxiety subscale of HAMD whatever the anxiety level of patients and whether or not they were treated with concomitant benzodiazepines. Analyses of subpopulations indicated a significant difference between agomelatine and placebo in patients 60 to 65 years old (delta=4.50±2.11, p=0.033), men (delta=3.83±1.01, p<0.001) and women (delta=2.46±0.7, p<0.001). This meta-analysis confirms agomelatine's efficacy in major depressive disorder, which is independent of gender or age. Agomelatine is also effective in subpopulations distinguished by level of anxiety and severity.

PO1.112.
PLACEBO-CONTROLLED STUDY WITH ACUTE AND CONTINUATION PHASE OF QUETIAPINE IN ADULTS WITH BIPOLAR DEPRESSION (EMBOLDEN I)

B. Paulsson, B. Olausson, S.L. McElroy, W. Chang, A.H. Young
AstraZeneca, Södertälje, Sweden; University of Cincinnati College of Medicine, Cincinnati, OH, USA; AstraZeneca, Wilmington, DE, USA; University of British Columbia, Vancouver, Canada

This study aimed to evaluate the efficacy and tolerability of quetiapine and lithium monotherapy for bipolar depression. 802 patients (499 bipolar I and 303 bipolar II), with episodes of major depression, were randomized to quetiapine 300 mg/day (n=265), quetiapine 600 mg/day (n=268), lithium 600-1800 mg/day (n=136), or placebo (n=133) for 8 weeks. The primary endpoint of the acute phase was the change from baseline to week 8 in Montgomery-Asberg Depression Rating Scale (MADRS) total score. Patients with MADRS and Young Mania Rating Scale scores ≤12 were randomized to 26 to 52 weeks of continued treatment with quetiapine or placebo. Mean changes in MADRS total score to week 8 were -15.36, -16.10, -13.60 and -11.81 for quetiapine 300 mg/day, 600 mg/day, lithium and placebo, respectively (p<0.001 for both quetiapine doses, p=0.123 for lithium, vs. placebo). Quetiapine, but not lithium-treated patients showed significant improvements (p≤0.05) in most secondary outcome measures at week 8 vs. placebo. Quetiapine 600 mg/day demonstrated significant improvements over lithium for MADRS and Hamilton Depression

Rating Scale total scores. In the acute phase, common adverse events included somnolence, dry mouth, and dizziness with quetiapine (both doses), and nausea with lithium. Continued treatment with quetiapine beyond 8 weeks significantly increased time to recurrence of mood and depression events vs. placebo. Tolerability during the continuation phase mirrored that during the acute phase. Thus, quetiapine (300 or 600 mg/day), but not lithium, was more effective than placebo for the treatment of acute depression episodes in bipolar I and II disorder. Quetiapine was generally well tolerated.

This study was supported by AstraZeneca Pharmaceuticals LP.

PO1.113.
PLACEBO-CONTROLLED STUDY WITH ACUTE AND CONTINUATION PHASE OF QUETIAPINE IN ADULTS WITH BIPOLAR DEPRESSION (EMBOLDEN II)

B. Paulsson, B. Olausson, A.H. Young, W. Chang, S.L. McElroy AstraZeneca, Södertälje, Sweden; University of British Columbia, Vancouver, Canada; AstraZeneca, Wilmington, DE, USA; University of Cincinnati College of Medicine, Cincinnati, OH, USA

This study aimed to evaluate the efficacy and tolerability of quetiapine and paroxetine monotherapy for bipolar depression. 740 patients (478 bipolar I, 262 bipolar II) with episodes of major depression were randomized to quetiapine 300 mg/day (n=245), quetiapine 600 mg/day (n=247), paroxetine 20 mg/day (n=122), or placebo (n=126) for 8 weeks (acute phase). The primary endpoint (acute phase) was change from baseline to week 8 in Montgomery-Asberg Depression Rating Scale (MADRS) total score. After 8 weeks, patients with MADRS and Young Mania Rating Scale (YMRS) scores ≤12 were randomized to 26 to 52 weeks of continued treatment with quetiapine or placebo. At 8 weeks, the mean MADRS score change from baseline was -16.19 (quetiapine 300 mg/day), -16.31 (quetiapine 600 mg/day), -13.76 (paroxetine), and -12.60 (placebo) ($p<0.001$ for both quetiapine doses, $p=0.313$ for paroxetine, vs. placebo). Quetiapine-, but not paroxetine-treated patients showed significant improvements ($p\leq0.05$) in most secondary outcome measures at week 8 vs. placebo. Both quetiapine doses were associated with greater improvements than paroxetine for MADRS and Hamilton Depression Rating Scale scores. At week 8, common adverse events included dry mouth, somnolence, sedation, and dizziness (quetiapine); and dry mouth, sedation, headache, insomnia, and nausea (paroxetine). Continued treatment with quetiapine increased the time to recurrence of mood and depression events significantly vs. placebo. Tolerability during the continuation phase mirrored that during the acute phase. Thus, quetiapine (300 mg/day or 600 mg/day), but not paroxetine, was more effective than placebo for treating acute episodes of depression in bipolar I and II disorder. Quetiapine treatment was generally well tolerated.

This study was supported by AstraZeneca Pharmaceuticals LP.

PO1.114.
QUETIAPINE MONOTHERAPY UP TO 52 WEEKS IN PATIENTS WITH BIPOLAR DEPRESSION: CONTINUATION PHASE DATA FROM THE EMBOLDEN I AND II STUDIES

B. Paulsson, B. Olausson, S.L. McElroy, W. Chang, A.H. Young AstraZeneca, Södertälje, Sweden; University of Cincinnati College of Medicine, Cincinnati, OH, USA; AstraZeneca, Wilmington, DE, USA; University of British Columbia, Vancouver, Canada

This study aimed to examine the continuation efficacy of quetiapine monotherapy in bipolar depression in a preplanned pooling of data from EMBOLDEN I and II. Following completion of the 8-week acute phases of EMBOLDEN I and II, patients who had received quetiapine (300 or 600 mg/day) and achieved remission (Montgomery-Asberg Depression Rating Scale, MADRS and Young Mania Rating Scale, YMRS scores ≤12) at week 8 (n=584), were randomized to the same dose of quetiapine (double-blind) or placebo for 26 to 52 weeks, or until mood event recurrence. Primary outcome variable was time from randomization to recurrence of any predefined mood event. Risk for recurrence of a mood event was significantly lower in the quetiapine group vs. placebo (HR 0.51, 95% CI 0.38-0.69; $p<0.001$). A lower risk for recurrence of depressive (HR 0.43; 95% CI 0.30-0.62; $p<0.001$) and manic events (HR 0.75; 95% CI 0.45-1.24) was also seen for quetiapine. Individually, both doses significantly delayed mood event recurrence (HRs 0.59, 95% CI 0.41-0.84 and 0.45, 95% CI 0.30-0.67 for 300 and 600 mg/day), with a numerical advantage for quetiapine 600 mg/day. A similar advantage was apparent for recurrence of depressive (HRs 0.48; 95% CI 0.30-0.75 and 0.39; 95% CI 0.24-0.63) and manic events (HRs 0.89; 95% CI 0.49-1.63 and 0.62;, 95% CI 0.32-1.21. Safety data were consistent with the recognized profile of quetiapine. Thus, acute efficacy of quetiapine in bipolar depression was maintained for up to 52 weeks compared with placebo among patients responding to acute treatment. Quetiapine was generally well tolerated.

This study was supported by AstraZeneca Pharmaceuticals LP.

PO1.115.
QUETIAPINE OR LITHIUM VS. PLACEBO FOR MAINTENANCE TREATMENT OF BIPOLAR I DISORDER AFTER STABILIZATION ON QUETIAPINE

B. Paulsson, R.H. Weisler, A. Neijber, Å. Hellqvist, W.A. Nolen AstraZeneca, Södertälje, Sweden; Duke University Medical Center, University of North Carolina at Chapel Hill, Raleigh, NC, USA; AstraZeneca, Mölndal, Sweden; University Medical Center, University of Groningen, The Netherlands

Quetiapine combined with lithium or divalproex is an effective maintenance treatment for bipolar I disorder. This double-blind, randomized trial investigated quetiapine monotherapy as maintenance treatment. Adults experiencing manic, depressed, or mixed episodes of bipolar disorder received open-label quetiapine. Patients achieving stabilization (Young Mania Rating Scale, YMRS≤12 and Montgomery-Asberg Depression Rating Scale, MADRS≤12, 4 consecutive weeks) were randomized to continue quetiapine (300-800 mg/day) or to switch to placebo or lithium (target serum 0.6-1.2 mEq/L) for up to 104 weeks or recurrent mood event. The primary endpoint was time to recurrence of any mood event. The study was terminated when interim analysis provided positive results. Of 2438 patients starting open-label quetiapine, 1226 (50.3%) were randomized to study medication, with 1172 in the ITT population. Mean median quetiapine dose was 546 mg/day; mean median lithium serum level was 0.63 mEq/L. Time

to recurrence of any mood event was longer for continued quetiapine vs. switching to placebo (HR 0.29; 95% CI 0.23-0.38; p<0.0001), for switching to lithium vs. switching to placebo (HR 0.46; 95% CI 0.36-0.59; p<0.0001), and for continued quetiapine vs. switching to lithium (HR 0.66; 95% CI 0.49-0.88; p=0.005). Safety findings were consistent with known profiles. Thus, in patients stabilized on quetiapine, continued quetiapine significantly decreased time to recurrence of any mood event vs. switching to placebo. Switching to lithium was also more effective than switching to placebo and conferred no additional benefit vs. continuing quetiapine.

This study was supported by AstraZeneca Pharmaceuticals LP.

PO1.116. RANDOMIZED DOUBLE-BLIND STUDY OF ADJUNCT EXTENDED RELEASE QUETIAPINE FUMARATE IN PATIENTS WITH MAJOR DEPRESSIVE DISORDER AND INADEQUATE ANTIDEPRESSANT RESPONSE

N. El-Khalili, M. Joyce, S. Atkinson, R. Buynak, C. Datto, P. Lindgren, H. Eriksson
Alpine Clinic, Lafayette, IN, USA; CNS Healthcare, Jackonsonville, Florida, FL, USA; Finger Lakes Clinical Research, Rochester, NY, USA; NorthWest Indiana Center for Clinical Research, Valparaiso, IN, USA; AstraZeneca Pharmaceuticals, Wilmington, DE, USA; AstraZeneca R&D, Södertälje, Sweden

This study aimed to evaluate once-daily extended release quetiapine fumarate (quetiapine XR)+antidepressant (AD) vs. AD alone in patients with DSM-IV major depressive disorder who experienced an inadequate response to Ads. This was a 6-week, double-blind, randomized, placebo-controlled study. Patients were randomized to AD (mainly SSRIs/SNRIs) and quetiapine XR 150, 300 mg/day, or placebo. The primary endpoint was change from randomization to week 6 in MADRS score. 446 patients were randomized: quetiapine XR 150 mg/day (n=148); 300 mg/day (n=150); placebo (n=148). Quetiapine XR 300 mg/day+AD demonstrated a significant difference vs. placebo for: primary endpoint (-14.70 vs. -11.7; p<0.01); MADRS improvement from week 1 onwards and, at week 6, response (58.9% vs 46.2%; p<0.05), remission (42.5% vs. 24.5%; p<0.01), HAM-D change (-13.53 vs. -10.80; p<0.01) and CGI-S change (-1.52 vs. -1.23; p<0.05). For quetiapine XR 150mg/day+AD, the difference vs. placebo was significant for MADRS improvement at weeks 1 and 2, and HAM-D week 6 change. Most common adverse events (>10% any group, weeks 1-6) were dry mouth, somnolence, sedation, dizziness, constipation, fatigue, headache. These findings suggest that quetiapine XR 300mg/day is an effective adjunct therapy, in patients with major depressive disorder and inadequate AD response, with symptom improvement observed as early as week 1.

PO1.117. REBOXETINE COMBINATION IN PATIENTS WITH DULOXETINE-RESISTANT MAJOR DEPRESSIVE DISORDER

X. Camarasa, J. Seguí, F. López-Muñoz, C. Álamo, P. García-García
Department of Psychiatry, "Doce de Octubre" University Hospital, Madrid; Service of Psychiatry, Sagrat Cor University Hospital, Barcelona; Pharmacology Department, Faculty of Medicine, University of Alcalá, Madrid, Spain

Despite the increase in the number of available antidepressants, many patients still do not respond to available therapies. In these cases, combination therapy is an useful strategy. In this prospective 12-weeks open-label study, we assessed the effectiveness of the addition of reboxetine to 79 depressive outpatients diagnosed with major depressive disorder (MDD) according to the DSM-IV criteria who had previously not responded, or had done so only in a partial way, over 8 weeks of conventional treatment in monotherapy, with duloxetine. 53.3% of patients presented a recurrent episode. Efficacy was assessed using the 21-item Hamilton Depression Rating Scale (HDRS) and the Clinical Global Impression-Improvement (CGI-I). Safety was evaluated by recording spontaneously reported adverse events. Data were analyzed on an intent-to-treat basis, using the last-observation-carried-forward (LOCF) method. The mean HDRS score reduction was 65.5% (p<0.0001). The percentages of responders (≥50% reduction in HDRS) and patients considered as benefiting from complete remission (HDRS ≤10 points) at week 12 were 76% and 69.3%, respectively. By the end of the treatment, the score of CGI-I decreased by 68.5% (p<0.0001). The percentage of patient improving (CGI<4 points) was 95.8%. Adverse events were judged as of mild or moderate severity. 77.5% of the physicians and 84.5% of the patients considered the efficacy of the treatment to be good or very good. Thus, in this study, reboxetine was found to be an efficient combination agent in duloxetine-resistant depression.

PO1.118. A RANDOMIZED CONTROLLED TRIAL OF CITALOPRAM IN MAJOR DEPRESSION FOLLOWING MILD TRAUMATIC BRAIN INJURY

F. Chan, K.L. Lanctôt, N. Herrmann, A. Kiss, S. McCullagh, A. Feinstein, M.J. Rapoport
Sunnybrook Health Sciences Centre, Toronto, Canada

Major depression following traumatic brain injury (TBI) is often refractory to pharmacotherapy. Those who do respond often wish to discontinue their treatment, and there have been no studies to date regarding the role of maintenance antidepressant therapy in the TBI population. This study aimed to determine whether maintenance therapy with citalopram following remission of major depression following TBI prevents relapse. It was a randomized double blind placebo controlled discontinuation trial. After open-label treatment of citalopram (20 mg to 50 mg/day) in 63 patients with major depression following mild-to moderate TBI, 25 patients (39.7%) met criteria for remission, of whom 21 (33.3%) were randomized to either citalopram or placebo for forty weeks of maintenance therapy. Remission was defined as a Hamilton Depression Rating Scale (HAMD) score of ≤7 or a Clinical Global Impression (CGI) rating for improvement of "much improved" or better. The main outcome variable was the presence of relapse, as defined by meeting criteria for major depressive episode according to the DSM-IV and either a HAMD≥16 or a CGI severity rating of "moderately ill" or worse and CGI improvement rating of "minimally improved" or worse compared to illness onset. Ten subjects were randomized to citalopram and eleven to placebo. Relapse occurred in 11 subjects (52.4%), with a mean time to relapse of 8.55±5.7 weeks. The groups did not differ in relapse rates (drug: 50.0%, vs. placebo 54.5%, p=1.00) or time to relapse (log rank test χ^2=0.148, p=0.700). The present study suggests important limitations of maintenance pharmacotherapy in the prevention of relapse of major depression following TBI.

PO1.119.
ZONISAMIDE AUGMENTATION IN POOR- OR NON-RESPONDER PATIENTS TREATED WITH DULOXETINE FOR A MAJOR DEPRESSIVE EPISODE

M. Fornaro, F. Bandini, F. Battaglia, C. Mattei, C. Ogliastro, P. Fornaro
Department of Neurology, Ophthalmology and Genetics, Section of Psychiatry and Neurology; Center of Excellence for Biomedical Research (CEBR), University of Genoa, Italy

The aim of the study is to investigate the effectiveness of zonisamide augmentation to duloxetine in partial and non-responder patients in course of unipolar major depressive episode. Thirty-five outpatients will be enrolled in a 12-weeks open-label study including both genders, 18 to 65 years old subjects. The diagnosis will be made at screening time using the Structured Clinical Interview for DSM-IV-Axis-I Disorders, Italian 1996 version and by a ≥14 total score on the Quick Inventory of Depressive Symptomatology-Self Rated (QIDS-SR). Patients will be repeatedly evaluated during the course of the study using a wide range of mood and anxiety rating scales and monitoring biomarkers such as electroretinogram b-wave amplitude, interleukins, and BDNF factors. At week 6, duloxetine partial/non responders will be augmented to zonisamide and further evaluations of mentioned markers will be repeated.

PO1.120.
DULOXETINE IN THE PREVENTION OF DEPRESSIVE RECURRENCES: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

D.G.S. Perahia, M.E. Spann, F. Wang, D.J. Walker, M.J. Detke, G. Maina
Lilly Research Centre, Windlesham, Surrey, UK; Gordon Hospital, London, UK; Lilly Research Laboratories, Indianapolis, IN, USA; McLean Hospital/Harvard Medical School, Boston, MA, USA; Indiana University School of Medicine, Indianapolis, IN, USA; University of Turin, Italy

The study aimed to assess the efficacy of duloxetine 60-120 mg once daily in the prevention of recurrence of a depressive episode in patients with recurrent major depressive disorder (MDD). Eligible patients with at least 3 episodes of MDD in the past 5 years received open-label duloxetine 60 to 120 mg/day for up to 34 weeks. Patients meeting response criteria were then randomized to either duloxetine or placebo for up to 52 weeks of double-blind maintenance treatment. The primary outcome measure was time to recurrence of a major depressive episode as assessed by any of the following recurrence criteria: a CGI-S score ≥4 and meet DSM-IV criteria for MDD; 3 consecutive visits meeting re-emergence criteria or 10 total re-emergence visits; study discontinuation due to lack of efficacy. Safety and tolerability were assessed via analysis of treatment-emergent adverse events (TEAEs), vital signs, weight, and laboratory measures. Of 514 patients initially entered into open-label treatment, a total of 288 responders were randomized to duloxetine or placebo. Time to a depressive recurrence was significantly longer in duloxetine-treated patients compared with placebo-treated patients (P<.001). During the double-blind maintenance phase, 33.1% of placebo-treated patients experienced a depressive recurrence compared with 14.4% of duloxetine-treated patients (P≤ .001). There were no significant differences between treatment groups in TEAEs, discontinuations due to adverse events, or changes in vital signs or weight. In conclusion, treatment with duloxetine was associated with a longer time to depressive recurrence and a significantly lower recurrence rate compared with placebo, and was well tolerated.

PO1.121.
DULOXETINE IN THE TREATMENT OF PREMENSTRUAL DYSPHORIC DISORDER: A SINGLE-BLIND CLINICAL TRIAL

M.G. Ramos, C. Hara, F.L. Rocha
Instituto de Previdência dos Servidores do Estado de Minas Gerais, Minas Gerais, Brazil

Premenstrual dysphoric disorder (PMDD) affects 3 to 8% of women of reproductive age and is characterized by severe mood symptoms that cause important functional impairment. Serotonergic antidepressants appear to be an effective treatment for this disorder. The purpose of this study was to investigate the efficacy and tolerability of duloxetine, a reuptake inhibitor of serotonin and norepinephrine, in the treatment of PMDD. We conducted a pilot, single-blind, non-controlled, fixed-dose trial. After two menstrual cycles for diagnostic confirmation, including a single-blind placebo cycle, 20 women who met DSM-IV-TR criteria for PMDD were included in the treatment phase. Daily doses of 60 mg of duloxetine were administered during 3 menstrual cycles. The primary measure of the efficacy of treatment with duloxetine was the significant reduction in premenstrual symptoms demonstrated by the comparison between mean scores in the Daily Record of Severity of Problems (DRSP) at baseline and endpoint (p=0.0002). Statistically significant symptom reduction was observed throughout all treatment cycles. Clinical response, defined as a reduction ≥50% in baseline premenstrual symptoms, occurred in 65% of subjects (intent-to-treat population). Significant improvements were demonstrated by secondary measures, including reduction in self-rated functional impairment (p=0.01) and improvement in quality of life (p=0.04). Main side effects were dry mouth, nausea, drowsiness, insomnia, decreased appetite, decreased libido, and sweating. Duloxetine was effective and well tolerated in the treatment of PMDD. Further large-scale, double-blind, placebo-controlled studies are needed to evaluate duloxetine as an additional treatment strategy for the management of PMDD.

PO1.122.
ANTIDEPRESSANT MEDICATIONS IN PREGNANCY AND POST-PARTUM: ADHERENCE VS. DECLINE

S. Misri, K. Joe, M. George
Reproductive Mental Health Program, Department of Psychiatry, British Columbia Women's and Health Center; University of British Columbia, Vancouver, Canada

Although antidepressants are the gold standard treatment of moderate/severe antenatal depression despite FDA warnings, it remains unclear why some women engage in pharmacotherapy while others refuse. This study examines factors that govern this decision, monitors illness trajectory and, tracks dose titration. Sixty pregnant participants recruited through Reproductive Psychiatry Program, Vancouver, Canada, comprised of three groups: adhering to medications, declining medications, declining antenatally but starting post-partum. Mood was evaluated with MINI, Hamilton Depression Scale and Hamilton Anxiety Scale, through second/third trimester and one month post-partum. Qualitative analysis revealed that, of 33% of the participants who declined medication due to denial of diagnosis/fear of exposure antenatally, 35% went on medications in post-partum. 77% adhered throughout. Statistical analysis revealed a significant difference in Hamilton Anxiety scores between adherence and decline groups: t=2.51, p<0.05. Further examination revealed higher mean Hamilton Anxiety scores at 26, 34 weeks and post-partum in declined group. Examination of the mean Hamilton Depression score

demonstrated that declined group had higher scores at 26, 34 weeks gestation and post-partum, although no statistical significant difference was noted. Despite adherence, women relapsed at 30 weeks gestation and with dose increase responded at 34 weeks. Preconceived notions about the illness regardless of severity govern the choice of pharmacotherapy in pregnancy. Alarmingly, women choose to remain symptomatic rather than take medication, thus exposing the unborn baby to the illness. Treatment to remission remains a challenge.

PO1.123. AUGMENTATION WITH INTRAVENOUS ANTIDEPRESSANTS IN DEPRESSIVE PATIENTS WITH PARTIAL OR NO RESPONSE TO ORAL THERAPY: A NATURALISTIC STUDY

M. Bosi, R. Truzoli, A. Colombo, A. Roaro, R. Bassetti, C. Viganò, G. Ba
Department of Psychiatry, Mood Disorder Unit, L. Sacco Hospital, University of Milan, Italy

The aim of this study was to compare the effectiveness of short-term (5-day), low-dose intravenous augmentation with S-adenosyl-L-methionine (SAMe) (400 mg/day) vs. citalopram (10 mg/day) and vs. clomipramine (25 mg/day) in major depressive patients with partial or no response to selective serotonin reuptake inhibitors (SSRIs), serotonergic-noradrenergic reuptake inhibitors (SNRIs) and tricyclics (TCAs). Twenty-three patients were studied. Intravenous augmentation with SAMe (n=7) or citalopram (n=7) or clomipramine (n=9) was chosen by senior psychiatrists on the basis of their clinical judgement. Patients were assessed daily by the Hamilton Depression Rating Scale and the Montgomery Asberg Depression Rating Scale. We found no significant difference among the three groups with respect to change in the total score on the two scales and the number of responders and remitters. Further studies on larger samples are warranted to confirm these results.

PO1.124. STIMULATION VS. BLOCKADE OF THE MINERALOCORTICOID RECEPTOR AS ADJUNCTIVE THERAPY TO SSRI TREATMENT OF MAJOR DEPRESSION: A RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED TRIAL

C. Otte, K. Hinkelmann, S. Moritz, A. Yassouridis, H. Jahn, K. Wiedemann, M. Kellner
Department of Psychiatry and Psychotherapy, University Hospital, Hamburg-Eppendorf; Max Planck-Institute of Psychiatry, Munich, Germany

Preclinical and clinical studies have suggested a role of the mineralocorticoid receptor (MR) in the pathophysiology of major depression and in the response to antidepressants**.** This study aimed to test whether adding spironolactone (an MR antagonist) or fludrocortisone (an MR agonist) to escitalopram, a standard selective serotonin reuptake inhibitor (SSRI), induces a more rapid and efficacious treatment response in patients with major depression. This was a double-blind, randomized, placebo-controlled trial. Sixty-four in- and outpatients with major depression (Hamilton Depression Rating Scale, HAMD score>18) were recruited and randomly allocated to three treatment groups (2:2:1 randomization): spironolactone (100 mg/d, n=27), fludrocortisone (0.2 mg/d, n=24) or placebo (n=13) for the first 3 weeks during a 5-week treatment with escitalopram. The primary outcome criterion was the mean change in HAMD score and the secondary outcome criterion was the response rate (reduction >50% in HAMD score) after three weeks. No difference in mean HAMD score change emerged between treatments. More patients receiving fludrocortisone (5/24) responded after one week compared to spironolactone (1/27) and placebo (0/13). Among the responders, the mean time until response was shorter in patients receiving fludrocortisone (16 days) compared with those receiving spironolactone (22 days) or placebo (22 days). Plasma cortisol concentrations increased during spironolactone and decreased during fludrocortisone treatment, but did not correlate with changes in psychopathology. All treatments were well tolerated, without serious adverse effects. Our study provides preliminary evidence that stimulating MR with fludrocortisone might accelerate the antidepressive effects of SSRIs.

PO1.125. SUCCESSFUL AUGMENTATION WITH ARIPIPRAZOLE IN CLOMIPRAMINE-REFRACTORY DEPRESSED PATIENTS

M. Fabrazzo, F. Perris, D. Giacco, F. Catapano
Department of Psychiatry, University of Naples SUN, Naples, Italy

Recent evidence suggests the use of atypical antipsychotics in resistant depression. The aim of the present study was to evaluate the efficacy of aripiprazole in combination to clomipramine in depressed patients with previous negative response to antidepressants alone. Ten patients, diagnosed by Structured Clinical Interview for DSM-IV (SCID-I) and affected by major depressive episode, according to DSM-IV criteria, were included in the study. At the beginning, all patients were on clomipramine treatment alone (daily dose from 150 to 300 mg). Psychopathological state was evaluated by Hamilton Rating Scale for Depression 17-items (HAMD-17) at baseline and after 4, 8, and 24 weeks of combined treatment. Clinical response was defined as a reduction of at least 50% of the initial score of HAMD-17. The association of aripiprazole was efficacious in the short and long term treatment, since all patients showed an improvement in depressed mood (40% of patients with positive response at 4th week of treatment, 90% at 24th week) and anxiety (70% at 4th week of treatment, 100% at 24th week). The mean score of HAMD-17, indeed, showed a variation from 33.6±2.4 at baseline to 23.0±7.1, 18.6±5.0, 13.5±3.2, respectively at 4th, 8th and 24th week. A possible explanation of such effects could be the pharmacokinetic interactions at the level oh hepatic microsomial enzymes (both drugs use CYP2D6 isoenzymes for their metabolism), with aripiprazole exerting an inhibitor effect which leads to an increase in plasma concentrations of clomipramine. Another mechanism could be a direct effect of aripiprazole on 5-HT1A receptors as a partial agonist, leading to an increase of serotonin bioavailability at the synaptic level.

PO1.126. THERAPEUTIC DRUG MONITORING OF CLOMIPRAMINE AND DESMETHYLCLOMIPRAMINE IN PATIENTS WITH DEPRESSION

H. Matsumoto, E. Woźny, J. Piwowarska, A. Zielińska, M. Ozimek, M. Radziwoń-Zaleska, M. Skalski, M. Wojnar, P. Januszko, B. Ryszewska-Pokraśniewicz, J. Łukaszkiewicz, J. Pachecka, W. Szelenberger
Departments of Psychiatry and of Biochemistry and Clinical Chemistry, Medical University, Warsaw, Poland

Clomipramine is a tricyclic antidepressant still frequently used in the treatment for depression in Poland. The purpose of this study was to assess the usefulness of two analytical methods, fluorescence polar-

ization immunoassay (FPIA) and high performance liquid chromatography (HPLC), in the process of therapeutic drug monitoring (TDM) of clomipramine treatment of depression. Fifteen patients (5 males and 10 females, 27-72 years old) diagnosed with major depression were included into the study. The clinical state of the patients was assessed before the treatment and after start of medication (75-150 mg/day) using Hamilton Depression Rating Scale (HDRS) and Hamilton Anxiety Rating Scale (HARS). Serum concentrations of clomipramine and desmethyl-clomipramine were measured by means of FPIA and HPLC methods before treatment and after 2, 4, 6, and 8 weeks of medication. Correlation coefficients between results of FPIA and HPLC methods ranged from r=0.881 to r=0.998. Good therapeutic effect (defined as a reduction of total scale score ≥50%) was obtained in 10 patients (HDRS) and 9 patients (HARS). In conclusion, both analytical techniques are useful in TDM of clomipramine treatment. FPIA is a faster method, but measures mix clomipramine and desmethyl-clomipramine concentrations. HPLC is more sensitive and selective than FPIA, but requires more expensive laboratory equipment.

PO1.127.
MIXED ANXIETY DEPRESSIVE DISORDER: DO WE TREAT IT WELL IN PRACTICE?

O. Skakic, L. Trajanovic
Mental Health Protection Clinic, Clinical Center, Nis, Serbia

There is a group of patients who fail to fulfill conventional diagnostic criteria for either an anxiety or depressive disorder, but who seem to warrant a psychiatric diagnosis. This diagnostic category has already been referred to as mixed anxiety and depressive disorder (MADD). The aim of this study was to explore which drugs are used in the treatment of MADD in a psychiatric dispensary. A retrospective analysis covering a 7-month period and including 13,020 adult patients was carried out. The number of MADD patients was 370 (2.8% of the total sample; 57.3% females, mean age 45.6±13.0 years, range 19-73). Anxiolytics were the most commonly used medications (53% of cases), followed by antidepressants (37%), and hypnotics (10%). Among antidepressants, the most frequently used were selective serotonin reuptake inhibitors (SSRI) (56.7%), followed by tetracyclics (29.7%), tricyclics (10.8%), and MAO inhibitors (2.7%). Bromazepam (39.3%) and diazepam (36.3%) were the most frequently used anxiolytics. Sertraline (26.9%) was the most commonly used antidepressant. Nitrazepam was the most frequently prescribed hypnotic (62.5%). Thus, although being the first choice treatment for MADD, antidepressants were used less frequently than anxiolytics.

PO1.128.
INTERPERSONAL COUNSELLING VS. SELECTIVE SEROTONIN REUPTAKE INHIBITORS FOR MAJOR DEPRESSION IN PRIMARY CARE: A RANDOMIZED CONTROLLED TRIAL

D. Berardi, M. Menchetti, A. Bombi, G. Lullini, B. Bortolotti, P. Scocco
Institute of Psychiatry, University of Bologna; Department of Mental Health, Local Health Unit 16, Padua, Italy

Depressed patients referred to primary care have usually less severe depressive symptoms than patients referred to psychiatric services. The most recent guidelines suggest an important role of psychological interventions as first-choice treatment in mild to moderate depressive disorders. However, few studies in the setting of primary care are available. Aim of the present study is to compare a psychological intervention, interpersonal counselling (IPC), with pharmacological antidepressant treatment. Primary care attenders with a DSM-IV diagnosis of major depression (MD) and an Hamilton Depression Rating Scale (HDRS) score ≥13 were recruited in nine centres in Italy. Patients were randomly allocated to IPC or antidepressant treatment with selective serotonin reuptake inhibitors (SSRIs). The main outcome measure was remission of depressive symptomatology after 2 months defined as HDRS score ≤7. Functioning was assessed by the Work and Social Adjustment Scale (WSAS). Two hundred and seventy patients were recruited (IPC=135 and SSRI=135). The mean HDRS score at baseline was 17.3±3.5. According to WSAS score 37.8% of the patients presented high levels of disability. At 2 months, in the IPC group, 59.1% of the patients remitted, 23.9% partially responded and 17.0% did not respond. In the SSRI group, 53.3% remitted, 28.3% partially responded and 18.5% did not respond. These results suggest that IPC and SSRIs were both efficacious in reducing depressive symptoms in primary care attenders suffering from MD.

PO1.129.
A DOUBLE BLIND RANDOMISED CONTROLLED TRIAL OF HALOPERIDOL VS. CARBAMAZEPINE VS. VALPROATE MONOTHERAPY IN ACUTE MANIC EPISODES

A.O. Adewuya, R.O.A. Makanjuola
Department of Psychiatry, Lagos State University College of Medicine, Ikeja, Lagos; Department of Mental Health, Obafemi Awolowo University, Ile-Ife, Nigeria

Acute episodes of mania associated with bipolar disorder require immediate, rapid and cost-effective treatment. However, little has been done to establish the appropriate management in sub-Saharan countries such as Nigeria. There are significant pharmacokinetic and pharmacodynamic variables that may influence the efficacy as well as the adverse effects of psychotropic medications across ethnic groups and cultures. A randomised clinical trial of the effectiveness of monotherapy treatment using affordable chemotherapy for manic episodes is needed, especially in a non-Western and an under-researched setting like Nigeria. It will help to establish appropriate interventions that will achieve the desired clinical outcome within the shortest possible time, thus saving costs and limiting disability in mania. This multi-centred 6-week randomised double blind controlled trial aims to compare the clinical efficacy of haloperidol monotherapy with carbamazepine monotherapy and valproate monotherapy in the management of acute manic episodes. Patients with a diagnosis of acute manic episode will be randomised into 3 groups on a 1:1:1 ratio (n=70 in each arm). Patients will be assessed with a battery of scales, including the Young Mania Rating Scale (YMRS), the Clinical Global Impression scale (CGI) and the Hamilton's Rating Scale for Depression (HAM-D). Clinical assessments will be carried out during the screening visits and again at baseline assessment. Post-randomization assessments will be conducted weekly up to the sixth week to assess the adverse effects, safety and tolerability of the three agents. Information from this study will help in determining the most appropriate therapeutic intervention for manic episodes in the Nigerian sub-Saharan African setting.

PO1.130.
ARIPIPRAZOLE IN ACUTE MANIA: RESULTS OF A SAFETY META-ANALYSIS

R. Marcus, W. Carson, R. McQuade, R. Sanchez, T. Iwamoto, S. Kaplita, E. Stock
Bristol-Myers Squibb Co., Wallingford, CT, USA; Otsuka America Pharmaceutical Inc., Princeton, NJ, USA; Bristol-Myers Squibb Co., Lawrenceville, NJ, USA; Otsuka Pharmaceutical Co. Ltd., Tokyo, Japan

This study aimed to analyse the time course and severity of adverse events of aripiprazole in a pooled analysis of data from placebo-controlled trials in patients with acute mania. Data included in this meta-analysis were pooled from four 3-week, double-blind, multicentre studies. Two of these studies were flexible-dose studies using aripiprazole 15-30 mg/day; two were fixed dose studies using aripiprazole 15 and 30 mg/day. Patients with acute mania (n=977) were randomised to receive aripiprazole (n=568) or placebo (n=409). Discontinuations due to adverse events were similar between aripiprazole and placebo (10.9% vs. 9.5%). The majority of adverse events, including nausea, agitation, akathisia and insomnia, were mild to moderate. The time course analysis of these events showed that most of these events were reported during week 1 with the incidence gradually diminishing up to study end. The incidence of clinically significant weight gain with aripiprazole was comparable to placebo (2.9% vs. 2.4%). There was no mean weight gain with aripiprazole and a change of -0.2 kg with placebo. Aripiprazole was associated with a similar incidence of clinically significant prolactin elevations compared to placebo. In conclusion, in this pooled analysis, aripiprazole demonstrated a favourable safety and tolerability profile.

PO1.131.
A 46-WEEK EVALUATION OF ARIPIPRAZOLE IN COMBINATION WITH LITHIUM OR VALPROATE IN BIPOLAR MANIA

E. Vieta, C. Baudelet, R.D. McQuade, R.N. Marcus, R. Sanchez
Clinical Institute of Neuroscience, Hospital Clinic, University of Barcelona, Spain; Bristol-Myers Squibb Co., Braine-l'Alleud, Belgium; Otsuka Pharmaceutical Development and Commercialization, Inc., Princeton, NJ, USA; Bristol-Myers Squibb Co., Wallingford, CT, USA

This study aimed to evaluate the efficacy, safety and tolerability of aripiprazole in combination with valproate or lithium in patients with bipolar I mania (manic/mixed) partially non-responsive to lithium or valproate monotherapy. Following screening, psychotropic washout and attainment of therapeutic levels of lithium (0.6-1.0 mmol/L) or valproate (50-125 µg/mL) (Phase 1), patients received open-label lithium or valproate monotherapy for 2 weeks (Phase 2). Partial non-responders with therapeutic lithium/valproate levels were randomized (2:1) to double-blind combination aripiprazole (15-30 mg/day) + lithium/valproate (n=253) or placebo + lithium/valproate (n=131). Mean changes from baseline in YMRS total score and in the Longitudinal Interval Follow-up Evaluation-Range of Impaired Function Tool (LIFE-RIFT) at end of Week 6 (LOCF) were assessed. Thereafter, patients could continue in the study for an additional 46 weeks on lithium/valproate in combination with open-label aripiprazole. At Week 6, aripiprazole + lithium/valproate demonstrated significant improvements from baseline vs. placebo + lithium/valproate in YMRS total (-13.3 vs. -10.7, p=0.002) and in LIFE-RIFT scores (-1.76 vs. -0.99; p=0.046), as well as significantly greater remission (YMRS total score ≤12) and response rates (≥50% improvement from baseline in YMRS total). In total, 283 patients entered the extension phase (prior placebo n=104 vs. prior aripiprazole n=179). The YMRS total score continued to improve in both groups, with those patients on prior placebo showing a greater improvement than those on prior aripiprazole at Week 46 (-4.27 vs. -2.52; LOCF). These data suggest that aripiprazole, in combination with lithium/valproate, is an effective treatment in bipolar I mania.

PO1.132.
MANAGEMENT OF ACUTE AGITATION IN MIXED MANIC STATES: AN EXPERIENCE WITH ORAL ARIPIPRAZOLE

C.I. Cattaneo, N. Barucci, S. Manfrinati, S. Spanarello, A. Colotto
Department of Mental Health, Aosta, and Department of Mental Health, Local Health Unit 3, Foligno, Italy

The aim of this study was to explore the efficacy, safety and tolerability of oral aripiprazole (30 mg/day per os) in bipolar I disorder during an acute mixed state. We recruited 20 patients (13 females, 7 males) admitted for an acute mixed state, according to DSM-IV-TR. The clinical outcome was evaluated using CGI-BP, BPRS, YMRS, HAM-D, HAM-A and MOAS; the side effects were quantified by SAS, BAS and AIMS. The scales were administered at baseline, and after 4, 8 and 12 hours. We observed a global improvement on total score of all the scales, but statistical significance was reached only on CGI-BP, YMRS and MOAS in later evaluations (8-12 hrs). Three out of 20 patients needed to be treated with conventional sedation drugs (lorazepam 4 mg i.m.). Two patients showed akathisia and dysphoria requiring treatment discontinuation. These data suggest that aripiprazole is effective in mixed states with less side effects than typical neuroleptics. These are preliminary data that need to be supported by randomized and case-control studies.

PO1.133.
VALPROATE PLUS LITHIUM VS. VALPROATE PLUS OLANZAPINE IN THE TREATMENT OF ACUTE MANIC PATIENTS

M. Barekatain, H. Afshar
Isfahan University of Medical Sciences, Isfahan, Iran

We sought to evaluate the efficacy of adding olanzapine or lithium to valproate in acutely manic or mixed bipolar I patients. In this randomized double blind, parallel group study, 44 acutely manic or mixed patients according to DSM-IV-TR criteria were randomly assigned to receive combinations of sodium valproate (20 mg/kg per day) with either olanzapine (5-15 mg/day) or lithium (900 mg/day) during a ten-day course. Efficacy was measured with Young Mania Rating Scale (YMRS). Effectiveness measures included YMRS response (YMRS reduction 50%) and YMRS remission (YMRS<12). The total number of patients was 44 (mean age 27.2±7.3), 21 in the olanzapine+valproate group (group I) and 23 in lithium+valproate group (group II). Response rate was 85.7% in group I and 73.9% in group II (p<0.33). Remission rate was 42.9% in group I and 43.5% in group II (p<0.97). The reduction in YMRS total score on days 2, 7 and 10 of study was significant in both groups (p<0.05). These data suggest that both combinations are effective in acutely manic or mixed patients.

PO1.134.
VALPROATE-RISPERIDONE VS. VALPROATE-LITHIUM COMBINATION IN ACUTE MANIA

M. Barekatain, A. Fatemi, M. Salehi
Isfahan University of Medical Sciences, Isfahan, Iran

We evaluated the efficacy of valproate plus risperidone vs. valproate plus lithium combination in the treatment of acute mania. In a 2-week, randomized, double-blind, parallel group study, 46 acute manic patients according to DSM-IV criteria were randomly assigned to receive the combination of valproate 20 mg/kg/day plus risperidone 2-4 mg/day (n=23) or lithium 600-1200 mg/day (n=23). The assessment of efficacy was made using the Young Mania Rating Scale (YMRS) and the Clinical Global Impression-Severity (CGI-S) and Improvement (CGI-I) scale. Other effectiveness measures included YMRS response (YMRS reduction ≥50%) and YMRS remission (YMRS total score ≤12). In each group, 16 of 23 patients (70%) completed the study. YMRS response, CGI-Improvement, and reduction in total scores of YMRS and CGI-S were significantly greater in the valproate-risperidone than in the valproate-lithium group (p=0.006, p=0.015, p=0.004, and p=0.007, respectively). There was no significant difference concerning YMRS remission (p=0.073). The YMRS total score on days 4, 8 and 14 of trial was lower in the valproate-risperidone than in the valproate-lithium group (p=0.017, p=0.005, and p=0.004, respectively). The rate of adverse events and the mean weight gain in the two groups were not statistically different. These data suggest that, in acute manic patients, the valproate-lithium and the valproate-risperidone combinations are both effective, but the valproate-risperidone combination has a more significant impact.

PO1.135.
EFFICACY OF LAMOTRIGINE AS MONOTHERAPY IN PATIENTS WITH BIPOLAR I DISORDER

S. Uzun, O. Kozumplik, M. Jakovljevic, D. Ljubicic
University Department, Vrapce Psychiatric Hospital; University Department, Clinical Hospital Zagreb; School of Medicine, University of Zagreb, University Department, Clinical Hospital Rijeka; School of Medicine, University of Rijeka, Croatia

The study was aimed to explore the efficacy of lamotrigine as monotherapy in patients with bipolar I disorder. The sample included 19 patients (8 males and 11 females, aged 18-65 years), with a diagnosis of bipolar I disorder according to the DSM-IV-TR. All patients were outpatients. This was the first treatment with lamotrigine for all patients. Patients were switched to lamotrigine due to side effects of previous treatment and/or patient's request. The Clinical Global Impression (CGI), Young Mania Rating Scale (YMRS) and Montgomery-Asberg Depression Scale (MADRAS) were used in order to assess efficacy of the therapy. Also, Patient's Preference Scale (PPS) was used in order to evaluate patients' satisfaction with therapy. The first assessment was made prior to initiation of the treatment. The following assessments were made every two weeks. The period of investigation was three months. Results were statistically analyzed using methods of descriptive statistics and chi-square test. Statistical significance was set to $p<0.05$. All patients remained stable during three months of therapy with lamotrigine, according to YMRS total score, MADRAS total score and CGI severity score. Only transient gastrointestinal side effects were observed in four patients. Results of PPS confirmed patients' satisfaction with lamotrigine as monotherapy.

PO1.136.
COMPLIANCE WITH TREATMENT IN BIPOLAR PATIENTS IN THE EMBLEM STUDY: PREDICTIVE FACTORS IN THE ITALIAN SAMPLE

V. Schiavone, A. Rossi, A. Barraco, C. Reed, J.M. Haro, M. Morlino, M. Casiello, G. Muscettola
University of Naples Federico II, Naples, Italy; Eli Lilly Italia S.p.A., Sesto Fiorentino, Florence, Italy; Eli Lilly and Company, Windlesham, UK; Fundacio Sant Joan de Deu, Barcelona, Spain

The EMBLEM (European Mania in Bipolar Longitudinal Evaluation of Medication) is a 2-year, prospective, observational study conducted in patients with a manic/mixed episode who initiated/changed oral psychotropic medication for treatment of acute mania in the context of bipolar disorder. This paper aims to describe compliance in patients of the EMBLEM study enrolled in Italy and factors associated with non-compliance during 2 years of follow-up. Analysis was performed in patients having an observation at 12 weeks and at least one observation for compliance thereinafter in the first year. Non-compliant patients were those who answered at least once that they either "complied half of the time or never complied with medication" during the maintenance phase. Compliant patients were those who were "always compliant" or "not prescribed medication" in all the visits of the maintenance phase. A logistic regression stepwise model was used to assess the baseline factors associated with being compliant. Of the 437 Italian patients who took part in the maintenance phase, 208 (93 males, mean age 45.1 years) were included in the analysis. The 229 patients that were not included were not clinically different from the 208 ones included with respect to any of the considered variables but the use of anticholinergics at baseline. Non-compliant patients were 52 (25%), while the remaining 156 (75%) were compliant. Statistically significant differences between compliant and non-compliant patients were found for: number of manic/mixed episodes in the last year (non-compliance increased with an increasing number of episodes, p=0.027), history of cannabis use (non-compliance was higher in users, p=0.043), social activities (non-compliance was higher in patients with no social activities, p=0.016), satisfaction with life (compliance was higher in patients who were neither satisfied/dissatisfied, p=0.009), reasons for a new medication (non-compliance was higher in patients who started the treatment due to lack of compliance to the previous therapy, p=0.009). The logistic regression model identified multiple baseline factors that were associated with being less compliant during the maintenance phase: lack of compliance to previous therapy, satisfaction with life and use of cannabis at baseline indicated greater non-compliance. Being socially active at baseline was associated with better compliance. No associations with compliance were found for any demographic data, number of previous episodes, previous suicide attempts, baseline clinical severity, relationship status, work impairment or prescribed drug therapy.

PO1.137.
AN OPEN-LABEL STUDY OF THE EFFECTIVENESS AND TOLERABILITY OF LONG-ACTING RISPERIDONE AS A MAINTENANCE ADD-ON THERAPY FOR BIPOLAR AND SCHIZOAFFECTIVE DISORDERS

A. Murru, P. Castro, A. Benabarre, E. Vieta
Bipolar Disorder Programme, Clinical Institute of Neuroscience, University Hospital Clinic, University of Barcelona, Spain

Besides mood stabilizers, several bipolar and schizoaffective patients need a long-term therapy with antipsychotic drugs. A possible strategy

in maintenance therapy could be the use of long-acting risperidone (RLAI), which could grant a better compliance, thus reducing frequency of relapses. This study aimed to evaluate the tolerability, adherence and effectiveness of RLAI as a maintenance add-on therapy in the prophylaxis of bipolar and schizoaffective disorders. We included 22 patients (14 with bipolar disorder type I and 8 with schizoaffective disorder). In one case, there was the withdrawal of the drug on request of the patient. Every patient was evaluated with YMRS, HAM-D, CGI, UKU scales in scheduled visits along 40 weeks. YMRS scores significantly decreased from 10.2±2.3 at baseline to 3.2±2.2 at 9 months follow-up (p=0.001), whereas HAM-D scores remained stable. Significant differences were observed between baseline and final visits on CGI (3.8±1.2 vs. 1.5±0.6, respectively), with p<0.0001. Similar findings were found in CGI-Efficacy. A trend towards a lower number of side effects was identified through the UKU (p=0.056). The use of RLAI as maintenance add-on therapy appears to be efficacious and well tolerated in bipolar and schizoaffective patients. During the follow-up, manic symptoms were reduced, without switch to a depressive episode or increased depressive symptoms. Moreover, clinical improvement occurred since week 8 and was sustained over time. No significant side effects were reported, and side effects tended to diminish across the follow-up visits.

PO1.138.
BIPOLAR DISORDER PATIENTS WITH AND WITHOUT CO-OCCURRING SUBSTANCE USE DISORDER: RESPONSE TO TREATMENT AND FUNCTIONAL OUTCOME IN A 1-YEAR FOLLOW-UP

M. Mazza, L. Mandelli, M. Di Nicola, D. Harnic, V. Catalano, D. Tedeschi, G. Martinotti, R. Colombo, P. Bria, A. Serretti, L. Janiri

Department of Psychiatry and Institute of Biochemistry and Clinical Biochemistry, Catholic University of Sacred Heart, Rome; Department of Psychiatry, University of Bologna; Laboratory of Molecular Biology and Human Genetics, Catholic University of Milan, Italy

The purpose of this study was to examine clinical and psychopatological features of bipolar disorder (BP) with and without comorbid substance use disorder (SUD) in a real-world setting. The sample was composed by 131 patients with mood disorders. Sixty-five patients had bipolar disorder I (BP-I), 29 bipolar disorder II (BP-II) and 37 cyclothymic disorder (CtD), according to DSM-IV. Sixty-six patients had a comorbid SUD. All patients were evaluated by the Hamilton Depression Rating Scale (HDRS), Hamilton Anxiety Rating Scale (HARS), Young Mania Rating Scale (YMRS), Global Assessment Scale (GAS), Social Adjustment Self-reported Scale (SASS), Quality of Life Scale (QoL), at baseline and after 1, 3, 6, 12 months. Mood disorder comorbid for SUD was more often diagnosed as BP-II and CtD and was less likely to present a moderate-severe manic symptomatology. Personality disorders were more frequent in SUD patients than in non-comorbid BP. BP with SUD was not different on primary outcome measures (HDRS, HARS, YMRS, GAS) from non-comorbid BP; however, BP with SUD was associated by a greater impairment in social functioning (SASS) at any stage of the follow-up.

PO1.139.
SECOND-GENERATION ANTIPSYCHOTICS AND HOSPITALIZATION IN BIPOLAR DISORDER: A CLAIMS DATA ANALYSIS

E. Kim, A. Pikalov, D. Ammerman, R. Knoth

Bristol-Myers Squibb Company, Plainsboro, NJ; Otsuka America Pharmaceutical Inc., Rockville, MD, USA

Patients treated with second-generation antipsychotics (SGAs) and mood stabilizers (MS) are hospitalized more frequently than those treated with MS monotherapy. The objective of this study was to characterize hospitalization rates in patients treated with adjunctive SGA-MS therapy. A retrospective propensity score-matched cohort study was conducted in the LabRx integrated claims database from January 2003 through December 2006. Patients aged 18-65 years with bipolar disorder and 180 days of pre-index enrollment without SGA therapy and 90 days post-index enrollment were eligible for inclusion. Patients had at least 30 days supply of MS therapy prior to index, and at least one prescription for MS within 30 days prior to, or following, index SGA prescription. A Cox proportional hazards analysis compared time to initial psychiatric hospitalization between aripiprazole and ziprasidone, olanzapine, quetiapine, or risperidone during the 90-day follow-up period. Of 198,919 patients with at least one SGA prescription, 6,162 met criteria for inclusion (840 aripiprazole, 446 ziprasidone, 1101 olanzapine, 2501 quetiapine, 1274 risperidone). After matching, post-index hospitalization rates in the first 90 days ranged from 5.8 to 10.2%. Compared with aripiprazole, patients on all other adjunctive SGAs were demonstrated statistically significantly greater risks of hospitalization (ziprasidone HR 1.67; 95% CI 1.03-2.71; olanzapine HR 1.60;, 95% CI 1.04-2.46; quetiapine HR 1.47; 95% CI 1.02-2.12; risperidone OR 1.49; 95% CI 1.02-2.18. With the exception of aripiprazole, mean starting and maximum doses were substantially below the dose recommended in each product's label. In conclusion, hospitalization in the first 90 days following initiation of combination MS-SGA therapy is relatively common and influenced by choice of SGA. This difference may be due to dosing and titration under real-world conditions.

PO1.140.
QUETIAPINE MONOTHERAPY IN BIPOLAR I DISORDER: SOME CLINICAL EXPERIENCES

I. Michopoulos, C. Christodoulou, E. Rizos, J. Dervenoulas, L. Lykouras

Athens University Medical School, Attikon General Hospital, Athens, Greece

Quetiapine has been used in bipolar mania and most recently in bipolar depression with good results; however, its use in maintenance treatment has not been established yet. Two cases are presented, both suffering from bipolar I disorder. The first is a woman, 48 years old, diagnosed as bipolar 15 years ago, who had had 3 manic episodes (severe and dangerous), 2 major depressive episodes, last episode manic, and underwent bone marrow transplantation twice because of leukemia. She had not responded to valproate. She received 400 mg of quetiapine daily with very good results. The second was a woman, 73 years old, diagnosed as bipolar 8 years ago, who had had 2 manic episodes, 4 major depressive episodes (severe and resistant to therapy), last episode manic, and had to receive treatment for diabetes mellitus (type II). She had not responded to lithium therapy. She received 300 mg of quetiapine daily with satisfactory response. The use of quetiapine as monotherapy in both cases was efficacious and safe. It helped the patients not only in maintaining mood stabilization for two years, but also dealing well with their somatic health problems.

PO1.141.
THE USE OF DRUGS FOR MOOD DISORDERS IN ITALY: PRELIMINARY RESULTS

M.G. Carta, E. Aguglia, M. Balestrieri, A. Bocchetta, F. Drago, C. Faravelli, M.C. Hardoy, P.L. Morosini, M. Nardini
Universities of Cagliari, Catania, Udine, Florence and Bari; National Institute of Health, Rome, Italy

This study aims to evaluate the rate of overprescription and underprescription of psychotropic drugs in different Italian community areas. The focus is on the use of antidepressants in general and in particular in subjects with bipolar disorder and in subsyndromal depression. The study is carried out in a sample randomly drawn, after stratification by sex and age, from the adult population in six Italian regions. About 4,000 persons will be interviewed. The assessment instruments include a questionnaire on psychotropic drugs consumption, prescription, health services utilization; the Diagnostic Structured Clinical Interview, the Mood Disorders Questionnaire, and the Short Form Health Survey. The study will also explore the determinants of prescription related to physicians, patients, comorbidity and symptoms and establish the basis for a cohort prospective study to assess the future changes.

PO1.142.
MINDFULNESS BASED COGNITIVE THERAPY FOR BIPOLAR DISORDER: A CASE SERIES

J.M. Aubry, F. Jermann, L. Bizzini, L. Myers-Arrazola, B. Weber-Rouget, G. Bondolfi
Department of Psychiatry, Geneva University Hospital, Geneva, Switzerland

Mindfulness based cognitive therapy (MBCT) is designed to improve depressive relapse prevention. For unipolar patients with recurrent depression, several studies have shown its efficacy, whereas for bipolar patients only one preliminary study has been published to date. Five patients with bipolar disorder type I or II were included in MBCT groups run for unipolar patients. Homework included meditation practice, observation of feelings, thoughts and bodily reactions, taking about 45 min per day, 6 days per week. Three, 6 and 9 months after the end of the program, participants were asked to come for a 2 hour "booster session". Three months after the end of the program, they were asked to answer a questionnaire elaborated to gather information about potential benefits derived from MBCT, frequency of their practice and whether the program should be adapted specifically for bipolar condition. Four patients completed the eight weeks program and found MBCT helpful in coping with emotions and distancing themselves from negative thoughts as well as from stressful situations. Two patients described the approach to be moderately or clearly efficacious in preventing a hypomanic episode. Two patients also reported that MBCT improved their quality of life. All four patients practiced regularly, although two patients found meditation practice to be moderately difficult. One patient dropped out after the first session because of hypomanic mood and reported difficulties in attending 2 hours sessions. Although very preliminary, these results open the way for randomised controlled studies with large samples of patients.

PO1.143.
EFFECTIVENESS OF ANTIDEPRESSANTS IN UNIPOLAR AND BIPOLAR NON-RAPID-CYCLING DEPRESSION

A. Tundo, F. Marchetti, I. Lega, P. Cavalieri, L. Borgioni
Institute of Psychopathology, Rome, Italy

The use of antidepressants (ADs) in bipolar depression is controversial. The aim of this study was to explore whether ADs work in acute bipolar non-rapid-cycling depression (BPD) as well as they do in unipolar depression (UPD), and what is the switch rate and the risk for suicide related to short-term treatment with ADs in BPD. We reviewed medical records of outpatients consecutively treated for a major depressive episode associated with recurrent major depressive disorder (n=190) or bipolar I (n=55) or bipolar II (n=54) non-rapid-cycling disorder. All patients were treated with ADs; bipolar patients were given mood stabilizers too. No difference was found in AD class, mean prescribed dose and augmentation strategies between unipolar and bipolar depressed patients. The remission rate was the same in both groups and no case of chronicity was recorded. The median time required to achieve remission was 8 weeks in bipolar and 4 weeks in unipolar patients ($p<0.001$). In bipolar patients, the switch rate was 19% and suicidal attempts occurred in 2 patients. Our results suggest that ADs associated with mood stabilizers are effective and safe in the short-term treatment of bipolar non-rapid-cycling depression. Bipolar patients may need a longer time for remission than unipolar patients because of the concomitant use of mood stabilizers.

PO1.144.
THE USE OF ANTIDEPRESSANTS IN BIPOLAR DISORDER: AN OVERVIEW

V. Salvi, G. Maina
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Whether to use or not antidepressants in the treatment of bipolar disorder is a matter of debate. Antidepressant use has been associated with manic switch and cycle acceleration; therefore many researchers have discouraged their use in bipolar depression. Furthermore, the recently published STEP-BD effectiveness study has not showed any superiority of antidepressants over placebo, arguing against their efficacy in the treatment of bipolar depression. Nevertheless, many clinicians continue to employ antidepressants, especially in the management of severe depression unresponsive to mood stabilizers alone. Randomized, controlled studies have demonstrated that antidepressants are efficacious in the treatment of bipolar depression in some populations of patients. On the other hand, the risk of manic switch, although not totally countered, appears to be strongly reduced when antidepressants are given in combination with a mood stabilizer, and when new generation antidepressants are preferred over old tricyclics. Finally, some studies showed that the continuous use of antidepressants after the remission of a major depressive episode helps to prevent depressive relapses without causing a significant increase in manic relapses. In conclusion, there seems to be a place for antidepressants in bipolar disorder, although their use should be evaluated on a case-by-case basis and they should always be administered with a concurrent mood stabilizer. Studies enrolling patients with bipolar depression presenting specific depressive symptoms such as anergia and retardation and, on the opposite side, anxiety and agitation might help physicians in making the choice whether to prescribe or not antidepressants.

PO1.145.
BIPOLAR DISORDER WITH A DEPRESSIVE ONSET DIAGNOSED AND TREATED AS UNIPOLAR DEPRESSION: A DESCRIPTIVE STUDY

C. Bonilla, M. Blanco, C. Martínez de Hoyos, H. Díaz Moreno
Hospital Universitario de Alcalá de Henares, Madrid, Spain

Bipolar disorder is defined by the occurrence of depression and (hypo)mania, but in the long-term evolution of the disease depressive episodes are usually more common than manic ones, and the first episode is often depressive, leading to a diagnosis of unipolar major depression. We carried out a descriptive study on patients admitted to our acute care unit during 2008 with a diagnosis of bipolar disorder. Out of these patients, 27% had had an initial depressive episode, diagnosed as unipolar depression and treated with antidepressant monotherapy (without the association of a mood stabilizer) for more than 10 weeks. Of these patients, 83.4% had been treated with tricyclic antidepressants and/or venlafaxine. Clinicians should be aware of the need to differentiate as early as possible bipolar vs. unipolar depression.

PO1.146.
THE RELATIONSHIP BETWEEN DOSES AND EFFECTS OF SULPIRIDE AS AN ANTIDEPRESSANT

M. Kishi, Y. Kishi
Yutaka Clinic, Osaka, Japan

Sulpiride is a selective antagonist of D2 dopamine receptors. It is widely prescribed in Japan for the treatment of depression. Although it is recommended that doses in depression treatment be lower than those in schizophrenic disorders, it is known that the penetration of sulpiride through the blood brain barrier (BBB) is poor. We investigated the relationship between doses and effects of sulpiride prescribed for depressive patients in our clinic. Effective doses peaked at 1.8mg/kg/day. Hyperprolactinemia was seen in 97% of patients, some of which was induced by very low doses. A single oral dose (50 mg) of sulpiride in healthy volunteers induced hyperprolactinemia with peak values at 4 hours. Low doses of sulpiride may exert their anti-depressive effects through alternate pathways and one of candidates is a prolactin pathway. Recently prolactin has been proved to have an anti-stress effect in rodents. The release of prolactin is tonically inhibited by the hypothalamus, with dopamine acting as the prolactin release-inhibiting factor. D2 dopamine receptor blockade at the level of the median eminence induces prolactin secretion from the anterior pituitary lactotorphs. We hypothesize that the anti-depressive mechanisms of sulpiride could be explained by the dopamine D2 receptor blockade at the level of the median eminence, resulting in the elevation of prolactin.

PO1.147.
TOLERABILITY AND EFFICACY OF THE COMBINATION OF AMISULPRIDE WITH ANTIDEPRESSANTS IN PATIENTS WITH DEPRESSION

E. Ceskova
Department of Psychiatry, Medical Faculty of Masaryk University and Faculty Hospital Brno, Brno-Bohunice, Czech Republic

The tolerability and efficacy of the combination of amisulpride with whatever antidepressant has been followed for 3 months in 3178 outpatients with depression. A total of 4463 side effects in 1624 patients were observed. 3719 side effects (83.3%) were evaluated as mildly severe, 669 (15.0%) as moderately severe and 75 (1.7%) as severe. The most frequently observed side effects were weight increase, headache, fatigue and somnolence. Only few prolactin-dependent side effects were observed (6.3% of all side effects in 8.8% of patients). The combination of amisulpride with selective serotonin reuptake inhibitors, particularly citalopram, was evaluated as effective (contrary to the combination with tricyclic antidepressants) and well tolerated.

PO1.148.
BUPROPION EFFICACY IN MAJOR DEPRESSIVE DISORDER WITH MELANCHOLIC FEATURES

D. Vasile, O. Vasiliu, D. Ojog
Department of Psychiatry, "Dr. Carol Davila" Emergency Military Central Hospital, Bucharest, Romania

Bupropion is a dual antidepressant with proven efficacy vs. placebo in treating depression and a good tolerability profile. Major depression with melancholic features is a challenge for clinicians. Bupropion could be an adequate choice for this mood disorder, because of its ability to stimulate dopamine and norepinephrine neurotransmission. This study aimed to assess the efficacy of bupropion in treating major depressive disorder with melancholic features. We studied 17 patients, 9 males and 8 females, mean age 36.2 years, admitted to our department for major depressive disorder with melancholic features (according to DSM-IV-TR criteria), using Hamilton Depression Scale 21 items version (HAMD-21), Global Assessment of Functioning Scale (GAF) and Clinical Global Impression (CGI). Patients were evaluated at baseline and every 2 weeks for a month and every 4 weeks after that, for another 5 months. Inclusion criteria were HAMD-21 >24, CGI>4, GAF<70, patients over 18 and under 65 years. Exclusion criteria were somatic or psychiatric comorbidity, personal history of therapeutic non-compliance. Patients treated with bupropion had a significant improvement at week 4, compared to baseline ($p<0.01$), as reflected by HAMD-21 (-10.5 points), GAF (+15.5 points) and CGI (-1.8 points) scores. The improvement was maintained at week 24, on all three scales ($p<0.01$). There was no drop-out and the adverse events were mild and transient. In conclusion, bupropion seems to be a good choice in the treatment of depression with melancholic features, as both theoretical background and clinical evidence suggest.

PO1.149.
VENLAFAXINE SAFETY DURING PREGNANCY: AN ANALYSIS OF THREE CASES

S. Sanzovo, G. Salce, C. Rosso
Department of Mental Health, Montebelluna, Treviso, Italy; Italian Society of Sexology and Sexual Psychopathology

Little is known concerning possible hazards of use of antidepressant drugs with noradrenergic and serotonergic activity during pregnancy. We studied three cases of women assuming venlafaxine (75-150 mg daily) for major depression who could not reduce the dosage because of depression symptoms. Only one used benzodiazepines at the time of delivery. The rate of preterm birth was not increased, and there were no neonatal pathological symptoms. The Apgar score was 10 in all the newborns. The decision to continue or to stop antidepressant treatment during pregnancy remains a current challenge for clinicians. When indicated, antidepressant treatment may be continued until the end of pregnancy to maintain optimal maternal mental health and function and to prevent maternal postnatal decompensation and disturbances of early mother-infant interactions. Our data indicate that venlafaxine is not teratogenic, but larger prospective cohort studies are needed to better assess the risk/benefit ratio of venlafaxine treatment during pregnancy.

PO1.150.
WEIGHT GAIN AND ANTIDEPRESSANTS: A COMPREHENSIVE REVIEW AND META-ANALYSIS

A. Serretti, L. Mandelli, D. De Ronchi
Institute of Psychiatry, University of Bologna, Italy

Weight gain is a frequently adverse event observed with antidepressants (ADs) in mood disorder patients. Overweight and obesity are associated with increased risk of developing diabetes mellitus, hyperlipidemia, hypertension, coronary artery disease, and metabolic syndrome. ADs' effect on weight varies depending on specific AD administered and also on specific AD class. We conducted a comprehensive review of the literature regarding the weight gain associated with antidepressants and performed a meta-analysis for each antidepressant drug. We here report preliminary findings obtained on 103 selected published studies. We tested each individual drug vs. placebo in studies with both a short (4-16 weeks) and long (at least 6 months) follow-up, using the Cochrane Review Manager software. Among selective serotonin reuptake inhibitors (SSRIs), fluoxetine and paroxetine are associated with weight loss in the short-term period of treatment, but in the long term fluoxetine is not different from placebo and paroxetine induce a significant increase of body weight. Instead, sertraline seems not to induce weight gain, neither in the short nor in the long period. Citalopram induces a small weight increase, while fluvoxamine a significant increase but only in the long-term period. Nevertheless, tricyclics (except imipramine) and mirtazapine induce more weight gain than SSRIs, particularly amitriptyline.

PO1.151.
USE OF ANTIDEPRESSANT DRUGS DURING PREGNANCY AND RISK OF SPONTANEOUS ABORTION: A SYSTEMATIC REVIEW

G. Santone, G. Ricchi, D. Rocchetti, S. Tofani, C. Bellantuono
Psychiatric Unit, Department of Neuroscience, Polytechnic University of Marche, United Hospitals of Ancona, Ancona, Italy

A recent systematic review has documented that exposure to the majority of selective serotonin reuptake inhibitors (SSRIs) is not associated to risk of major malformations. The aim of the present study was to review the literature concerning the rate of spontaneous abortion (SA) in pregnant women taking antidepressant drugs (ADs). PubMed, Toxline, EMBASE, and the Cochrane library were searched for the years January 1980 - March 2008 to identify studies assessing the risks of SA in women taking ADs. Retrieved papers were also searched. The search identified 10 prospective studies adopting as control group both pregnant women unexposed to drug or exposed to non-teratogenic drugs or to placebo. Only 3 papers reported a significantly higher risk of SA in women exposed to fluoxetine, bupropion, and to different classes of ADs, including SSRIs, MAOIs, and bupropion. The other studies showed no significant differences in rates of SA between women exposed to different ADs and SA. These results do not allow to draw definitive conclusions about the risk of SA in women taking ADs during pregnancy. Among the different ADs, only bupropion presents a significantly higher risk of SA. For fluoxetine, data are still controversial. Further studies are needed to establish risk for other ADs.

PO1.152.
THE METABOLIC EFFECTS OF THE ACUTE ADMINISTRATION OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS

E. Pierantozzi, L. Padula, L. Bossini, M. Tavanti, A. Fagiolini, P. Blardi, A. De Lalla, P. Castrogiovanni
Department of Neuroscience, Psychiatry Division, University of Siena, Italy; Department of Clinical Pharmacology, University of Siena, Italy; Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

Weight gain occurring during psychopharmacological treatment is a frequent side effect that reduces compliance. Older antidepressants (tricyclics and MAO inhibitors) were associated with weight gain as a side effect, whereas newer agents, like the selective serotonin reuptake inhibitors (SSRIs), may be associated with an early minimal weight loss, only to be followed by long-term weight gain. Leptin and adiponectin are proteins synthesised in the adipose tissue, which modulate food intake and energy expenditure. Several studies show that psychiatric drugs can have effects on plasma levels of leptin and adiponectin. Aim of our study was to evaluate whether SSRIs may produce changes on metabolic parameters. We investigated 9 outpatients with mood or anxiety disorders, drug-naïve at baseline (T0), who received six months (T1) of continuous treatment with different types of SSRIs (paroxetine, sertraline and citalopram), and were checked for changes in body weight, waist circumference and plasma levels of leptin and adiponectin after six months of SSRIs administration. Exclusion criteria were treatment with drugs with a predictable impact on body weight; comorbidity with any diseases known to modify body weight, resting metabolic rate and eating behavior. The mean age of the 9 patients was 35.8 ± 11.2 years. No significant change was observed after treatment in metabolic paramaters, i.e., body weight ($t=1.721$; $df=8$; $p=0.124$), waist circumference ($Z=-1.334$; $p=0.182$), leptin ($Z=-.415$; $p=.678$), and adiponectin levels ($t=1.485$; $df=8$; $p=0.176$).

PO1.153.
THE EFFECT OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS IN HEALTHY SUBJECTS

U. Knorr, L.V. Kessing
Department of Psychiatry, Rigshospitalet, University Hospital of Copenhagen, Denmark

Treatment with selective serotonin reuptake inhibitors (SSRIs) may have positive effects not only in patients with depression or other disorders, but also in healthy persons who do not fulfil criteria for a psychiatric disorder. This study aimed to critically evaluate the effect of SSRIs in healthy persons. A systematic review was conducted of all randomised multiple-dose, placebo-controlled trials on the effect of treatment with a SSRI for at least 1 week in healthy persons published between 1966 and May 2008. Studies were evaluated with characterisation of factors that may influence outcome and with quality assessment according to the Consort Statement guidelines. A total of 27 trials including six different SSRIs and 84 different outcome tests were identified. The effect of SSRIs showed divergence on the tests, presumably due to methodological issues. Specifically, no trial tested the effect of SSRIs in healthy persons with a family history of affective disorder. Few presented information on factors that may influence outcomes such as age, gender, family history of psychiatric disorder, drug levels and ethnicity, and none fulfilled principles of conducting and reporting randomised controlled trials according to

the Consort Statement guidelines. Results from studies on the effect of SSRIs in healthy persons are severely influenced by a number of methodological drawbacks that may explain their diverging findings, thus making it impossible to estimate the effect of SSRIs on healthy persons.

PO1.154. DURATION OF DRUG THERAPY IN PATIENTS WITH BIPOLAR DISORDER

J. McCombs, V. Ganapathy, D. Stafkey-Mailey
School of Pharmacy, University of Southern California, Los Angeles, CA, USA

This study aimed to compare time to all-cause discontinuation (TTAD) across drug therapies for patients with bipolar disorder (BD). Three years of data from a commercial health plan were used to identify non-institutionalized patients with BD, but no history of schizophrenia. Patients initiating treatment using antipsychotics, mood stabilizers or antidepressants were included. Episodes were divided into three categories: restarting treatment after a break in drug therapy >15 days using a drug used in the previous episode, switching therapy with or without a break in treatment, and augmentation therapy. First observed episodes were excluded. Ordinary least squares (OLS) regression models were estimated for TTAD adjusting for age, gender, drug use history, prior medical care use, and diagnostic mix. Augmentation constituted 59% of all episodes (n=105,440), but only 20% of all episodes included an antipsychotic. Augmentation episodes exhibited significantly longer TTAD initial therapy than restart or switching episodes, especially when TTAD was measured over all BD-related therapies. Patients initiating therapy using 2 or more drugs achieved longer TTAD. Patients using quetiapine, ziprasidone and aripiprazole achieved longer TTAD relative to TAP in restart (+10 to +25 days), switching (+13 to +23 days) and augmentation episodes (+25 to +45 days) ($p<0.05$ for 7 of 9 estimates). TTAD for patients with bipolar disorders varies significantly with treatment history and the initial therapy used with ziprasidone, aripiprazole or quetiapine exhibiting longer TTAD that TAP.

PO1.155. POST-TREATMENT COSTS FOR PATIENTS WITH BIPOLAR DISORDER

J. McCombs, V. Ganapathy, D. Stafkey-Mailey
School of Pharmacy, University of Southern California, Los Angeles, CA, USA

This study aimed to compare one-year cost across drug therapies for patients with bipolar disorders (BD). Three years of commercial health plan data were used to identify non-institutionalized patients with BD with no history of schizophrenia. Patients initiating treatment using antipsychotics, mood stabilizers or antidepressants were included. Episodes were divided into three categories: restarting treatment after a break in drug therapy >15 days using a drug used in the previous episode, switching therapy with or without a break in treatment, and augmentation therapy. First observed episodes were excluded. Ordinary least squares (OLS) regression models were estimated for cost adjusting for age, gender, drug use history, prior medical care use, and diagnostic mix. Total cost ranged from $18,983 (olanzapine) to $24,059 (ziprasidone). Augmentation episodes were more costly than restart episodes (+$6461, $p<0.0001$) or switching episodes (+$4,285, $p<0.0001$). Restart episodes using an atypical antipsychotic (AAP) were more costly relative to restart episodes using typical antipsychotics (TAP) and the estimate for quetiapine was significant (+$2,353, $p<0.05$). Augmentation episodes using an AAP were more costly relative to TAP, and significantly so for quetiapine (+$3,043), ziprasidone (+$3,505), risperidal (+$2,003) and aripiprazole (+$2,813). However, most AAPs achieved significantly lower total costs relative to TAP for switching episodes [range: -$1,488 for ziprasidone ($p>0.05$) to -$6,398 ($p<0.0001$) for olanzapine]. In a commercially-insured population, AAPs are only associated with lower total post-treatment costs in BD patients who switch therapies.

PO1.156. EVALUATION OF LITHIUM DETERMINATION USING THREE ANALYZERS

M. Aliasgharpour, H. Hagani
Food and Drug Control Research Laboratories of Iran; Iran University of Medical School, Tehran, Iran

Lithium remains an important substance in the treatment of manic depressive disorders and its relatively narrow therapeutic range requires laboratories to monitor its serum concentration carefully. We evaluated lithium measurement using three different analyzers: flame emission (FES), flame atomic absorption spectroscopy (FAAS) and ion selective electrode (ISE). Within day coefficient of variation (%CV) was ≤1.5% for FES and FAAS, and 1.9% for ISE. Between days %CV was lower for FES than for FAAS and ISE (1.3% vs. 2.2% and 2.3%). The percent recovery of added lithium was higher for ISE than for FASS and FES (103.4% vs. 96.2% and 94.6%). Comparing Li/ISE results (x) with the FAAS results (y) gave the following equation: $y = 0.95x - 0.014$ ($r=0.982$). The equation for the results of Li/FPH with the FAAS was $y = 0.98x + 0.016$ ($r=0.999$). We also obtained a higher average lithium concentration for patient's serum samples (n=16) measured by ISE than for FAAS and FES (0.825±0.30 vs. 0.704±0.26 and 0.735±0.19). Paired t-test result revealed a significant difference ($p<0.001$) for patient sera analyzed with FAAS and ISE. We conclude that the choice between the two flame methods for serum lithium determination is arbitrary. However, FES analyzer appears to be an attractive and routine alternative for lithium determination, because of its cost and ease of performance.

PO1.157. THE ROLE OF GENETIC VARIATION OF BDNF GENE IN ANTIDEPRESSANT-ASSOCIATED MANIA IN BIPOLAR DISORDER

A.A. Ferreira, F.S. Neves, G.J. Pimenta, M. Mello, M.A. Romano-Silva, D.M. Miranda, L.A. Marco, H. Correa
Department of Mental Health, Faculty of Medicine, Federal University of Minas Gerais-UFMG, Belo Horizonte, Brazil

The occurrence of mania during antidepressant treatment is a key issue in the clinical management of bipolar disorder. Brain-derived neurotrophic factor (BDNF) has been implicated in the pathogenesis of mood disorders. Moreover, antidepressants increase the expression of BDNF, and its overactivity may be involved in the mechanism of development of the manic state. The aim of the present study was to test the influence of BDNF gene alterations in antidepressant-associated mania in bipolar patients. A case-control study was performed to analyse genotype and allele frequencies for the BDNF polymorphisms between two groups: 37 patients with antidepressant-associated mania (AAM+) and 55 patients without antidepressant-associated mania (AAM-). No significant differences were found between AAM+ and AAM- groups. Our results do not support the BDNF gene link to antidepressant-induced mania, like a previous study with a smaller sample has already suggested.

PO1.158.
THE ROLE OF 5-HTTLPR POLYMORPHISM IN ANTIDEPRESSANT-ASSOCIATED MANIA IN BIPOLAR DISORDER

A.A. Ferreira, F.S. Neves, F.F. Rocha, G. Silva, M.A. Romano-Silva, D.M. Miranda, L.A. Marco, H. Correa
Department of Mental Health, Faculty of Medicine, Federal University of Minas Gerais-UFMG, Belo Horizonte, Brazil

The occurrence of mania during antidepressant treatment is a key issue in the clinical management of bipolar disorder (BD). The serotonin transporter gene is a candidate to be associated with antidepressant-associated mania (AAM) in some patients. We performed a case-control study to compare 5-HTTLPR genotype and allelic frequencies between 43 patients with a DSM-IV diagnosis of BD, with at least one manic/hypomanic episode associated with treatment with proserotonergic antidepressants (AAM+) and 69 unrelated, matched bipolar patients, who had been exposed to proserotonergic antidepressants without development of manic symptoms (AAM-). Furthermore, we performed this comparison between a subgroup of 23 AAM+ patients that, when they presented AAM, were not using a mood stabilizer and 25 AAM- patients who used antidepressant without the concomitant use of a mood stabilizer. 5-HTTLPR genotyping was performed using PCR. No significant differences were found between AAM+ and AAM-. Within the subgroups, our results show that S-carriers (LS+SS genotypes) are more prone to develop a manic/hypomanic episode associated with antidepressant (p=0.017). The 5-HTTLPR polymorphism may be considered a predictor of abnormal response to antidepressant in patients with BD, but this action is influenced by the presence of a mood stabilizer. Such observations reinforce the idea that a correct diagnosis of bipolarity before the beginning of the treatment is essential, mainly for S-carriers patients.

PO1.159.
DECREASED BRAIN SEROTONIN TRANSPORTER BINDING IN THE EUTHYMIC STATE OF BIPOLAR I BUT NOT BIPOLAR II DISORDERS: A SPECT STUDY

Yuan-Hwa Chou, Shyh-Jen Wang, Chun-Lung Lin, Wei-Chung Mao, Shin-Min Lee, Chia-Chieh Chen
Taipei Veterans General Hospital and National Yang Ming University, Taipei; Armed Forces General Hospital and National Defense Medical Center, Taoyuan; Tri-Service General Hospital and National Defense Medical Center, Taipei; Yu-Li Hospital, Department of Health, Executive Yuan and National Defense Medical Center; Institute of Nuclear Energy Research, Lung-Tan, Taoyuan, Taiwan

Previous positron emission tomography studies have demonstrated that serotonin transporter (SERT) binding in the midbrain is decreased in the depressive state of bipolar disorder (BD). The aim of this study was to assess SERT binding in the midbrain of BD patients in a euthymic state. Twenty-eight healthy controls and 24 patients in a euthymic state of medicated BD were recruited. Euthymic state was defined as a Montgomery-Asberg Depression Rating Scale score less than 10 and a Young Mania Rating Scale score less than 7 within an eight-week period. Single photon emission computed tomography with the radiotracer ^{123}I-ADAM was used to measure SERT binding in the midbrain. An equilibrium ratio model was used for data analysis. Specific uptake ratio (SUR), which represents availability of SERT binding in the midbrain, was the primary measurement outcome. The averaged SURs were not different between healthy controls and patients in the euthymic state of medicated BD (p=0.27). However, the averaged SURs were significantly lower in BD I patients compared with BD II patients (p=0.012). One-way analysis of variance with a Bonferroni post-hoc test demonstrated the SURs were still significantly lower in BD I patients compared with BD II patients (p=0.048) and normal controls (p=0.05). The decreased SURs in BD I patients were well correlated with duration of illness (R=-0.742, p=0.014), but there were no correlations with age, number of hospitalizations or duration of treatment. Our findings demonstrate that there is differential biological regulation in BD I and BD II patients after stable treatment, which may support the existence of a dichotomy between BD I and BD II.

PO1.160.
ASSOCIATIONS BETWEEN GENE POLYMORPHISMS, ENDOPHENOTYPES FOR DEPRESSION AND ANTIDEPRESSANT TREATMENT

U. Knorr, M. Vinberg, L.V. Kessing, U. Gether
Center for Pharmacogenomics, Faculty of Health Sciences, University of Copenhagen, Denmark

The endophenotype concept has emerged as a strategic tool in neuropsychiatric research. An endophenotype could be any quantifiable component in the genes-to-behaviours pathways distinct from psychiatric symptoms. Identification of endophenotypes has for some years been a focus in the research of depression. In parallel to classification of psychiatric diseases, endophenotypes are validated by specificity, state independence, heritability, familial association, cosegregation and biologically and clinically plausibility. We are conducting a randomised, controlled trial to study treatment effects on possible endophenotypes for depression: 80 high-risk first-degree relatives of depressed patients are allocated to arms of either escitalopram 10 mg or placebo for four weeks. Subjects are evaluated by the SCAN and SCID interviews and Hamilton Depression and Anxiety Rating Scales. The subjects perform self-rating of mood, personality, aggression, stress, sleep and pain. A neuropsychological battery is applied. Neuroendocrinology is evaluated by the combined dexamethasone corticotropin-releasing hormone test. Blood screen for basic health parameters, gene polymorphisms, immunological parameters, proteomics and plasma drug concentration are conducted. Forty subjects have been randomised for the study. This is the first study to evaluate the effect of SSRI treatment on possible endophenotypes for depression in healthy first-degree relatives of depressed patients. The study might add to the development of improved preclinical models in which depression is classified according to endophenotypes prior to specific nosological classes.

PO1.161.
TRISMUS INDUCED BY FLUOXETINE

A.S. Filho, D.L.B. Carvalho, V. Tumas, L.A.B. Hetem, M.C.S. Freitas, J.A.S. Crippa
Department of Neuropsychiatry and Medical Psychology, Faculty of Medicine, University of São Paulo. Ribeirão Preto; Faculty of Medicine, University of Cuiabá, Brazil

We report the case of a 56-year-old male patient diagnosed with generalized anxiety disorder and moderate major depressive episode. Treatment with fluoxetine was started and dose was increased until 40 mg/day, with good improvement of anxious and depressive symptoms after 8 weeks of treatment. The patient, however, complained that his jaw was "stuck". It seemed that his muscles did not respond properly. This malaise was worse at the end of the day and there was pain during mastication. He was referred to a speech therapist and a dentist

for evaluation and a diagnosis of trismus was made. Treatment with fluoxetine was discontinued after 3.5 months of treatment, with a progressive improvement of the mandibular symptoms and total remission two weeks after interruption of the medication. Trismus is a painful dystonic contracture of the mandibular muscles, with limitation of the ability to open the mouth. In the present case there was a clear temporal relation between the use of fluoxetine and the beginning and remission of the symptoms. The pathophysiological mechanism by which fluoxetine may induce changes in movement is possibly related to the interaction of serotoninergic and dopaminergic pathways in the basal ganglia.

PO1.162.
ACTH AND CORTISOL IN ANTIDEPRESSANT RESPONDERS AND NON-RESPONDERS WITH MAJOR DEPRESSIVE DISORDER

S.I. Han, Y.W. Jeon, E.J. Park
Department of Psychiatry, Incheon St. Mary's Hospital, Catholic University of Korea, Incheon, Korea

Depressed mood has been associated with increased hypothalamic-pituitary-adrenal (HPA) axis function. The present study assessed plasma ACTH and cortisol in antidepressant responders and non-responders with major depressive disorder (MDD) at baseline and 4 week follow-up. Sixteen patients with MDD (M=3, F=13) from an outpatient clinic were recruited. We administered the Hamilton Rating Scale for Depression (HRSD) and the Montgomery Åsberg Depression Rating Scale (MADRS) and assessed plasma ACTH and cortisol before and after 4-week treatment with antidepressants. We classified as responders those patients whose HRSD total score decreased more than 50% from baseline or was less than 10 at the 4-week assessment. Eight patients were classified as responders and eight as non-responders. There was a significant effect of antidepressant treatment on the cortisol ($p<0.01$) and ACTH ($p<0.05$) levels. Cortisol and ACTH levels were decreased compared to pretreatment in responders, but increased in non-responders.

PO1.163.
PREVENTION OF ADOLESCENT MAJOR DEPRESSION

L. Karlsson and the CWS-A-Fin Study Group
Department of Mental Health and Alcohol Research, National Public Health Institute, Helsinki, Finland

The incidence of major depression (MDD) peaks between 15 and 18 years. Although prevention of depression is difficult due to its multifactorial etiology, the Adolescent Coping with Stress (CWS-A) course has been promising in the few studies conducted on targeted prevention of adolescent MDD. However, "real life" studies outside the US have been scarce. We aim at investigating whether the CWS-A is successful in targeted prevention of adolescent MDD and the role of selected moderators and mediators for the outcome. The feasibility of the intervention as part of general school health care in Finland is analyzed. Adolescents at risk for MDD are identified at school health care by using BDI-13 as screen. In addition to the intervention group, two control groups (normal controls and treatment as usual) are gathered. The assessment includes structured diagnostic interviews and internationally validated self-report scales on cognitive style, attachment, self-esteem, temperament, and life events. The study groups derived from three centers in Finland are followed up for 36 months. Data collection has started in 2008. We expect to have a total of 600 adolescents from three centers after two years of baseline data collection.

PO1.164.
COPING STYLES IN UNAFFECTED TWINS DISCORDANT FOR AFFECTIVE DISORDER

M. Vinberg, V.G. Frøkjær, L.V. Kessing
Department of Psychiatry, Rigshospitalet, University Hospital of Copenhagen, Denmark

Life stress is a robust risk factor for later development of affective disorders, particularly in individuals at familial risk. Coping styles may influence the perceived life stress experienced by an individual and therefore also be critical in the development of affective disorders. This study aimed to examine the hypothesis that familial risk for affective disorder is associated with the use of maladaptive coping styles. 112 high-risk monozygotic and dizygotic twins with, and 78 low-risk twins without a co-twin history of affective disorder were identified through nation-wide registers and invited to participate in an extensive psychiatric evaluation including the Coping Inventory for Stressful Situations. Univariate analyses showed that the high-risk twins used more emotion-oriented ($p=0.001$) and avoidance coping ($p=0.04$) in comparison with the low-risk twins. When adjusting for gender, age, years of education, and recent stressful life events in multiple linear regression analyses, the high-risk twins still used more emotion-oriented coping ($p=0.02$) as compared to the low-risk twins. Healthy individuals with a family history of affective disorder may use maladaptive coping styles more often than individuals without such a history. Hence, the use of maladaptive coping style may represent a trait marker for mood disorder in individuals at risk of affective disorder. However, whether this vulnerability is of genetic origin, environmentally shaped or a result of a gene environment interaction is unresolved.

PO1.165.
TRANSCRANIAL DIRECT CURRENT STIMULATION IN SEVERE MAJOR DEPRESSION

R. Ferrucci, M. Bortolomasi, M. Vergari, L. Tadini, B. Salvoro, M. Giacopuzzi, M. Fumagalli, F. Mameli, S. Barbieri, A. Priori
Ospedale Maggiore Policlinico, Milan; Villa Santa Chiara Hospital, Verona; Department of Neurological Sciences, University of Milan, Italy

Though transcranial direct current stimulation (tDCS) improves patients with mild/moderate depression, its efficacy in severe major depression is unknown. This study aimed to assess the effects of tDCS in a group of patients with severe, drug-resistant depression. We studied 14 hospitalized patients aged 37-68 years, with severe major depression according to DSM-IV.TR criteria, at high risk of suicide and candidate for electroconvulsive therapy. Mood was evaluated using the Beck Depression Inventory (BDI) and Visual Analogue Scales (VAS). tDCS was bilaterally delivered by a pair of sponge electrodes to the dorsolateral prefrontal cortex (DLPFC). Anodal electrode was placed on the left DLPC and cathode electrode on the contralateral area. The stimulating current was of 2 mA intensity and was delivered for 20 minutes, twice a day, for 5 days consecutively. Because of the severity of the depression, a placebo treatment was considered not ethical. Depression scales were administered before (baseline) and after the last tDCS session on day 5 (T1) and one month after (T2). After five days of tDCS the BDI improved more than 30% ($p=0.001$). The mood improvement persisted and even increased at four (T2) weeks after treatment ended. The feeling of sadness and mood as evaluated by VAS improved after tDCS ($p=0.007$ and $p=0.036$, respectively). These data suggest that tDCS significantly improves patients with severe major depression after only five days of treatment. tDCS is a simple, promising technique that could be

useful in clinical practice as an adjuvant treatment for hospitalized patients with severe, drug-resistant major depression.

PO1.166.
VAGUS NERVE STIMULATION AND RESISTANT DEPRESSION: A SYSTEMATIC REVIEW

C. Daban, A. Martinez-Aran, N. Cruz, M. Bonin, E. Vieta
Clinical Institute of Neurosciences, Hospital Clinic, University of Barcelona, Spain

Since 2005, vagus nerve stimulation (VNS) is considered as an adjunctive for treatment-resistant depression (TRD) (unipolar or bipolar). Our objective is to give a clear overview of the safety and efficacy of the VNS by means of a systematic review. The review was made using the major databases beginning in January 2000 until April 2008. A total of 108 references were found, but only 20 add-on studies meeting the required criteria were selected for this review. Since only one double-blind randomized study was published, a meta-analysis was not feasible. Regarding the efficacy, VNS is associated to a reduction of depressive symptoms in a majority of the open studies. Unfortunately, in the only double-blind study the results are rather disappointing and inconclusive. Regarding safety, despite its invasive nature, VNS can be considered as safe and feasible. VNS therapy is an interesting new approach for the treatment of TRD. Although the results are rather promising, we must be cautious in our conclusions since the evidence is only based on open studies. Further clinical trials are needed in bipolar patients, regarding the predictors of response, the cost-efficacy and the mechanism of action to better understand and develop VNS therapy for affective disorder.

PO1.167.
FUNCTIONAL OUTCOME AFTER 12 MONTHS OF DEEP BRAIN STIMULATION FOR TREATMENT RESISTANT MAJOR DEPRESSIVE DISORDER

S.H. Kennedy, S. Rizvi, H. McNeely, P. Giacobbe, H.S. Mayberg, A.M. Lozano
University of Toronto, Ontario, Canada; St. Joseph's Hamilton Healthcare, Hamilton, Canada; McMaster University, Hamilton, Canada; Emory University, Atlanta, GA, USA

Although improvements in function are fundamental to recovery from a depressive episode, reductions of individual symptoms often precede objective increases in a patient's functional capacity. In order to assess the full utility of an antidepressant therapy, it is not only necessary to explore the rate of symptom decline, but also the trajectory for improvement across various domains of function. In 20 patients with treatment resistant major depressive disorder, measures of mental, physical, and sexual function, and neuropsychology tests that assess executive function, memory and emotional responsivity, were administered before and at various times up to 12 months after deep brain stimulation to the subcallosal ingulated gyrus. The rate and degree of functional improvement across measures was analyzed for all patients. The influence of executive function, memory and emotional responsivity and personality dimensions was also examined in relation to functional outcome. The results extend the emerging evidence base on deep brain stimulation as an alternative to existing options for treatment resistant depression.

PO1.168.
APPLYING TWO TRANSCRANIAL MAGNETIC STIMULATION SESSIONS PER DAY COULD HELP IN THE FASTER REDUCTION OF DEPRESSIVE SYMPTOMS

P. Sakkas, C. Theleritis, C. Psarros, V. Masdrakis, T. Paparrigopoulos, G.N. Papadimitriou
First Psychiatry Department, Athens University Medical School, Eginition Hospital, Athens, Greece

During the last seven years, we completed various pilot studies using repetitive transcranial magnetic stimulation (rTMS), trying to evaluate its efficiency. In this context we selected some patients suffering from drug resistant major depression, who wanted to be treated with rTMS, and gave them an intensive treatment. We raised the magnetic intensity to 110-120% of the motor threshold. We gave them about 40 trains of 20-25 Hz per session, using two electromagnetic coils. Also, we extended the overall duration of treatment to three weeks. Patients were evaluated with the Hamilton Depression Rating Scale (HDRS) at baseline as well as at the end of every week thereafter. In addition, we extended our period of clinical assessment to two more weeks, because we had an indication from some of our patients that rTMS sometimes produces a late effect. Ten patients were treated with two daily sessions (one in the morning, and another in the afternoon) for five days every week and for three consecutive weeks. Preliminary results indicate that patients who were treated with two daily sessions of rTMS had a faster reduction of depressive symptoms on the HDRS, and some of them also a faster remission of depressive symptoms, in comparison to patients treated with one rTMS session per day. Further investigations in larger patient populations should verify this preliminary result.

PO1.169.
NON-ECT TREATMENT OF CATATONIA

M. El-Shazly, M. Chandran
Department of Neurosciences, University of Birmingham; Hallam Street Hospital, Birmingham, UK

Catatonia is considered a rare and potentially lethal condition. It is a syndrome that encompasses multiple motor signs. It can be the only presenting feature in a patient with underlying multiple neuropsychiatric syndrome. It is, however, more usually associated with schizophrenia and to a lesser extent with mixed manic episodes in bipolars. Electroconvulsive therapy (ECT) is generally considered the treatment of choice for various forms of catatonia, e.g., organic, lethal and schizophrenic. The use of benzodiazepines in catatonia remains unlicensed. There are reports of the use of intravenous (i.v.) low-dose lorazepam in treating excited catatonia, while higher doses are reported to have worsened the condition. We present the treatment of four different types of catatonia (one of organic/antipsychotic induced, one of iatrogenic, one of schizophrenic and one of depressive catatonia) without the resort to ECT or i.v. medication. In all cases benzodiazepines were used, mostly during the stuporous phase. The use was judicious and time limited. Other treatment strategies were used such as withdrawing certain drugs or the introduction of others. All cases responded satisfactorily. In no case ECT was needed. We discuss these cases in detail and present a review of the literature on the use of benzodiazepines in catatonia. We present an argument for including catatonia as one of the indications for benzodiazepine use.

PO1.170.
EVALUATION OF LIOTHYRONINE EFFECT ON MEMORY IMPAIRMENT IN DEPRESSED PATIENTS UNDERGOING ELECTROCONVULSIVE THERAPY

A. Hamidia, B. Yeganeh
Modarress Hospital, Saveh, Iran

The results of some controlled double-blind studies indicate that if patients take T3 or liothyronine during electroconvulsive therapy (ECT), they will suffer less memory impairment. The purpose of this study was to assess the effect of liothyronine on memory function in patients undergoing ECT. Based on a double-blind experimental design, 40 clinically depressed women (age range 20-50) with a diagnosis of major depression, bipolar mood disorder, depressive phase or schizoaffective disorder, depressive type, who were to undergo ECT, were selected and they were randomly allocated to the experimental and the control group. The Wechsler Memory Scale-Revised (MWS-R) was administered. The experimental group took liothronine and the control group took placebo. Both groups then underwent 6 session bilateral ECT on a three times a week basis. The MWS-R was readministered at the end of the ECT treatment. The results of pre-post comparison of the scores of the two groups on WMS-R showed no significant differences in memory function. One of the causes of these results may be that the groups did not have equal variance in memory function before entering to the trial. Larger studies are warranted in order to further explore this issue.

PO1.171.
DEPRESSION RELAPSE PROPHYLAXIS WITH MINDFULNESS-BASED COGNITIVE THERAPY: A REPLICATION RANDOMIZED CONTROLLED STUDY

G. Bondolfi, F. Jermann, M. Van der Linden, M. Gex-Fabry, L. Bizzini, B. Weber Rouget, L. Myers-Arrazola, C. Gonzalez, Z. Segal, J.M. Aubry, G. Bertschy
Department of Psychiatry, University Hospital, Geneva, Switzerland; Centre for Addiction and Mental Health, University of Toronto, Canada

Mindfulness-based cognitive therapy (MBCT) is a group intervention that integrates elements of cognitive behavioural therapy (CBT) and components of mindful training to prevent depressive relapse. The effectiveness of MBCT relies on two randomized controlled trials conducted by its developers, which showed a 2-fold decrease of 1-year relapse rate in people with at least three past episodes. The present study in a French-speaking outpatient sample is the first replication trial performed independently from the MBCT founders. Sixty unmedicated patients in remission from recurrent depression (3 episodes) were randomly assigned to treatment as usual (TAU; n=29) or MBCT+TAU (n=31). Over a 14-month follow-up period, time to relapse was significantly longer with MBCT+TAU than TAU alone (median 29 and 10 weeks, respectively), although both groups relapsed at similar rates (10/29 TAU; 9/31 MBCT+TAU). Compared with TAU participants, people who benefited from MBCT and relapsed reported significantly more often that they coped with relapse in a different way than in the past.

PO1.172.
EFFECTS OF A COMPUTER-ASSISTED COGNITIVE TRAINING ON NEUROPSYCHOLOGICAL PARAMETERS, MOOD AND DYSFUNCTIONAL COGNITIONS IN DEPRESSIVE PATIENTS

N. Pfaffenberger, K. Stürz, E. Trebo, B. Holzner, M. Pircher, R. Prunnlechner, V. Günther
Department of General Psychiatry, Clinical Psychology Unit, Innsbruck University Hospital, Innsbruck, Austria

In this pilot study, a computer-assisted cognitive training programme (CAT) was administered to depressive patients. Effects on neuropsychological parameters, mood and dysfunctional cognitions were assessed. A total of 48 subjects were randomized either to a treatment or control group. The former underwent 20 sessions, 30-45 min each, of computer-assisted cognitive training, twice a week. The control group received treatment as usual. At the beginning and at the end of the training (ten weeks later), all patients completed neuropsychological tests (Benton-Test, d 2, IST-verbal learning, HAWIE-digit span, KVT, Stroop-Test) and questionnaires to assess depressive mood, thoughts, negative self communication and locus of control (FKK, ISE). Results show a significant improvement in memory parameters, attention and concentration as well as information processing speed in the treated group. Also depressive mood, as well as negative self-communication improved in that group. These results suggest that a computer-assisted cognitive training programme might have a positive influence not only on neuropsychological function but also on mood and self-communication in depressive patients. Therefore, CAT should be tested in larger controlled clinical trials.

PO1.173.
BRIEF DYNAMIC THERAPY IN THE TREATMENT OF DEPRESSIVE DISORDERS

G. Rosso, G. Maina
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

The efficacy of brief dynamic therapy (BDT) in the treatment of depression in monotherapy has already been suggested by some randomised controlled trials. According to many clinicians' opinion, the combination of antidepressants and psychotherapy should be the treatment of choice in outpatients with major depression. In the acute treatment of major depression, the provision of supplemental BDT to pharmacotherapy has been shown to be significantly more acceptable by patients and cost-effective. We recently compared the efficacy of BDT added to medication with that of brief supportive psychotherapy added to medication in the treatment of major depressive disorder: although at the end of the combined therapies (acute treatment phase), no differences emerged between the two treatment approaches, the group of patients treated with BDT showed a further clinical improvement at the end of the following 6 month continuation phase. This finding is consistent with the results of another investigation on minor depression, in which we found that BDT is an effective psychological treatment that works also after the end of treatment sessions. The present study examines the hypothesis that depressed patients who are responsive to acute phase combined treatment with BDT plus pharmacotherapy would have lower recurrence rates in comparison with patients initially treated with pharmacotherapy alone. Furthermore, we hypothesize a better symptomatic and psychosocial long-term outcome especially for patients treated with BDT and pharmacotherapy at their first depressive episode.

PO1.174.
EFFECTIVENESS OF COUNSELING BY MINIMALLY TRAINED COMMUNITY COUNSELORS FOR POST-PARTUM ANXIETY/DEPRESSION IN UNDERPRIVILEGED COMMUNITIES OF A MEGA-CITY OF PAKISTAN

N. Ali, B. Ali, I. Azam
Department of Family Medicine, and Department of Community Health Sciences, Aga Khan University, Karachi, Pakistan

Post-partum women are known to suffer from anxiety/depression, and are reluctant to accept pharmacotherapy for fear of exposing their neonates to drugs. This study assesses the benefit of counseling from minimally trained community health workers in reducing post-partum anxiety/depression, the rate of recurrence and the interval preceding recurrence in two underprivileged communities. In a quasi-experimental study, community women were trained in screening for anxiety/depression, and in minimal counseling skills. Through a household survey, 113 women with postpartum anxiety/depression were identified, and screened 1, 2, 6, 12, 18, 24 and 30 months after delivery. Sixty-six women consented to counseling and were provided 8 weekly counseling sessions, followed by additional screening after 4 and 8 weeks of counseling. Out of those who declined counseling, 16 agreed to be re-screened after 4 and 8 weeks. Significant decline in level of anxiety/depression was found in both groups at 4 and 8 weeks ($p=0.001$). The counseled group fared modestly better than the non-counseled one in reduction in anxiety/depression, rate of recurrence and interval before relapse. Incorporation of minimal counseling skills in training of community health workers could improve the care of women with postpartum anxiety and depression.

PO1.175.
DISPARITIES IN DEPRESSION TREATMENT AMONG DEPRESSED NURSING HOME RESIDENTS IN THE US

S. Crystal, M. Siegel, J. Lucas, A. Akincigil, E. Kalay
Center for Pharmacotherapy, Chronic Disease Management, and Outcomes, Institute for Health, Rutgers University, New Brunswick, NJ, USA

Rates of diagnosis of depression and its treatment with antidepressants have increased in nursing homes (NHs). However, treatment rates remain higher among whites than blacks. To test whether this is due to segregation of blacks into majority-black facilities, we examined effects effects of resident race and facility racial composition on antidepressant use among nursing home residents. We used data from 42,864 white residents and 4,016 black residents of Ohio nursing homes diagnosed with depression in the 1999-2000 Long-term Care Minimum Data Set (MDS). Resident-level data were merged with NH facility characteristics from the Online Survey Certification and Reporting (OSCAR) System and Area Resource File (ARF). Logistic regression models controlled for: resident sociodemographics, physical and cognitive limitations, physical and psychiatric comorbidities, and symptom severity; facility ownership structure, size, physician and nurse staffing, quality indicators, and aggregate resident characteristics; and community characteristics. Bivariate results indicated that 76.8% of depressed whites and 72.0% of depressed blacks used antidepressants ($p<0.001$). Whites resided in facilities where on average 7.1% of residents were black. Blacks resided in facilities where on average 46.6% of residents were black ($p<0.001$). In multivariate analyses, black race was associated with significantly lower odds ($p<0.001$) of antidepressant use (OR=.878; CI .799-.964), but the proportion of facility residents who were black had no effect on these odds (OR=.803; CI .631-1.020). Results suggest that, while black NH residents were less likely than whites to be treated with antidepressants, this was not due to their segregation in majority black facilities.

PO1.176.
SELF-REPORTED RESPONSES TO MEDICARE PART D PRESCRIPTION DRUG COSTS AMONG BENEFICIARIES WITH ANTIDEPRESSANT USE

V. Fung, J. Hsu
Kaiser Permanente Division of Research, Oakland, CA, USA

The US Medicare Part D prescription drug program requires beneficiaries to choose their drug plan; plans may involve substantial cost-sharing including a coverage gap. We examined Part D plan choices and cost responses among beneficiaries receiving antidepressants. Telephone interviews were conducted in a stratified random sample of beneficiaries in an integrated delivery system (n=1040, response rate 74.9%). Subjects reported if they considered more than one plan when choosing 2006 Part D coverage, and whether, because of 2006 drug costs, they engaged in cost-coping behaviors (e.g., switching to a cheaper medication), reduced medication adherence, or experienced financial burden (e.g., went without necessities). Antidepressant use was defined as any antidepressant dispensing in the first quarter of 2006 using pharmacy data. All analyses were weighted for sampling proportions. In January-April 2006, 9.1% received antidepressants: 7.6% of beneficiaries who did not reach and 26.7% of beneficiaries who reached the coverage gap in 2006. Among antidepressant users, 16.3% considered multiple Part D plans for 2006 vs. 6.7% of non-users. After adjustment for patient characteristics and 2006 drug costs, antidepressant users were more likely to consider multiple plans (OR=4.74; 95% CI: 1.32-17.07). Forty-two percent of antidepressant users reported cost-coping behaviors, 29.7% reduced adherence to any medication, and 17.7% experienced financial burden in 2006. In multivariate analyses, antidepressant users vs. non-users had greater odds of financial burden (OR=2.66; 95% CI: 1.16-7.72). Beneficiaries with antidepressant use were more likely to consider multiple plans when choosing Part D coverage, yet had greater reports of financial burden than beneficiaries without antidepressant use.

PO1.177.
WHAT WOULD HONG KONG PATIENTS DO IF THEY ARE SUFFERING FROM DEPRESSION

T.P. Lam
Family Medicine Unit, University of Hong Kong, China

Depression is a common psychiatric illness. Depressive patients may be looked after by primary care physicians or psychiatrists. Hong Kong is slowly developing its primary care system. The current system allows patients to seek care directly from specialists without having referrals from primary care doctors. We therefore aimed to investigate the views of the general public concerning care of depressive patients. A telephone survey was conducted in March and April 2008 using a structured questionnaire. A total of 1647 adult individuals completed the questionnaire with an overall response rate of 67.6%. Of all respondents, 19.3% would consult a psychiatrist directly if they feel they have depression. Forty nine percent would consult the doctor whom they have seen for a long time, while 4.8 percent would consult any doctor. Sixteen percent would seek help from other sources instead of a doctor and 6.9% would not seek help at all. The remaining 3.5% did not know what to do or refused to answer. Males tended to consult psychiatrists more readily, while those who received

only up to primary level education tended to attend their regular doctors. Younger adults also preferred to see psychiatrists directly. However, 9.9% of males would not seek help at all, while only 4.8% of females would do so. The results showed that the general public in Hong Kong has diverse preference towards care of the depressives. Certain patient characteristics will affect their decision on whom to obtain care for depression.

PO1.178.
FACTORS ASSOCIATED WITH LIFE SATISFACTION IN A 6-YEAR FOLLOW-UP OF PATIENTS WITH DEPRESSION

H. Koivumaa-Honkanen, T. Rissanen, J. Hintikka, K. Honkalampi, K.P. Haatainen, T. Saharinen, H. Viinamäki
Department of Psychiatry, University of Kuopio; Department of Psychiatry, University of Oulu; Department of Psychiatry, Lapland Hospital District, Muurola, Finland

The major goal of mental health services should be improved global well-being. However, studies assessing factors associated with life satisfaction during recovery from depression are lacking. A 6-year follow-up of 121 depressive outpatients was done with health questionnaires at baseline, 1/2, 1, 2 and 6 years completed. Throughout the follow-up, clinical status was assessed with several psychometric scales on life satisfaction (LS), depression (Beck Depression Inventory, Hamilton Rating Scale), hopelessness (Hopelessness Scale), functional ability (Global Assessment of Functioning, Social and Occupational Functioning Assessment Scale) and general psychopathology (Symptom Checklist, SCL). Men and women did not differ in gaining life satisfaction. At baseline 77% and at the end 22% of the study subjects were dissatisfied. Life satisfaction at 6-year follow-up was associated with baseline and concurrent self assessments of health and wealth, baseline interpersonal sensitivity (SCL subscale) and concurrently having someone who loves. Satisfied people were better off in all clinical variables regardless of measurement time. Depression and hopelessness were the strongest concurrent correlates of LS at 6-year.

PO1.179.
AN ALTERNATIVE APPROACH TO TREATMENT OF DEPRESSION

Y. Ishizuka
Private Practice, New York, NY, USA

Working with the patient and his/her partner in three-way teamwork, "breakthrough intimacy" therapy helps the patient couples to think, feel, and act in such ways that their closeness will increase, provoking and overcoming waves of spikes of depression, until it disappears by exhaustion, guided by their own daily self-rating on 41 parameters that allow accurate graphic tracking of subtle changes in their personalities and dynamic mental status. Of the 1,170 patients (nearly all of them showing varying degree of depression) treated over the last 20 years, 48% reached a level of adjustment higher than their previous maximum level beyond symptom elimination. Among them, 31% reached a level up to twice, 24% reached up to three times, 20% reached up to four times, 16% reached up to five times, and 7.6% reached up to and beyond 10 times their previous maximum level according to their own daily self-rating. Of those who failed to reach their previous maximum level of adjustment before termination, 75% showed significant improvement in overall adjustment and 77% showed reduction of symptoms. Of the 52% who failed to reach their previous maximum level, the majority (75%) came to therapy without partner and remained without partner throughout therapy.

PO1.180.
COGNITIVE FUNCTIONING AND THE EFFECT OF ATYPICAL ANTIPSYCHOTICS IN BIPOLAR PATIENTS

C. Torrent, A. Martinez-Aran, C. Daban, B. Amann, M. Reinares, M. Comes, C.M. Bonnin, E. Vieta
Bipolar Disorders Program, Clinical Institute of Neuroscience, University Hospital Clinic, IDIBAPS, University of Barcelona; Hospital Benito Menni, CASM, Sant Boi de Llobregat, Barcelona, Spain

Persistent impairments in neurocognitive function have been described in patients with bipolar disorder, with potential indirect consequences on functional outcome. Different clinical factors have been described as having an important influence on cognition. There have been few studies, up to date, targeting the effect of medication. A sample of 93 euthymic bipolar patients in combination therapy treated with at least one atypical antipsychotic (15 with quetiapine, 33 with olanzapine, 45 with risperidone) were included in the study. Euthymia was defined by a score of 6 or less on the Young Mania Rating Scale, and a score of 8 or less on the Hamilton Depression Rating Scale, for at least six months. The three groups were compared on several clinical and neuropsychological variables (specially on the domains of attention, verbal memory and executive functions) and contrasted with 35 healthy controls on cognitive performance. The groups differed on subclinical symptoms and the age of onset, which was higher in patients on quetiapine treatment. After controlling for subclinical symptoms, the three groups showed significant deficits in most cognitive tasks compared to healthy controls, independently to the doses received. However, the bipolar group treated with quetiapine showed a better performance in short-term memory and recognition task assessed with the California Verbal Learning Test ($p<0.05$). The results indicate that treatment with quetiapine could be associated with a better performance in measures of verbal memory compared with olanzapine or risperidone. Given the expanded range of effective treatments for bipolar disorder, a strong consideration should be given to use drugs with a lower risk of cognitive dysfunctions. Specific randomized trials are needed to address this critical problem.

PO1.181.
THE IMPACT OF EMOTIONAL STIMULI ON COGNITIVE CONTROL AND SELECTIVE ATTENTION IN EUTHYMIC INDIVIDUALS WITH BIPOLAR DISORDER

M.Z. Dernovšek, L. Šprah, T. Novak
Educational and Research Institute Ozara Ljubljana; Scientific Research Centre, Slovenian Academy of Sciences and Arts, Ljubljana, Slovenia

Several studies have shown that mood disorders are associated with abnormalities in the processing of emotional stimuli. However, it is still unclear to which extent these problems persist across different mood states, including euthymia. We aimed to determine whether the emotional valence of stimuli influences cognitive control and selective attention in euthymic bipolar patients and whether there is an interaction between trait and state-dependent components of impulsivity. Forty-four euthymic bipolar outpatients and 34 healthy individuals performed computer administered emotional Stroop task and affective Go/NoGo task. Trait impulsivity was measured by the Barratt Impulsiveness Scale (BIS-11). Relative to the controls, euthymic bipolars displayed higher levels of impulsiveness and demonstrated a generally worse performance on emotional Stroop task and affective Go/NoGo

task. Affective Go/NoGo task revealed that euthymic bipolars displayed fewer correct responses and more erroneous performance with neutral target stimuli and within unpleasant emotional context. Identification of unpleasant stimuli and dealing with neutral stimuli context were also significantly impaired. Elevated impulsiveness scores in the bipolar group correlated significantly with diminished identification of pleasant stimuli and with neutral emotional context. Our findings suggest that the emotional valence of stimulus influences cognitive control and selective attention in euthymic bipolars compared to healthy subjects, and that there is an interaction between trait and state-dependent components of impulsivity in bipolar disorder.

PO1.182.
FUNCTIONING IN EUTHYMIC BIPOLAR PATIENTS: THE INFLUENCE OF CLINICAL AND CONTEXTUAL FACTORS

J. Sanchez-Moreno, A. Martinez-Aran, H.F. Gadelrab, M. Cabello, C. Torrent, C.M. Bonnin, J. Valle, M. Leonardi, J.L. Ayuso-Mateos, E. Vieta
Bipolar Disorders Program, Clinical Institute of Neuroscience. Hospital Clinic of Barcelona, University of Barcelona, Spain; Department of Psychiatry, Universidad Autonoma de Madrid. Hospital Universitario de la Princesa, Madrid, Spain; "Carlo Besta" Neurological Institute, Milan, Italy

Recent studies have suggested a low functioning even when bipolar patients are euthymic. In this context, the International Classification of Functioning, Disability and Health (ICF) provides the framework to describe the individual's functioning and allows the study of the interaction between patient's health status and the environmental factors involved. This is the first time the ICF model is used to describe functioning and disability in bipolar patients. Eighty-eight euthymic patients with a diagnosis of bipolar disorder (ICD-10) were included. Clinical and socio-demographic data were recorded. The outcome variable was performance qualifier based on ICF codes, representing problems associated with performing activities in the current environment. To examine the importance of clinical and contextual factors, a hierarchical multiple regression was used. The clinical variables that significantly predicted patient functioning were the number of episodes, number of depressive episodes, family history of psychiatric disorders and mild subdepressive symptoms, accounting for 34.1% of the variance of functioning ($F=2.14$, $p=0.011$). Contextual factors (environmental and personal variables), including dysfunctional attitudes and perceived social support, accounted for 17.5% of the variance ($F=3.04$, $p<0.001$), after controlling for the effect of sociodemographic and clinical variables. These findings may have implications for clinical and psychosocial interventions.

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PO1.183.
MEMORY AND ATTENTION IN EUTHYMIC PATIENTS WITH MOOD DISORDERS

V. De Queiroz, D. Pagnin, S. Pini, G.B. Cassano
Mood and Anxiety Research Group, Fluminense Federal University, Rio de Janeiro, Brazil; Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Italy

There is evidence that individuals with bipolar disorder exhibit neuropsychological impairments not only during mood episodes but also when they are euthymic. The purpose of this study was to examine memory and attentional domains in euthymic patients with bipolar I (n=15), bipolar II (n=10) and recurrent major depressive disorder (n=11), and to test the relationship between several clinical variables and memory and attentional functions. All patients completed a neuropsychological battery that included the Continuous Performance Test A-X, the Digit Symbol and the Digit Span test of the WAIS-R, the WHO/UCLA Auditory Verbal Learning Test, and the WHO/UCLA Picture Memory and Interference Test. The three patient groups presented a significant attentional and memory impairment when compared with healthy control subjects. Euthymic patients with bipolar I disorder and major depressive disorder, but not those with bipolar II disorder, had a significantly worse performance than healthy subjects in verbal learning and delayed free recall.

PO1.184.
EFFICACY OF GROUP PSYCHOEDUCATION FOR CAREGIVERS OF PATIENTS WITH BIPOLAR I DISORDER

M. Reinares, A. Rosa, F. Colom, A. Martínez-Arán, C. Torrent, J. Sánchez-Moreno, C. Daban, J.M. Goikolea, A. Benabarre, E. Vieta
Bipolar Disorders Program, Institute of Clinical Neuroscience, Hospital Clinic CIBERSAM, University of Barcelona, Spain

There is a mutual influence between bipolar disorder and the family. Although some studies highlight the efficacy of family-focused treatment added to pharmacotherapy, few studies have analysed the specific effect of working with caregiver-only groups. Since subtle differences in the treatment response between bipolar subtypes may be found, the aim of this study was to assess the impact over the illness outcome of psychoeducation focused on caregivers of bipolar I patients. This is a subanalysis of data obtained from a larger, randomized controlled trial about the efficacy of group psychoeducation for caregivers of medicated euthymic bipolar I and bipolar II outpatients in the prophylaxis of recurrences. For the current study we only selected patients who fulfilled DSM-IV criteria for bipolar I disorder. Caregivers in the experimental group (n=47) received 12, 90-minute group psychoeducation sessions. The patients did not attend any session. Caregivers in the control group (n=47) did not receive any intervention. There was a 1-year-follow-up. Psychoeducation for caregivers of patients with bipolar I disorder, when added to pharmacological treatment, carried a reduction of overall recurrences ($\chi^2=6.86$; $p=0.009$) and longer relapse-free intervals (log rank=5.30; $p=0.021$). When different types of episodes were analysed separately, the effect was significant for both the number of patients who experienced a hypomanic/manic recurrence ($\chi^2=6.03$; $p=0.014$) and the time to such an episode (log rank=6.11; $p=0.013$). The group differences in preventing depressive and mixed episodes were not significant. Psychoeducational group intervention for caregivers is a useful adjunct to pharmacotherapy in reducing recurrences, particularly mania and hypomania, in euthymic patients with bipolar I disorder.

PO1.185.
META-ANALYSIS OF MAGNETIC RESONANCE IMAGING STUDIES IN FIRST-EPISODE BIPOLAR DISORDER

A. Vita, L. DePeri
University of Brescia, School of Medicine, Brescia, Italy

Structural brain abnormalities have been frequently reported in patients with bipolar disorder (BD). However, there are some incon-

sistencies among magnetic resonance imaging (MRI) studies of both multiple and first-episode bipolar patients with respect to cerebral regional volumetric differences between BD patients and healthy controls and their relationship with clinical features of the disease. The present study aimed to determine whether patients with first-episode BD differ from comparison healthy subjects in regional brain volumes, with the purpose to understand whether and which abnormalities are present early in the course of the illness. We conducted a systematic search of structural MRI studies that reported quantitative measurements of cerebral regions in first-episode BD patients and in comparison groups. Eleven studies were identified as suitable for analysis and 4 meta-analyses were performed for 4 cerebral regions. Significant volume reduction was demonstrated for total white matter (d_{comp} values: -0.406, 95% CI -0.750 to -0.061) in BD patients, but not for whole brain (d_{comp} values: -0.239, 95% CI -0.495 to 0.018), intracranial (d_{comp} values: -0.341, 95% CI -0.736 to 0.053) and total gray matter (d_{comp} values: -0.136, 95% CI -0.512 to 0.240) volumes. The available research data indicate that some brain abnormalities are already present in first-episode BD patients. Longitudinal studies in high-risk samples and first-episode patients are needed to examine whether such abnormalities precede the appearance of symptoms, and whether other abnormalities, previously reported in samples of chronic BP patients, appear subsequently as a result of illness course.

PO1.186.
CEREBRAL MORPHOLOGICAL FEATURES ASSOCIATED TO BORDERLINE PERSONALITY DISORDER AND BIPOLAR DISORDER

R. Rossi, G. Borsci, M. Lorenzi, R. Beneduce, L. Rillosi, A. Placentino, A. Orlandini, R. Pioli, G. Rossi, G.B. Frisoni
IRCCS San Giovanni di Dio, Brescia; Poliambulanza Hospital, Brescia; AFaR, Rome, Italy

Increased attention has been directed to the possible overlap between borderline personality disorder (BPD) and bipolar disorder (BD). Neuroimaging may help to illuminate the issue of overlap between the two disorders. This study aimed to explore cerebral morphological features associated to BPD and BD. Twenty-five patients with BPD, 14 with BD and 40 age- and sex-matched healthy controls (mean age: 38±11; 43±8; 40±11 years; %female: 60%, 36%, 53%, respectively) underwent clinical assessment and magnetic resonance (MR). MR images were processed with DARTEL and analyzed with statistical parametric mapping (SPM5). Gray and white matter images were separately compared in BPD and BD vs. healthy controls to identify regions of atrophy. All of the comparisons were carried out using total intracranial volumes, alcohol and substance abuse as a nuisance covariates ($p<0.001$ uncorrected). In BPD patients, the peaks of atrophy were mainly located in frontal regions (rectal gyrus, anterior cingulate, frontal gyri) and in temporo-mesial structures (hippocampus and amygdala), bilaterally. Furthermore, BDP showed white matter atrophy in frontal and temporal regions. BD showed atrophy broadly in frontal regions, in temporal (hippocampus and amygdala, temporal gyri), parietal and occipital lobes, in thalamus bilaterally and in the cerebellum. White matter seems to be more preserved, with only few small clusters of atrophy in frontal and occipital regions. Thus, although BPD and BD show a number of areas of overlap, they present different patterns of atrophy that lead to hypothesize that BDP and BD are different clinical entities.

PO1.187.
ADULT SEPARATION ANXIETY IS ASSOCIATED WITH PLATELET 18 KDA TRANSLOCATOR PROTEIN DENSITY REDUCTION IN PATIENTS WITH BIPOLAR DISORDER

M. Abelli, B. Chelli, B. Costa, S. Pini, A. Cardini, L. Lari, C. Gesi, M. Muti, A. Lucacchini, C. Martini, G.B. Cassano
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Italy

Recent studies indicate that separation anxiety disorder (SAD) in adulthood may represent a discrete diagnostic entity worthy of attention. The majority of authors suggest that SAD is specifically correlated to panic disorder. Other authors supported the hypothesis that early SAD operates as a general vulnerability factor, increasing risk of anxiety and mood disorders in adulthood. We previously confirmed the hypothesis that SAD is associated with a broad range of psychiatric conditions, in particular with bipolar disorder (BD). In two previous studies we found platelet expression reduction of TSPO in patients with panic disorder or major depression who also fulfilled the diagnostic criteria for ASAD. This study aimed to explore whether separation anxiety might be a factor differentiating TSPO expression in a sample of patients with BD. The equilibrium binding parameters of the specific TSPO ligand [3H]PK11195 were estimated on platelet membranes from 24 adult outpatients with DSM-IV diagnosis of BD and 20 healthy controls. Patients were assessed by SCID-I, HAM-D, the Structured Clinical Interview for Separation Anxiety Symptoms (SCI-SAS-A) and the Adult Separation Anxiety Self-report Checklist (ASA-27). A significant reduction of platelet TSPO density mean value was found in BD patients. Individual TSPO density values were significantly and negatively correlated with both SCI-SAS-A ($r=-0.5413$) and ASA-27 ($r=-0.4367$) total scores, but not with HAM-D total score or HAM-D anxiety/somatization factor score. The reduction of platelet TSPO density in our sample of patients with BD was specifically related to the presence of ASAD. These data suggest that TSPO expression evaluation is a useful biological marker of ASAD.

PO1.188.
COLOR SENSITIVITY AND MOOD DISORDERS: BIOLOGY OR METAPHOR?

C. Barrick, D. Taylor, E. Correa
Towson University, Towson, MD; Emerald Health Center, Reisterstown, MD, USA

A familiar but overlooked symptom in affective disorders is patient self-report of alterations in color sensitivity. Anecdotal and empirical evidence have suggested an association between mood and color sensitivity. The purpose of this pilot study was to test three hypotheses concerning the relationship between mood disorders and color sensitivity. Using a cross-sectional survey design consisting of a sample of 120 inpatients and outpatients, color sensitivity was assessed by the patient's response to a self-report depression scale item, "I notice that everything seems gray/cloudy/drab/lacing color". Color sensitivity significantly correlated with depression in the total sample ($p=0.001$). The other two hypotheses approached significance but were not supported. These findings suggest there is evidence that color sensitivity is impaired during depression. Further research using a larger, more homogeneous sample and longitudinal design whereby measures of mood and color sensitivity are correlated before, during, and after treatment in depressed and manic patients would be justified. A study using ophthalmological instrumentation to measure color sensitivity would provide objective, "hard" evidence of the association between

color sensitivity and depression. Whether color perception is metaphorically reported by patients to describe their mood or a biological phenomenon remains to be validated. Findings seem to lend support to the conclusion that abnormalities in brain function alter retinal function.

PO1.189.
5-HTT GENOTYPE EFFECT ON PREFRONTAL-AMYGDALA COUPLING DIFFERS BETWEEN MAJOR DEPRESSION AND CONTROLS

E. Friedel, F. Schlagenhauf, P. Sterzer, S.Q. Park, A. Ströhle, M. Stoy, J. Wrase, C. Büchel, A. Heinz
Department of Psychiatry, Charité University Medicine, Berlin; Department of Neurology, University Clinic, Hamburg-Eppendorf, Germany

In major depression, prefrontal regulation of limbic brain areas may be a key mechanism that is impaired during the processing of affective information. This prefrontal-limbic interaction has been shown to be modulated by serotonin (5-HTT) genotype, indicating a higher risk for major depressive disorder (MDD) with increasing number of 5-HTT low expression alleles. Functional magnetic resonance imaging was used to assess neural response to unexpected unpleasant affective pictures in 21 unmedicated patients with MDD compared to 21 matched healthy control participants, taking into account genetic influences of the 5-HTT (SCL6A4) high and low expression genotype. Healthy controls displayed greater prefrontal activation (BA10) to unexpected negative pictures compared to patients with MDD. While in healthy controls prefrontal (BA10) activation and BA10-amygdala coupling increased with the number of 5-HTT low expression risk alleles, this effect was abolished, and even reversed, in patients with MDD. These findings suggest that increased medial prefrontal (BA10) activation and BA10-amygdala connectivity may counteract the risk for MDD in healthy carriers of 5-HTT low-expression alleles, while this protective factor is lost in patients who actually suffer from MDD.

PO1.190.
ASSOCIATION BETWEEN H111H POLYMORPHISM AND GENE EXPRESSION OF BETA-ARRESTIN 1 GENE (ARRB1) IN MAJOR DEPRESSIVE DISORDER

Min-Soo Lee, Hun Soo Chang, Rhee-Hun Kang, Hwa-Young Lee, Jong-Woo Paik, Yoo-Jung Jeong
Korea University and Kyunghee University, Seoul, Republic of Korea

Beta-arrestin 1, which is encoded by ARRB1 gene located in chromosome 11q13, plays a critical role in desensitization of G protein-coupled receptor by interfering in G protein receptor interaction, which has been known to be involved in the pathophysiology of mood disorders and in the mechanism of action of antidepressant and mood-stabilizing treatments. As a candidate gene approach, we investigated the association between ARRB1 gene polymorphisms and responsiveness to mirtazapine treatment in Korean patients with major depression. We discovered 39 SNPs on ARRB1 gene using direct sequencing for 24 Koreans. Among them, 7 SNPs were selected for large scale genotyping in 298 patients with depression regarding the location, minor allele frequencies and linkage disequilibrium of SNPs. The proportion of minor allele carrier on ARRB1 H111H locus was higher in responders than in non-responders at 2 weeks of mirtazapine treatment (p=0.028). The decreases of HAM-D score were smaller in patients possessing the minor allele than in those having the major allele on ARRB1 H111H locus at both 1 and 2 weeks of mirtazapine treatment (p=0.012 and p=0.003, respectively). Peripheral blood mononuclear cells possessing the T allele on ARRB1 H111H showed higher levels of beta-arrestin 1 mRNA expression compared with those having the C allele. These results suggest that ARRB1 polymorphism may affect the responsiveness of patients with major depression to mirtazapine treatment and that the determination of genotype on ARRB1 H111H may be useful as a genetic marker for predicting response of patients with major depression to mirtazapine and for planning treatment strategies.

PO1.191.
THE ASSOCIATION OF SEROTONIN 1A RECEPTOR POLYMORPHISM WITH RESPONSE TO MIRTAZAPINE IN MAJOR DEPRESSIVE DISORDER

Min-Soo Lee, Hwa-Young Lee, Rhee-Hun Kang, Hun Soo Chang, Jong-Woo Paik, Hyang-Mi Kim
Korea University and Kyunghee University, Seoul, Republic of Korea

The serotonin 1A receptor (HTR1A) plays a key role in the serotonin system and in the mechanism of action of noradrenergic and selective serotonergic antidepressants (NaSSA). In this study, we focused on the association between mirtazapine response and serotonin receptor 1A genetic polymorphism. We enrolled 366 Korean patients with major depression, who were examined using the Structured Clinical Interview for DSM-IV. The severity of depression was assessed using the 21-item Hamilton Depression Rating Scale (HAM-D-21). Only patients with a score of at least 18 on the HAM-D-21 scale entered the study. Prior to study entry, a 2-week wash-out was performed. Clinical assessments were made at baseline and after 1, 2, 4, 8 and 16 weeks of treatment. Polymorphisms on HTR1A (-1019C>G and +272G>A) were genotyped using polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) assays. The proportion of G allele carriers on HTR1A-1019C>G were lower in non-responders than that in responders at 8 weeks after initiation of mirtazapine treatment (36.2% vs. 49.0%; respectively; p=0.031, OR=2.16). In addition, at 16 weeks after treatment, the frequency of G allele carriers on HTR1A-1019C>G were lower in non-remitted than that in remitted patients (39.8% vs. 53.7%, respectively; p=0.04, OR=2.07). These results suggest that -1019C>G polymorphism on HTR1A gene may be a useful biomarker for predicting response to mirtazapine treatment in patients with major depression.

PO1.192.
PATTERNS OF CIRCULATING CYTOKINES IN PATIENTS WITH DEPRESSION: A PROSPECTIVE LONGITUDINAL STUDY

H. Wang, C. Ahrens, H.C. Friederich, V. Daniel, M. Schiltenwolf
University of Heidelberg, Germany

This study explores the differences between depressed patients at various stages of their illness and healthy controls concerning the patterns of circulating cytokines. Twenty-nine patients with an ICD-10 diagnosis of current depressive episode of at least moderate severity and a minimum score of 25 on the self-rated ADS were compared to 29 age- and sex-matched healthy controls. Serum concentrations of IL-4, IL-6, IL-8, IL-10 and TNF-α were assayed at baseline (t0) and after 10 days (t1), 3 weeks (t2) and 6 months (t3). ADS scores were assessed at t0, t2 and t3. IL-8 decreased significantly from t0 to t1 and increased significantly from t1 to t2. TNF-α increased significantly from t1 to t2 and was significantly higher at t2 and t3 than at t0. ADS scores decreased significantly at each time. These findings suggest a

suppression of the immune system in depression which is reversed with recovery.

PO1.193. MODELLING G PROTEIN-MEDIATED SIGNAL TRANSDUCTION IN IMMORTALIZED HUMAN LYMPHOCYTES IN RESPONSE TO ANTIDEPRESSANT TREATMENT: POSSIBILITIES FOR DEVELOPING PATIENT-SPECIFIC PHARMACOTHERAPY

S. Hodgkinson, J. Kirchheiner, W.P. Kaschka
University of Ulm, Germany

Perturbations in the mechanisms governing the uptake and release of neurotransmitters such as serotonin, norepinephrine and dopamine in the brain have been implicated in the aetiology of affective disorders. A number of antidepressant drugs are available that inhibit the uptake of one or more of these neurotransmitters. However, relatively little is known about the pharmacogenetic determinants of this inhibition. A better understanding of how individual patient genotypes influence the efficacy of these drugs will provide the opportunity for earlier, more targeted therapeutic interventions to be made. Immortalized human lymphocytes express a number of neurotransmitter receptors and transporters on their cell surface membrane, and thus provide a simple model system for the study of neurotransmitter uptake and release. We describe the first stages of our approach for combining mathematical modelling of the molecular processes involved in the uptake and release of serotonin, dopamine and norepinephrine by immortalized human lymphocytes, with experimental work looking at the changes in signal transduction that occur in the lymphocytes in response to a number of reuptake inhibitor antidepressants. An outline of the underlying mathematical model is provided, together with some initial findings from our experimental work. This approach provides a powerful means of testing and adapting basic mathematical models of cellular function (such as membrane transport and sequestration) using experimental data generated from the same model system.

PO1.194. FETAL GROWTH RESTRICTION AND THE DEVELOPMENT OF MAJOR DEPRESSION

H.-M. Vasiliadis, S.E. Gilman, S.L. Buka
Department of Community Health and Sciences, University of Sherbrooke, Quebec, Canada; Departments of Epidemiology and of Society, Human Development and Health, Harvard School of Public of Health, Boston, MA, USA; Department of Community Health, Brown University, Providence, RI, USA

Whether or not lower birth size is associated with a higher risk of depression in adulthood is not clear, as prior studies have reported varying results. This study aimed to test the association between fetal growth restriction and the lifetime risk of major depression and number of recurrent episodes. Study subjects (n=1101) were offspring of participants in the Providence, Rhode Island, site of the National Collaborative Perinatal Project. Cox regression was used to investigate the relation between measures of birth size and the lifetime risk of depression, and the mean number of depressive episodes was compared across categories of birth size. There was no association between low birth weight, gestational age, ponderal index, and small for gestational age and the lifetime risk of major depression, or the number of recurrent episodes. These results suggest that fetal growth restriction, as reflected by multiple measures of birth size, is not associated with the risk of a major depression or the subsequent recurrence of depressive episodes. They do not support a "fetal programming" effect in depression.

PO1.195. QUALITY OF LIFE AND PERSONALITY TRAITS MODERATE THE INFLUENCE OF SEROTONIN TRANSPORTER GENETIC VARIANTS ON DEPRESSIVE SEVERITY AND TREATMENT OUTCOME IN BIPOLAR SPECTRUM DISORDERS

L. Mandelli, M. Mazza, G. Martinotti, D. Tavian, E. Colombo, S. Missaglia, D. De Ronchi, R. Colombo, L. Janiri, A. Serretti
Department of Psychiatry, University of Bologna; Department of Psychiatry and Institute of Biochemistry and Clinical Biochemistry, Catholic University, Gemelli Hospital, Rome; Laboratory of Human Molecular Biology and Genetics, Catholic University, Milan, Italy

In the present work we aimed to test the effect of serotonin transporter gene (SLC6A4) variants on depressive outcome in combination with personal/interpersonal well-being indexes and personality traits. One hundred and thirty patients with a bipolar spectrum diagnosis were included in the sample. At intake, patients were evaluated for personality traits, depressive symptoms, quality of life (QoL) and social adjustment (SAS), and then followed for a period of 1 year under pharmacological treatment. Evaluations were repeated after 1, 3, 6 and 12 months of treatment. Four SLC6A4 variants were genotyped: SERTPR, the SERTPR A/G variant (rs25531), rs25533 and STin2 (VNTR in intron 2). Indicators of psychosocial adjustment (QoL and SAS), as well as personality traits, particularly Harm Avoidance (HA), significantly and strongly correlated with depressive severity at various stages of the follow-up. Controlling for confounders and covariates, SLC6A4 variants (SERTPR *S or *LG, rs25533 *T, STin2 *12 and the S-T-12 haplotype) were significantly associated with baseline depressive severity and poor outcome during treatment. A good QoL markedly favour subjects carrying risk variants, while a high HA showed an opposite effect, increasing depressive scores and reducing remission likelihood. These findings are a further confirmation of an influence of SLC6A4 on depression and its outcome. Most importantly, QoL and HA moderate genetic associations, suggesting an interactive effect between these variables and SLC6A4 variations.

PO1.196. ELECTROCONVULSIVE THERAPY INCREASES SERUM GLIA CELL LINE-DERIVED NEUROTROPHIC FACTOR IN DRUG RESISTANT DEPRESSED PATIENTS

Xiaobin Zhang, Zhijun Zhang, Weiwei Sha, Chunming Xie, Guangjun Xi, Honghui Zhou, Yumei Zhang
Department of Neurology, Affiliated ZhongDa Hospital of Southeast University, Nanjing; Department of Psychiatry, Affiliated WuTaiShan Hospital of Yangzhou University, Yangzhou, China

Electroconvulsive therapy (ECT) is effective for patients with antidepressant medication-resistant depression. However, the mechanisms of ECT's effectiveness for treating depression are not fully understood. We investigated if ECT operates a modulation of serum glial cell line-derived neurotrophic factor (GDNF) levels in a sample of drug resistant depressed patients. There was a significant increase of serum GDNF levels in responders to ECT (before ECT: 401.7±193.2 pg/ml; 5 weeks after starting ECT: 686.2±299.2 pg/ml; p=0.033),

whereas serum GDNF levels in non-responders to ECT did not change (before ECT: 443.0±160.5 pg/ml; 5 weeks after starting ECT: 501.4±137.9 pg/ml; p=0.135). Our results suggest that ECT may be associated with changes in serum GDNF and further support the possible involvement of GDNF in antidepressant therapies.

PO1.197.
RELATIONSHIP BETWEEN PLASMA BDNF VARIATION AND CLINICAL REMISSION IN DRUG-RESISTANT DEPRESSED PATIENTS RECEIVING ELECTROCONVULSIVE THERAPY

A. Del Debbio, C. Bianchi, I. Roncaglia, M. Catena, S. Zanello, C. Mannari, D. Marazziti, A. Piccinni, L. Dell'Osso
Department of Neuroscience, University of Pisa, Pisa, Italy

There is increasing evidence that the brain-derived neurotrophic factor (BDNF) could be involved in the mechanism of action of antidepressants. Electroconvulsive Therapy (ECT) is one of the eligible therapies for the treatment of major depression (MD) and indicated for drug-resistant MD; nevertheless, the therapeutic mechanism of ECT remains elusive. This study aimed to investigate whether remission in drug-resistant depressed patients is associated with an increase of plasma BDNF concentrations after a course of ECT. We conducted a prospective study of 16 patients with a DSM-IV diagnosis of major depressive episode, with melancholic or psychotic features. Drug resistance was defined as a failure to respond to at least three courses of antidepressant medications with adequate dose and duration. Remission was considered when HAM-D score after acute ECT treatment was ≤10. Plasma BDNF levels of depressed patients and control subjects (n=15) were measured by an enzyme-linked immunosorbent assay. The results showed that plasma BDNF concentrations significantly increased between pre- and post-ECT assessments ($p<0.01$). This change was accompanied by a significant decrease in HAM-D scores ($p<0.001$). However, while in remitters patients (n=7) plasma BDNF levels did not differ significantly from those observed in healthy control subjects starting from the fourth electroconvulsive seizure, plasma BDNF levels of non-remitters (n=9) remained significantly lower at all times. These results confirm the increase in plasma BDNF concentrations in patients receiving ECT and suggest that clinical remission may be associated with an early normalization of such levels.

PO1.198.
THE INVOLVEMENT OF ERK-DEPENDENT PROCESSES IN THE EFFECTS OF ANTIDEPRESSANT DRUGS ON BETA-ARRESTINS

M. Golan, G. Schreiber, S. Avissar
Ben-Gurion University of the Negev, Beer-Sheva, and Barzilai Medical Center, Ashkelon, Israel

Preliminary data from our laboratory indicates that chronic exposure to antidepressant drugs (ADs) results in a significant increase in activated β-arrestin1 protein levels, while causing a major decrease in the protein levels of both β-arrestin2 and functional ERK1/2. This study aims at elucidating ADs mechanism of action at the post-receptor level involving β-arrestin 1 and 2 and functional ERK1/2. C_6 glioma cells were treated chronically with various classes of ADs in the presence or absence of the MEK1/2 inhibitor U0126 or the translation inhibitor cycloheximide. Protein and mRNA levels were measured by Western blotting in the relevant cell fractions and RT-PCR, respectively. Chronic exposure to ADs resulted in a major increase of activated ERK1/2 in the nuclear fraction of the cells. Cycloheximide overturned the previously reported elevation of β-arrestin1 protein levels following ADs. ADs treatment caused an increase in β-arrestin1 mRNA levels, that was reversed by U0126. β-arrestin2 mRNA levels were unaltered using U0126 alone and significantly increased in its presence together with ADs. Surprisingly, ADs by themselves increased β-arrestin2 mRNA levels. The present findings support our assumption that, by reducing β-arrestin2 protein levels, ADs enable activated ERK1/2 translocation to the nucleus, thus increasing β-arrestin1 transcription and expression. The increase in β-arrestin2 mRNA levels following ADs treatment is in agreement with a previously published study that had demonstrated ERK1/2-dependent β-arrestin2 transcription. Taken together, these results implicate that ADs preferentially reduce arrestin2 protein levels, although under reduced ERK1/2 activity may induce a non-ERK1/2-dependent β-arrestin2 transcription pathway.

PO1.199.
GOETHE'S DEPRESSION AND (SELF-) THERAPEUTIC STRATEGIES

R.M. Holm-Hadulla
University of Heidelberg, Germany

During his life, Goethe frequently suffered from severe mood swings and melancholic phases. Besides very detailed descriptions of his melancholic feelings, he depicted complex narcissistic conflicts and relational problems. These descriptions are unique in respect to their precision and richness. This is why they are psychopathologically interesting till today. To cope with his mood swings and psychological conflicts, Goethe developed efficient psychotherapeutic strategies which fit into modern psychotherapy: acceptance of supportive relationships; behavioral modification; cognitive correction of dysfunctional attitudes and beliefs; dynamic remembering, repeating and working through; existential and creative shaping of conflicts. Goethe describes elementary principles which modern psychotherapies often derive from well-tried principles of the history of culture without consideration. Those Goethean principles may serve as a coherent fundament for the integration of eclectic, cognitive-behavioral, psychodynamic and existential approaches to psychotherapy.

PO1.200.
PSYCHOPATHOLOGY AND SUICIDE AMONG QUEBEC PHYSICIANS: A NESTED CASE CONTROL STUDY

P. Gagné, D. Bourget, J. Moamai
University of Sherbrooke and University of Ottawa, Canada

The objective of this study is to describe a psychiatric profile and characteristics of physicians who killed themselves in Quebec between 1992 and 2005. The consecutive cases of 30 physicians (6 females and 24 males) and 45 non-physicians who committed suicide were matched for age and gender and examined in a nested case control design. All subjects were judged as definite suicide by the Quebec Coroner Head Office. Consensus regarding DSM-IV diagnoses was established by two forensic psychiatrists. Results revealed that rates of all Axis I diagnoses were 80% for physicians and 93% for non-physicians at the time of suicide. Major depressive disorders were the most frequently observed pathology in both groups (63% and 64%, respectively). The physicians and non-physicians in this sample were similar in many ways. However, the physicians had issued less warning for their acts than non-physicians (20% vs. 47%, respectively). More than one third of physicians committed suicide by self-poisoning. The availability of drugs and knowledge of their effect is a professional

risk factor unique to this population. In conclusion, this research confirms the important association between psychopathology and suicide. This study is unique in that the data demonstrate that physicians who committed suicide were suffering from psychiatric disorders as frequently as non-physicians who killed themselves.

PO1.201.
A PROGRAMME OF SYSTEMATIC RECALL AFTER HOSPITALIZATION FOR A SUICIDAL CRISIS

L. Jehel, D. Morali, S. Akhounak
Psychiatry Unit, Tenon University Hospital, Paris, France

The risk of a new suicide attempt is high during the year following hospitalization for a suicidal crisis. Recent surveys reported on the usefulness of systematic recall to reduce the risk of suicide in the 6 months following an attempt. This study aims to evaluate a programme of systematic structured recall, consisting of five phone calls during the year following a hospitalization for a suicidal crisis. We also evaluate the alliance between patient and medical staff and its correlation with the outcome of the programme. Seventy-two subjects (76% female) have been recruited. The quality of the alliance is being measured by the Working Alliance Inventory. The suicidal potential (risk, emergency, lethality) and the intensity of anxiety and depression (as measured by the Hospital Anxiety and Depression subscale) are being assessed after 6 and 12 months. Preliminary data confirm the usefulness of systematic recall in reducing the suicidal potential.

PO1.202.
PREVENTION OF REPETITION OF SUICIDE ATTEMPT IN A SAMPLE OF CUBAN ADOLESCENTS

J. Velázquez-Argota
Medical University, Havana, Cuba

It is estimated that the risk of death by suicide in subjects who have previously carried out a suicide attempt is 100 times higher than in general population. We applied a model of prevention of repetition of suicide attempt in 194 adolescents attending a child psychiatry ward. The model included the routine assessment of the risk of repetition, the determination of the level of functioning, a thorough psychiatric assessment, and a cognitive-behavioural intervention when a diagnosis of depression was made. During the study period, only two subjects (1% of the sample) were re-hospitalized for a suicide attempt.

PO1.203.
CHARACTERISTICS OF SUICIDALITY IN A PSYCHIATRIC CLINIC SAMPLE IN ROMANIA

A.M. Murgulescu
Obregia Psychiatric Hospital, Bucharest, Romania

The relationship between sociodemographic and clinical data has been analysed in a sample of psychiatric patients admitted after a suicide attempt to an acute psychiatric hospital. Of the enrolled patients, 53% were male and 47% were female. Most of them were young, with ages between 30 and 40 years. Female patients had a higher educational level than male patients, tended to be married and employed at the time of their suicide attempt. The majority of patients were at their first suicide attempt: 59% of female patients and 84% of male patients. Regarding the method used, 71% of women and 42% of men resorted to drug overdose. The most frequent diagnosis was major depression for female patients (59%), and borderline personality disorder for male patients (47%).

PO1.204.
A COMPARISON BETWEEN GIRLS WHO ATTEMPTED SUICIDE BUT WERE NOT DEPRESSED AND DEPRESSED GIRLS WHO DID NOT ATTEMPT SUICIDE

V. Ribakoviene, A. Markeviciute, R. Pukinskaite, V. Adomaitiene, B. Diomshyna
Department of Psychology, Faculty of Social Policy, Mykolas Romeris University, Vilnius; Psychiatry Clinic, Medical University, Kaunas; Psychiatric Clinic, Medical Faculty, Vilnius, Lithuania

Depression is believed to be one the strongest predictors of suicide. Our aim was to compare adolescent girls who were depressed but did not attempt suicide and girls who attempted suicide but were not depressed. The study was carried out in two hospitals from 2005 to 2007. One hundred and ten girls participated in the study: 70 girls who had attempted suicide but were not depressed and 40 girls with a diagnosis of depression who had not attempted suicide. Their age was from 11 to 18 (average 15.3) years. Achenbach System of Empirically Based Assessment Youth Self-Report (ASEBA-YSR) was used. Depressed girls who did not attempt suicide were more anxious ($p=0.026$) and withdrawn ($p<0.001$) and had lower social competence ($p=0.002$) and more social difficulties ($p=0.065$). Girls who attempted suicide had higher scores on rule-breaking behavior sub-scale ($p=0.002$). These results suggest that the psychopathological and social functioning pattern is different in non-depressed girls who attempt suicide compared to depressed girls who do not attempt suicide.

PO1.205.
DIFFERENCES AND SIMILARITIES AMONG GIRLS WITH DELINQUENT BEHAVIOUR AND GIRLS WHO ATTEMPTED SUICIDE

V. Ribakoviene, R. Pukinskaite, A. Markeviciute, B. Diomshyna, V. Adomaitiene, D. Danyte
Department of Psychology, Faculty of Social Policy, Mykolas Romeris University, Vilnius; Psychiatry Clinic, Medical University, Kaunas; Psychiatric Clinic, Medical Faculty, Vilnius, Lithuania

The aim of this study was to compare clinical problems of girls who attempted suicide and girls with delinquent behaviours. One hundred girls aged 11-18 years participated in this study: 50 of them were suicide attempters, and 50 had problems of delinquent behavior. We used the Achenbach System of Empirically Based Assessment. Girls who attempted suicide were more depressive/anxious, presented more somatic complaints, and were more closed/anxious. They were also more likely to have significant social difficulties. Girls with delinquent behavior had a higher social competency. These data suggest that girls who attempt suicide have more pronounced internal difficulties than delinquent girls, while externalizing behavior difficulties are not significantly different in the two groups.

PO1.206.
THE IMPACT OF DEPRESSION ON SEXUAL RESPONSE IN MEN AND WOMEN

D. Kesicky, V. Novotny, M. Kesicka
Psychiatric Clinic, School of Medicine, Commenius University, Bratislava, Slovakia

We studied 98 hospitalized depressed patients (37 males, 61 females), examining the impact of the severity of depression (HAMD question-

naire, BDI inventory) on their sexual desire, ability to get excited, coital readiness, orgasm ability and satisfaction. We monitored sexual functioning by using ASEX and GRISS questionnaires. A statistical analysis of the whole group showed an impact of the severity of depression on sexual desire ($p<0.001$), and on the ability to get excited and coital readiness ($p<0.01$). The analysis of men showed a strong impact of depression on sexual desire ($p<0.01$) and a lower impact on coital readiness. Depression had the strongest impact on female ability to get excited ($p<0.001$), and a lower impact on desire and coital readiness. Depression induced sexual avoidance, which was more typical for females.

PO1.207.
RELATIONSHIP BETWEEN DEPRESSION AND APATHY IN KOREAN OUTPATIENTS WITH DEPRESSIVE DISORDERS

Moon-Soo Lee, Jae-Won Yang, Seung-Hyun Kim, Sook-Haeng Joe, In-Kwa Jung
Department of Psychiatry, College of Medicine, Korea University, Seoul, Korea

Apathy is a specific syndrome which is different from depression. However, apathy is also common in depressive patients. Our objective was to evaluate the relationship between apathy and depressive symptoms in patients who are clinically diagnosed as having depressive disorders. This study was performed in a Korean university medical center. Outpatients diagnosed as having depressive disorders were enrolled. We translated the Apathy Evaluation Scale (AES) into Korean and performed a cross-sectional assessment using the Hamilton Rating Scale for Depression (HRSD), the Beck Depression Inventory (BDI), and the Apathy Evaluation Scale - clinician version (AES-C). A total of 30 outpatients were enrolled in this study. We found that the internal consistency of AES was satisfactory. There was a positive correlation between the total scores of HRSD and AES-C. The AES-C score was correlated with subtotal scores of the four apathy-related items from HRSD (loss of interest, psychomotor retardation, loss of energy, and loss of insight), but not with total BDI scores. This cross-sectional study shows that apathy symptoms are different from depressive ones. However, apathy symptoms frequently coexist with depression. Further studies using prospective follow-up design and including other diagnostic groups are required.

PO1.208.
ISHAQ IBN IMRAN'S "TREATISE ON MELANCHOLY"

A. Omrani, R. Jazi
Private practice, Tunis, Tunisia

Written in Kairouan, Tunisia in the 9th century, Ishaq Ibn Imran's "Treatise on melancholy" is the oldest work entirely dedicated to melancholy which has survived to our times. Known in Europe under the name "De Melancholia", it remained for centuries the main reference for the treatment of black bile disturbances. The Treatise is interesting in many respects. First, from the historical viewpoint, because it is a snapshot of the medical conceptions of ancient times on melancholy and it allows us to understand the continuity of Arab medicine in relation to Greek and Roman heritage. From the clinical viewpoint, the Treatise offers a fine description of manic-depressive illness. While sticking to the Galen conception of melancholy, Ibn Imran insists on the multitude of symptomatic presentations that the illness takes. He presents the disease as a spectrum where depression, hallucinations, delirium and phobias, amongst others, can be found. From the presentation viewpoint, the Treatise is of surprising modernity with regards to definition, etiology, clinical forms and pathogenesis, associated forms, and then treatment, which is the sole focus of the entire second essay. As for etiology, Ibn Imran proposes antenatal causes and physical or psychological causes. He does not recognize the influence of supernatural, demonic or magical causes. His attitude diverges from that of the majority of his successors, until Burton in 1621. From the therapeutic viewpoint, Ibn Imran succeeded in sketching all of the major lines of therapy for mood disorders: support, cognitive correction, physical therapy, hygiene/diet and medicinal care.

PO1.209.
ASSOCIATION OF NEUROTICISM-RELATED TRAITS WITH THE S ALLELE OF THE 5HTTLPR: IMPLICATIONS FOR PHARMACOTHERAPY

X. Gonda, K.N. Fountoulakis, J. Lazary, Z. Rihmer, G. Bagdy
Semmelweis University, Budapest, Hungary; Aristotle University, Thessaloniki, Greece

The s allele of the 5HTTLPR polymorphism of the serotonin transporter gene has been consistently associated with affective and anxiety disorders. Since one of the main targets of the most commonly used medications in the treatment of these disorders is the serotonin transporter, this polymorphism may play an important role in influencing the effectiveness of drugs used to treat these disorders. 169 psychiatrically healthy women participated in the study. All subjects completed the Zung Self-Rating Depression Scale, the STAI, the SCL-51 and the TEMPS-A, and were genotyped for 5-HTTLPR. 5-HTTLPR genotype was significantly associated with scores indicating depression and anxiety on both state and trait/temperament level. Scales associated with the somatic symptoms of depression also showed a significant association with the s allele. These data confirm that clinical and subclinical depressive and anxiety symptoms are associated with the s allele of the 5HTTLPR polymorphism of the serotonin transporter gene.

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PO1.210.
POSSIBLE ROLE OF A FUNCTIONAL POLYMORPHISM IN THE D2 RECEPTOR GENE IN EMOTIONAL PROCESSING IN HEALTHY SUBJECTS

L. Lo Bianco, G. Blasi, P. Taurisano, B. Gelao, R. Romano, L. Fazio, A. Papazacharias, A. Di Giorgio, G. Caforio, A. Rampino, R. Masellis, A. Papp, M. Nardini, W. Sadee, A. Bertolino
Department of Neurology and Psychiatry, University of Bari, Bari, Italy; Departments of Pharmacology and Psychiatry, Ohio State University, Columbus OH, USA

Dopamine is a powerful modulator of emotional as well as cognitive behavior. Previous studies have revealed that a single nucleotide polymorphism (SNP - rs1076560) in the D2 dopaminergic receptor (DRD2) gene affects splicing and is associated with differential cortical and subcortical activity during cognition. The aim of this study was to evaluate if DRD2 rs1076560 modulates emotional behavior and activity in the emotional network during emotion perception and regulation. One hundred thirty-five healthy subjects were genotyped for the DRD2 SNP rs1076560 (101 homozigous GG, 26 heterozigous GT). The Big Five Questionnaire (BFQ) was administered to all subjects. Furhermore, a subsample of 24 subjects (12 GG, 12 GT matched for a series of demographic and neuropsychological variables) under-

went functional magnetic resonance imaging while performing a task requiring implicit or explicit processing of emotional facial stimuli. Behavioral data showed higher scores on the Emotion Control scale of the BFQ for GT relative to GG subjects (p=0.05). Furthermore, imaging data revealed an interaction between genotype and task on amygdala and prefrontal activity (p<0.05, small volume corrected). In particular, GG subjects showed greater amygdala activity during implicit processing and greater left dorsolateral prefrontal BOLD responses during explicit processing when compared with the GT individuals. These results suggest that DRD2 rs1076560 may explain part of the variance associated with emotional behavior and physiology in healthy subjects.

PO1.211.
A POLYMORPHISM IN THE D2 GENE MODULATES NEURONAL ACTIVITY DURING ATTENTIONAL CONTROL PROCESSING IN HEALTHY HUMANS

A. Papazacharias, G. Blasi, P. Taurisano, R. Romano, B. Gelao, A. Di Giorgio, L. Fazio, L. Lo Bianco, G. Caforio, A. Rampino, R. Masellis, A. Papp, W. Sadee, M. Nardini, A. Bertolino
Psychiatric Neuroscience Group, Department of Psychiatry and Neurology, University of Bari; Italy; Department of Neuroradiology, IRCCSS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy; Program in Pharmacogenomics, Department of Pharmacology, and Department of Psychiatry, Division of Human Genetics, College of Medicine and College of Pharmacy, Ohio State University, Columbus, OH, USA

Dopamine D2 receptor signaling is crucially involved in cognition and has been implicated in brain disorders such as drug addiction, schizophrenia and Parkinson's disease. Single nucleotide polymorphism rs1076560 in the D2 gene (DRD2) affects the relative concentration of the D2 short variant in human brain and has been associated with differential activity in the working memory network, as well as with performance in working memory and attentional control tasks in healthy humans. Aim of this study with functional magnetic resonance imaging (fMRI) was to investigate in healthy subjects putative modulation of brain responses during increasing levels of attentional control demands by rs1076560 polymorphism. Sixty-seven healthy subjects were genotyped for DRD2 rs1076560 and underwent fMRI while performing a task eliciting increasing demands for attentional control. Fifty-five subjects were homozygous for guanine (GG) and 10 were heterozygous (GT). Groups were matched for a series of demographical variables. Behavioral results showed lower accuracy in GT subjects at higher attentional loads (p=0,014). Imaging data revealed a load by genotype in anterior cingulate (p<0.005, SVC corrected), with GT subjects showing lower cingulate activity at the greatest attentional load. These results suggest that DRD2 rs1076560 may explain part of individual variability associated with behavior and physiology during attentional processes in healthy humans.

PO1.212.
PET STUDY OF A NOVEL α7 NICOTINIC RECEPTOR LIGAND IN HEALTHY HUMAN SUBJECTS

K. Hashimoto, M. Ishikawa, J. Toyohara, J. Wu, M. Sakata, K. Oda, Y. Kimura, M. Iyo, K. Ishiwata, K. Ishii
Division of Clinical Neuroscience, Chiba University Center for Forensic Mental Health, Chiba; Positron Medical Center, Tokyo Metropolitan Institute of Gerontology, Tokyo; Department of Psychiatry, Chiba University Graduate School of Medicine, Chiba; Molecular Imaging Center, National Institute of Radiological Sciences, Chiba, Japan

The α7 nicotinic acetylcholine receptors (nAChRs) play an important role in the pathophysiology of neuropsychiatric diseases such as schizophrenia and Alzheimer's disease. However, there are currently no suitable positron emission tomography (PET) radioligands for imaging α7 nAChRs in the intact human brain. Recently, we developed the novel PET radioligand [^{11}C]CHIBA-1001 for *in vivo* imaging of α7 nAChRs in non-human primate brain. In the present study, we performed a clinical PET study of [^{11}C]CHIBA-1001 in healthy human subjects. A dynamic series of PET data acquisition using [^{11}C] CHIBA-1001 was performed with arterial blood sampling to evaluate α7 nAChRs in brain regions of interest (ROIs) in normal male volunteers. Magnetic resonance imaging was performed after PET scan to rule out any neurological diseases, and also to be referred to when selecting the ROIs. High brain uptake after intravenous administration of [^{11}C]CHIBA-1001 in healthy subjects was detected.

PO1.213.
RELATIONSHIP BETWEEN OXYTOCIN AND SEROTONIN IN HUMANS

D. Marazziti, S. Baroni, M. Catena Dell'Osso, G. Consoli
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Italy

Oxytocin (OT), a neuropeptide synthesized by the paraventricular (PVN) and supraoptic nuclei (SON) of the hypothalamus, has been suggested to be involved in the pathophysiology of different psychiatric disorders, including anxiety disorders, schizophrenia, autism and depression, all conditions characterized by dysfunctions of the serotonergic systems. A few observations have highlighted that the OT system and 5-HT transporter (SERT) might be related. In particular, immunocytochemical and double-immunofluorescent techniques have demonstrated a high degree of overlap between SERT-labeled fibers and OT-containing cells in the primate PVN and SON, while suggesting that the 5-HT influence on OT system might mediated by SERT. Since no information is available in humans, the present study aimed to explore the possible existence of a link between OT and SERT by means of two peripheral markers, the platelet [^{3}H]-paroxetine binding, for the 5-HT system, and OT plasma levels. The results showed that the Bmax (mean±SD, fmol/mg protein) was 1114.9±130.5 and the Kd (mean±SD, nm) was 1.30±0.61. The OT plasma levels (mean±SD, ng/ml) were 1.38±1.04. A significant and positive correlation was observed between the Kd values and OT plasma levels (r=0.466; p=0.038). These findings seem to suggest that the SERT and the OT system do interact even at peripheral levels.

PO1.214.
NEURAL REPRESENTATION OF ATTACHMENT STYLE USING FUNCTIONAL MAGNETIC RESONANCE IMAGING: METHOD DEVELOPMENT

A. Winston, G. Galynker, S. Fox, J. Prosser, R. Kelly, C. Muran
Department of Psychiatry and Behavioral Sciences, Beth Israel Medical Center, New York, NY, USA

Attachment, the degree of maternal-child security experienced during development, is considered to be a significant determinant of ability to appropriately evaluate and respond to social cues throughout life. Evidence indicates that attachment style influences psychotherapeutic outcome. We present a method for examining the neurobiology of attachment styles using functional neuroimaging. Four healthy adult female volunteers completed the Adult Attachment Interview (AAI) and underwent blood oxygen level dependent (BOLD) functional magnetic resonance imaging (fMRI) scanning. Attachment stimuli consisted of black and white photographic images of the subject's mother, father, a close female friend, female strangers and male strangers. Statistical parametric mapping was used to assess functional neural activity. FSL 3.2, a library of analysis tools for brain imaging data, was used for data analysis. First level and higher level analyses were performed. The relationship between attachment experience and regional brain function was assessed by correlating AAI with fMRI data.

PO1.215.
EFFECT OF THREE FUNCTIONAL POLYMORPHISMS OF THE HUMAN DOPAMINE D2 RECEPTOR GENE ON COGNITION

R. Romano, B. Gelao, P. Taurisano, G. Caforio, A. Di Giorgio, A. Rampino, A. Porcelli, L. Fazio, L. Lo Bianco, A. Papazacharias, R. Masellis, A. Papp, W. Sadee, G. Blasi, M. Nardini, A. Bertolino
Psychiatric Neuroscience Group, Department of Psychiatry and Neurology, University of Bari; Program in Pharmacogenomics, Department of Pharmacology, and Department of Psychiatry, Division of Human Genetics, College of Medicine and College of Pharmacy, Ohio State University, Columbus, OH, USA

Cortical and subcortical dopamine D2 receptor (DRD2) signaling has been implicated in cognitive processes, including working memory, attention and executive functions. Aim of this study was to investigate the association of cognition with three frequent DRD2 SNPs, two intronic SNPs, respectively SNP19 (rs#1076560)(G/T) and SNP17 (rs#2283265)(G/T), which affect mRNA splicing, and SNP2 in the promoter region (rs#12364283)(T/C) affecting total mRNA expression. We recruited a large sample of healthy subjects (n=77-119) matched for socio-demographic variables across the three DRD2 SNPs. All subjects underwent a set of neuropsychological tests assessing working memory (N-back), sustained attention (CPT), executive function (WCST), cognitive flexibility (TMT A-B), and memory (WMS). Behavioral performance was evaluated in terms of accuracy and reaction time. Moreover, all raw scores were transformed to z scores to calculate the composite score using the mean of z scores for each subject. ANOVA demonstrated a significant main effect of DRD2 SNP19 on composite score ($p<0.05$). ANOVAs of the different tests indicated that G/G homozygotes perform better than T allele carriers at 1back and 2back. We also observed a significant association between DRD2 SNP2 and cognitive flexibility ($p<0.05$). Homozygotes T/T were faster than T/C while performing the TMT B. No significant effect was found for SNP17. Thus, genetic variation in DRD2 seems to affect several cognitive processes, including working memory and cognitive flexibility. Our results may suggest that these variants provide risk to psychiatric disorders associated with these cognitive deficits.

PO1.216.
GENE-ENVIRONMENT INTERACTION IN MODULATING BRAIN ACTIVITY DURING PROCESSING OF EMOTIONAL STIMULI: THE ROLE OF DOPAMINE AND MATERNAL CARE

P. Taurisano, G. Blasi, B. Gelao, R. Romano, L. Lo Bianco, F. Ferrante, A. Di Giorgio, L. Fazio, F. Sambataro, G. Caforio, A. Rampino, A. Papazacharias, M.T. Attrotto, G. Ursini, L. Sinibaldi, G.M. Giannatempo, M. Nardini, B. Dallapiccola, A. Bertolino
Psychiatric Neuroscience Group, Department of Psychiatry and Neurology, University of Bari; IRCCS "Mendel", Roma; IRCCS Casa Sollievo della Sofferenza, San Giovanni Rotondo, Foggia, Italy

Earlier evidence indicates an important role of dopamine (DA) in processing of emotional stimuli. Increases of DA release have been associated with responses to aversive stressful stimuli. Moreover, disruptions of mother-infant relationships have been shown to have long-lasting effects on mesolimbic dopaminergic system and stress-induced release of dopamine. The dopamine transporter (DAT) has an important role in dopamine reuptake. Functional genetic variants of DAT have been shown to critically affect DA levels. Thus, we assessed the potential interaction between a functional genetic variant of the DAT and maternal parenting on brain activity during processing of emotional stimuli using functional magnetic resonance imaging (fMRI). We recruited 61 normal controls, genotyped for the 3' VNTR DAT variant (10_10 and 9 carriers). Maternal care was assessed by the Parental Bonding Instrument (PBI), which allows categorization of subjects in those with high maternal care (HMC) and those with low maternal care (LMC). All subjects underwent fMRI while performing a task requiring gender discrimination of faces stimuli with angry, fearful or neutral expressions. The LMC subjects showed greatest activation in bilateral basal ganglia and in right temporal lobe. The interaction of maternal care by DAT revealed a cluster in right parahippocampal gyrus, where subjects with HMC and 10_10 activate more than LMC 10_10 subjects. Moreover, the interaction emotion-by-maternal care by DAT identified a cluster in the inferior frontal gyrus, in which HMC 10_10 subjects activated more than LMC 10_10 in processing of fearful faces. These findings suggest that early life events may interact with DAT genetic variants in modulating brain activity during emotional processing.

PO1.217.
OVEREXPRESSED FERROPORTIN 1 AND/OR HEPHAESTIN ATTENUATED IRON INDUCED OXIDATIVE STRESS IN MES23.5 CELLS

Ning Song, Jun Wang, Hong Jiang, Junxia Xie
Department of Physiology, Medical College of Qingdao University, Qingdao, China

Ferroportin1 (FP1) and hephaestin (HP) are newly-found iron transporters cooperating in the iron efflux process in the gut. Their roles in brain iron homeostasis are not fully elucidated. Our in vivo experiments suggested that decreased FP1 and HP may account for the cellular iron accumulation in the substantia nigra of Parkinson's disease animal models. To investigate whether increased FP1 and/or HP expression could attenuate iron induced cell injury, in the present

study we generated the stable MES23.5 dopaminergic cell lines with over-expression of FP1 and/or HP, and then we observed the enhanced iron efflux in these cells. Cell viability and cellular oxidative stress under iron overloaded circumstances was further investigated in transfected cells. The results showed that high expression of FP1 and/or HP could attenuate iron induced cell injury indicated by lactate dehydrogenase leakage, lower cellular iron level, suppress reactive oxygen species production and restore mitochondrial transmembrane potential under iron overloaded conditions, due to more iron efflux out of the cells. These findings suggest that both FP1 and HP are responsible for iron efflux process in brain cells and high-expression of FP1 and/or HP can protect cells from iron induced oxidative stress by enhancing iron efflux process.

PO1.218.
OVEREXPRESSION OF DMT1 ENHANCED IRON INDUCED CELL DAMAGE

Hua-Min Xu, Hong Jiang, Jun Wang, Jun-Xia Xie
Department of Physiology, Medical College of Qingdao University, Qingdao, China

Elevated iron accumulation has been reported in brain regions in some neurodegenerative disorders. However, the mechanism for this is largely unknown. Divalent metal transporter 1 (DMT1) is an important divalent cation transporter. Our previous studies demonstrated the increased DMT1 expression and elevated iron levels in the substantia nigra of Parkinson's disease mouse model, indicating the important role of increased DMT1 expression in iron accumulation. In the present study, we generated the stable MES23.5 dopaminergic cell lines with overexpression of DMT1with iron responsive element (IRE) or DMT1 without IRE to investigate the role of increased DMT1 expression in cellular oxidative stress and cell damage caused by iron influx. Results showed that the expression of DMT1 with IRE or DMT1 without IRE increased significantly in stable transfected cells compared to the control. The upregulation of DMT1 with IRE or DMT1 without IRE enhanced the iron influx inducing the subsequent increase of reactive oxygen species and reduced mitochondrial membrane potential. This led to the activation of caspase-3. These results suggested that increased two forms of DMT1 expression in MES23.5 cells caused the increased intracellular iron accumulation. This resulted in the increased oxidative stress leading to ultimate cell damage.

PO2.
ANXIETY DISORDERS, SOMATOFORM DISORDERS, EATING DISORDERS, PERSONALITY DISORDERS, IMPULSE CONTROL DISORDERS, SLEEP DISORDERS, SEXUAL DISORDERS, SUBSTANCE ABUSE

PO2.1.
ANXIETY DISORDER TYPE SPECIFICITY OF ANXIETY RELATED THOUGHTS

M. Ghazinour, J. Richter
Institute of Social Work, University of Umeå, Sweden; Centre for Child and Adolescent Mental Health Eastern and Southern Norway, Oslo, Norway

The aim of the study was to identify patterns of differences in thoughts and core beliefs between various types of anxiety disorder. A consecutive sample of 148 outpatients with an anxiety disorder (panic disorder without agoraphobia, panic disorder with agoraphobia, social anxiety disorder, generalised anxiety disorder, and post traumatic stress disorder) was investigated in a cross-sectional study. The thoughts related items of the Panic Rating Scale, of the Social Phobia Rating Scale and of the Generalised Anxiety Disorders Scale were analysed. Social anxiety typical thoughts seem to be most specific. General anxiety typical beliefs that refer to the positive impact of worrying seem to be specific to generalised anxiety disorder, whereas thoughts of the negative impact of worrying are common in most anxiety patients. Even though patients of the particular anxiety disorder type scored highest on the respective measurements there is an overlap, in that patients with post-traumatic stress disorder had the highest scores on some panic-related and on some general anxiety items and even panic patients reported a higher conviction with some general anxiety typical thoughts than generalised anxiety patients. These findings may have implications for cognitive-behavioural interventions.

PO2.2.
THE ROLE OF TEMPERAMENTAL DIMENSIONS AND ANXIETY SENSITIVITY IN PANIC DISORDER: A HIGH RISK STUDY

G. Perna, D. di Pasquale, M. Grassi, L. Bellodi
Vita-Salute San Raffaele University, Milan, Italy; University of Maastricht, The Netherlands

Adult patients with panic disorder (PD) are characterised by high levels of harm avoidance and anxiety sensitivity. This might be a product of illness onset or might represent a risk factor for the development of panic disorder. To test these hypotheses, we examined these factors in a high-risk sample of children of patients with PD compared to children of non-affected parents. Twenty-six children of PD patients and thirty children of controls were assessed by the Junior-Temperament and Character Inventory (J-TCI), the Childhood Anxiety Sensitivity Index (CASI) and semi-structured clinical interviews for the assessment of anxiety disorders. Results showed no significant differences between children at risk for panic disorder and peers of non-affected parents for Cloninger's temperamental dimensions and anxiety sensitivity, while anxiety disorders, in particular separation anxiety disorder (SAD), were more frequent among children of PD patients ($p<0.05$). Our data indicate that specific temperamental profiles and high anxiety sensitivity are not significantly associated with familial vulnerability to PD, thus suggesting that they may not be significant childhood risk factors for PD. On the other hand, our findings confirm the association between childhood SAD and PD.

PO2.3.
THE ROLE OF ANXIETY SENSITIVITY AND PERSONALITY FACTORS IN PANIC DISORDER

S. Crippa, A. Bertani, A. Fossati, L. Bellodi, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

Several studies have reported an increased anxiety sensitivity in patients with panic disorder (PD) and temperamental and character profiles different from those reported in populations of healthy subjects. We investigated the relationships between clinical symptomatology, anxiety sensitivity and personality dimensions in patients with PD, with the aim of trying to disentangle these relationships. We recruited 50 patients with PD with/without agoraphobia and 50 healthy controls. All subjects were tested by the Temperament and

Character Inventory (TCI) and the Anxiety Sensitivity Index (ASI). The results confirm that patients with PD have higher scores for ASI as compared to healthy controls. Moreover, patients have higher harm avoidance and lower self-directedness and cooperativeness scores than healthy controls. ASI scores are positively correlated with harm avoidance and avoidant behaviours in patients with PD. Anticipatory anxiety seems to have a role of mediator in the relationship between anxiety sensitivity, harm avoidance and agoraphobia. These results suggest that cognitive and personality dimensions play a role in the presence of agoraphobia in patients with PD, but this role is strongly mediated by anticipatory anxiety. Studies on high risk populations (e.g., children of patients with PD) could clarify this issue.

PO2.4. NEUROPSYCHOLOGICAL IMPAIRMENT IN DRUG-FREE PATIENTS WITH PANIC DISORDER

F. Mancuso, S. Galderisi, A. Mucci, D. Avolio, E. Plaitano, M. Chieffi, M. Maj
Department of Psychiatry, University of Naples SUN, Italy

Previous studies investigating neuropsychological indices in subjects with panic disorder (PD) reported cognitive dysfunctions involving short-term memory, executive functioning, verbal learning, divided attention and visuospatial abilities. Other studies found no difference between patients with PD and healthy subjects (HS). In the present study, general cognitive abilities, focused and sustained attention, incidental learning, secondary memory and the ability to suppress interference were evaluated in 28 drug-free patients with PD and 32 HS, matched for sex, age, educational level and handedness. In patients with PD, the frequency and intensity of panic attacks, anticipatory anxiety, main phobias and avoidance, as well as the severity of anxiety and depressive symptoms, were assessed. Compared to HS, PD patients showed: lower scores on tests assessing general cognitive abilities, a higher accuracy on the test exploring spatial incidental learning, a higher degree of interference on a test exploring secondary memory for non-verbal materials. No correlation was observed between neuropsychological and psychopathological indices. Our results suggest an impairment of abstraction and symbolization abilities in patients with PD. Differences in susceptibility to interference on the non-verbal memory task may reflect an executive dysfunction involving orbito-frontal and cingulate cortices.

PO2.5. PANIC DISORDER AND QUALITY OF LIFE: 3-YEAR OUTCOME OF AN INTEGRATED TREATMENT MODEL

C. Pizzagalli, C. Viganò, G. Luce, R. Paleari, G. Valentini, R. Bassetti, G. Ba
Department of Psychiatry, Department of Clinical Science Luigi Sacco, University of Milan, Italy

We assessed the outcome of an integrated treatment combining pharmacological therapy (SSRIs- SNRIs), cognitive behavioural group therapy (Andrews Model) and short-term psychodynamic oriented psychotherapy in patients with panic disorder. The treatment aimed to review panic symptoms, to improve global functioning, to reduce relapses, and to improve the subjective perception of health. All patients are evaluated by the SCID for the diagnosis, and the PAAAS, MSPS, HAM-A, HAM-D, SF36 at baseline and at 3, 6, 12, 24, 36 months. We analysed the results of 36-month follow-up in 43 patients with panic disorder with or without agoraphobia. Patients received either combined pharmacological plus cognitive behavioural therapy or integrated treatment. Pharmacotherapy combined with cognitive behavioural therapy confirmed its effectiveness at short-term in reducing panic and avoidance, but integrated treatment was found to be more effective in reducing relapses and improving global functioning and the subjective perception of health.

PO2.6. IS THERE A HYPERSENSITIVE VISUAL ALARM SYSTEM IN PANIC DISORDER?

D. Caldirola, R. Teggi, S. Bondi, F.L. Lopes, M. Bussi, L. Bellodi, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

Hypersensitive alarm systems have been postulated in patients with panic disorder (PD). Vision rules our perception of environmental stimuli influencing our responses and balance adaptations; peripheral vision is involved in orienting and in fast defensive reactions to potentially dangerous stimuli, whereas central vision analyses details of objects. We investigated the influence of moving visual stimuli resembling every day-life environment on balance and the roles of central and peripheral visual stimulations. We compared body sway recorded by posturography with and without visual stimulations in 25 patients with PD and agoraphobia, and 31 healthy controls. Video-films, not related to agoraphobic situations, were projected in peripheral and central visual fields in a randomized sequence. Length, velocity and surface of body sway and posturographic quotients were calculated. Patients with PD and agoraphobia increased their body sway, anxiety and dizziness during peripheral stimulation, whereas controls did not; all subjects showed a similar increase of body sway during central stimulation. Patients showed greater increase of body sway than controls in closed-eyes conditions. Seven patients with PD without agoraphobia showed posturographic performances similar to those of controls. The higher visual sensitivity to peripheral stimulation in patients with PD and agoraphobia may be linked to a more active "visual alarm system" involving visual, vestibular and limbic areas that might influence the development of agoraphobia in situations where environmental stimuli are uncertain. Panic-phobic spectrum disorders might be the result of the activation of complex alarm systems.

PO2.7. INVOLVEMENT OF DOPAMINERGIC SYSTEM IN PANIC DISORDER

L. Padula, M. Valdagno, L. Bossini, A. Fagiolini, P. Castrogiovanni
Department of Neuroscience, Psychiatry Division, University of Siena, Italy; Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA

Many recent studies reported a significant relevance of bright light stimuli in the genesis and course of panic disorder (PD), with a mechanism probably mediated by dopamine. Aims of this study are to assess the central dopaminergic system by electroretinogram (ERG) and the peripheral dopaminergic system through plasmatic dopamine determination, to compare these parameters between subjects with PD and healthy subjects, and to evaluate qualitatively and quantitatively the photosensitivity in patients with PD and in healthy subjects. We recruited 25 patients with PD (9 men and 16 women, mean age 38.3±12.13) and without medical and psychiatric comorbidity, and a

control group from the general population. All the subjects were evaluated using MINI, QVF (a questionnaire developed for the assessment of photosensitivity) and ERG. There was a significant difference ($p<0.001$) between patients assessed before therapy and healthy controls on ERG b wave, whose value was lower in subjects with PD. The average levels of plasma dopamine in the group of patients were significantly higher compared with healthy controls. Moreover, subjects with DP, compared with controls, showed higher scores in the QVF on photophobia. The results appear in line with the hypothesis proposed of an involvement of central dopaminergic system in the ethiopathogenesis of PD.

PO2.8. CORRELATIONS BETWEEN CORTISOL AND DHEAS LEVELS AND SUBTHRESHOLD PANIC-AGORAPHOBIC SPECTRUM SYMPTOMS IN HEALTHY SUBJECTS

L. Dell'Osso, C. Carmassi, E. Da Pozzo, F. Mundo, C. Martini
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Italy

Data from basic and clinical research indicate that neuroactive steroids may modulate anxiety and depression-related behaviours. In patients with panic disorder, an hypersecretion of neurosteroids has been found. To the best of our knowledge, no data is available on the impact of subthreshold panic-agoraphobic symptomatology. The aim of this study was to explore the possible correlations between the serum levels of cortisol, DHEAS and of their ratio (DHEAS/cortisol) and the panic-agoraphobic spectrum symptomatology, in a sample of 18 healthy subjects (aged 20-50 years). Exclusion criteria were: any medical/psychiatric disorder, alcohol/drug abuse, ongoing contraceptive drugs, heavy cigarette smoking, any pharmacological treatment assumed within the 4 weeks prior to blood withdrawal. The lifetime panic-agoraphobic spectrum symptomatology was assessed by using the panic-agoraphobic spectrum questionnaire (PAS-SR lifetime version), consisting of 114 items grouped in 8 domains (separation sensitivity, panic-like symptoms, stress sensitivity, substance and medication sensitivity, anxious expectation, agoraphobia, illness related phobia and hypochondriasis, reassurance orientation). Ten ml of venous blood were collected between 8.30 and 9.30 AM, after an overnight fasting. Significant positive correlations were found between DHEAS levels and the PAS-SR total ($p=0.0031$) and anxious expectation domain ($p=0.0018$) scores. The DHEAS/cortisol ratio was significantly correlated to PAS-SR total scores $p=0.0008$) and to the panic-like symptoms ($p=0.0011$) and anxious expectation ($p=0.0026$) domains. These data contribute to a biological validation of the dimensional approach to panic disorder and agoraphobia as identified by the PAS-SR.

PO2.9. A FREEZING REACTION IN PANIC DISORDER PATIENTS ASSOCIATED WITH ANTICIPATORY ANXIETY THROUGH AN EXPERIMENT WITH STABILOMETRY

F.L. Lopes, T.M. Azevedo, E. Volchan, L.A. Imbiriba, R.C. Freire, D. Caldirola, G. Perna, A.E. Nardi
Vita Salute San Raffaele University, Milan, Italy; Institute of Psychiatry, Federal University of Rio de Janeiro, Brazil; Institute of Biophysics Carlos Chagas Filho, Federal University of Rio de Janeiro, Brazil; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

Anticipatory anxiety has been described as a conditioned response with the defensive posture of freezing and autonomic activation being described as measurable indexed responses. The purpose of the present study was to assess freezing response through postural control analysis and autonomic activation through electrodermal activity in panic disorder (PD) patients during affective pictures viewing. In this study, 29 PD patients and 27 healthy controls stood on a force platform while viewing blocks of anxiogenic, mutilation and neutral pictures. Skin conductance responses and the displacements of the center of pressure were measured. The PD patients demonstrated significantly reduced body sway, increased mean power frequency and increased skin conductance response throughout the experiment, when compared to the control group ($p<0.05$). Additionally, PD patients exhibited: a) a negative correlation between anticipatory anxiety and sway area and b) increased body sway velocity compared to the healthy controls while viewing the anxiogenic block and it was compared to the respective neutral one. Our data suggest that PD patients have an autonomic activation and a body immobility and rigidity consistent with a freezing like behavior, which may be related to the state of anticipatory anxiety of the PD as a defense response to an imminent threatening situation. The additional finding consisting of a destabilizing pattern in PD patients on the specific anxiogenic context might indicate a flight response or a failure in the vestibulo-anxiety brain circuitries.

PO2.10. A DEFICIT IN THE TOP-DOWN REGULATION IN PANIC DISORDER PATIENTS EVALUATED BY FUNCTIONAL MAGNETIC RESONANCE IMAGING

F.L. Lopes, A.E. Nardi, V.L. Mello-Neto, D. Caldirola, F.V. Magalhães, R.C. Domingues, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Institute of Psychiatry, Federal University of Rio de Janeiro, Brazil; Multi-Imaging Magnetic Resonance - CDPI, Rio de Janeiro, Brazil; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

With the aim to verify the neural circuitry involved in a specific anxiogenic condition and to analyse a possible modulatory effect among regions within the brain in patients with panic disorder (PD), we examined 13 medication-naïve PD patients and 9 controls with functional magnetic resonance imaging while exposed to visual stimuli (negative, neutral and a set of specific panic-anxiogenic pictures). The data were analysed by a subtractive method. Thereafter, a dynamic causal model (DCM) analysis was performed. The results of subtraction between the conditions evidenced an activation in the left amygdalar region and right inferior frontal gyros (IFG) in PD patients during the specific anxiogenic condition, whereas controls exhibited an

activation in the left amygdalar region and left IFG in the negative condition. The DCM showed a direct effect in left amygdala and right IFG in PD patients in both panic-anxiogenic and negative conditions; a direct effect in healthy controls was observed only in the negative condition and in the regions of left amygdala, right and left IFG. The modulatory effect was significant from the right and left IFG to the left amygdala in healthy controls and this effect was driven by the negative context input. In the patients with PD, a significant modulatory effect from the left amygdala to the right IFG driven by the specific panic-anxiogenic context was verified. These results may suggest that in patients with PD a prominent bottom-up process is involved in specific panic anxiogenic conditions thus representing a weak modulation of the frontal area.

PO2.11.
THE CARDIORESPIRATORY RESPONSE TO PHYSICAL EXERCISE IN PANIC DISORDER

D. Caldirola, F.L. Lopes, C. Namia, C. Carminati, L. Bellodi, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

Patients with panic disorder (PD) are described as presenting a less efficient cardio-respiratory (CR) response to endurance tasks. The objectives of our study were to evaluate the physical fitness and the CR response during an exercise testing in PD, and also whether cognitive variables could influence those responses. Ten PD outpatients and 10 healthy matched controls underwent a submaximal exercise testing on a treadmill with constant speed (4 km/h) and a gradually increased workload until they reached a target heart rate (HR) (Karvonen's formula). The subjective effort and anxiety levels were assessed during the test. The CR physiology was assessed through a breath-by-breath system. Patients achieved the target HR earlier than controls, exhibited higher HR than controls in the beginning of the testing, showed lower average within-subject SDs of HR than controls in the phases that follow the endurance testing, showed lower oxygen consumption than controls at the target HR and maintenance phases, reached the ventilatory threshold earlier than controls, had positive correlations between HR and respiratory frequency (in the phases preceding and during the endurance testing) and negative between HR and tidal volume (in the phases that follow the endurance testing). Patients also showed higher anxiety levels in all the phases of the exercise, but it significantly decreased over the exercise. These data may suggest a low cardiorespiratory fitness in the patients with PD, which might be due to an inability in the functioning of the homeostatic brain, thus leading to a low vagal tone and increased sympathetic reactivity.

PO2.12.
EMOTIONAL INTELLIGENCE AND ALEXITHYMIA IN PANIC DISORDER

G. Borriello, R. Menotti, L. Bellodi, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, Maastricht, The Netherlands

Recent studies show significant correlations between emotional intelligence (EI) and pathological anxiety. Other results highlight high alexythymia (AL) in panic disorder (PD). Panic attacks underlies emotional deregulation, inducing anticipatory anxiety and phobic avoidance (AGO). The purposes of this research, conducted on 27 patients with PD and 28 healthy controls, were to compare EI and AL in PD with/without AGO and controls; to test if different levels of AGO are related to EI and/or to AL; and the relationship between EI and AL. Patients with PD have lower strategical EI ($p<.0007$) than controls, specifically in emotional comprehension. Intensity of AGO correlates with experiential EI (MIA alone $p<.008$; MIA accompanied $p<.009$), especially with "facilitating thought with emotion". Patients with PD were significantly more alexithymic than controls ($p<.00003$) for all factors: difficulty identifying feelings, externally oriented thinking ($p<.00001$), difficulty describing feelings ($p<.001$), externally oriented thinking ($p<.01$). Analysis failed to discover significant differences in AL between AGO and not AGO PD. There was no significant relationships between EI and AL in PD. Our results suggest that patients with panic disorder do have a different pattern of emotional stimuli processing mechanisms. Emotional comprehension seem to be weaker in panic patients than in healthy subjects and there seem to be a relationship between agoraphobia and the degree of influence of emotions on thoughts. However, from our data, is not possible to clarify if these abnormal emotional mechanisms are a predisposing factor or a consequence of panic disorder. Furthermore, the absence of a relationship between emotional intelligence and alexythymia is not in line with previous findings in healthy subjects and suggests that these two psychological constructs, at least in subjects with panic disorder, measure two different aspects of emotional regulation.

PO2.13.
THE BREATHING THERAPY IN PANIC DISORDER

G. Perna, F.L. Lopes, D. Caldirola, S. Ozino, S. Biffi, E. Fadda, L. Bellodi
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, The Netherlands

The patients with panic disorder (PD) have been described as presenting higher levels of irregularity in their respiratory function which could lead to the development of panic attacks (PAs). We performed this study with the aim to verify the effectiveness of breathing therapy (BT) on clinical measures and on the breath-by-breath complexity of the respiratory dynamics. We included 31 symptomatic and drug resistant and/or low compliance PD patients. The BT consisted of 5 sessions (one/week) in a combined modality (diaphragmatic/thoracic). Clinical status and respiratory physiology were assessed at baseline and end-point. Irregularity in the breathing pattern was indexed by the approximate entropy (ApEn) index. We observed a significant reduction in the end-tidal pCO2 ApEn indexes and a trend to the reduction of FeCO2% ApEn values. Significant clinical improvement (PD severity, anxiety trait and state) was also seen at the end-point. In addition, treatment compliance was excellent for session attendance. These data suggest that BT may decrease irregularity of the end-tidal PCO2 instead of its mean values, being, therefore, therapeutically beneficial for at least a subgroup of drug resistant and/or low compliance PD patients.

PO2.14.
AUGMENTATION WITH COGNITIVE-BEHAVIORAL THERAPY IN PANIC DISORDER PATIENTS WITH PARTIAL RESPONSE TO PHARMACOTHERAPY

R. Paggini, C. Carmassi, C. Taponecco, G. Marcacci, E. Macchi, C. Conversano, A. Ciapparelli, L. Dell'Osso
Department of Psychiatry, Neurobiology, Pharmacology and Biotecnology, University of Pisa, Pisa, Italy

Cognitive-behavioral therapy (CBT) is an effective treatment for panic disorder (PD). The aim of the present study was to investigate changes in anxiety symptoms and in quality of life after the augmentation with CBT in patients with PD who had shown partial or no response to at least two adequate treatments with selective serotonin reuptake inhibitors (SSRIs). Patients were assessed at T_0 by the Structured Clinical Interviews for DSM-IV (SCID-I and SCID-II), the Hamilton Anxiety Scale (HAM-A), the Hamilton Depression Rating Scale (HAM-D), the Clinical Global Impression (CGI), and the Quality of Life Index (QL-INDEX). Thirty-six patients were recruited on the basis of a diagnosis of PD and the presence of symptoms of anxiety, as documented by HAM-A score >18 despite an adequate treatment with at least two SSRIs. When entering the study patients started CBT without changes of pharmacologic treatment. After 2 (T_1) and 4 months (T_2) of CBT, patients were assessed again through the same scales. All patients showed an improvement on the CGI, that corresponded to "very much" in 24 (66.7%) of them. A significant improvement was observed between T_0 and T_2 in the HAM-A scores ($p<0.0001$) and in the HAM-D scores ($p<0.0001$). Quality of life improved significantly ($p<0.0001$). Our data suggest that CBT is an effective treatment in patients with PD who had shown partial or no response to SSRIs, inducing a significant improvement both in anxiety symptoms and in the quality of life.

PO2.15.
ARE NORADRENERGIC ANTIDEPRESSANTS A VALUABLE CHOICE IN THE TREATMENT OF PANIC DISORDER? A REVIEW AND META-ANALYSIS

A. Serretti, A. Chiesa, R. Calati, G. Perna, L. Bellodi, D. De Ronchi
Institute of Psychiatry, University of Bologna; Department of Psychiatry, San Raffaele Scientific Institute, Milan, Italy

The aim of the present review and meta-analysis is to evaluate the efficacy of new noradrenergic antidepressants (NAD) in the treatment of panic disorder (PD). A literature search was conducted using MEDLINE, ISI web of knowledge and references of selected articles. Data from fourteen papers were entered in RevMan 4.2. Our primary outcome measures were the rate of response, remission and side effects of NAD compared to placebo. Further analysis included the endpoint patients free from panic attacks, the Panic and Anticipatory Anxiety Scale and the Hamilton Scale for Anxiety' values. We found a significant higher rate of response (OR=3.2; 95% CI=2.61 to 3.92), remission OR=2.14; 95% CI=1.72 to 2.66) and side effects (OR=1.41; 95% CI=1.11 to 1.78) for NAD compared to placebo, even though the studies were very heterogeneous. Analysis performed on the three drugs individually showed a higher rate of response for patients treated with venlafaxine and mirtazapine, whereas no statistical difference was found between reboxetine and placebo. The number of panic attacks and the values of all scales measuring the intensity of panic disorder at the end of trial were significantly lower for patients treated with a NAD. This is the first meta-analysis investigating the efficacy of NAD for the treatment of panic disorder. Although the small sample size of some studies and limiting statistical assumptions could reduce the significance of our findings, both venlafaxine and mirtazapine showed a significant efficacy for the treatment of PD. Further studies on reboxetine are needed.

PO2.16.
SEROTONIN TRANSPORTER: AN EXAMPLE OF GENE INFLUENCE ON HUMAN BEHAVIOUR

A. Serretti, R. Calati, D. De Ronchi
Institute of Psychiatry, University of Bologna, Italy

The complexity of gene influences on behavioural features has been extensively considered. A single gene variant modulates many behavioural traits, but with a moderate effect size. The best available example in psychiatric genetics is represented by the gene coding for the serotonin transporter (5-HTT). Among the recognized polymorphisms of this gene, the one located in the transcriptional control region upstream of the coding sequence (5-HTTLPR) is thought to greatly influence the modulation of behaviour. Given the enormous amount of association studies about 5-HTTLPR and behavioural features, it was decided to carry out a review of the literature. All publications that focused on the association between 5-HTTLPR and psychiatric disorders, and temperamental traits and other related features were included. In particular, the 5-HTTLPR short (S) form was found to relate to a higher amygdala response, anxiety-related personality traits but not anxiety disorders, elevated vulnerability in front of stressors, a worse response to selective serotonin reuptake inhibitors in different diagnoses and worse side effects. Moreover, bipolar disorder, alcohol dependence, eating disorders, attention deficit hyperactivity disorder and suicide attempts have also been found to be associated with the S allele. In conclusion, 5-HTTLPR polymorphism appears to modulate a widespread variety of human characteristics. However, future studies should further examine previous results, thus investigating both other 5-HTT polymorphisms, such as rs25531, and different interacting genes.

PO2.17.
FOCUS ON HTR2C

A. Drago, D. De Ronchi, A. Serretti
Institute of Psychiatry, University of Bologna, Italy

HTR2C is one of the most relevant and investigated serotonin receptors. Its role in important brain structures such as the midbrain, the lateral septal complex, the hypothalamus, the olfactory bulb, the pons, the choroid plexus, the nucleus pallidus, the striatum and the amygdala, the nucleus accumbens and the anterior cingulated gyrus candidate the HTR2C as a promising target for genetic association studies. The biological relevance of these brain structures is reviewed through the focus on the HTR2C activity, with a special attention devoted to psychiatric disorders. The evidence of genetic association studies that dealt with HTR2C is reviewed against the findings that come from the neuroanatomic investigations. The reasons of the discrepancies between these two sets of reports is discussed. As a result, HTR2C is shown to play a pivotal role in many different psychiatric behaviors or psychiatric related disrupted molecular balances. Nevertheless, genetic association studies brought inconsistent results so far. The most replicated association seems to involve the feeding behavior and antipsychotic induced side effects, both weight gain and motor related, with the Cys23Ser (rs6318) and the -759C/T (rs3813929) reporting the most consistent results. The lack of association found in other independent studies dampens the clinical impact of these reports. The

incomplete coverage of the HTR2C variants is proposed as the best cost-benefit ratio bias to fix.

PO2.18. PREVALENCE OF GENERALIZED ANXIETY DISORDER IN A PRIMARY CARE CLINIC IN EAST MALAYSIA

J.H. Ting, D.K. Catherinus
Department of Psychological Medicine, Faculty of Medicine, University Malaya, Kuala Lumpur, Malaysia

This study aimed to determine the prevalence of generalized anxiety disorder in patients attending an outpatient primary care clinic in a small town in East Malaysia. Patients attending the clinic were randomly selected to participate in the study. They were then interviewed to record their sociodemographic characteristics and were screened for generalized anxiety disorder by using the Mini International Neuropsychiatric Interview (MINI). A total of 203 patients participated in this study. The prevalence rate of generalized anxiety disorder (GAD) was estimated to be at 9.4%. Female patients were almost three times more likely to have a diagnosis of GAD when compared to men. The age group of 15-34 had the highest number of patients with GAD. The MINI proved to be easy to use and required only a short time for administration.

PO2.19. FUNCTIONAL IMPAIRMENT RELATED TO PAINFUL PHYSICAL SYMPTOMS IN PATIENTS WITH GENERALIZED ANXIETY DISORDER WITH OR WITHOUT COMORBID MAJOR DEPRESSIVE DISORDER

I. Romera, A.L. Montejo, F. Caballero, L. Caballero, J. Arbesu, I. Gilaberte
Clinical Research Department, Lilly Spain; University of Salamanca; Sixth Health Area, Servicio Madrileño de Salud, Madrid; Hospital Puerta de Hierro, Madrid; Centro de Salud de la Eria, Oviedo, Spain

This study aimed to assess the functional impairment related to the presence of painful physical symptoms (PPS) in patients suffering from generalized anxiety disorder (GAD) with or without comorbid major depressive disorder (MDD). This is post-hoc analysis of a cross-sectional study in patients attending primary care who received a diagnosis of GAD (Mini International Psychiatric Interview). A control group (no GAD, no MDD) was consecutively selected. Patients were considered to have PPS if Visual Analog Scale overall pain score was >30. Functioning was assessed by the Sheehan Disability Scale (SDS). ANCOVA models (including age, gender, comorbidity) were used. Of 7152 patients included, 981 had GAD, 559 with comorbid MDD. Of those, 436 (78.0%) had PPS, higher than the percentage in those with GAD without MDD (249 of 422, 59%) and than controls patients (95 of 336, 28.3%). Functioning of both GAD groups was clearly worse when PPS were present ($p<0.0001$). Very few GAD patients had normal functioning (SDS total score <5) if PPS were present. In all groups, the presence of PPS was significantly associated with more underproductive days/week ($p<0.0001$). These data suggest that functional impairment associated to the presence of PPS in patients with GAD is of clinical relevance, and needs to be considered when evaluating and treating the patient.

PO2.20. TREATMENT OF GENERALIZED ANXIETY DISORDER WITH PREGABALIN IN ORDINARY CLINICAL CONDITIONS

M. Brasser, F. Leverkus
Pfizer Pharma GmbH, Karlsruhe, Germany

Pregabalin, an alpha2delta-ligand, has shown efficacy and safety in treatment of generalized anxiety disorder (GAD) in a comprehensive clinical trial programme. This open-label non-interventional observational trial aimed to prospectively investigate the efficacy and tolerabilty in real life settings. 331 physicians (mainly psychiatrists) recruited 578 adult GAD patients and documented treatment with pregabalin over 4 weeks. GAD severity was rated by the patients using Hospital Anxiety and Depression Scale (HADS), the GAD-7-Score and a daily Visual Analogue Scale (VAS-anxiety). Spontaneous Adverse Events (AEs) were collected. Anxiety symptoms assessed using GAD-7 were significantly reduced by 6.1 points (95% CI, -6.5,-5.7) from a mean of 15.0 at baseline to a mean of 8.9 at final visit. This improvement was in accordance with that seen by using the HADS. A total of 26 AEs occured during this study, most of them rated mild to moderate in severity with no treatment related serious events. This open-label observational study shows that pregabalin is effective in reducing GAD symptoms measured by GAD-7 scale and is well tolerated under clinical practice conditions.

PO2.21. EXTENDED RELEASE QUETIAPINE FUMARATE MONOTHERAPY FOR GENERALIZED ANXIETY DISORDER (GAD): A RANDOMIZED, PLACEBO- AND ESCITALOPRAM-CONTROLLED STUDY

C. Merideth, A. Cutler, A. Neijber, F. She, H. Eriksson
Affiliated Research Institute Inc, San Diego, CA, USA; Department of Psychiatry, University of Florida, FL, USA; AstraZeneca R&D, Södertälje, Sweden; AstraZeneca Pharmaceuticals, Wilmington, DE, USA

The study aimed to evaluate once-daily quetiapine XR monotherapy for generalized anxiety disorder (GAD). We conducted a 10-week (8-week randomization; 2-week post-treatment phase), parallel-group, double-blind study. Patients with a DSM-IV diagnosis of GAD (HAM-A ≥20 with Item 1 and 2 scores ≥2; CGI-S ≥4; MADRS ≤16) were randomized to quetiapine XR 150 or 300mg/day, escitalopram 10mg/day, or placebo. The primary objective was a HAM-A week 8 change from randomization. 854 patients randomized: quetiapine XR 150 mg/day (n=219); 300 mg/day (n=207); escitalopram (n=213); placebo (n=215). Quetiapine XR 150mg/day, 300mg/day and escitalopram significantly reduced HAM-A at Week 8 vs. placebo ($p<0.001$, $p<0.05$, $p<0.05$, respectively). At Day 4, quetiapine XR 150 mg/day ($p<0.001$) and 300 mg/day ($p<0.001$), but not escitalopram ($p=0.889$), significantly reduced HAM-A vs. placebo. Week 8 HAM-A psychic subscore was significantly reduced for all groups and HAM-A somatic subscore was significantly reduced for quetiapine XR 150 mg/day vs. placebo. Week 8 HAM-A response and remission were significantly greater for quetiapine XR 150 mg/day ($p<0.001$, $p<0.05$, respectively) vs. placebo, but not for quetiapine XR 300 mg/day or escitalopram. Common adverse events (>10% all groups; weeks 1-8) were dry mouth, somnolence, sedation, nausea, dizziness, headache. In patients with GAD, quetiapine XR (150 and 300 mg/day) was effective at reducing anxiety symptoms at Week 8 and as early as Day 4, and was generally well tolerated.

PO2.22.
FREQUENCY AND CLINICAL CORRELATES OF ADULT SEPARATION ANXIETY IN A SAMPLE OF 508 OUTPATIENTS WITH MOOD OR ANXIETY DISORDER

M. Abelli, S. Pini, A. Cardini, L. Lari, C. Gesi, M. Muti, S. Calugi, G.B. Cassano
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Italy

This study was aimed to evaluate the frequency and severity of adult separation anxiety disorder (ASA) in a sample of patients with mood or anxiety disorders. The sample included 508 adult psychiatric outpatients with Axis I anxiety and/or mood disorders. Patients were assessed for diagnosis by SCID-I, for separation anxiety by the Structured Clinical Interview for Separation Anxiety Symptoms (SCI-SAS), the Separation Anxiety Symptoms Inventory (SASI) and the Adult Separation Anxiety Checklist (ASA-CL). To estimate role impairment among 12-month, we administered the Sheehan Disability Scale (SDS). Of the total cohort of patients, 49.2% were categorized as not having ASA or childhood separation anxiety (CSA) (no ASAD), 29.5% with ASA without a history of CSA (ASAD-A), 21.7% with ASA with a history of CSA (ASAD-C/A), and 8.5% with a history of CSA only (ASAD-C). Overall, 82.7% of patients with ASAD-A/C, 73.3% of those with ASAD-A and 63.6% of those with no ASAD had at least one comorbid anxiety disorder (p=001). The strength of association was significant for ASAD-A/C with panic disorder (OR=2.74; 95% CI 1.70-4.42) and with specific phobia (OR=1.91; 95%CI 1.08-3.35). The results of the MANCOVA confirmed the association between ASA and functional impairment in the area of work (ASAD-A, p=.006; ASAD-A/C, p=.023) and social relationships (ASAD-A, p=.001; ASAD-A/C, p=.009). This is the first study, to our knowledge, exploring ASA and CSA in a large cohort of patients with anxiety and mood disorders. Consistently with previous clinical and epidemiological studies, our data indicate that ASA has a significant clinical impact in patients with affective disorders.

PO2.23.
EARLY BIOLOGICAL AND PSYCHOLOGICAL RESPONSES TO TRAUMA AND DEVELOPMENT OF POST-TRAUMATIC STRESS DISORDER: THE PHOENIX STUDY

J. Attal, I. Chaudieu, C. Gandubert, A. Hermès, J. Scali, K. Ritchie, J.P. Boulenger, M.L. Ancelin
Inserm U888, and CHU Montpellier, La Colombiere Hospital, Montpellier, France

Post-traumatic stress disorder (PTSD) is a disabling chronic disorder, which is often under-diagnosed, difficult to treat and to predict. We studied the predictive value of biological and clinical stress markers in the development of PTSD and potential associations with psychological risk factors of PTSD, in particular peritraumatic dissociation and distress. A prospective study was carried out in 95 victims recruited in emergency and forensic services. The subjects were included during the week following the trauma. Dissociation and distress levels, as well as biological and physiological measures of acute stress reaction, were evaluated. The presence of PTSD was assessed using the PTSD Interview. Subjects reporting PTSD one month after the trauma had significantly higher initial levels of dissociation and distress compared to traumatized subjects without PTSD. During the week following the trauma, they showed higher urinary norepinephrine and lower urinary cortisol levels. They also had a significantly higher heart rate, systolic blood pressure, and glycosylated hemoglobin, the latter being positively associated with peritraumatic distress. The norepinephrine/cortisol ratio was correlated with these clinical markers as well as with PTSD level, especially with the arousal subscale. Multivariate analysis suggested two independent factors associated with PTSD: the norepinephrine/cortisol ratio and dissociation. This study supports a predictive role of high epinephrine and low cortisol levels in the development of PTSD, while highlighting glycosylated hemoglobin as a vulnerability factor for distress and PTSD. Our results suggest the existence of two different pathways for PTSD development. Identifying early predictive factors could improve secondary prevention.

PO2.24.
PRESERVED SUBCORTICAL VOLUMES AND CORTICAL THICKNESS IN POST-TRAUMATIC STRESS DISORDER

L. Landré, C. Destrieux, P. Gaillard, V. Camus, W. El Hage
Université François Rabelais, Tours, France

Post-traumatic stress disorder (PTSD) is usually associated with decreased volumes in the medial temporal lobe and grey matter reduction in the prefrontal cortex. The present study aimed at exploring whole-brain structures in women with sexual abuse-related PTSD, to determine volumes of subcortical grey matter structures and cortical thickness, as compared to a well-controlled matched pair sample. Seventeen young women who had experienced sexual abuse, diagnosed with PTSD using the Clinician-Administered PTSD Scale for DSM-IV, and 17 healthy controls matched for age and years of education were consecutively recruited. They underwent structural magnetic resonance imaging and psychiatric assessment of the main psychiatric disorders according to DSM-IV axis I. The data were analyzed using automated subcortical volumetric segmentation and cortical thickness quantification. Compared with controls, PTSD subjects displayed normal brain volumes and cortical thickness. Our results indicate preserved subcortical volumes and cortical thickness in a sample of female survivors of sexual abuse with PTSD. We discuss the possibility of differences between neural mechanisms of sexual abuse-related PTSD and war-related PTSD.

PO2.25.
PRELIMINARY FINDINGS OF CORTICAL EXCITABILITY VARIABLES IN DRUG-NAÏVE POST-TRAUMATIC STRESS DISORDER PATIENTS

A. De Capua, M. Tavanti, N.R. Polizzotto, S. Calossi, V. Falzarano, M. Ulivelli, S. Bartalini, L. Bossini, P. Castrogiovanni, S. Rossi
Divisions of Psychiatry and Neurology, Department of Neuroscience, University of Siena, Italy

A reduction of GABA-mediated inhibitory mechanisms may be involved in the pathophysiology of post-traumatic stress disorder (PTSD) symptoms, according to both neurophysiological and neuroimaging studies. Aim of the present work was to test, by single and paired pulse transcranial magnetic stiumulation (TMS), several central cortical inhibitory and facilitatory mechanisms in both hemispheres of PTSD patients. Ten drug-naïve PTSD patients and 10 healthy controls underwent the assessment of cortico-spinal excitability by recording single and double pulse TMS variables from the right and left first dorsal interosseous muscles. After the stimulation of the primary motor cortex of both hemispheres, resting motor threshold (testing ion channel function), the CSP (reflecting a putative GABAb-mediated mechanism), SICI and SICF (reflecting putative GABAa and glutamate

mechanisms, respectively) and SAI (reflecting a putative cholinergic mechanism) were recorded. PTSD diagnosis and severity were established through the Clinician Administered Post-Traumatic Stress Disorder Scale (CAPS). PTSD patients had left SICI reduced or reversed (t=-2.40; df=18; p=0.024), and SICF enhanced on the right side (t= -2.27; df=18; p=0.03). Further, a significant difference between the two groups in the left CSP (t=-2.89; df=18; p=0.01) was found. No correlations between clinical and neurophysiological variables were found. This study confirms neurophysiological evidence of a reduced GABAergic tone in PTSD patients.

PO2.26. COMPARISON OF THE CYCLIC ADENOSINE MONOPHOSPHATE RESPONSE ELEMENT BINDING (CREB) PROTEIN LEVELS IN PATIENTS WITH POST-TRAUMATIC STRESS DISORDER VS. HEALTHY CONTROL SUBJECTS

C. Carmassi, C. Martini, E. Da Pozzo, R. Paggini, S. Tonini, L. Dell'Osso
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Italy

The cyclic adenosine monophosphate responsive element binding (CREB) protein has a key role in the formation of long-term memories; the cAMP/PKA/CREB pathway, in fact, is responsible for the genomic involvement in long term memory formation and storage. Patients with post-traumatic stress disorder (PTSD) typically display deficits and alteration in memories, particularly for what concerns re-experiencing symptoms. Aim of the present study was to investigate the CREB and P-CREB (activated) levels in peripheral blood lymphocytes of 26 patients with PTSD as compared to 26 healthy control subjects (HCS). Exclusion criteria were: the presence of any autoimmune, inflammatory or endocrine disorder, obesity, alcohol or drug abuse, ongoing use of contraceptive drugs. Assessment instruments included the Structured Clinical Interview for DSM-IV (SCID-P) and the Impact of Event Scale (IES). Blood samples were collected from subjects, between 9 and 10.30 AM, after a overnight fast; CREB and P-CREB levels were evaluated by the ELISA assays. A significant reduction was reported in the total CREB levels in patients with PTSD vs. HCS ($p<0.05$). The P-CREB percentage with respect to the total CREB was higher in PTSD patients than in HCS, indicating a major protein activation in PTSD. Our data, in line with previous literature, suggest a complex role played by the CREB in PTSD. Thus, further studies are needed in larger samples.

PO2.27. POST-TRAUMATIC STRESS DISORDER AND ALCOHOL CONSUMPTION: A RETROSPECTIVE STUDY IN A FIREMAN POPULATION

C. Moiras, H. Denizot, G. Brousse, P.M. Llorca
Service de Psychiatrie B, CHU Clermont-Ferrand, France

The aim of this retrospective study was to assess the possible relationship between the occurrence of post-traumatic stress disorder (PTSD) and alcohol consumption in a population of 83 sapper firemen. The prevalence of PTSD was 3.6% (IES-R). PTSD was related to peritraumatic dissociation (PDEQ) ($p<0.05$) and to an increase of alcohol abuse and dependence (AUDIT) ($p<0.001$). The temporal relationship between PTSD and alcohol abuse needs to be explored by a prospective study. Coping strategies should also be investigated in order to develop preventive strategies.

PO2.28. COMORBID SUBTHRESHOLD MANIA AS A CORRELATE OF HIGHER SUICIDALITY IN PATIENTS WITH POST-TRAUMATIC STRESS DISORDER

L. Dell'Osso, C. Carmassi
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnology, University of Pisa, Italy

Post-traumatic stress disorder (PTSD) represents a chronic psychiatric condition with high suicidal risk that often co-occurs with bipolar disorder, suggesting a non-casual relationship. In patients presenting with bipolar disorder in comorbidity with PTSD, higher suicidality rates have been reported as compared to those with each of the two disorders alone. In the present study, we explored the mood spectrum symptoms in a sample of civilian patients with PTSD without bipolar disorder comorbidity, with the aim to investigate whether the mood spectrum symptoms were associated with suicidal ideations and/or attempts. Study participants included 65 PTSD patients without bipolar disorder and 65 healthy control subjects (C). The lifetime manic/hypomanic, depressive and rhythmicity/vegetative function symptoms were assessed by using a validated self-report instrument (MOODS-SR). PTSD patients reported higher MOODS-SR scores compared with C. In logistic regression models, positive associations were found between the number of items endorsed on the manic/hypomanic, depressive and rhythmicity/vegetative function components of the mood spectrum and the increased likelihood of suicidal ideation (OR=1.09; 95% CI 1.04-1.15; odds ratio=1.11; 95% CI: 1.08-1.24; OR 1.36; 95% CI: 1.17-1.58 respectively), or attempts (OR=1.05; 95% CI 1.00-1.11; OR=1.13; 95% CI: 1.04-1.23; OR 1.14; 95% CI: 1.01-1.30 respectively). Our results suggest that lifetime subthreshold manic/hypomanic traits and soft disturbances of rhythmicity/vegetative functions are associated with higher suicidality in PTSD.

PO2.29. THE ATYPICAL ANTIPSYCHOTICS OLANZAPINE AND RISPERIDONE IN THE TREATMENT OF POST-TRAUMATIC STRESS DISORDER: A META-ANALYSIS OF RANDOMIZED, DOUBLE-BLIND, PLACEBO-CONTROLLED CLINICAL TRIALS

In-Ho Paik, Woong Ham
Department of Psychiatry, Catholic University of Korea, Seoul; Keyo Medical Foundation, Keyo Hospital, Uiwang, Kyunggi-Do, South Korea

Post-traumatic stress disorder (PTSD) is a prevalent and disabling mental illness. Small studies found atypical antipsychotics (AAs) to be beneficial in the treatment of patients with PTSD. This study reports the results of a meta-analysis of existing randomized, double-blind, placebo-controlled clinical trials (RCTs) of AAs as a monotherapy or augmentation therapy for the treatment of patients with PTSD. Seven RCTs were identified through extensive scans of databases, which included PubMed, MedLine, the National PTSD Center Pilots database, PsycINFO, Cochrane Central Register of Controlled Trials, and the Abstracts Library of the American Psychiatric Association with predefined inclusion criteria. Dichotomous and continuous measures were performed using a fixed effects model, heterogeneity was assessed, and subgroup analyses were done. Data from seven RCTs involving a total of 192 PTSD patients (102 randomized to AAs and 90 randomized to placebo) were analyzed. The results show that AAs may have a beneficial effect in the treatment of PTSD, as indicated by the changes from baseline in Clinician Administered PTSD Scale total scores (standardized mean difference, SMD=-0.45; 95%

CI -0.75; -0.14, p=0.004). In addition, the overall SMD of the mean changes in the three Clinician Administered PTSD Scale subscores was statistically significant (p=0.007) between AAs and placebo groups. The symptom of intrusion was mainly responsible for this significance. The clinical significance of the results, however, should be carefully interpreted, given the limitations of currently existing RCTs included in the analysis.

PO2.30.
ZIPRASIDONE TREATMENT FOR POST-TRAUMATIC STRESS DISORDER: A CASE REPORT

M. Saitis, G. Papazisis, K. Katsigianopoulos
Community Mental Health Center of North-Western District of Thessaloniki, Psychiatric Hospital of Thessaloniki; Department of Pharmacology, School of Medicine, Aristotle University of Thessaloniki, Greece

Recent pharmacotherapeutic research on treatments for post-traumatic stress disorder (PTSD) has focused on antidepressant drugs with serotonergic actions. However, the presence of psychotic symptoms in a substantial portion of PTSD patients raises the possibility that atypical antipsychotics might also prove useful in treating PTSD. We describe the case of a woman with chronic PTSD, following a physical attack, who benefited from therapy with ziprasidone. Ms. A., a 43-year-old woman, had a 2-year history of panic disorder. She became panic free when treated with sertraline 200 mg/day. After 1 year of sertraline treatment, she experienced a severe physical attack-induced PTSD. While still panic free, she developed PTSD with typical symptoms that included recurrent and intrusive distressing recollections of the attack, a sense of reliving the experience, hypervigilance, irritability, illusions and hallucinations. Sertraline treatment successfully blocked her panic symptoms before, during and after the physical attack but did not prevent the development of PTSD. The patient was treated with ziprasidone 40 mg/day, which was raised to 160 mg/day. Three weeks after beginning ziprasidone treatment, the illusions and hallucinations had disappeared. She had also a remarkable improvement regarding her intrusive recollections, hypervigilance and irritability. Two months after, the patient began to entertain and work. This is continued for 20 months of follow-up. To our knowledge, this is the first published case report which indicates that ziprasidone may be useful for treatment of physical attack-induced PTSD.

PO2.31.
EFFICACY OF LAMOTRIGINE IN THE TREATMENT OF AVOIDANCE/NUMBING IN POST-TRAUMATIC STRESS DISORDER

H. Afshar, S. Amanat
Department of Psychiatry and Behavioral Sciences Research Center, University of Medical Sciences, Isfahan, Iran

Post-traumatic stress disorder (PTSD) is difficult to treat. Based on the hypothesis that exposure to traumatic events may kindle the limbic system, efforts to treat PTSD by anticonvulsants have been made. We sought to assess clinical response to lamotrigine in PTSD patients. Thirty patients with PTSD were randomly assigned to two groups in a double-blind clinical trial. One group was treated for 3 months with lamotrigine (n=15; 150-500 mg/day) and the other with placebo (n=15). The Clinician-Administered PTSD Scale (CAPS) was used at the first visit and after three months of treatment. In the placebo group, there was no significant change in the mean scores for frequency and intensity of PTSD symptoms after treatment compared to baseline. In the lamotrigine group, the mean scores for frequency and intensity of avoidance of thoughts/feelings/situations, inability to recall important aspects of trauma and diminished interest in activities decreased significantly after treatment. These findings suggest that lamotrigine is effective in the treatment of avoidance/numbing in PTSD.

PO2.32.
INTERVENTIONS TO REDUCE PTSD IN VICTIMS OF RAPE: A SYSTEMATIC REVIEW

C. Regehr, R. Alaggia, M. Saini
University of Toronto, Toronto, Canada

The traumatic aftermath of sexual assault on victims is well recognized. Several psychosocial treatment modalities for victims of sexual violence, predominantly based on psychodynamic, cognitive behavioral or feminist-informed theoretical frameworks, are found in the literature and in practice. Some modalities have been specifically designed for victims of sexual violence and some have been adapted from other populations. Although there is evidence of effective treatments for traumatic stress (PTSD) for a variety of populations, modalities specific to victims of sexual assault have not been systematically tested. Evidence suggests that trauma associated with rape or sexual assault differs from trauma related to other sources, in part due to the strong element of self-blame, higher incidence of concurrent depression and increased risk of suicide. Therefore, special attention is needed to explore the effectiveness of interventions specific to victims of sexual violence. Furthermore, the effectiveness of psychotherapies should be distinguished from interventions that either include pharmacology or are based solely on the use of medication to treat trauma and distress. We present the results of a systematic review of controlled and clinical trials of psychotherapies for victims of rape and sexual assault and a synthesis of effective treatments for addressing distress and trauma. Differences in effect sizes between treatments are assessed by considering the relative influences of different characteristics of the populations used in evaluative studies, treatment modalities, targeted outcomes and research designs.

PO2.33.
THE EFFECT OF PRAZOCIN ON COMBAT RELATED POST-TRAUMATIC STRESS DISORDER NIGHTMARES

G. Asadollahi Dehaghi, J. Mahmoodi Gharaei
Isfahan University of Medical Sciences, Isfahan; Tehran University of Medical Sciences, Tehran, Iran

Several studies have shown noradrenergic system hyperactivity in post-traumatic stress disorder (PTSD). Four Vietnam combat veterans with chronic PTSD reported reduction or complete elimination of combat trauma nightmares after assumption of prazocin, an α_1-adrenergic receptor antagonist. This study prompted an open trial of prazocin for Iran and Iraq combat PTSD patients nightmares. Twenty-two male and married patients with chronic DSM-IV PTSD and combat trauma related nightmares participated in the 8 week trial. Exclusion criteria were current substance abuse or dependency, psychotic disorders and any medical condition that contraindicated the use of prazocin. Six patients were withdrawn from the study because of side effects. In the remainders, there was a statistically significant reduction of the severity of nightmares ($p<0.001$). This is a preliminary evidence of the efficacy of α_1-adrenergic receptor blockade in PTSD nightmares.

PO2.34.
ORIGIN OF PHOBIA: EVALUATION OF PREPAREDNESS EFFECT

E. Galimberti, M. Grassi, L. Bellodi, G. Perna
Vita Salute San Raffaele University, Milan, Italy; Faculty of Psychology, University of L'Aquila, Italy; Faculty of Health, Medicine and Life Sciences, University of Maastricht, Maastricht, The Netherlands

The central component of Seligman's preparedness theory of phobia was that many aspects of phobias can be understood in term of selective associations in fear conditioning. He suggested that some conditioned stimuli (CS) with evolutionary significance, such as spiders or angry expression, are more readily associated with certain kinds of aversive unconditioned stimuli (US). He also proposed that subjects conditioned to these stimuli should exhibit rapid acquisition, resistance to extinction, "irrationality" and "belongingness". In the present study, we aimed to test the resistance to extinction and easy acquisition hypothesis. A differential electrodermal aversive conditioning procedure was applied to a sample of 82 healthy subjects. The study included five experimental conditions. In all conditions, experimental design and US were the same, but the CS was spider in the first, a neutral animal stimulus in the second, a angry facial expression in the third, a neutral facial expression in the fourth and a neutral stimulus in the last one. The experimental design consisted of 12 habituation, 26 acquisition, and 12 extinction trials. A startling loud and obnoxious sound (a 100 dB, 1 s, 250 Hz) served as US during the acquisition phase. All tested subjects displayed an expected response to conditioning test, but the group conditioned to spider or angry facial expression showed an easier acquisition and extinguished conditioned response significantly more slowly than subjects conditioned to neutral stimuli, neutral facial expression or neutral animal stimulus. These results are consistent with the preparedness hypothesis of phobia.

PO2.35.
COGNITIVE-BEHAVIORAL THERAPY FOR BLOOD-INJURY-INJECTION PHOBIA IN A YOUNG WOMAN

H. Fukuhara, T. Iketani, K. Maebayashi, S. Murata, M. Katagami, T. Noshi, R. Fukada, J. Okazaki, N. Kiriike
Department of Neuropsychiatry, Osaka City University Medical School, Osaka, Japan

Blood-injury-injection (BII) phobia is a peculiar type of specific phobia, characterized by excessive fear and avoidance of seeing blood, an injury, or receiving an injection. Blood-injury-injection phobic cues evoke an initial tachycardia followed by bradycardia and, frequently, vasovagal syncope. Unlike other phobias, faintness is a specific somatic response of BII phobia. Specific phobias are not usually treated unless they are severely disabling, especially in Japan. Cognitive-behavioral therapy is recommended to treat for disabling BII phobia in Western countries, but is not so widespread in Asian countries. This case report describes the successful treatment of a young woman who suffered from BII phobia with cognitive-behavioral therapy. We treated with exposure as a central component, and applied tension as an adjunct. The woman had had the phobia since when she was in junior high school. She became a health care worker, but her occupational functioning was significantly affected by this phobia. The final goal of treatment was to restart working as a health care worker, so we performed specialized exposure for tasks for 7 months. Vasovagal syncope and feeling faint subsided after carrying out exposure tasks. Twelve-month follow-up study demonstrated maintenance of treatment gains and of her career as a health care worker.

PO2.36.
SOCIAL ANXIETY DISORDER, PANIC DISORDER AND MITRAL VALVE PROLAPSE: ARE THERE ANY RELATIONSHIPS?

A.S. Filho, B.C. Maciel, M.M.D. Romano, T.F. Lascala, M.C.S. Freitas, J.A.S. Crippa
Department of Neuropsychiatry and Medical Psychology, and Department of Internal Medicine, Faculty of Medicine, University of São Paulo, Ribeirão Preto, Brazil

The association between mitral valve prolapse (MVP) and anxiety disorders, particularly panic disorder (PD) and social anxiety disorder (SAD), has attracted considerable interest, but the published results have not been sufficient to definitely establish or to exclude an association. This study consisted of an echocardiographic evaluation of 232 volunteers previously diagnosed with SAD (n=126), PD (n=41) or no anxiety disorder (n=65). The exams were performed by two cardiologists specialized in echocardiography who were blind to the psychiatric diagnosis of the participants. There were no statistical differences between groups in MVP prevalence (SAD 4.0%, PD 2.4% and controls 0.0%), with values similar to the prevalence currently estimated for the normal population (2-4%). When the data were evaluated using the M-mode, the method used in most of the previous studies but currently considered of questionable validity, the prevalence was higher in the SAD group (8.7%) compared to control (0.0%). If any relationship does actually exist among SAD, PD and MVP, it could be said that it is infrequent and that it mainly occurs in subjects with minor variants of MVP.

PO2.37.
SPECTRUM OF SOCIAL ANXIETY DISORDER AND PSYCHIATRIC COMORBIDITIES

A.S. Filho, L.A.B. Hetem, M.C.S. Freitas, F.L. Osório, T. Borduqui, S.R. Loureiro, J.A.S. Crippa
Department of Neuropsychiatry and Medical Psychology, Faculty of Medicine, University of São Paulo, Ribeirão Preto, Brazil

Most patients with social anxiety disorder (SAD) present other psychiatric disorders. The lifetime prevalence of comorbidities has been reported to range from 52 to 92% in epidemiological studies. There is some evidence showing that the frequency of comorbidities varies according to subtype and severity of SAD and those subjects with subthreshold SAD present intermediate values. This study consisted of the evaluation of psychiatric comorbidities in 355 volunteers, all of them college students who had been diagnosed as SAD (n=141), subthreshold SAD (n=92) or no SAD (n=122) in a previous study. The groups were balanced regarding age, sex and socioeconomic level. Three interviewing psychiatrists, blind to the group to which the volunteers belonged, applied the SCID for the DSM-IV. The rate of comorbidity with other psychiatric disorders was 71.6% in the SAD group and 50% in subjects with subthreshold SAD and differed significantly from the controls (28.7%). These results confirm in a Brazilian sample of college students the results of other epidemiological and clinical studies on the existence of high levels of lifetime comorbidity in SAD. The rates of psychiatric comorbidity increase progressively along the spectrum of social anxiety. Further studies are needed to determine the consequences of this association.

PO2.38.
SPECTRUM OF SOCIAL ANXIETY DISORDER AND IMPAIRMENT OF PSYCHOSOCIAL FUNCTIONING

A.S. Filho, J.A.S. Crippa, M.C.S. Freitas, F.L. Osório, L.V. Morais, T. Borduqui, S.R. Loureiro, L.A.B. Hetem
Department of Neuropsychiatry and Medical Psychology, Faculty of Medicine, University of São Paulo, Ribeirão Preto, Brazil

Social anxiety disorder (SAD) is a highly incapacitating condition that can cause considerable subjective suffering, with a negative impact on psychosocial functioning. However, few data are available in the literature about the influence of SAD severity and subtypes or the presence of comorbidities on psychosocial functioning, and the possible extent of this impairment in individuals with subthreshold signs and symptoms. This study consisted of the evaluation of psychosocial functioning using the Disability Profile (DP) in 355 volunteers, all of them college students who had been diagnosed in a previous study as SAD (n=141), no SAD (n=122) or subthreshold SAD (n=92), the last ones being defined as having unreasonable fear of a social situation but not fulfilling the criteria of avoidance or functional/occupational impairment due to this fear. The groups were balanced regarding age, sex and socioeconomic level. The SAD group had higher scores than the other two groups in all domains of DP, both on a lifetime basis and during the last two weeks. Subjects with subthreshold SAD presented intermediate values. The impairment of psychosocial functioning was also significantly related to the severity of the disorder. Regarding subtype, generalized SAD caused more harm, and the presence of comorbidities was associated with greater impairment of psychosocial functioning in each group. These findings suggest that the impairment of psychosocial functioning progressively increases along the spectrum of social anxiety. Further studies are needed to evaluate the consequences of this association.

PO2.39.
RECOGNITION OF FACIAL EMOTIONS IN SOCIAL ANXIETY DISORDER PATIENTS

K.C. Arrais, A.S. Filho, J.P.M. Sousa, M.C.F. Ferrari, S.R. Loureiro, F.L. Osório, J.E.C. Hallak, J.A.S. Crippa
University of São Paulo, Ribeirão Preto, Brazil

Some studies suggest that individuals with social anxiety disorder (SAD) exhibit impaired ability for the recognition of facial expressions. The purpose of this study was to analyze the recognition of facial expressions of six basic emotions (happiness, sadness, disgust, anger, fear and surprise) in individuals with SAD. The sample was formed by 78 individuals with SAD assigned to the experimental group and 153 healthy controls. All volunteers were university students, never treated, aged between 18 and 30 years and with similar socioeconomic classification. They had to judge which emotion was presented in the facial expression of stimuli displayed on a computer screen. The stimuli were faces of four actors representing the six emotions, which were manipulated in order to depict different emotional intensities. Thus, the initial image would be a neutral face (0%) and, as the individual moved the images, the expressions increased their emotional intensity until reaching the total emotion (100%). When the individual was able to recognize the emotion presented, he pressed the button labeled as the emotion recognized and moved on to a new emotion. The time, accuracy, and intensity necessary to perform judgments were later evaluated. The experimental groups did not show statistically significant differences in respect to the number of correct judgments or to the time necessary to respond. However, the SAD group required lower intensity to recognize the fear (p=0.041) and happy (p=0.032) emotions, whereas there were no significant differences for the other emotions.

PO2.40.
COPING WITH SOCIAL PHOBIA IN OCCUPATIONAL REHABILITATION: A COGNITIVE BEHAVIORAL APPROACH INTEGRATED IN A PERSONAL COMPUTER COURSE

H. Löhr, R. Wynn, J.H. Rosenvinge
University Hospital of Northern Norway, and University of Tromsoe, Norway

The study aimed to develop and evaluate cognitive behavioural therapy (CBT) for social phobia patients ambivalent to complete occupational rehabilitation. It addressed both achievement anxiety and interaction anxiety. CBT for social phobia was adjusted to fit with a basic computer skills course, as a first step from medical to occupational rehabilitation. Eight patients met at school four days weekly for 11 weeks. Seventy-five per cent of the time was spent on computer skills taught by a teacher, and 25% on psycho-education and social phobia treatment exercises taught by a psychologist. The teacher was following the psycho-education sessions, too. Patients were systematically tested diagnostically and psychometrically. Both patients and teacher were interviewed about their experiences. A positive impact on anxiety coping and self-confidence concerning returning to work was found, mostly for people with compulsive tendencies. The computer course teacher's participation in psycho-education facilitated social phobia treatment exercises. The presence of strong avoiding tendencies seemed to reduce program efficacy.

PO2.41.
OBSESSIVE-COMPULSIVE DISORDER WITH POOR INSIGHT: CLINICAL CHARACTERISTICS AND TREATMENT RESPONSE

F. Perris, M. Luciano, V. Cioffi, F. Catapano, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Poor insight has been reported in 15% to 36% of patients with obsessive-compulsive disorder (OCD), but little is known about its clinical correlations. Similarly, controversial results have been reported on the relationship between poor insight and response to serotonin reuptake inhibitors (SRIs). The aim of this study was to evaluate the clinical characteristics of OCD patients with poor insight, and the predictive value of poor insight with respect to response to treatment with SRIs. One hundred twenty patients, fulfilling DSM-IV criteria for OCD, were included in the study. Baseline information, demographic and clinical characteristics were collected by standardized instruments. Eighty-four patients were treated with an SRI in a 2-year open-label trial. During the follow-up period, the clinical status was evaluated by the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) and the Hamilton Rating Scale for Depression (HDRS), monthly during the first year and bimonthly thereafter. Twenty percent of the patients did not recognize obsessive-compulsive symptoms as unreasonable or senseless. Patients with poor insight had a earlier age at onset, a greater severity of obsessive-compulsive symptoms at intake, a higher rate of schizophrenia spectrum disorders in first-degree relatives, and a higher comorbidity rate of schizotypal personality disorders. At the end of the study, 62% of the patients with normal insight responded to SRIs, whereas none of the patients with poor insight was found to be responder. These results suggest that poor insight is associated with specific clinical correlates and poor response to drug treatment. Fur-

ther studies should aim at identifying additional treatment strategies that are effective in poor insight OCD patients.

PO2.42.
OBSESSIVE-COMPULSIVE DISORDER IN PATIENTS WITH THE COMPULSION TO WASH: WHAT DOES THE BRAIN PERFORM EXACTLY?

S. Oddo, A. Thiel, R. Langnickel, A. Heinecke, J. Thiel, M. Brand, H.J. Markowitsch, A. Stirn
Department of Psychiatry, Psychosomatic and Psychotherapy, J.W. Goethe University Hospital, Frankfurt, Germany; Philosophical Seminar, University of Zurich, Switzerland; Brain Innovation B.V., Maastricht, The Netherlands; Physiological Psychology, University of Bielefeld, Germany

Specific neural correlates of obsessive-compulsive disorder (OCD) with the compulsion to wash have never been analyzed before. Existing neuroimaging data on OCD generally show changes of neural activity in the striatum, orbitofrontal cortex and anterior cingulated gyrus. In our functional magnetic resonance imaging (fMRI) study, we compared the neural networks of OCD patients with the compulsion to wash and healthy controls. We used a picture paradigm consisting of autosexual, aggressive, disgusting, neutral and water pictures. When confronted with aggressive stimuli, OCD patients showed increased neural activity in the right hemispheric parahippocampal gyrus, the precuneus, prefrontal, insula and subcortical regions. This underlines a strongly emotional (negative) reaction in the OCD group. At the behavioral level, we observed an inhibition of aggression, which is contrariwise represented in the brain. Moreover, OCD patients showed an increase in neural activity in the precuneus, and the posterior cingulate of the left hemisphere, when water pictures were presented, which points at strong self relational processing. In conclusion, OCD patients processed diseases-related stimuli in a highly emotional and self-related manner, whereas healthy controls did not. New therapeutic implications could be seen in a more focussed emotional regulation training to express emotions adequately.

PO2.43.
OBSESSIVE SPECTRUM DISTURBANCES IN THE POSTPARTUM PERIOD

M. Ferreira, V. Raposo, C. Pissarra, J. Oliveira
Psychiatric Hospital Center, Coimbra, Portugal

It is well known that the risk of the development of various mental disorder increases considerably in the months after childbirth. The concern regarding residual excess of weight during this period and, consequently, changes in body image are reported by women as causes for emotional distress. This self-image dissatisfaction may trigger eating disorders and obsessive compulsive symptoms. The authors describe the case of a patient, aged 32, who developed a depressive syndrome after her daughter was born, which she ascribed to pregnancy-induced body changes (she had had a 20 kg increase on her initial weight). This picture was accompanied by intrusive thoughts of her hitting the baby, which forced the father and the daughter to sleep in another room. Since then, she reports excessive concern regarding the control of her body weight and repeated episodes of hyperphagia, followed by feelings of guilt and discomfort. She denies compensatory behavior. She holds an affectively distant relationship with her daughter, now 2 years old. These disturbances may have negative consequences on childhood development, because they influence mother-child interaction.

PO2.44.
LONG-TERM COURSE OF OBSESSIVE-COMPULSIVE DISORDER: A PROSPECTIVE STUDY

E. Pessina, G. Maina
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Several studies have examined the prognosis of obsessive-compulsive disorder (OCD), but long-term studies are few, and most were published several decades ago. Studies with a mean follow-up of more than 10 years are rare and are based mainly on retrospective information. The results from these studies are difficult to compare owing to differences in study populations, diagnostic criteria and criteria for improvement and deterioration. The longest prospective study to date that followed up patients for 40 years, included severely ill hospitalized patients. This study aimed to evaluate the long term course of OCD in a perspective way over a period of 15 years, in a sample of patients recruited at a mood disorders unit. Patients were included in the study if they had a diagnosis of OCD according to DSM-IV. In the initial comprehensive evaluation, lifetime history was assessed with the Structured Clinical Interview for DSM-III-R Axis I disorder. Yale-Brown Obsessive-Compulsive Scale, Clinical Global Impression Scale, and Global Assessment of Functioning Scale were also administrated. Follow-up interviews were conducted at 3-year intervals. 315 OCD patients were recruited at baseline. A total of 71 OCD patients remained enrolled at the 15 year follow-up. 34 patients (47.9%) were still obsessive-compulsive after 15 years; 24 (33.8%) were remitted or had subthreshold OCD (Y-BOCS<16) and 13 (18.3%) had changed diagnosis. Y-BOCS mean scores decreased from 26.3 at baseline to 13.9 at 15-year follow-up. GAF mean scores increased from 61.6 to 71.4.

PO2.45.
FIRST ONSET OF OBSESSIVE-COMPULSIVE DISORDER DURING PREGNANCY FOLLOWED BY DEVELOPMENT OF PSYCHOSIS

D. Vecchio, A. Mohandas
Devon Partnership NHS Trust, Devon, UK

It is well recognized that obsessive-compulsive disorder (OCD) can be induced by pregnancy. It is less well recognized that OCD can be a prodrome for a psychotic illness. We present a case report of a first onset of OCD during pregnancy followed by development of psychotic illness in the post partum period. A thirty year old Caucasian lady with no previous history of OCD presented at 28 weeks of gestation with severe OCD symptoms which responded only partially to antidepressant and cognitive behavioural therapy (CBT). Following delivery of the baby by induction her OCD symptoms were reduced even though they continued in the background. Eight weeks after delivery she had an eight week admission for depression with guilt regarding a marital issue and during this admission her OCD symptoms disappeared completely and she was on an antidepressant and a low dose antipsychotic. Two months later in the outpatient clinic she reported florid psychotic symptoms and admitted that she was experiencing this even during the previous inpatient admission. Since then, she has been managed under the early intervention team with minimal OCD and no psychotic symptoms and her treatment includes an antipsychotic and an antidepressant as well as CBT, psychoeducation and family therapy. The early recognition and management of psychosis by specialised early intervention services produces better outcomes and we suggest that early intervention teams would be well placed to monitor patients who are at risk of developing psychosis, which would include those who present with OCD for the first time during pregnancy.

PO2.46.
CLINICAL HETEROGENEITY OF OBSESSIVE-COMPULSIVE DISORDER: TREATMENT IMPLICATIONS

U. Albert, G. Maina, F. Bogetto
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Obsessive-compulsive disorder (OCD) has been the focus of several studies in recent years and effective treatments are now available: serotonin reuptake inhibitors and/or cognitive-behavioural approaches. However, a proportion of patients fail to respond to these strategies. Moreover, it appears still to be fully understood whether there are predictors of response to differential treatment strategies. One of the reasons that might explain the slow progress of our understanding of OCD is that this is a heterogeneous disorder. Several subtypes of OCD have been investigated: tic-related vs. non tic-related, familial vs. sporadic, early vs. late-onset, PANDAS, bipolar vs. non-bipolar, episodic vs. chronic. Only a few appear to have treatment implications: tic-related OCD is highly responsive to antipsychotic addition; a subgroup of early-onset cases has been proposed to have an autoimmune etiopathogenesis (PANDAS) and in such patients immunomodulating therapies (such as plasma exchange or antibiotic prophylaxis) might be effective. Anti-brain antibodies have been detected even in adult patients and this might imply that such therapies could be offered even to adults, although the evidence to date is poor. An additional methodology has been recently proposed to characterize different subtypes of OCD according to symptomatological dimensions and might in the future prove to be informative regarding etiopathogenesis and differential treatment strategies.

PO2.47.
EATING ATTITUDES IN OBSESSIVE COMPULSIVE PATIENTS

F.C. Celikel, T.Y. Bingol, D. Yildirim, H. Tel, U. Erkorkmaz
Gaziosmanpasa University, Tokat; Erciyes University, Kayseri, Turkey

The aim of the present study was to determine the correlates of disordered eating attitudes in a sample of obsessive-compulsive disorder patients. The sample consisted of 55 outpatients (40 females, 15 males; mean age: 32.8±11.7), who met DSM-IV criteria for obsessive-compulsive disorder. All patients were administered the Turkish version of the Maudsley Obsessive Compulsive Questionnaire (MOCQ), the Eating Attitudes Test (EAT), the Beck Depression Inventory (BDI), and the Beck Anxiety Inventory (BAI). The body mass index (BMI) was calculated. An EAT score of 30 was taken as cut-off which is suggestive of a disordered eating attitude. The mean duration of disease was found to be 6.7±7.5 years. Both BDI ($r=0.350$; $p=0.009$) and BAI ($r=0.507$; $p<0.001$) were positively and significantly correlated with MOCQ. The average BMI of the sample was 25.7±5.0 kg/m^2 and the mean EAT score was 27.2±18.9. The EAT scores showed no significant correlations with the duration of disease, BMI, and the mean scores of BDI, BAI or MOCQ. The results of the present study do not support the existence of correlations between obsessive-compulsive symptoms and eating attitudes.

PO2.48.
PATIENTS WITH RESISTANT OBSESSIVE-COMPULSIVE DISORDER SUCCESSFULLY TREATED WITH CITALOPRAM PLUS CLOMIPRAMINE

D. Marazziti, G. Consoli, F. Golia, M. Carlini, M. Catena Dell'Osso
Department of Psychiatry, Neurobiology, Pharmacology and Biotechnologies, University of Pisa, Italy

The high percentage (between 40 and 60%) of resistance to first-line drugs, such as clomipramine or selective serotonin reuptake inhibitors (SSRIS), is a major problem in the pharmacological management of obsessive-compulsive disorder (OCD). In these cases, different strategies have been employed with controversial outcomes. The meagre information available on the association of two serotonergic drugs prompted us to explore the possible effectiveness and tolerability of citalopram + clomipramine in resistant OCD patients. Twenty outpatients with a DSM-IV diagnosis of OCD, who had failed to respond to at least two trials with SRI/SSRI and were currently taking clomipramine at different doses, were administered citalopram at a maximal dose of 60 mg/day. The clinical assessment was carried out at baseline (t0) and after 4 (t1), 12 (t2), 24 (t3), 36 (t4), and 48 (t5) weeks, by means of the Y-BOCS, HRSD, CGI and DOTES. The response was defined as a 35% decrease of the Y-BOCS total score. The results showed that about 50% of the patients improved significantly after one month and one year of treatment. This study represents one of the few experiences with the association of two serotonergic compounds in resistant OCD and confirms its potential usefulness and good tolerability profile. Controlled research on this association in OCD is recommended.

PO2.49.
SYMPTOM DIMENSIONS AND TREATMENT RESPONSE IN OBSESSIVE-COMPULSIVE DISORDER

F. Perris, V. Cioffi, F. Rossano, V. De Santis, F. Catapano
Department of Psychiatry, University of Naples SUN, Naples, Italy

This study aimed to evaluate the relationship between symptom dimensions of obsessive-compulsive disorder (OCD) and response to treatment with serotonin reuptake inhibitors (SRIs). One hundred ten patients fulfilling DSM-IV criteria for OCD were included in the study and assessed by standardized instruments. Seventy-nine patients were treated with SRIs and followed prospectively for 3 years. During the follow-up period, the clinical status of each patient was evaluated monthly in the first year and bimonthly thereafter by means of the Yale-Brown Obsessive Compulsive Scale (Y-BOCS) and the Hamilton Rating Scale for Depression (HDRS). The 13 main symptom categories from the Y-BOCS Checklist were factor analysed by using principle components analysis. The analysis yielded a four-factor solution: symmetry/ordering, hoarding and religious obsessions, contamination/cleaning, and aggressive/sexual obsessions. The symmetry/ordering dimension was significantly correlated with Yale-Brown compulsion subscale score and comorbid obsessive-compulsive personality disorder; the hoarding and religious obsession dimension with the obsession subscale score and a longer duration of illness at intake; the aggressive/sexual obsession dimension with earlier age at onset, a higher comorbidity rate of schizotypal personality disorder and a higher level of insight. The contamination/cleaning dimension was negatively correlated with family history of OCD. Higher scores on the

contamination/cleaning dimension predicted poorer outcome following treatment with SSRIs. The study provides evidence of significant differences in clinical characteristics and response to treatment in relation to the symptom dimensions of OCD. Further research on the biological correlates and treatment implications of those dimensions are needed.

PO2.50.
CLINICAL FEATURES RELATED TO REFRACTORINESS TO SELECTIVE SEROTONIN REUPTAKE INHIBITORS IN OBSESSIVE-COMPULSIVE PATIENTS

F.F. da Rocha, N.V. Lage, H. Correa
Federal University of Minas Gerais, Belo Horizonte, Brazil

This study aimed to identify clinical characteristics that may differentiate obsessive-compulsive disorder (OCD) patients who are resistant to treatment with selective serotonin reuptake inhibitors (SSRIs) from those who have a favorable response. We recruited 84 outpatients with a DSM-IV diagnosis of OCD, aged 18-47 years, who were determined to have previously received an adequate trial with an SSRI. Treatment-resistant patients (n=30; 35.7%) were compared with responders (n=54; 64.3%) on a number of factors, including age, sex, insight into disease, duration of illness, age of onset, severity and nature of OCD symptoms (Yale-Brown Obsessive Compulsive Scale, Y-BOCS), severity of depressive (Beck *Depression Inventory*) and anxious (Beck Anxiety Inventory) symptoms, and ratings on the Clinical Global Improvement (CGI) and Clinical Global Impression-Severity (CGI-Severity) scales. All these features were evaluated before treatment. The treatment-resistant group had significantly more severe anxiety ($p<0.05$) and compulsive symptoms ($p<0.01$), prominent hoarding symptoms ($p<0.01$), greater functional impairment ($p<0.05$) and impaired insight ($p<0.01$) than treatment responders. However, treatment responders reported higher levels of depressive symptoms ($p<0.05$), perhaps indicating that they present greater insight about their symptoms. Our study is retrospective and further studies are needed to identify variables associated with refractoriness to SSRIs in OCD patients.

PO2.51.
EARLY AGE OF ONSET AND 5-HTTLPR S ALLELE AS POSSIBLE PREDICTORS OF A LESS FAVORABLE RESPONSE TO SELECTIVE SEROTONIN REUPTAKE INHIBITORS IN OBSESSIVE-COMPULSIVE DISORDER

F.F. da Rocha, N.V. Lage, H. Correa
Federal University of Minas Gerais, Belo Horizonte, Brazil

This study evaluates the influence of 5-HTTLPR on response to treatment with selective serotonin reuptake inhibitors (SSRIs) in obsessive-compulsive-disorder (OCD). We compared 5-HTTLPR genotype and allelic frequencies between 30 patients with a DSM-IV diagnosis of OCD who were treatment-resistant and 54 OCD patients that responded to therapy with an SSRI. 5-HTTLPR genotyping was performed using PCR. The association between genotype, allele frequencies, SSRI response and clinical features was assessed by use of logistic regression. Patients with the 5-HTTLPR s allele had a non-significantly increased risk of SSRI non-response: the odds ratio (OR) was 1.33, with a 95% confidence interval (CI) of 0.57-4.20. Early age of onset of the disorder (<18 years) was related to increased risk of SSRI non-response (OR 4.12; 95% CI 1.45-17.48). Further studies are needed to explore the relationship of 5-HTTLPR and age of onset with response to SSRIs in OCD.

PO2.52.
UTILITY OF ARTIFICIAL NEURAL NETWORKS IN THE PREDICTION OF OBSESSIVE-COMPULSIVE TREATMENT RESPONSE

M. Grassi, G. Salomoni, C. Zorzi, S. Di Santo, P. Mosetti, P. Mosini, G. Perna, P. Cavedini, L. Bellodi
Vita Salute San Raffaele University, Milan; Faculty of Psychology, University of L'Aquila, Italy

Prediction tasks are common in psychiatry, both in clinics and research. A new method are the supervised artificial neural networks (S-ANN), which may bring to a better predictive performance due to their ability to model all the complex and interactive relationships among predictors and dependent variables. We built a predictive model of obsessive-compulsive disorder treatment response, comparing S-ANN and traditional logistic regression performances. The sample analysed consisted of 130 obsessive-compulsive patients, all treated with selective serotonin reuptake inhibitors (SSRIs), using an augmentation strategy with antipsychotic drug or a cognitive-behavioural therapy (CBT) when judged necessary according to clinical patient characteristics and SSRI treatment response. Patients were considered responder if Δ%Y-BOCS≥40%. Predictors considered were gender, the 13 Y-BOCS items for the different types of obsessions and compulsions (excluding other obsessions and other compulsions), the Y-BOCS Total Obsessions and Total Compulsions scales, the Y-BOCS Insight item score and performances on Wisconsin Card Sorting Test, Iowa Gambling Test and Tower of Hanoi. Random-resampling procedure (10,000 resamplings; n train=90%, n test=10%) was used in order to test model generalization performances. S-ANN models showed a generalized predictive performance which was significantly better both than randomness and logistic regression models performances, with a generalized correct classification rate of 93.3±4.82% and 63±8.71% (threshold set at 0,5; C.I. 95%) and a generalized AUC ROC of 0.945±0.0524 and 0.645±0.106, respectively.

PO2.53.
CLINICAL FEATURES RELATED TO REFRACTORINESS TO RISPERIDONE AUGMENTATION THERAPY IN OBSESSIVE-COMPULSIVE DISORDER PATIENTS

F.F. da Rocha, N.V. Lage, H. Correa
Federal University of Minas Gerais, Belo Horizonte, Brazil

Selective serotonin reuptake inhibitors (SSRIs) are the mainstay of pharmacological treatment for obsessive-compulsive disorder (OCD). The augmentation with atypical antipsychotics has been shown to be effective. However, there are patients who still show no response after trials with this augmentation therapy. This study aimed to identify clinical features of OCD patients who did not respond to augmentation with risperidone. Forty-two patients with a DSM-IV diagnosis of OCD who received augmentation therapy were divided into two groups: responders to SSRI with risperidone augmentation (n=10; 23.8%), and non-responders therapy (n=32; 76.2%). We recorded age, sex, insight into disease, duration of illness, age of onset, nature of OCD symptoms (*Yale-Brown* Obsessive Compulsive Scale, Y-BOCS), presence and severity of tics (Yale Global Severity Tic Scale), severity of OCD symptoms (Y-BOCS) before augmentation, depression (Beck *Depression Inventory*) and anxiety (Beck *Anxiety Inventory*) symptoms. OCD patients who were refractory to augmentation therapy showed early onset of the disorder ($p<0.01$), prominent hoarding symptoms ($p<0.05$) and absence of motor tics ($p<0.01$). Our study is retrospective and the number of patients was small. Further

studies are needed in order to identify predictors of response to augmentation with atypical antipsychotics in OCD patients.

PO2.54.
DEEP BRAIN STIMULATION IN THE NUCLEUS ACCUMBENS FOR REFRACTORY OBSESSIVE-COMPULSIVE DISORDER

R. Muffatti, R. Cordella, O. Gambini, H. Messina, S. Scarone, A. Franzini, M. Savino, G. Broggi
Department of Psychiatry, University of Milan Medical School and San Paolo Hospital, Milan; Department of Neurosurgery, Fondazione Istituto Besta, Milan; Department of Psychiatry, Neurobiology Pharmacology and Biotechnologies, University of Pisa, Italy

Nucleus accumbens (NA) has been recognized to play an important role in reward, pleasure and addiction. Several neuroimaging studies of patients affected by obsessive-compulsive disorder (OCD) have pointed to basal ganglia and orbitofrontal cortex being relevant for pathophysiology of this disorder. As a central relay structure between amygdala, basal ganglia, mesolimbic dopaminergic areas, mediodorsal thalamus and prefrontal cortex, NA has been proposed as a target for deep brain stimulation (DBS) in OCD. Here we report our experience of OCD patients treated by DBS of NA. Technical details of electrode implantation and neurophysiological parameters of stimulation, discharge patterns in NA, as well as clinical description of patients at baseline and follow-up are given. A neurobiological model of OCD is proposed, including abnormalities in reward processing at the basis of obsessive-compulsive symptoms.

PO2.55.
EFFICACY OF BUSPIRONE IN THE TREATMENT OF OBSESSIVE-COMPULSIVE DISORDER

H. Afshar, S. Amanat
Department of Psychiatry and Behavioral Sciences Research Center, University of Medical Sciences, Isfahan, Iran

This study was designed to evaluate the efficacy of buspirone in the treatment of patients with obsessive-compulsive disorder. Sixty patients with this diagnosis were randomly assigned to two groups: one group received clomipramine (up to 300 mg/day) and the second was given buspirone (up to 60 mg/day). The patients were followed for 12 weeks. In both groups, the total score on the Yale-Brown Obsessive-Compulsive Scale declined significantly at week 12, and there was no significant difference between the two groups. These findings suggest that both clomipramine and buspirone are effective in obsessive-compulsive disorder.

PO2.56.
DECISION-MAKING IMPAIRMENT IS RELATED TO ADHERENCE TO COGNITIVE-BEHAVIORAL THERAPY IN OBSESSIVE-COMPULSIVE DISORDER

N.V. Lage, F.F. da Rocha, L. Malloy-Diniz, H. Correa
Federal University of Minas Gerais, Belo Horizonte, Brazil

Decision-making impairment seems to be an important feature of obsessive-compulsive disorder (OCD). Previous studies stressed the role of decision-making functioning in predicting anti-obsessive treatment outcome with serotonin reuptake inhibitors drugs in patients with OCD. This study aimed to examine whether the performance on the Iowa Gambling Task (IGT), a task which assesses decision-making, can predict the anti-obsessive outcome with cognitive-behavioral therapy (CBT). Twelve patients with a DSM-IV diagnosis of OCD (aged 18-47 years) received twelve weekly sessions of CBT. Assessments were conducted at baseline and post-treatment. Outcomes included severity of OCD symptoms (Yale-Brown Obsessive Compulsive Scale, Y-BOCS) and severity of depressive (Beck *Depression Inventory*) and anxious (Beck Anxiety Inventory) symptoms. Five participants (41.7%) abandoned the treatment and the others (n=7) were all classified as treatment responders. On IGT, the patients who had abandoned the treatment had significantly lower scores on the fourth ($p<0.01$), and fifth blocks ($p<0.01$). These findings were confirmed after adjusting for clinical variables. Thus, decision-making impairment measured by IGT seems to predict adherence to CBT in OCD.

PO2.57.
COGNITIVE-BEHAVIORAL THERAPY FOR COMORBID OBSESSIVE-COMPULSIVE DISORDER IN PATIENTS WITH PSYCHOSIS

A. Tundo, L. Salvati, D. Di Spigno, G.L. Busto, A. Parena, A. Saliani, L. Cieri, S. Sciortino
Institute of Psychopathology, Rome, Italy

Comorbid obsessive-compulsive disorder (OCD) in patients with schizophrenia or schizoaffective disorder is frequent (10-40%) and hard to treat. In this subpopulation serotonin reuptake inhibitors are often not tolerated. The purpose of this study was to evaluate the effectiveness of cognitive-behavioral therapy (CBT) on OCD in psychotic patients. Seventeen patients affected by OCD and schizophrenia or schizoaffective disorder were treated with CBT, involving exposure and ritual prevention. All patients were taking atypical antipsychotics. Obsessive compulsive symptoms were assessed by Yale-Brown Obsessive Compulsive Scale (Y-BOCS), level of functioning by Global Assessment of Functioning (GAF) at baseline (T0), at 6 (T1) and 12 (T2) months after starting CBT. Four patients (23%) dropped out of the study. Intent-to-treat analysis showed statistically significant reduction ($p<0.0001$) from T0 to T1 and from T1 to T2 on Y-BOCS total (29.8 vs. 25.9 vs. 21.6), obsession (15.7 vs. 13.3 vs. 11), compulsion (14.1 vs. 12.5 vs. 10.4) and insight (3.2 vs. 2.5 vs. 1.8) scores. GAF score also significantly improved ($p<.0001$) during the follow-up (49.8 vs. 52.6 vs. 58.8). These data suggest that CBT is a useful treatment of OCD in patient with psychosis.

PO2.58.
PREVALENCE OF OBSESSIVE-COMPULSIVE DISORDER IN FEMALE SECONDARY SCHOOL STUDENTS IN CAIRO

Z. Bishry, G. El-Nahass, E. Abou El-Ela, M. Sultan
Ain Shams University, Cairo, Egypt

This study aimed to estimate the point prevalence of obsessive-compulsive disorder (OCD) and sub-threshold obsessive-compulsive syndrome (sOCS) in Egyptian female adolescents. The study also delineated the commonest obsessive-compulsive symptoms in this population, that may be different from adults. The study was conducted in female secondary schools in Cairo. It covered urban, semi-urban and rural areas and public and private schools. The total sample included 607 students. A two-stage design was applied: there was a screening phase using Leyton Obsessional Inventory, child version; candidates who were considered positive for obsessive-compulsive symptoms were administered the *Mini*-International Neuropsychiatric Interview (MINI-Kid) to diagnose OCD and the associated comorbidity. The point prevalence of OCD was 1.2%; that of sOCS was 13.0%. These values were not significantly affected by order of birth, religion,

residency, or socioeconomic status. The commonest obsessive-compulsive symptom was overconscientiousness, which was more common in rural areas. The most common comorbid psychiatric disorders were dysthymia and other anxiety disorders.

PO2.59.
OBSESSIVE-COMPULSIVE DISORDERS AND COMORBID STATES: THEIR PATHOPLASTICITY

N. Israelyan
Yerevan State Medical University, Yerevan, Armenia

Obsessive-compulsive disorder (OCD) is often accompanied by comorbid disorders, such as anorexia nervosa, Tourette's syndrome, dysmorphophobic disorders. This comorbidity may affect the course and outcome of OCD. This study was conducted in 40 patients with OCD (age range 13-30 years), using a semi-structured clinical interview. Twelve patients (8 females and 4 males) had dysmorphophobic disorders with onset in adolescence. Among female patents, dysmorphophobia was accompanied by abnormal eating behaviors. A depressive component was present in both males and females. Tic disorders were found only in 2 cases (both of them males). Comorbidity should be routinely assessed in OCD patients and followed up longitudinally.

PO2.60.
SUPERSTITIONS AND PSYCHOLOGICAL DEFENSE RELATED OBSESSIONS AND COMPULSIONS

K. Gasparyan, T. Arakelyan
Medical Psychology Department, Yerevan State Medical University, Yerevan, Armenia

The aim of this report is to analyze the influence of culturally accepted superstitions or psychological defensive rituals on the development of obsessions and compulsions. The primary functions of defense rituals, like any other psychological defense mechanisms, are to minimize anxiety and to protect the ego. There are certain rituals and habits in each culture or religion, aimed to prevent anxiety or to fight against so-called "bad luck". Black cat crossing the road is a sign of something bad in Armenia, whereas in Britain it is a sign of positive expectation. An analysis of children and adolescents with a clinical diagnosis of obsessive-compulsive disorder indicated that adults in their families were more likely to use superstitions, rituals and repetitive habits. This suggests that there may be a link between micro environmental social-cultural factors, compulsions, ritualized repetitive behaviors, obsessive thinking and obsessive-compulsive symptoms.

PO2.61.
COGNITIVE CHARACTERISTICS OF SOMATIZERS WITH ANXIETY SYMPTOMS

In Chul Choi, Mi Kyung Lee
Department of General Psychiatry, Seoul National Hospital, Korea

We examined the cognitive characteristics in terms of somatosensory amplification and symptom interpretation in patients with somatization associated or not with anxiety symptoms. We used the Minnesota Multiphasic Personality Inventory - Korean Version (MMPI-K), the Symptom Checklist-90-Revised (SCL-90-R), the Somato-sensory Amplification Scale (SSAS) and the Symptom Interpretation Questionnaire (SIQ). Multiple regression analysis was performed to determine the effect of somatosensory amplification and symptom interpretation differences in age, sex, marital status and educational level between the two groups. The amplification of sensation was greater in the anxiety than in the non-anxiety group. In regard to the symptom interpretation, the anxiety group showed higher levels of physical interpretation, psychological interpretation and catastrophic interpretations than the non-anxiety group. However, no significant difference was noted in environmental interpretation between the two groups. On multiple regression analysis, somatization was affected by somatosensory amplification, physical interpretation, psychological interpretation in the anxiety group; and by physical interpretation and somatosensory amplification in the non-anxiety group. These findings suggest that the approach and treatment based on cognitive characteristics are essential for the effective management of somatizers.

PO2.62.
RELATIONSHIP BETWEEN ATTACHMENT STYLE, PARENTAL BONDING AND ALEXITHYMIA IN ADULTS WITH SOMATOFORM DISORDERS

F. Pedrosa Gil, C.E. Scheidt, N. Ridout, D. Höger, M. Nickel
Department of Internal Medicine, Ludwig-Maximilians-University, Munich, Germany; Department of Psychosomatics and Psychotherapeutic Medicine, University Hospital, Freiburg, Germany; Department of Clinical and Cognitive Neurosciences, Aston University, Aston Triangle, Birmingham, UK; Department of Psychology, University of Bielefeld, Germany; Department of Psychosomatic and Psychotherapy, Medical University, Graz, Austria; Department of Psychiatry, PMU, Salzburg, Austria

This study examined the interrelationship between parental bonding, adult attachment behaviour, and alexithymia in patients with somatoform disorders (SFD). There are only very few empirical studies that support the clinical impression that alexithymia may be due to disturbances in the early parent-child relationship. In a cross-sectional study, data from 76 patients with SFD were obtained, consisting of questionnaire measures of alexithymia (TAS scale), attachment style (BFKE), and the German version of the MOPS (Measure of Parental Style). A higher prevalence of insecure attachment (n=67; 88.2%) in our sample with SFD and a T-value of 54.3 (9.5) in the TAS total score was found, 22% reaching clinically significant alexithymia. Regression analyses demonstrated the relationship between the "ambivalent clinging" and "ambivalent withdrawing" attachment style and more marked alexithymia features. Furthermore, alexithymia was positively predicted by "indifference" in the relationship to the father. The results of this study support the hypothesis that alexithymia is associated with perceived parental bonding and attachment style.

PO2.63.
ALEXITHYMIA AND TREATMENT OUTCOME IN SOMATOFORM DISORDERS. TWO LONGITUDINAL STUDIES IN GASTROENTEROLOGY

P. Porcelli, G. Todarello, O. Todarello
Psychosomatic Unit, IRCCS De Bellis Hospital, Castellana Grotte; Department of Neurology and Psychiatry, University of Bari, Italy

This paper reports two studies aiming to evaluate the role played by alexithymia in the treatment outcome of patients with functional gastrointestinal disorders (FGID) and inflammatory bowel disease (IBD). After 6 months of standard treatment, reliable criteria were used for dividing 130 FGID patients into improved and not improved, and 186 IBD patients into stable/improved disease activity (DA) and active/worsened DA. Alexithymia was measured with the TAS-20 and psychological distress with the HADS. An absolute stability of

alexithymia was observed in IBD, but not FGID patients. In both samples, however, alexithymia showed a high relative stability, independent from psychological distress, gastrointestinal symptoms, and DA. In a series of hierarchical regression models, alexithymia predicted treatment outcome in FGID but not IBD, after control for pre- and post-treatment mediating variables. The present results suggest that alexithymia is a stable personality dimension in both functional and organic gastrointestinal patients, which significantly predicts the treatment outcome in FGID, while it is unrelated to DA change in IBD after standard medical treatment.

PO2.64. ALEXITHYMIA IN HEALTHY WOMEN: A BRAIN MORPHOLOGY STUDY

G. Borsci, M. Boccardi, R. Rossi, G. Rossi, J. Perez, M. Bonetti, G.B. Frisoni
Laboratory of Epidemiology, Neuroimaging and Telemedicine; Psychosocial Rehabilitation Unit, Biological Psychiatry Unit, and Psychogeriatric Ward, IRCCS S. Giovanni di Dio, Brescia; Service of Neuroradiology, Istituto Clinico Città di Brescia, Brescia, Italy; AFaR, Associazione Fatebenefratelli per la Ricerca, Rome, Italy

The aim of this study was to investigate whether alexithymia is associated with a specific cerebral morphology of candidate structures in healthy adults. Fifty-four female volunteers were enrolled in the study and the 20-item Toronto Alexithymia Scale (TAS-20) was self-administered. Gray matter (GM) volume was assessed with an optimized voxel-based morphometry (VBM) protocol on high-resolution 3D magnetic resonance images. The following three experiments were carried out: comparison between the 14 volunteers with TAS-20 scores ≥61 (alexithymic) and the 30 with scores <51 (non-alexithymic); correlation of TAS-20 scores on the whole sample; and comparison between the 14 alexithymic and 14 non-alexithymic matched by age. The alexithymic group showed smaller GM volume in the anterior cingulate cortex (cluster size 5880 mm^3; z=3.26; stereotaxic coordinates: -12, 22, 30) and middle temporal gyrus (2048 mm^3; 3.21; -60, 2, -20). Of specific biological relevance, smaller clusters were located in the anterior insula, orbitofrontal cortex and superior temporal sulcus. The correlation analysis confirmed the pattern of results mainly in the left hemisphere. Our findings suggest that the ability to process emotional aspects of the self correlates with morphology of a specific set of cerebral structures known to be involved in decision making and self awareness and rich in neurons subserving social competence.

PO2.65. SEROTONIN TRANSPORTER GENE PROMOTER POLYMORPHISM AND SOMATOFORM SYMPTOMS

A. Hennings, P. Zill, W. Rief
Division of Clinical Psychology and Psychotherapy, Philipps University of Marburg; Psychiatric and Psychotherapeutic Hospital, Ludwig-Maximilian University, Munich, Germany

Most models of somatoform disorders postulate an interaction of cognitive processes with affective, behavioural and biological changes. Serotonin plays a major role in the regulation of functions associated with somatoform symptoms, and previous studies confirmed lowered concentrations of 5-HT for patients with somatoform disorders. The serotonin transporter is a major limiting factor of serotonergic action; therefore a candidate gene for somatoform symptoms is a polymorphism in the promoter region of the serotonin transporter gene (5-HTTLPR). We hypothesised a positive association between 5-HTTLPR and the number of unexplained somatic symptoms, even after controlling for depressive mood. Ninety-one patients with at least two unexplained physical symptoms were clinically evaluated and genotyped for the triallelic genotypes of the 5-HTTLPR. DSM-IV diagnoses were assessed using the International Checklists for ICD-10 and DSM-IV (IDCL). Somatic complaints were quantified with an interview version of the Screening for Somatoform Symptoms-2 (SOMS-2, persistent symptoms in the last 2 years) and the SOMS-7 (current symptoms in the last 7 days). Depressive symptoms were quantified with the Beck-Depression-Inventory (BDI). Subjects with higher-expressing allele variants of the serotonin transporter gene had significantly more somatic symptoms than those with lower-expressing variants. Participants with the L'L' and the L'S' variants reported significantly more persistent somatic complaints than those with the S'S' variant. Thus, 5-HTTLPR seems to play a role in the pathophysiology of somatoform symptoms.

PO2.66. SERTRALINE TREATMENT FOR BODY DYSMORPHIC DISORDER: A CASE REPORT

M. Saitis, G. Papazisis, K. Katsigianopoulos
Community Mental Health Center of North-Western District of Thessaloniki, Psychiatric Hospital of Thessaloniki; Department of Pharmacology, School of Medicine, Aristotle University of Thessaloniki, Greece

Research on the pharmacotherapy of body dysmorphic disorder (BDD) is limited. Available data suggest that this disorder may respond to serotonin reuptake inhibitors. A literature search revealed no reports of treatment of this disorder with sertraline. We report a case of BDD that responded favorably to sertraline. Mr. A., a 30-year-old single and unemployed man was referred by his orthopedic surgeon, who felt that his concern about his height was excessive. After careful consideration, the surgeon had refused to provide a second operation for patient's height without psychiatric consultation. At the time of the evaluation, it appeared that the patient suffered from BDD. He had been excessively preoccupied since his teenage years with his height, curly hair, eyes colour, eyebrows, body build, muscularity and penis size. As a result of his severe concerns, he did not date, avoided most social situations and was underemployed. Surgical treatment to increase his height did not alleviate his concerns. The patient was treated with sertraline 50 mg/day, which was raised to 200 mg/day. After 4 weeks of sertraline treatment, Mr. A.'s preoccupation with his appearance began to decrease. Over the next several weeks, his preoccupations further diminished and he began to socialize, entertain and work hard and long hours for the first time of his life. This is continued for 24 months of follow-up. This case report suggests that sertraline is a safe and effective treatment for BDD.

PO2.67. HOW IS BODY INTEGRITY IDENTITY DISORDER REPRESENTED IN THE BRAIN?

A. Stirn, A. Thiel, S. Skoruppa, S. Oddo
Department of Psychiatry, Psychosomatic and Psychotherapy, J.W. Goethe University Hospital, Frankfurt, Germany

Body integrity identity disorder (BIID) describes a psychic phenomenon associated with an overwhelming desire for amputation of one or more healthy body parts. It can have devastating consequences like self-amputation. Little is known about the aetiology. We arranged a complex psychometric examination and clinical interview and performed functional magnetic resonance imaging (fMRI) measurements with male BIID patients and healthy controls. During the fMRI ses-

sion, patients viewed edited pictures of themselves, in the current body-condition and the desired state with one/both legs amputated and with prosthesis. Our patients showed superior intelligence, good social abilities and a challenging employment. The neuroimaging findings revealed increased activity in the somatomotor and somatosensory cortex, and in the precuneus and prefrontal structures, when BIID patients looked at their body in the desired, amputated state compared to their current, intact body. BIID patients activated the parahippocampal and medial frontal regions when confronted with their own amputated body compared to a foreign amputated body, pointing at self-related, emotional processing. The involvement of the sensory and motor system when the own amputated body is exposed marks the strong neural representation of the amputated body. BIID patients are high functioning people, in which the persisting wish of amputation shows obsessive-compulsive aspects, in the absence of other psychopathological symptoms.

PO2.68.
DISSOCIATION, COGNITIVE CONFLICT AND NONLINEAR DYNAMICS OF HEART RATE VARIABILITY IN UNIPOLAR DEPRESSIVE PATIENTS

P. Bob, M. Susta, J. Raboch
Department of Psychiatry, First Faculty of Medicine, Charles University, Prague, Czech Republic

Recent findings in cognitive neuroscience indicate that activation of anterior cingulate cortex (ACC) is related to detecting cognitive conflict. Conflict related ACC activation elicits responses in central autonomic network which can be assessed by psychophysiological measures such as heart rate variability (i.e., beat to beat R-R intervals, RRI). Cognitive conflict has also been found to be related to specific nonlinear chaotic changes of the signal generated by the neural systems. The present study used Stroop word-colour test as an experimental approach to the study of cognitive conflict in connection with RRI measurement, psychometric measurement of dissociation (Dissociative Experiences Scale, DES) and calculation of largest Lyapunov exponents in nonlinear data analysis of RRI time series, in 35 patients with unipolar depression and 35 healthy controls. The significant correlation ($r=0.59$; $p<0.01$) between largest Lyapunov exponents and DES found in depressive patients indicates that cognitive conflict related neural interference during conflicting Stroop task is closely related to dissociative processes. These results support the idea that degree of chaos in autonomic nervous system could be related to dissociation.

PO2.69.
SERTRALINE TREATMENT FOR GLOBUS HYSTERICUS SYNDROME: A SERIES OF CASE REPORTS

M. Saitis, G. Papazisis, K. Katsigianopoulos
Community Mental Health Center of North-Western District of Thessaloniki, Psychiatric Hospital of Thessaloniki; Department of Pharmacology, School of Medicine, Aristotle University of Thessaloniki, Greece

Patients with the globus hystericus syndrome fear that they are choking and are unable to breathe. If untreated, they may develop life-threatening weight loss. A literature search revealed no reports of treatment of this syndrome with selective serotonin reuptake inhibitors. We describe three patients who were effectively treated with sertraline. Ms. A., a 47-year-old woman, had a 2-year history of severe fear about swallowing and choking. She had difficulty eating solid food and she had lost 17 kg. The patient was treated with sertraline 200 mg/day. Five weeks after start of treatment, she had a remarkable improvement. At 2-year follow-up, she was still markedly improved. Ms. B., a 35-year-old woman, had a history of fear of choking while swallowing solid food. She had lost 10 kg. The patient was treated with sertraline 150 mg/day. Four weeks after, her symptoms disappeared. This was continued for 18 months of follow-up. Ms. C., a 30-year-old woman, was referred by her general practitioner for a psychiatric examination. She developed a fear of choking that led her to refrain from solid food and she lost 7 kg. She was treated with sertraline 200 mg/day. Three weeks after start of treatment, her fear had resolved. At 2-year follow-up, she remained asymptomatic. In conclusion, sertraline may be a promising pharmacological treatment for globus hystericus syndrome.

PO2.70.
RELATIONSHIP BETWEEN SOMATOFORM DISSOCIATIVE SYMPTOMS AND SERUM CORTISOL

J. Raboch, M. Susta, P. Bob
Department of Psychiatry, First Faculty of Medicine, Charles University, Prague, Czech Republic

According to recent findings, dissociative symptoms are associated with a dysregulation of the hypothalamus-pituitary-adrenal (HPA) axis, but the functioning of this axis as related to dissociation is only partially understood. With the aim to test the relationship between basal serum cortisol and dissociative symptoms measured as somatoform and psychic dissociation, we performed clinical testing and biochemical analysis in 40 inpatients with a diagnosis of unipolar depression. The results show that serum cortisol, as an index of HPA axis functioning, is significantly related to somatoform dissociative symptoms ($r=-0.40$; $p<0.01$), but not to psychic dissociation.

PO2.71.
DISSOCIATIVE STATES AND PROLACTIN

M. Susta, P. Bob, J. Raboch
Department of Psychiatry, First Faculty of Medicine, Charles University, Prague, Czech Republic

Traumatic stress and dissociation have been found to be associated with neuroendocrinological dysregulations. The aim of the present study was to assess basal serum prolactin and test its relationship to dissociative symptoms and symptoms of traumatic stress. Forty-five inpatients with a diagnosis of unipolar depression were assessed using psychometric measures of dissociation (Dissociative Experiences Scale, DES) and traumatic symptoms (Trauma Symptom Checklist - 40, TSC-40), and basal serum prolactin levels were investigated. Prolactin levels were significantly related to dissociative symptoms ($r=0.45$; $p<0.01$). No correlation was found between prolactin levels and traumatic symptoms measured by TSC-40.

PO2.72.
COMORBIDITY AND DIAGNOSTIC INSTABILITY IN EATING DISORDERS

G. Milos, A. Spindler, S. Mühlebach
Eating Disorders Centre, Psychiatric Department, University Hospital, Zurich, Switzerland

The aim of the present study was to examine course, stability and comorbidity of the full range of eating disorder (ED) diagnoses over a period of 30 months. One hundred and ninety two women with a current DSM-IV eating disorder (55 anorexia nervosa, 108 bulimia nervosa and 29 eating disorders not otherwise specified) were assessed at

three time points (baseline, 12 and 30 months) using the Structured Clinical Interview for Axis I (SCID I). Axes I and II comorbidities were assessed using SCID I and II. Only 16% of the sample had only an ED diagnosis. The stability of the three specific eating disorder diagnoses was low. 41% of participants retained their original diagnosis (including temporal remission after 12 months), 46% changed the diagnosis, whereas 13% showed a stable remission. Participants with unstable ED diagnoses had significant more lifetime axis I comorbidity ($p<0.03$) than participants with stable ED diagnosis. However, this effect was present only in the affective disorders subgroup. The diagnostic crossover of ED diagnoses seems to be somehow related to the presence of lifetime axis I disorders, in particular of affective disorders. This finding may have important therapeutic implications.

PO2.73.
CLINICAL AND PERSONALITY PREDICTORS OF DIAGNOSTIC FLUCTUATION IN EATING DISORDER PATIENTS

M. Vacca, C. Serritella, R. Ferrandino, P. Monteleone, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Eating disorders (ED) show a considerable instability of diagnosis over time, since patients with anorexia nervosa (AN) or bulimia nervosa (BN) tend to migrate from one category to the other. Most of these fluctuations take place within 5 years from the onset of the disorder. Clinical, biological and personality factors predictive of the ED diagnostic crossover are scarcely known. The aim of this study was to characterize clinical and personality variables that may affect diagnostic crossover from AN to BN. For that purpose, 138 women were enrolled; 69 had a DSM-IV diagnosis of AN that was stable for at least 5 years from the onset of the disease (NO-SHIFT group), and 69 had a diagnosis of AN at the onset of disease with a subsequent (within 5 years) crossover to BN (SHIFT group). All patients were interviewed by means of the Structured Clinical Interview for the DSM-IV Axis I and II disorders, and completed the Temperament and Character Inventory-Revised (TCI-R). As compared to the NO-SHIFT group, the SHIFT group exhibited a significant higher frequency of comorbid lifetime mood disorders and cluster A personality disorders and significant higher scores on the novelty seeking and persistence, but lower scores on the self-directedness dimension of TCI-R. These results suggest that comorbid Axis I and II disorders and personality traits may be associated to diagnostic crossover from AN to BN.

PO2.74.
THE SIGNIFICANCE OF AMENORRHEA IN THE DIAGNOSIS OF ANOREXIA NERVOSA

T. Zanetti, A. Favaro, P. Santonastaso
Department of Neurosciences, University of Padua, Italy

Few studies have examined the differences between typical and atypical anorexia nervosa (AN) with a well-powered design. The present study aimed to explore this issue, with particular attention to psychopathology and temperament. The sample consisted of 384 subjects with restrictive AN and 144 with atypical AN. All subjects underwent a routine baseline assessment. Subthreshold AN, i.e., those subjects who fulfilled all the criteria for AN except weight, were very similar to restricting AN as regards temperament and psychopathology, but differed from full AN by having a higher body mass index and a stronger drive for thinness. In contrast, subjects with partial AN (underweight subjects without amenorrhea) were similar to restricting AN as regards weight history, but differed from the other two groups by having lower drive for thinness, lower persistence, higher levels of psychiatric symptoms, and higher novelty seeking. They also showed a higher frequency of physical abuse and compulsive self-injurious behaviors. Before considering a revision of the diagnostic criteria of AN, further studies on adequately large samples are needed to better understand the psychobiological mechanisms and clinical significance of amenorrhea.

PO2.75.
EATING DISORDER SYMPTOMS IN OVERWEIGHT AND OBESE CHILDREN AND ADOLESCENTS: SELF REPORT AND PARENT OBSERVATIONS

C. Thiels, C. Bender
Department of Social Studies, University of Applied Sciences, Bielefeld; Institute of Psychology, University of Freiburg, Germany

In industrialised countries, increasing overweight and obesity is challenging health care systems due to physical consequences. Moreover, there seems to be an increase of eating disorder symptoms such as restrained eating, binge eating, purging and body dissatisfaction, resulting in higher risk for eating disorders and obesity. Little is known about the prevalence of these eating disorder symptoms among male and female overweight pupils at different ages and to what extent their self-reports and parent observations differ. 1057 pupils (10 to 17 years, 55.2% male) completed the Eating Disorder Inventory - Child version (EDI-C) and their parents compiled the Anorectic Behaviour Observation Scale (ABOS). Parents and their children reported the pupils' height and weight. Underweight, normal weight, overweight and obesity were defined according to national percentiles. Parent-child agreement was moderate to high, depending on the item. More disordered eating patterns and higher body dissatisfaction were found in overweight and obese youngsters compared to their underweight and normal weight peers. Assessment of overweight and obesity should include attention to eating disorder symptoms.

PO2.76.
PERSONALITY DISORDERS AND TRAITS IN EATING DISORDERS

R. Siani, L. Berti, L. Ravazzin, L. Burti
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, Unit of Psychotherapy, University of Verona, Italy

Studies on comorbidity between personality disorders (PDs) and eating disorders (EDs) show inconsistent results, which have been attributed to the high percentage of patients with anorexic and bulimic symptoms at the same time. In an attempt to overcome these limits, many researchers have studied the relationship between EDs and personality *traits*, mainly with cluster analysis. These studies have identified three clear personality profiles across the axis I diagnosis: a) high-functioning/perfectionistic group; b) constricted/overcontrolled group; c) emotionally dysregulated/undercontrolled group. The three different personality profiles (appraised both dimensionally and categorically) show a high predictive value with respect to both the symptoms of axis I and II, and also to important outcome measures, such as response to treatment, quality of life, substance abuse. These data are in favour of considering ED symptoms within the three profiles described above, both for research and clinical purposes. In this sense, many authors suggest to modify current diagnostic classification systems. In particular, it may be crucial to distinguish two different patterns of patients with anorexia nervosa (high functioning and constricted) and two patterns of patients with bulimia nervosa (high

functioning and dysregulated). This alternative classification system seems definitely more appropriate than that of DSM, because it does not include in the same group patients with very different personality traits. Furthermore, it may better describe the PDs of females with EDs than the classification of DPs in DSM axis II.

PO2.77
NEUROCOGNITIVE FUNCTIONING IN SUBJECTS WITH BULIMIA NERVOSA

P. Bucci, S. Galderisi, A. Mucci, F. Maddalena, M. Chieffi, R. Zamboli, M. Maj
Department of Psychiatry, University of Naples SUN, Italy

Neuropsychological studies carried out in subjects with eating disorders (EDs) have reported conflicting results as to the presence and type of cognitive dysfunctions. Moreover, the pathophysiological mechanisms underlying the reported cognitive deficits are still unclear. In the present study, we investigated the neuropsychological profile and the influence of neuroendocrine and psychopathological indices on neuropsychological performance in 83 untreated patients with bulimia nervosa (BN) and 77 healthy controls (HC). In both groups, neurocognitive indices of attention, executive functions, visuospatial abilities, memory and learning were evaluated. Cortisol and 17β-estradiol plasma levels were also assessed. Psychopathological evaluation included the Eating Disorder Inventory-2, the Bulimic Investigation Test Edinburgh, the Montgomery-Asberg Depression Rating Scale, the Yale-Brown-Cornell Eating Disorder Scale. Temperamental traits were assessed by Cloninger's Temperament and Character Inventory-Revised (TCI-R). No impairment of cognitive performance was found in subjects with BN when compared to HC. Patients were faster than HC on the nonverbal subtest exploring incidental learning. Higher plasma levels of cortisol were associated to a faster performance on a test exploring conditional learning, whereas higher plasma levels of 17β-estradiol were associated to a less accurate and slower performance on the same test. The depressive symptomatology was associated with a worse performance on the WCST, and the item "Reward dependence" of the TCI-R was associated with a worse performance on the verbal subtest exploring incidental learning. According to our results, patients with BN are not cognitively impaired. Neuroendocrine and clinical variables might explain variability in neurocognitive findings in this population.

PO2.78.
NEUROPSYCHOPHYSIOLOGICAL CHARACTERIZATION OF BULIMIA NERVOSA: POSSIBLE ROLE OF HYPERAROUSAL

E. Merlotti, A. Mucci, P. Bucci, U. Volpe, M. Piccirillo, D. Corominas Rabassa, S. Galderisi, M. Maj
Department of Psychiatry, University of Naples SUN, Italy

In subjects with bulimia nervosa (BN), several psychological dysfunctions have been reported, mainly involving visuospatial abilities, attention, non-effortful learning and executive control. In the same patients, a few studies investigated the components of event-related potentials (ERPs) and reported controversial findings. This study was aimed to evaluate electrophysiological activation in BN patients during an auditory discrimination task. Peak latency and amplitude were measured for each ERP component and ERP cortical generators were explored by a low-resolution brain electromagnetic tomography (LORETA) technique. The amplitude of N200 was significantly increased and its latency was reduced in patients with BN, with respect to healthy controls. Furthermore, patients with BN showed a larger amplitude and a shorter latency of the slow wave (SW), with respect to healthy controls (HC). In patients with BN vs. HC, the current source density of the P300 for rare non-target stimuli was increased in the left fronto-parietal regions and in the cingulate gyrus, while the current source density of the SW for target stimuli was decreased in the right superior frontal gyrus, in the left parieto-temporo-occipital regions and, bilaterally, in cingulate gyrus. Our findings suggest that, in patients with BN, a condition of hyperarousal may be present, akin to the one induced by the administration of ACTH, in which an enhanced allocation of processing resources to irrelvant stimuli leads to a working memory saturation. Hyperarousal may also reflect maladaptive personality traits, frequently observed in these patients, which might be the target of psychoterapeutic interventions.

PO2.79.
BIOLOGICAL CORRELATES OF IMPULSIVITY AND BORDERLINE PERSONALITY SYMPTOMS IN PATIENTS WITH BULIMIA NERVOSA

F.J. Vaz-Leal, L. Rodríguez-Santos, M.A. García-Herráiz, M.I. Ramos-Fuentes
Faculty of Medicine, University of Extremadura; Mental Health Unit/Eating Disorders Unit, University Hospital Network, Extremadura Health Services, Badajoz, Spain

This study aimed to analyse the association between several neurobiological parameters and four clinical dimensions (impulsivity, borderline personality symptoms, depressive symptoms, and self-defeating behavior) in patients with bulimia nervosa (BN). The Impulsive Behavior Scale (IBS), the Diagnostic Interview for Borderline Patients - Revised (DIB-R), the Beck Depression Inventory (BDI), and the self-destructive personality subscale of the Millon Multiaxial Clinical Inventory (MMCI-II) were administered to 70 female patients with DSM-IV BN (purging subtype). Twenty-four hour urinary excretion of norepinephrine (NE), 3-methoxy-4-hydroxyphenylglycol (MHPG), serotonin (5-HT), 5-hydroxy-indoleacetic acid (5-HIAA), dopamine (DA), homovanillic acid (HVA), and morning serum cortisol levels before and after the administration of 1 mg of dexamethasone, were assessed. The patients with higher scores in each of the four clinical dimensions were compared with those with lower scores using logistic regression techniques. The four clinical dimensions were associated with lower tendency to suppress morning cortisol after dexamethasone administration. In addition, patients with high impulsivity had lower 24-hour excretion of 5-HIAA, and patients with severe borderline personality symptoms tended to have lower 24-hour excretion of DA. Our results suggest the existence of a significant correlation between the activity of the hypothalamic-pituitary-adrenal axis and some core symptoms of bulimia nervosa. They also confirm the existence of alterations in serotonergic and dopaminergic activity in patients with impulsivity and other symptoms of the borderline spectrum.

PO2.80.
PERCEIVED FAMILY CONFLICTS AND CELLULAR IMMUNITY IN A SAMPLE OF PATIENTS WITH BULIMIA NERVOSA

F.J. Vaz-Leal, L. Rodríguez-Santos, M.J. Melero-Ruiz, M.A. García-Herráiz, N. Fernández-Sánchez
Faculty of Medicine, University of Extremadura; Mental Health Unit/Eating Disorders Unit, University Hospital Network, Extremadura Health Services; Department of Immunology, University Hospital Network, Extremadura Health Services, Badajoz, Spain

The aim of this study was to analyse the association between family functioning and immune status in patients with bulimia nervosa (BN). The family functioning was assessed in forty-five BN patients using the Family Environment Scale (FES). In each patient, lymphocyte and lymphocyte subset counts were performed. A strong inverse correlation was found between the score in the "conflict" factor of the FES and the number of lymphocytes, mature T cells (CD3+), helper T cells (CD4+), and cytotoxic-suppressor T cells (CD8+). These data give support to the hypothesis that environmental/behavioral factors and immune function are associated, and that interpersonal support can play a role as modulator of immune activity.

PO2.81.
3111T/C POLYMORPHISM OF THE CLOCK GENE CONFERS A PREDISPOSITION TO A LIFETIME LOWER BODY WEIGHT IN ANOREXIA AND BULIMIA NERVOSA

A. Tortorella, P. Monteleone, D. Perillo, A.M. Di Genio, F. Perris, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

In mammals, the suprachiasmatic nuclei of the hypothalamus contain the master circadian clock that coordinates the daily temporal organization of endogenous rhythms. The core oscillation is thought to be driven by several genes called "clock genes" for their crucial role in the clockwork. Eating disorders (EDs), such as anorexia nervosa (AN) and bulimia nervosa (BN), are characterized by a disruption of circadian feeding patterns, as well as by alterations in the circadian rhythms of endogenous hormones. Therefore, a possible role of the clock gene in the biological vulnerability to EDs can be suggested. To explore this hypothesis, we designed a case-control study exploring the 3111T/C polymorphism of the CLOCK gene in patients with EDs. One hundred fifty one female Caucasian patients were enrolled into the study. Sixty of them met the DSM-IV diagnosis of AN and 91 met the DSM-IV diagnosis of BN purging. A group of 90 normal weight Caucasian healthy women were also recruited. We could not detect any significant association between the 3111T/C polymorphism of the CLOCK gene and AN or BN. Moreover, we found that the 3111T/C polymorphism of the CLOCK gene was significantly associated with minimum past body weight in both AN and BN individuals, but not in healthy controls. In conclusion, our present findings, although preliminary, suggest that the CLOCK 3111T/C SNP does not represent a major vulnerability factor for AN and BN, but seems to predispose ED patients to a more severe body weight loss in the course of their illness.

PO2.82.
NICOTINE INCREASES CYTOSOLIC Ca2+ IN GLUCOSE- AND LEPTINE- RESPONSIVE NEURONS AND POMC NEURONS IN THE ARCUATE NUCLEUS OF RATS

E. Takano, Y. Maejima, U. Sedbazar, S. Kato, T. Yada
Department of Psychiatry and Department of Integrative Physiology, School of Medicine, Jichi Medical University, Shimotsuke, Tochigi, Japan

Some people smoke for the purpose of losing appetite and body weight. However, neural mechanisms for the anorexigenic action of smoking are not clear. The aim of this study was to explore the effects of nicotine, the major component of smoking, on the activity of neurons that control appetite. Single neurons were isolated from the hypothalamic arcuate nucleus (ARC), a feeding center, of male Wistar rats aged 6 weeks. Cytosolic Ca2+ concentration ([Ca2+]i) was measured by fura-2 microfluorometry in the single ARC neurons, which were subsequently immunostained with antibody against proopiomelanocortin (POMC). Firstly, we examined the acute effects of nicotine on the activities of the anorexigenic glucose-responsive neurons (GRN) and non-GRN neurons. Nicotine at 10-5 M increased [Ca2+]i in 28 out of 90 ARC neurons. Out of 28 nicotine-responsive neurons, 12 were GRN (43%), and 3 of 4 nicotine-responsive GRN exhibited [Ca2+]i responses to leptin (75%). Secondly, nicotine at 10-7M increased [Ca2+]i in 3 of 8 POMC neurons (75%) and 2 of 4 leptin-responsive POMC neurons (50%). Nicotine at 10-5M increased [Ca2+]i in 12 of 15 POMC neurons (80%) and 8 of 11 leptin–responsive POMC neurons (75%). Thus, nicotine dose-dependently activated POMC neurons in rat ARC. These results suggest that the activation by nicotine of GRN and of POMC neurons, especially those responsive to leptin, may be implicated in the feeding inhibitory action of smoking.

PO2.83.
OLANZAPINE-INDUCED WEIGHT GAIN IN ANOREXIA NERVOSA: INVOLVEMENT OF LEPTIN AND GHRELIN SECRETION?

E. Castaldo, F. Brambilla, P. Monteleone, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

Body weight gain has been associated to olanzapine (OLA) administration in both experimental animals and humans. Leptin, an adipocyte-derived hormone, stimulates satiety and energy expenditure, and ghrelin, a peptide hormone secreted by gastric mucosa, induces hunger and food ingestion. In OLA-treated patients, leptin secretion is increased whereas that of ghrelin is decreased; therefore, the possibility exists that changes in peripheral levels of appetite regulating peptides mediate OLA-induced weight gain. The aim of this study was to determine whether in patients with anorexia nervosa (AN) OLA induces weight gain through the modulation of the hunger-satiety regulatory peptides leptin and ghrelin. Twenty female patients with AN entered into the study. All patients received a 3-month course of personal cognitive-behavioral therapy (CBT) and nutritional rehabilitation. Ten of the patients received OLA p.o. (2.5 mg for 1 month, 5 mg for 2 month) and the remaining 10 received placebo (PL), according to a double-blind design. A group of 10 healthy women, free of medications and with a normal body mass index (BMI), were also recruited. Weight, measured as BMI, leptin and ghrelin plasma values were measured before starting the therapy and then monthly for 3 months. BMI increased significantly but not differently in both treatment groups. Leptin and ghrelin secre-

tion did not change during the course of treatment. No correlations were observed between BMI values and leptin and ghrelin levels. Our data suggest that the weight gain observed in OLA-treated AN patients was not linked to drug administration and was not mediated by changes in leptin and ghrelin secretion.

PO2.84.
NO ASSOCIATION OF THE cDNA 385C TO A POLYMORPHISM OF THE ENDOCANNABINOID DEGRADING ENZYME FATTY ACID AMIDE HYDROLASE (FAAH) IN OVERWEIGHT/OBESE WOMEN WITH BINGE EATING DISORDER

C. Di Filippo, B. Canestrelli, A. Tortorella, P. Monteleone, M. Maj
Department of Psychiatry, University of Naples SUN, Naples, Italy

The endogenous cannabinoid system is involved in modulation of eating behaviour. This system includes G-protein-coupled receptors CB-1 and CB-2, the putative endogenous CB1 ligands, anandamide (AEA) and 2-arachidonoylglycerol, and their degrading enzyme fatty acid amide hydrolase (FAAH). Recently, a single nucleotide polymorphism (SNP) in the FAAH gene (cDNA 385C to A) has been associated with obesity. The presence of binge eating disorder (BED), a condition that frequently occurs in obese individuals, has not been investigated. Therefore, the possibility exists that this SNP is associated to binge eating phenotype rather than to obesity. We investigated the distribution of the FAAH gene cDNA 385C to A SNP in overweight/obese patients with or without BED and in normal weight healthy controls, and assessed the relationships between genotype frequencies and overweight/obesity or BED. One hundred eight nine female Caucasian patients were enrolled into the study: 115 overweight/obese with BED and 74 obese without BED. A group of 110 normal weight Caucasian healthy women were also recruited. As compared to healthy controls, the whole group of overweight/obese BED and non-BED patients had significantly higher frequencies of the CA genotype and of the A allele of the FAAH gene cDNA 385C to A SNP. The SNP resulted significantly correlated to the presence of overweight/obesity, but not to the occurrence of BED. In conclusion, the present study confirms that the cDNA 385C to A missense polymorphism of the FAAH gene is associated with overweight/obesity but not with BED in overweight/obese women.

PO2.85.
A CASE OF ANOREXIA NERVOSA WITH REFEEDING SYNDROME DESPITE CAREFUL NUTRITION

M. Kasai, E. Takano, Y. Okazima, S. Kato
Department of Psychiatry, Jichi Medical School, Japan

The refeeding syndrome (RS) is a complication of nutritional support the potentially causes considerable morbidity and mortality. We experienced a case of anorexia nervosa (AN) with RS despite the introduction of slow and careful low-calorie nutrition. The patient was a 16-year-old female. She was first diagnosed with AN at the age of 14 as she went on a diet. She was admitted to a pediatric unit, and recovered. However, AN reoccurred after she started high school, and her weight decreased to 31.8 kg. She was admitted to the pediatric unit again, refused to receive treatment, was discharged from the hospital, and admitted to our department. Her weight went down to 29.6 kg, and continued to decrease down to 26.8 kg. Inpatient care was recommended, but she firmly refused. Few days later, the occurrence of an episode of loss of consciousness convinced her to accept inpatient care. She was treated carefully and enteral feeding was started from 125 kcal/day. Six days later, severe liver damage was observed, serum phosphorus concentration went down to 2.0 mg/dl, and she was diagnosed with RS. The lowest concentration of serum phosphorus observed was 1.3 mg/dl. However, our strict management with intravascular phosphorus administration supported increased nutrition intake, and the patient was able to leave the hospital on her 54th day after the admission.

PO2.86.
ANOREXIA NERVOSA AND IMMIGRATION: TWO CASE REPORTS OF RESTRICTIVE ANOREXIA IN PREGNANT MAGHREB WOMEN

E. Manzato, T. Zanetti
Eating Disorders Unit, Ferrara; Department of Neuroscience University of Padua, Italy

In Italy the phenomenon of immigration from North African countries is a present-day situation which implies a particular medical attention. We present the cases of two pregnant women suffering from anorexia nervosa. Given the state of pregnancy, amenorrhea was not considered a diagnostic criterion. In their countries of origin anorexia has never been recognized and in both cases previous treatment pointed at the physical situation but not at the underlying psychopathology. Given the severe state of malnutrition, the difficulties in gaining weight and the body image distortion, these two women were referred to our eating disorder unit. Low body weight during pregnancy requires special monitoring. A specific psychiatric consultation to detect the presence of an eating disorder could be useful to both the mother and the baby. Psychological treatment might be useful also in the post-partum period to help the mother in her child-feeding style.

PO2.87.
BINGE EATING IN A SAMPLE OF OVERWEIGHT PEOPLE NOT SEEKING TREATMENT

E. Manzato, T. Zanetti, B. Mori, S. De Paoli, F. Zurlo, M. Cuzzolaro
Eating Disorders Unit, Ferrara; Department of Neuroscience, University of Padua; University La Sapienza, Rome, Italy

Binge eating disorder has been widely studied in obese clinical populations, while little is known about this disorder in overweight samples. The presence of binge eating could lead from a condition of overweight to a more serious condition of obesity. The present study aims at evaluating the presence of binge eating in a sample of overweight subjects not seeking treatment. Subjects aged 18 to 65 years with a body mass index between 25 and 29.9 were recruited among the patients who referred to general practitioners. Subjects were asked to complete an anamnestic and clinical schedule and the Binge Eating Scale to assess the presence and severity of binge eating. One hundred overweight subjects were recruited. Self-reported questionnaires are not sufficient to diagnose an eating disorder. Nevertheless, they can represent an important first step for the screening of binge eating among overweight not seeking treatment samples.

PO2.88.
BODY IMAGE IN A CLINICAL SAMPLE OF OVERWEIGHT SUBJECTS NOT SEEKING TREATMENT

E. Manzato, T. Zanetti, M. Leoni, M. Simoni, L. Puntone, M. Cuzzolaro
Eating Disorders Unit, Ferrara; Department of Neuroscience University of Padua; University La Sapienza, Rome, Italy

Obese binge eating disorder patients are reported to have abnormal attitudes towards body, weight and shape. Body dissatisfaction, shame, anxiety, worries and embarrassment for the body can lead to avoidance behaviour up to the point of social phobia. Little is known about body attitudes in overweight subjects in relation with the presence or absence of binge eating symptoms. The present study aimed at evaluating body attitudes in a sample of overweight patients and to evaluate if body attitudes differ in relation to the presence/absence of binge eating. We recruited one hundred patients, aged 18 to 65, with a body mass index ranging from 25 and 29.9. Recruitment was made in a general practice All subjects completed a battery of questionnaires, including the Body Uneasiness Test and the Binge Eating Scale. Patients who scored over the cut-off point of 17 at the Binge Eating Scale were compared to those who scored lower in relation to their body image difficulties. Body uneasiness in overweight individuals with binge eating symptoms requires specific attention, as difficulties in body experience could be associated to a lower level of compliance during treatment.

PO2.89.
COMORBIDITY BETWEEN EATING DISORDERS AND BIPOLAR DISORDER: A LONGITUDINAL STUDY

M. Fornaro, C. Mattei, P. Fornaro
Department of Neuroscience, Ophthalmology and Genetics, Section of Psychiatry, University of Genoa, Italy

The objective of the study is to evaluate the lifetime prevalence of eating disorders among bipolar spectrum subjects and to investigate the burden of such comorbidity. Bipolar spectrum outpatients with a lifetime history of eating disorders, as defined by DSM-IV, or with a clinically significant eating disorder, are being compared with bipolar outpatients with no psychiatric comorbidity. Statistical analysis will be performed comparing the expected differences in total score for all the rating scales and subscales used for both the groups. A Fisher-test or χ^2 analysis will be performed at the end of the study depending on the completers number. The prevalence of eating disorders is expected to be higher in bipolar patients than in the general population. We also expect eating disorder comorbidity to influence bipolar illness burden.

PO2.90.
SIBLING RELATIONSHIPS OF YOUNG GIRLS WITH ANOREXIA NERVOSA

R. Scelles, P. Gerardin, M. Benard, G. Bréchon, M. Fillatre, S. Latreille, M.-A. Podlipski, C. Touati
University and CHU of Rouen; University and CHU of Tours, France

The importance of sibling relationships in the emergence and evolution of anorexia nervosa in adolescence has not been studied extensively until now. We studied couples of sisters from 20 different families, and for each pair we conducted a semi-structured interview at 2 month intervals. This study showed, in these families, a difficulty in the setting up of a third party in the family dynamic, and a reflective alienation between brothers and sisters. This difficulty to differentiate the self from the other, a psychic dysfunction, could be translated into a "visible" differentiation leading to the possible total disappearance of the other, who is neither completely oneself, nor completely other.

PO2.91.
SHOULD WE EVER LET PEOPLE DIE FROM ANOREXIA?

S. Giordano
University of Manchester, UK

In 1990, a doctor provided lethal drugs to a 25-year-old woman with anorexia nervosa. A jury acquitted the doctor after viewing a video of the woman explaining her decision. In 1994, the Dutch Supreme Court ruled that emotional suffering, not just physical suffering, was a basis for euthanasia. In a number of cases, anorexics have been allowed to die – in this instance, in particular, the patient was actively assisted in ending her life. According to some, even if in principle people should be allowed to refuse life-saving treatment, anorexics should never be allowed to do so, because they cannot do so competently. This paper reviews the most common arguments produced to show that anorexics cannot be competent to make decisions about food and therapy (among which: they have a distorted body image; their cognitive abilities are impaired by starvation; they suffer from a mental illness to which refusal of meaningful therapy is inherent) and shows that they are invalid and cannot be accepted. Because competent refusals of treatment should be respected, it seems to follow that where an anorexic refuses life-saving treatment competently, her decision should be respected. I argue, however, that this inference is invalid. Whether or not an anorexic's wish to die should be respected depends not only on her competence, but also on the extent of her suffering and on whether it can be alleviated. I argue that it might be ethical to allow an anorexic to die, and will explain on which grounds decisions to let an anorexic die should be made.

PO2.92.
NUTRITIONAL COUNSELING PROGRAM IN OBESE WOMEN PREVIOUSLY TREATED WITH COGNITIVE-BEHAVIOR THERAPY AND TOPIRAMATE FOR BINGE EATING DISORDER

S.R. de Freitas, J.C. Appolinario, A.M. Claudino, K. Siqueira, A.M.D. Roma, J.A.L.G. Filho, R. Sichieri
State Institute of Diabetes and Endocrinology, Rio de Janeiro; Department of Epidemiology, State University of Rio de Janeiro; Psychiatry Institute. Federal University of Rio de Janeiro; Department of Psychiatry, Federal University of São Paulo, Brazil

This study aimed to evaluate the efficacy of a nutritional program on body weight and binge eating episodes (BEE) in obese women with binge eating disorder (BED) that had participated in a randomized clinical trial receiving cognitive-behavior therapy (CBT) plus topiramate or placebo. Completers of the randomized, double-blind, placebo controlled study were offered participation in a 42-week open-label extension study with nutritional counseling. Eighteen patients who received TCC plus topiramate and 12 who received TCC plus placebo in the double-blind study entered the open label trial. Patients were given on a monthly basis 60 min of individual and group nutritional counseling. Assessments included Binge Eating Scale (BES), Beck Depression Inventory and food diaries. Patients who received TCC/topiramate in the double-blind trial presented

increasing weight regain compared with those who received TCC plus placebo (p<0,0001). All patients entered the study without BEE; 69% of those who received TCC-topiramate and 55.5% of those who received TCC-placebo (p=0,66) remained without BEE. Participants who maintained complete remission from BEE had greater mean weight loss (-4.3%) than those who returned to present BEE (-1.2%). Although BES scores increased in both topiramate-TCC and placebo-TCC groups, the rate of change was greater in the topiramate group (p<0.0001). The results suggest that adding a structured nutritional counseling program to TCC for some obese patients with BED contributes to a better evaluation for the need of pharmacological intervention. Further, these findings may have implications for stepped care treatment models of BED.

PO2.93.
DIET QUALITY IS ASSOCIATED WITH COMMON MENTAL DISORDERS

F.N. Jacka, J.A. Pasco, A. Mykletun, L.J. Williams, M.A. Kotowicz, G.C. Nicholson, M. Berk
University of Melbourne, Victoria, Australia; University of Bergen, Bergen, Norway

There is emerging evidence of a role for diet and nutrition in depressive illnesses. However, previous research in this field has mostly focused on individual nutrients such as folate and essential fatty acids. This study investigated the association between overall diet and depressive symptoms, major depressive disorder (MDD), dysthymia and anxiety disorders in a randomly selected community sample of 1007 women aged 20-96 years. A diet quality score (DQS), based on national dietary guidelines, was derived from a comprehensive, validated food frequency questionnaire. A factor analysis identified habitual dietary patterns. Participants completed the General Health Questionnaire (GHQ-12), and a semi-structured clinical interview (SCID-I/NP) determined current and lifetime depressive and anxiety disorders. After adjustments for age, socioeconomic status, education, alcohol consumption, current smoking, and physical activity, there was a significant inverse association between z-score standardised DQS and GHQ-12 scores (β=-0.10; 95% CI -0.17 to -0.04). DQS was also inversely related to current MDD/dysthymia (OR=0.72; 95% CI 0.54 to 0.98) after adjustments. A prudent dietary pattern was associated with a reduced likelihood of current MDD/dysthymia (OR=0.53; 95% CI 0.33 to 0.83) and both current (OR=0.62; 95% CI 0.42 to 0.91) and lifetime anxiety disorders (OR=0.73; 95% CI 0.55 to 0.97). A Western dietary pattern was associated with increased GHQ-12 scores (β=0.14; 95% CI 0.04 to 0.25). These data support a role for habitual diet in common mental disorders and emphasise the need for prospective studies examining the role of nutrition in the aetiology of such illnesses.

PO2.94.
ARE SPECIFIC TYPES OF CHILDHOOD TRAUMA ASSOCIATED WITH SPECIFIC PERSONALITY TRAITS IN ADULTHOOD?

C. Theo, N.S. Gokbayrak, H. Forman, J. Philip, C. Nesci, I. Galynker, L.J. Cohen
Beth Israel Medical Center, New York, NY, USA

Although there is robust evidence of an association between childhood maltreatment and adult personality disorders, there is little research investigating whether specific types of childhood maltreatment are selectively correlated with specific personality disorders. Data is presented from an ongoing study in which 150 psychiatric patients from an urban hospital's inpatient and outpatient psychiatric units will complete a battery of personality and childhood maltreatment measures. Exclusion criteria were axis I psychotic disorders, manic episode, dementia, mental retardation, and organic impairment. Measures include questionnaires about childhood sexual, physical, emotional abuse and neglect (the Childhood Trauma Questionnaire, the Tactics in Conflict Questionnaire – Parent-Child Adult Recall Version, the Multidimensional Neglect Scale), and current personality pathology (the Personality Diagnostic Questionnaire). Regression analyses were performed. Analyses of the first 50 subjects demonstrate that sexual abuse during childhood is selectively correlated with adult borderline personality traits (p=0.001) while childhood neglect is selectively correlated with Cluster A personality traits (p=0.047). Contrary to our hypotheses, significant relationships were not found between physical abuse and antisocial personality traits or between emotional abuse and cluster C or narcissistic traits. These data suggest that a childhood history of sexual abuse and neglect may be specifically associated with adult borderline and Cluster A personality traits, respectively. Future studies should further evaluate the relationship between childhood trauma and axis II pathology in order to support appropriately targeted interventions.

PO2.95.
DO PATIENTS WITH BORDERLINE PERSONALITY DISORDER BELONG TO THE BIPOLAR SPECTRUM?

J. Deltito, J. Riefkohl, L. Martin, B. Austria, A. Kissilenko
Anxiety and Mood Disorder Program, The New York Hospital - Cornell Medical Center, Westchester Division, New York, NY, USA

This report examines clinical indicators for bipolarity in a cohort of patients suffering from borderline personality disorder (BPD). The study was conducted in the Cornell-Westchester Hospital, famed for its expertise in BPD. To avoid biasing our sample, we excluded all BPD patients in our anxiety and mood disorder program. Through the use of both open clinical interviews and standardized diagnostic interviews (SCID), borderline patients were examined for evidence of bipolarity by five indicators: history of spontaneous mania, history of spontaneous hypomania, bipolar temperaments, pharmacologic response typical of bipolar disorder and a positive bipolar family history. Depending on the level of bipolar disorder from the most rigorous (mania) to the most "soft" (bipolar family history), between 13-81% of borderline patients showed signs of bipolarity. Based on what the emerging literature supports as rigorously defined bipolar spectrum (bipolar I or II), we submit that at least 44% of BPD belong to this spectrum. In conclusions, patients with BPD more often than not exhibit clinically ascertainable evidence for bipolarity and may benefit from known treatments for bipolar spectrum disorders.

PO2.96.
IDENTITY DISTURBANCES IN BORDERLINE PERSONALITY DISORDER: PSYCHOPATHOLOGY AND CLINICAL CORRELATES

C. Rinaldi, P. Bozzatello, F. Fermo, S. Bellino
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Identity disturbance, defined as "markedly and persistently unstable self-image or sense of self", is one of the nine criteria for borderline personality disorder (BPD) in DSM-IV-TR. According to Kernberg, identity diffusion in patients with borderline personality organization derives from inability to integrate positive and negative representa-

tions of self and others. These features produce feelings of emptiness, fear of abandonment, instability of interpersonal relationships with shifting between idealization and devaluation. The aim of our investigation was to identify the demographic and clinical characteristics of BPD patients that are significantly related to identity disorder. Consecutive outpatients who received a DSM-IV-TR diagnosis of BPD were recruited for the study. Patients included were between 18 and 60 years old; all subjects were tested with a semi-structured interview for demographic and clinical variables, the Structured Clinical Interview for DSM-IV Axis II Disorders (SCID II), the Clinical Global Impression-Severity (CGI-S), the Hamilton Scales for Depression and Anxiety (HDR-S, HAR-S), the Social Occupational Functioning Assessment Scales (SOFAS), the Borderline Personality Disorder Severity Index (BPDSI), and the Satisfaction Profile (SAT-P). Pearson's correlation and Student's t-test were used for statistical analysis. Significant variables were inserted in a model of stepwise logistic regression with the item "identity disturbance" of BPDSI as dependent variable.

PO2.97. UNSOLVABLE TASKS LEAD TO CRITICAL EMOTIONALITY IN BORDERLINE PATIENTS: A FUNCTIONAL MAGNETIC RESONANCE STUDY

A. Thiel, S. Oddo, J. Thiel, D. Herzog, A. Stirn
Department of Psychiatry, Psychosomatic and Psychotherapy, University Hospital, Frankfurt, Germany

Borderline disorder is the most popular personality disorder, due to its very striking symptoms. Chronic mistreatment in terms of emotional disregarding, physical or psychic abuse in the very early childhood are key factors. One important feature of borderline patients is the huge vulnerability towards criticism and appreciation. These characteristics have never been analyzed before at neural level. In the present functional magnetic resonance imaging (fMRI) study, we confronted borderline patients and healthy controls with unsolvable tasks in a forced choice format. The patients received a feedback (strong negative depreciation or strong positive appraisal) after each task, independently of their performance, to evoke strong feelings of self-confidence as well as self-hate in borderline patients. The fMRI results revealed significant higher activity in the anterior cingulated gyrus in borderline patients compared to healthy controls, which points at a stronger feeling of conflict monitoring. We also found stronger activation in the parahippocampal gyrus in borderline patients, which shows that the patients are familiar with negative emotional feelings like shame and fault, which were evoked by the repeated strongly negative feedback in our experiment. Furthermore, a higher involvement of the amygdala was observed in the borderline patients, which additionally underlines the aversive emotional state and feelings of being committed. Our design successfully represents situations in which borderline patients are repeatedly involved in their daily life. Psychotherapy needs to focus on learning new strategies on how to gain control over the high emotional, mainly negative states.

PO2.98. COMBINED TREATMENT OF BORDERLINE PERSONALITY DISORDER: A TRIAL OF MODIFIED INTERPERSONAL THERAPY

M. Zizza, M. Fenocchio, C. Rinaldi, S. Bellino
Department of Neuroscience, Psychiatric Unit, University of Turin, Italy

Practice guidelines for the treatment of borderline personality disorder (BPD) consider combined therapy (pharmacotherapy and psychotherapy) as more effective than single therapies. A few psychotherapies were reviewed and recommended by the guideline watch and are currently used in clinical practice. Markowitz proposed to adapt interpersonal therapy for BPD (IPT-BPD), providing two phases of overall 34 sessions over 8 months. The goals of this therapy are establishing and maintaining a strong therapeutic alliance and developing more adaptive interpersonal skills. We designed this study to assess the efficacy of combined therapy with SSRIs plus IPT-BPD. Consecutive outpatients receiving a DSM-IV-TR diagnosis of BPD are enrolled. Lifetime codiagnosis of dementia, schizophrenia, or bipolar disorder, and psychotropic drugs or psychotherapy in the last two months are exclusion criteria. Patients are evaluated at baseline with a semistructured interview, the CGI-S, the BPD Severity Index, the HDRS, the HARS, the BDI-II, the SOFAS and the SAT-P for the subjective quality of life. Patients are randomly assigned to two treatment arms for 32 weeks: a combination of fluoxetine 40 mg/day and IPT-BPD; fluoxetine 40 mg/day plus clinical management. Data will be analysed with ANOVA to compare score changes in the two treatment arms, considering two factors: type and duration of treatment.

PO2.99. A NEW STRATEGY FOR TREATMENT OF BORDERLINE PERSONALITY DISORDER

Y. Ishizuka
Private Practice, New York, NY, USA

"Breakthrough intimacy" therapy works with couples (the patient, his/her partner in life) bringing them far closer than their previous maximum level, guided by their own daily self-rating on 41 parameters, that allow accurate graphic tracking via Internet of subtle changes in their personalities during each therapy session. This approach frees the therapist from transference (counter-transference) issues, which is the principal obstacle in treatment of borderline personality disorder. Working in three-way teamwork, the therapist actively helps the couple to achieve closeness far greater than their previous maximum level, overcoming waves of symptom spikes (anxiety, anger, physical-symptoms, depression, and psychosis) until they disappear by exhaustion, usually without medications, as couples undergo personality transformation. The patients typically go through four distinct stages in the process of personality transformation, with stage-IV representing complete transformation. Of the 182 patients with a confirmed diagnosis of borderline personality disorder, 15% reached stage-IV, 12% reached stage-III, and 12% reached stage-II at the time of termination. 15% improved without going through typical four stages. However, 23% remained in stage-I and 35% remained in stage-0 at the time of termination. Seventy-five percent of those who did poorly (stage I and 0) were without partners. Thus, if single patients are excluded, the above result would improve significantly.

PO2.100. MANAGEMENT OF MAJOR DEPRESSIVE DISORDER AND CLUSTER C PERSONALITY DISORDER DUAL DIAGNOSIS THROUGH COGNITIVE PSYCHOTHERAPY

D. Vasile, O. Vasiliu, M. Vasile
Department of Psychiatry, "Dr. Carol Davila" Emergency Military Central Hospital, Bucharest, Romania

Patients with major depressive disorder and cluster C personality disorder dual diagnosis must be carefully monitored because of the high incidence of refractory cases to either psychotherapeutic or pharma-

cologic therapy, when each is applied alone. In cluster C patients, the emphasis during psychotherapy must be on the self image improvement, coping to stressful situations management and social skills development. We prospectively evaluated 14 patients, 6 males and 8 females, mean age 33.2 years, diagnosed with major depressive disorder and cluster C personality disorder (according to DSM-IV-TR criteria), treated with either fluoxetine (40 mg/day) or venlafaxine (225 mg/day) and weekly sessions of cognitive-behavioural therapy, for 3 months. We used the Beck Depression Inventory (BDI) 21 items form and the Global Assessment of Functioning (GAF) at baseline and every two weeks until the endpoint. The specific schemas of avoidant, dependent and obsessive-compulsive personality disorder had been addressed simultaneously with depressive specific dysfunctional beliefs restructuring. There were two cases of discontinuation of the psychotherapy after a mean duration of 4.4 weeks. These patients presented at 3 months a higher score on BDI (+10.2, compared to completed treatment) and a lower degree of social and professional level of functioning (-10.2 on GAF, compared to completed treatment). The patients that reached the endpoint presented a mean decrease in BDI of 65.2%, while the GAF increased by 25.2 points. These data suggest that addressing dysfunctional schemas of cluster C personality disorder improves the long-term prognosis in depressed patients with dual diagnosis.

PO2.101.
RELATIONSHIP BETWEEN TEMPERAMENT AND PERSONALITY DISORDERS IN SOUTH KOREAN GIRLS

E.J. Kim, S.B. Choi, J.O. Park, I.Y. Kim, H.O. Kim, I.K. Son, J.H. Ha
Keyo Hospital, Uiwang Si; Konkuk University, Seoul, Korea

This study explored the association between temperaments and personality disorders in the general female population. A total of 466 female subjects from the same community were included (mean age 21.2±2.0 years). They completed the Personality Disorder Questionnaire (PDQ-4) and the Temperament and Character Inventory (TCI). We found a prevalence of 53.0% for obsessive-compulsive and 48.1% for avoidant personality disorders. The lowest prevalence was found for antisocial personality disorder (5.6%). Cluster A symptoms were most strongly associated with low reward dependence (r=-0.316), Cluster B with novelty seeking (r=0.256) and cluster C with harm avoidance (r=0.545). Self-directedness was the strongest predictor of personality symptoms.

PO2.102.
JUVENILE OFFENDERS AND PERSONALITY DISORDERS: DIMENSIONS AND CATEGORIES

R. Sperandeo, D. Cantone, F. Perris, V. Cioffi, M. Architravo, N. Nascivera, M. Orazzo
Department of Psychiatry and Department of Psychology, University of Naples SUN, Naples, Italy

Many authors have identified the presence of personality disorders (PD) among juvenile prisoners. The Axis II diagnoses assigned according to the DSM-IV criteria do not allow to obtain valuable psychopathologic descriptions because of the poor specificity of the diagnostic criteria. The aim of the study was the identification of personality traits which can describe the psychopathologic features of juvenile offenders. The research was conducted in a juvenile penitentiary in Italy. We assessed the presence of PD in a sample of 87 individuals aged between 16 and 21, using the Structured Clinical Interview for DSM Axis II pathologies (SCID-II), the Eysenck Personality Questionnaire (EPQ) and the State Trait Anger Expression Inventory (STAXI). We performed a principal component analysis and cluster analysis in order to identify factors which could better describe the psychopathologic elements of the subjects. The results suggest that it is possible to select ten first rank traits which provide an individual dimensional description of each subject. Such traits, in correlation with temperamental traits, led us to identify three second rank clusters which represent a categorial frame to the dimensional description of the psychopathology. The personality traits which better describe the psychopathologic features of the individuals are: impulsive aggressiveness, lack of empathy, grandiose self-image, antisocial behaviour and suspiciousness. This model may be useful in planning rehabilitative and therapeutic interventions for those individuals characterized by clinical and diagnostic complexity.

PO2.103.
CONTAGIOUS SELF-MUTILATION BEHAVIOR IN JAPANESE HOSPITALIZED ADOLESCENTS

S. Okamoto, T. Abe
Department of Psychiatry, Children's Medical Center, Jichi Medical University, Shimotsuke, Japan

Self-mutilation and its contagious effect is described as the sequence of events where an individual inflicts self-injury and is imitated by others in the immediate environment. In our ward, we often try to intervene in the sequence to identify an "instigator" who manipulates group dynamics. However, frequently patients are exposed to a lot of negative behavior models not only from an "instigator" but also from Internet and mobile phone networking services. In our department, a 13 year old female whose diagnoses were bipolar II and eating disorder, had several episodes of wrist cutting since she was 11 years old. She was admitted to the adolescent ward twice due to weight loss. During her first admission, another patient with an eating disorder witnessed her self-mutilating and imitated her. Later, when the first patient was admitted again, the second used her self-mutilation behavior as a status symbol; then two more patients took up self-mutilation behaviors in emulation. The first patient was also involved in mobile phone networking exhibiting wrist cutting images and in exchanging mobile phone e-mails with self-mutilation dialogs. How to intervene is becoming a difficult problem, especially when "instigators" and patients meet on websites. They choose wrist cutting as a coping behavior, share the experience with friends, and thereby reinforce group behavior. We believe that networking technology can exacerbate contagious self-mutilation.

PO2.104.
PSYCHIATRIC RISK AND YOUNG ADULT ARREST

J. Beitchman, E.B. Brownlie
University of Toronto; Centre for Addiction and Mental Health, Toronto, Ontario, Canada

The study aimed to create a multivariate model of childhood and adolescent variables that significantly predict arrest record at age 25. Participants were part of a 1982 longitudinal study in which 142 speech and language impaired children and their matched controls were selected in a one in three random representative survey of all English speaking 5 year old children. A comprehensive battery including demographic, mental health and cognitive measures was administered to all participants at age 5, 12, 19 and 25 years. Using Global Assessment of Functioning (GAF) scores, psychiatric diagnoses, school attendance, family and friend social support, gender, family separation

and socioeconomic status, we constructed a multivariate model predicting arrest record at age 25. Our multivariate model, incorporating age 12 psychiatric diagnosis, ratings of family support, parent and teacher reports and family breakup, significantly predicted arrest at age 25. Arrestees at age 25 have a history of low GAF scores and psychiatric disorders at age 12, tend to come from a single or separated home, and have a childhood history of behavior problems as young as age 5. Our model, based on prospectively collected information, predicts with greater than 90% accuracy who will be arrested by age 25.

PO2.105. VALIDITY AND RELIABILITY OF THE INVENTORY OF VIOLENCE AND PSYCHOLOGICAL HARASSMENT AT WORK (IVAPT-PANDO)

M. Pando, C. Aranda, C. Rodríguez
University of Guadalajara, Mexico

The aim of this work was to study the reliability and construct and concurrent validity of the Inventory of Violence and Psychological Harassment in the Mexican population. The sample consisted of 307 workers of fourteen states of the Mexican Republic and twenty-four different entrepreneurial sectors. The results show internal consistency of four factors, with significant validity and high reliability. Making comparisons between different nations is difficult for cultural reasons, but more so because of the different meanings which are given to employment harassment and the diverse forms of measuring it. Mikkelsen and Einarsen found that the rates among the Danish workers could vary from 4% to 25% when the criteria varied on the exposition to intimidating behaviour forms from once a week to at least twice a week. The result we obtained of 8.5% of victims of employment harassment remains within the range reported, closer to the lowest extreme.

PO2.106. ABNORMAL CORTICAL MORPHOLOGY IN OFFENDERS WITH PSYCHOPATHY

M. Boccardi, P. Najt, M. Pievani, R. Ganzola, J. Perez, E. Repo-Tiihonen, P. Thompson, G. Frisoni, J. Tiihonen
IRCCS San Giovanni di Dio-FBF, Brescia, Italy; University of Kuopio and Niuvanniemi Hospital, Kuopio, Finland; UCLA School of Medicine, Los Angeles, CA, USA; AFaR Associazione Fatebenefratelli per la Ricerca, Rome, Italy

Current findings suggest that psychopathy may be associated with anomalies in the transition paralimbic mesocortical structures. This study aimed to test this hypothesis by examining the cerebral cortex in subjects with different degrees of psychopathy but no evidence of other mental disorders, with advanced mapping procedures. A cortical pattern matching algorithm was used to assess gray matter density differences from 3D high-resolution magnetic resonance images. Maps were computed to show mean percent difference and statistical significance ($p<0.05$). Permutation tests were used to correct for multiple comparisons. Substance abuse was controlled for by disaggregation. The study was carried out in twenty-six offenders (age: 32.5±8.4) with different degrees of psychopathy rated with the Psychopathy Checklist-Revised, and 25 healthy controls (age: 34.6±10.8). The analyses revealed decreased cortical volume around 15% in the whole mesocortical paralimbic structures (orbitofrontal, cingulate, parahippocampal gyri; right temporal pole) and in other adjacent midline cortex, with minor involvement of dorsal structures (permutation tests: $p<0.001$), the pattern being less severe in low psychopathy subjects. Comparisons of polysubstance and amphetamine users vs. non-users showed that the findings were attributable to psychopathy and not to substance abuse. These findings support the view that psychopathy is associated with abnormalities in the mesocortical structures connecting limbic to cortical regions. Nonetheless, a wider involvement of cortical midline structures was observed, in regions known to process self-referential stimuli.

PO2.107. ABNORMAL HIPPOCAMPAL SHAPE IN OFFENDERS WITH PSYCHOPATHY

M. Boccardi, R. Ganzola, F. Sabattoli, M.P. Laakso, E. Repo-Tiihonen, O. Vaurio, M. Könönen, H.-J. Aronen, P.M. Thompson, G.B. Frisoni, J. Tiihonen
IRCCS San Giovanni di Dio-FBF, Brescia, Italy; University of Kuopio and Niuvanniemi Hospital, Kuopio, Finland; UCLA School of Medicine, Los Angeles, CA, USA; AFaR Associazione Fatebenefratelli per la Ricerca, Rome, Italy

Posterior hippocampal volumes correlate negatively with severity of psychopathy, but whether hippocampal shape differs locally from controls, and whether differences are due to co-existing substance abuse, is unknown. This study aimed to assess hippocampal morphology in offenders with different degree of psychopathy with a surface-based radial distance mapping method. The design included hippocampal manual tracing from 3D high resolution magnetic resonance imaging and statistical modeling of local changes visualizing group differences as maps of percent change and significance ($p<0.05$). Permutation tests were used to compute overall p-value corrected for multiple comparisons. The study was carried out in twenty-six violent offenders (age: 32.5±8.4) with DSM-IV diagnosis of antisocial personality disorder and different degree of psychopathy rated with the Psychopathy Checklist-Revised (12 with high, 14 with low psychopathy), and 25 healthy controls (34.6±10.8). Offenders and controls had similar mean hippocampal volume. Local analysis showed that the high psychopathy group had significantly smaller volumes along a ribbon on the longitudinal axis, on both the dorsal and ventral aspects, when compared with healthy controls and low psychopathy offender group. Extensive check for confounders denoted that this finding was not attributable to substance abuse or to antisocial personality disorder, but to the degree of psychopathy. The opposite comparison revealed abnormal enlargement of the lateral borders, in both the right and left hippocampi of both high and low psychopathy groups vs. controls, covering CA1, CA2-3 and subicular regions. A permutation test revealed a group difference ($p<0.002$) for both hippocampi, indicating that the results survived correction for multiple comparisons. In conclusion, habitually violent offenders exhibit a specific abnormal hippocampal morphology, but similar total amount of hippocampal gray matter. The peculiar 8-shaped morphology, in coronal sections, may reflect abnormal development of inner structures such as the dentate gyrus, known to be crucial for fear-conditioning.

PO2.108. RISK FACTORS FOR AGGRESSION IN ADULTS WITH INTELLECTUAL DISABILITIES: A SYSTEMATIC REVIEW

G. Unwin, S. Deb
Department of Psychiatry, Division of Neuroscience, University of Birmingham, UK

Aggression, including physical aggression, property destruction and self-directed aggression (self-injurious behaviour), is more common in adults with intellectual disabilities (ID) than the general population. There is a body of published literature on the risk factors and

associations with aggression in adults with ID, with factors such as gender, age, degree of ID, communication deficit and diagnosis of autism receiving some attention. However, the link between such factors and others is far from clear, with different studies suggesting different results. We report the outcome of a systematic review aimed to identify and summarise all the relevant peer reviewed journal publications pertaining to the identification of risk factors and associations. Four journal article databases were searched using a comprehensive list of search terms (MEDLINE, PsycInfo, CINAHL and EMBASE). Hand searching and cross-referencing were also used. All the identified publications were entered into a database and scrutinised against a pre-piloted set of inclusion/exclusion criteria. The criteria have been designed to be robust yet sensitive. The identification of the publications for inclusion comprised three stages: a title scan stage, an abstract scan stage and a full text scan stage. Two independent reviewers completed the abstract scan and full text scan stages. The results of the included studies are extracted, summarised and presented. The methodologies of the studies are discussed in terms of their limitations and future suggestions for research.

PO2.109.
THE EFFECTIVENESS OF INTERVENTIONS ON AGGRESSION IN ADULTS WITH INTELLECTUAL DISABILITIES: A NATURALISTIC OBSERVATIONAL STUDY

G. Unwin, S. Deb
Department of Psychiatry, Division of Neuroscience, University of Birmingham, UK

Studies have demonstrated that the rate of aggression in people with intellectual disabilities (ID) is higher than in the general population. Attention has been paid to determining the efficacy of interventions used to manage aggression. However, systematic reviews of interventions indicate that there is a lack of good quality randomised controlled trial data in the field, largely due to the difficulties in conducting such trials within a population with ID. Available medication trials often show widely varying results. Most studies did not analyse the reasons for the target behaviour, did not account for the confounding effect of different non-medication based interventions, were short term and focussed on a reduction in severity and/or frequency of the target behaviour to determine effectiveness. This study will address the effectiveness of different interventions on aggression, the life course of aggression, risk factors for aggression and the effect on the quality of life by employing a naturalistic design. We aim to recruit 80-100 adults with ID and their carers who are currently receiving interventions for their aggression. Participants will be followed-up for 12 months (with three data collection points), collecting longitudinal data which is largely lacking in the field. A range of measures will be used to address clinically, socially and personally meaningful outcomes for the person and his/her carer. There is also a retrospective arm of the study which will assess the history of the aggression. The aim is to collect practice-based evidence which can facilitate evidence-based practice. So far, 97 people have been invited to take part from one outpatient ID psychiatric clinic, of whom, 29 have expressed an interest in taking part (recruitment from other clinics is to commence shortly). Subsequently, 23 individuals and their carers have been recruited, with data collection completed for 14 of these individuals. Of those recruited, 15 are males and 8 are females. Of those for whom data collection has been completed, the average age is 35 years.

PO2.110.
MANAGEMENT OF A PATIENT WITH INTRUSIVE VIOLENT THOUGHTS IN THE COMMUNITY

Y. Dundar, D. Vecchio
Department of Psychiatry, North Devon District Hospital, Devon, UK

Management of patients with intrusive thoughts of violent nature in the community can be challenging, particularly when there is insufficient evidence of a mental illness. Some literature suggests that unwanted intrusive thoughts may be related to the development and onset of psychosis. We present a case with violent intrusive thoughts and discuss the possible diagnostic indicators, treatment and risk management strategies. A 32 year-old male, with past medical history of cerebral palsy and no major psychiatric history, presented to the outpatient clinic in a distressed state with intense homicidal thoughts. His partner noticed worsening of his behaviour over the last few months. He was previously found wandering in town with a knife, and on one occasion, assaulted someone whom he had assumed was a drug addict, and was detained by the police. Mental state examination revealed a preoccupation and fascination with knives, and ideas of grandiosity. He described these thoughts in graphic detail, which mainly involved stabbing the drug addicts, and reported on occasions a voice telling him to act on these thoughts. He reported an unhappy childhood in an abusive family. He maintained a long-term relationship and worked as a chef until recently. He had a history of alcohol abuse and a significant forensic history. Further forensic and psychological assessments indicated that his symptoms did not appear to be consistent with a mental illness at present, but suggested monitoring and management in the community. These included multi-agency public protection arrangements and anger management strategies.

PO2.111.
PREVALENCE OF IMPULSE CONTROL DISORDERS IN A COLLEGE SAMPLE

B. Odlaug, J. Grant
Department of Psychiatry, University of Minnesota, Minneapolis, MN, USA

Impulse control disorders (ICDs), including pathological gambling, kleptomania, intermittent explosive disorder, trichotillomania, pyromania, compulsive sexual behavior, and compulsive buying, are relatively common in both clinical and inpatient psychiatric samples. However, limited information is available regarding their prevalence in the general population. The aims of the present study are to provide prevalence estimates for a college population and highlight gender differences. The Minnesota Impulsive Disorders Interview, a screening instrument with excellent classification accuracy, was modified into an anonymous self-report version and distributed to 3,945 collegiate students at two private colleges. Participation was voluntary and anonymous. A total of 791 (20.1%) surveys were returned. The mean age of the sample was 20.0±1.25 years, with females comprising 67.9% of the respondents. Overall, 10.4% (n=82) met criteria for at least one lifetime impulse control disorder. 30.5% (n=241) of respondents met criteria for either a clinical or sub-syndromal version of an impulse control disorder. The most common disorders were trichotillomania (3.9%) and compulsive sexual behavior (3.7%). Kleptomania was the least common (0.4%). Males were significantly more likely to screen positive for pathological gambling and compulsive sexual behavior. Females were more likely to have compulsive buying. Impulse control disorders appear to be common among college students. The high rates of sub-syndromal behavior indicate that these disorders may be

incipient during late adolescence and early adulthood and should be addressed prior to onset of clinical versions of the impulse control disorder.

PO2.112. CONCEPTUAL FRAMEWORK OF "RISK" IN SUICIDALITY

A. Shrivastava
University of Western Ontario Regional Mental Health Care, St. Thomas, Ontario, Canada

Suicide is a global public health problem. There are newer high-risk groups needing special attention, e.g., elderly, teen age, military personnel and medical professionals. It is also a prime cause in most of the lawsuits and litigations in clinical practice. It is clear that there is a perceptible gap between what we do and what needs to be done. Clearly, new strategies are required in order to facilitate the prevention of suicidal behaviors. Current suicide risk assessment methods include measurement of suicidal intent, assessment of suicide potential and prediction of possible attempt, and assessment of suicide potential in certain disorders such as personality disorder and substance abuse. Besides these, basic screening tools are available which provide very basic information for possible psychiatric diagnosis and possibility of risk. An investigation into the current suicide risk assessment procedures among practicing clinicians found that assessment instruments were used infrequently and clinicians rated these instruments as having limited usefulness. An important part of this process is developing assessment instruments, which can successfully differentiate between individuals who are at serious risk for attempting suicide and those who are not. A large part of this work is based upon contemporary concept of "risk", which needs revision incorporating current evidence and then to develop measurement tools accordingly. We propose that: a) a net sum of "risk" shall be the quantum of risk factors in relation to protective factors in a given individual at a given time; b) absolute risk in an individual is ratio of risk factors and protective factors; c) there are two types of risk factors: trait and state risk factors. Trait factors determine lifetime risk arising from genetics-familial, presence of mental illness, adverse childhood experience and learned coping mechanism. State risk determines current or situational response in presence of recent life events, lack of support system, current mental state and personal belief system. The paper discusses this concept and its implications for practice and research.

PO2.113. DETECTION OF RISK FACTORS FOR DELIBERATE SELF-HARM IN HIGH SCHOOL TEENAGERS FROM THE STATE OF CAMPECHE, MEXICO

G. Bautista-Vázquez, A. Padilla-Vázquez, H. Lamadrid-Figueroa, C. González-Forteza, R. Durán del Rivero
Psychiatric Hospital of Campeche; National Institute of Public Health, Mexico City; National Institute of Psychiatry, Mexico City, Mexico

Mortality statistics report that 69 suicides occurred in the state of Campeche, Mexico during 2005, of which 16 were in youths under 24 years of age. The objective of this study was to characterize risk factors for deliberate self-harm (DSH) and other parasuicidal behaviours in teenagers of the state. We applied psychosocial factors questionnaires to 503 students with ages 13 to 21 years, attending three tertiary level schools. A parasuicidal indicator identifier developed by Gonzalez-Forteza was also applied. For DSH risk factor identification, logistic regression models were fitted to the data. We found that 22% of subjects reported DSH. After adjustment for age and gender, the wish to undergo aesthetic surgery (OR=2.6; $p<0.01$), anorexia (OR=1.9; $p<0.01$) and the wish to have piercings (OR=2.8; $p<0.01$) were significantly associated to DSH. However, the most important risk factor for DSH was a bad relationship with the mother (OR=7.1; $p<0.01$). Frequency of communication with the parents about the subject's feelings was unrelated to DSH after adjusting for whether the relationship with them was either good or bad.

PO2.114 STRUCTURAL BRAIN ABNORMALITIES IN A HOMICIDAL PATIENT: A FORENSIC CASE REPORT

S. Radeljak, T. Žarkovic-Palijan, M. Kovač, D. Kovačević
Institute of Forensic Psychiatry, Dr. Ivan Barbot Neuropsychiatric Hospital, Popovaca, Croatia

Key regions commonly found to be impaired in populations of violent homicide offenders include prefrontal cortex, temporal gyrus, amygdala-hippocampal complex, and anterior cingulate cortex. Recent findings have confirmed a link between large arachnoid cysts and psychotic symptoms. We present the forensic clinical case of a male homicidal patient, age 29, with a arachnoidal cyst (Galassi III) occupying a large portion of the right brain hemisphere. The patient presented with acute psychotic behavior after he killed his father and was escorted to our department for psychiatric evaluation. The patient was catatonic upon admission to the hospital and completely non-cooperative. Patient's family members reported visible changes in his behaviour in the last two years, accompanied with frequent attacks of headache. Magnetic resonance imaging revealed a large arachnoid cyst in the right brain hemisphere, compressing right frontal and temporal cortex, with lesions in frontal and temporal cortex and white brain matter in the insular region of both hemispheres. The patient was ordered antipsychotic therapy (clozapine) and scheduled for further psychiatric observation.

PO2.115. CITALOPRAM IN TREATMENT OF PATHOLOGICAL SKIN PICKING: A RANDOMIZED DOUBLE-BLIND PLACEBO-CONTROLLED TRIAL

M. Arbabi, V. Farnia, K. Balighi, M.R. Mohammadi, A.A. Nejati Safa, K. Yazdchi, B. Golestan, F. Darvish, H. Parsafar
Tehran University of Medical Sciences, Tehran, Iran

Several studies suggest that selective serotonin reuptake inhibitors (SSRIs) may be useful in treating pathological skin picking. This study sought to assess the effectiveness of citalopram in comparison with placebo in treating this condition. Forty-five individuals with pathological skin picking were recruited in a four-week, randomized clinical trial of citalopram (20 mg/day) in comparison with placebo. Study measures assessing skin picking severity, mental health status, obsessive-compulsive disorder and quality of life were given at baseline, and at weeks 2 and 4 during treatment. Pathological skin picking severity, general health status, obsession-compulsion severity and quality of life level were similar between two groups at baseline. Treatment analyses revealed significant improvements in quality of life, general health status and obsession-compulsion severity in the citalopram compared with the placebo group ($p<0.05$). The mean pathologic skin picking severity reduction in the citalopram group was greater than in the placebo group, but the difference was not significant. These findings suggest that citalopram can improve general health status and quality of life in individuals with pathological skin picking, but its effect on

skin picking behavior does not differ significantly from placebo. Further trials with longer treatment period are needed to fully clarify the efficacy of citalopram on pathologic skin picking.

PO2.116.
USE OF TOPIRAMATE IN A 5-YEAR-OLD CHILD WITH TRICHOTILLOMANIA

L. Miranda, L. Costa
Universidade Federal de Pernambuco, Recife, Brazil

Topiramate has been proposed for use in adults suffering from trichotillomania and other impulse-control disorders. However, it has not been studied as a treatment of children suffering from trichotillomania. We describe the case of a 5-year-old female child suffering from trichotillomania and treated with this medication, with satisfactory results so far. She was admitted to our hospital with a history of abdominal distension and epigastric mass. These symptoms were due to a trichobezoar, consequence of hair pulling and ingestion since 18 months of age. She had previously been treated with clomipramine, but the results had been unsatisfactory. Topiramate was initiated and the patient had a complete remission of trichotillomania after reaching the dose of 50 mg/day.

PO2.117.
DEVELOPMENTAL TRAJECTORY OF RISK FOR DRUG USE DISORDER

L. Kirisci, R. Tarter, M. Vanyukov, A. Mezzich
Center for Education and Drug Abuse Research, University of Pittsburgh, PA, USA

Employing a prospective paradigm, this study derived the phenotype, spans cognitive, emotion, and behavioral domains of psychological functioning, associated with risk for drug use disorder (DUD). Five hundred males and 200 females were evaluated between ages 10-12 and 22 on a comprehensive protocol using self, mother, and teacher reports. The transmissible liability index (T-LI) was derived using item response theory at ages 10-12, 12-14, 16, 19, and 22. Logistic regression and ROC analyses were conducted to evaluate the accuracy of the T-LI to predict DUD. The developmental trajectory of T-LI has a negative slope for nondrug users (b=-.25, p<0.001) and a positive slope for drug users (b=.04, p=0.017). Socioeconomic status (b=-.01, p=0.001), deviant peers (b=.03, p=0.031) and opportunity/resistance (b=.07, p=0.016) significantly predict the developmental trajectory for drug users, whereas none of the variables was significant for nondrug users. Furthermore, T-LI significantly predicts DUD at age 22 with odds-ratios of 1.9 (age=10-12), 2.0 (age=12-14), 2.6 (age=16), 3.4 (age=19), and 3.8 (age=22). The present study demonstrated that it is feasible to identify males and females at high risk for DUD using index developed to evaluate transmissible liability. The findings support the feasibility of accurately identifying high risk youths for targeted intervention. In addition, the results potentially have heuristic value for research aimed at elucidating the etiology of SUD.

PO2.118.
ASSOCIATION BETWEEN SUBSTANCE USE IN ADOLESCENCE AND ADJUSTMENT PROBLEMS IN ADULTHOOD: A 10-YEAR LONGITUDINAL STUDY

R. Carbonneau, L. Malet, F. Vitaro, R.E. Tremblay
GRIP Research Unit on Children's Psychosocial Maladjustment, University of Montreal, Canada; CHU Sainte-Justine, Montreal, Canada; CHU of Clermont-Ferrand, France; INSERM U669, Paris, France

A 10-year longitudinal study among French Canadian adolescent boys examined the association between trajectories of alcohol and drug use and delinquency, along with elementary school predictors and adult outcomes. A semi-parametric mixture model was used to analyse data from a sample of 1161 boys from low socioeconomic status families. Subjects were interviewed yearly on delinquency and substance use between the ages of 13 and 17. Alcohol, marijuana and other substance use were assessed. Joint trajectories combining subject's use profiles on all three substances were computed. Results show that boys on a high trajectory of use for either drug are also high users of the other substance and high users of alcohol as well. These high users are also more delinquent throughout adolescence. Longitudinal predictors of substance use show that a high level of disruptive behavior and a low level of anxiety, and low parental supervision and lack of concrete and clear rules at home, between the ages of 10 and 12, are associated with a high trajectory of use of either substances, and especially multiple use, during adolescence. Boys on the adolescent high trajectory of alcohol and drugs use are also more likely to experience adjustment problems, including antisocial personality and criminality, at age 24.

PO2.119.
PREDICTING CRAVING IN SUBSTANCE-DEPENDENT WOMEN: PROSPECTIVE FINDINGS FROM A COMPUTERIZED AMBULATORY MONITORING INVESTIGATION

J. Swendsen, M. Barrault, L. Nadeau
National Center for Scientific Research, France; University of Bordeaux 2, France; University of Montreal, Canada

Ambulatory monitoring techniques have been increasingly applied in investigations of substance use disorders. Despite a growing appreciation for the capacity of these techniques to identify immediate precursors of craving and to improve targets for abstinence programs, knowledge of commonly-cited triggers such as stress or negative emotions remains almost exclusively based on cross-sectional or retrospective investigations. Using state-of-the-art computerized techniques, women with drug (n=61) or alcohol dependence (n=19) provided information five times per day over a 1-week period concerning mood states, stress, craving, and substance use. Participants completed an average of 80% of programmed assessments, and no devices were lost or stolen. Craving intensity strongly predicted substance use over subsequent hours (p<0.001). In turn, decreases in positive mood (p<0.05) and increases in negative mood (p<0.05) predicted later craving intensity. No prospective association was observed between daily stress and craving. The management of craving intensity is of key importance for treatment programs but real-time and ecologically-valid data has been lacking, particularly for drug dependence. Patient education concerning immediate antecedents of craving fluctuations, such as the role played by state affect, should provide important contributions to the development or refinement of successful treatments.

PO2.120.
DEMOGRAPHIC AND CLINICAL FEATURES OF PATIENTS WITH BIPOLAR DISORDER AND SUBSTANCE ABUSE/DEPENDENCE

N. D'Urso, F. Castellano, I. Balossi, B. Dell'Osso, A.C. Altamura
Department of Psychiatry, University of Milan, "Fondazione IRCCS Ospedale Maggiore Policlinico, Mangiagalli e Regina Elena", Milan, Italy

Bipolar disorders (BDs) are common and serious mental illnesses with a lifetime prevalence of 2-3.3% for BD-I and 3-5% for BD-II. The aims of the present naturalistic study were to evaluate the prevalence of comorbidity of substance abuse/dependence (SAD) in 320 outpatients with BD (BD-I=128; BD-II=192) and to assess possible differences in clinical and demographic variables among BD patients with and without SAD comorbidity. The total sample was divided in two sub-groups on the basis of the presence of SAD comorbidity (present: n=61, absent: n=259). Lifetime prevalence of SAD was 19.1%, 25%, and 15.1% for the total sample, for BD-I and for BD-II respectively, with a statistically significant higher prevalence in male patients (χ^2=17.456, p<0.001). The subgroup of BD patients with SAD comorbidity was younger (t=4.335, p<0.001), showed an earlier age at onset of BD (t=3.856, p<0.001), an earlier age at the first pharmacological treatment (t=2.841, p=0.005), and an earlier age at the first treatment with mood-stabilizers (t=2.970, p=0.003). Among subjects with SAD, the subgroup of patients with BD-I showed a higher number of hospitalizations/lifetime compared to BD-II patients (t=2.49, p=0.01). Moreover, patients in whom the onset of SAD was earlier than that of BD showed a statistically significant earlier age (t=-3.259, p=0.002), an earlier age at the first treatment with mood stabilizers (t=-2.301, p=0.02), a shorter duration of illness (t=-2.419, p=0.01), a lower number of hospitalizations lifetime (t=-2.667, p=0.01), and a lower rate of alcohol abuse/dependence (23.1% vs. 68.6%; χ^2=16.839, p=0.002) than patients with the onset of SAD after BD.

PO2.121.
ADDICTIVE BEHAVIOURS: STUDIES IN FRENCH MILITARY PERSONNEL

M.D. Colas, C. Gheorghiev, A. Benali, F. de Montleau
Psychiatry Unit, Percy Military Hospital, Clamart, France

Addictive behaviours are rarely evaluated in a healthy working population. We assessed the frequency, dynamics and professional incidence of five behavioural addictions and of problematic cannabis use among a strictly selected and followed population: military personnel. Two different surveys were carried out. The first, on behavioural addictions, evaluated 61 military aviators in an aeromedical center from May to September 2003. The second, on cannabis use, included 509 military personnel during 15 months up to March 2007. The survey methodology was based on an anonymous self-responded questionnaire and, in the second study, a psychiatric interview. In the flight personnel, 31.1% were at risk to become dependent to work and 6.5% were already so. 19.7% were dependent to Internet, 16.4% to jogging, 3.3% to compulsive shopping and 1.6% to pathological gambling. In the second sample, prevalence of cannabis abuse was 7.8% and that of dependency 1.4%. Consultations for cannabis misuse concerned less than 5% of all demands. In the flight personnel, behavioural addictions had no significant impact on professional life.

PO2.122.
INHALATION OF VOLATILE SUBSTANCES AND HETEROAGGRESSIVE ACTING OUT

L. Sahnoun, F. Bretel, M. Rotharmel, S. Haouzir, O. Guillin
Service Hospitalo-Universitaire, Centre Hospitalier du Rouvray, Sotteville-les-Rouen; Neuropsychopharmacology of Depression Unit, University of Rouen, France

Volatile substance abuse (VSA) is an increasing addictive behaviour. Symptoms associated with VSA include euphoria, excitement, disinhibition and hallucinations. We report two cases of young patients with VSA using gas lighter (containing butane and isopropane) or air freshener (containing butane, propane and chlorofluorocarbons). These patients also had an antisocial personality disorder. In these two patients, heteroaggressive acting-out was associated with the inhalation of volatile substances.

PO2.123.
SELF-ESTEEM AND STATE-TRAIT ANXIETY IN RELATION TO DRUG MISUSE IN KUWAIT

M. Al-Najjar
Department of Research and Studies, Ministry of Interior, Kuwait

This study was designed to document knowledge about Kuwaiti drug users and to investigate whether or not there is an association between their poor self-concept and high level of anxiety. One hundred and seven incarcerated drug users, 107 individuals serving prison terms for offences other than drug use, and 107 normal controls were included in this study. The Arabic version of Rosenberg's Self-Esteem Scale and Spielberger's State-Trait Anxiety Inventory were used to measure the subjects' self-esteem and state-trait anxiety respectively. The results revealed that there is a relationship between levels of self-esteem and anxiety in Kuwaiti drug users.

PO2.124.
RISK FACTORS ASSOCIATED WITH INCREASED SMOKING IN A YOUNG NONCLINICAL SAMPLE FROM TURKEY

F.C. Celikel, S. Celikel, U. Erkorkmaz
Gaziosmanpasa University School of Medicine, Tokat, Turkey

The aim of this research was to examine the factors affecting smoking behavior and to identify a possible correlation between smoking habits, anxiety proneness, and alexithymia in Turkish university students. The sample consisted of 1870 university students (52.2% males), aged 17-38 years (mean 21.2±2.0). All participants completed a self-report questionnaire and the Turkish versions of the 16-item Anxiety Sensitivity Index (ASI), and the 20 item Toronto Alexithymia Scale (TAS-20). Of the total sample, 35.9% were current smokers (with 46.2% males and 24.4% females). The mean age of starting smoking was 16.0±2.8 years. Of the smokers, 21.7% smoked for the first time in their university years. Male gender, parental smoking, more years spent at university education, and unsuccessful school achievement were factors associated with an increase in the rate of smoking (p<0.05). Boys had a 2.72 times higher risk of smoking compared to girls. Students whose parents smoked had a 1.41 times higher risk of smoking. Students with poor school achievement had a 3.38 times higher risk of smoking compared to students with good school success. Comparisons between the smoker and the non-smoker groups did not show a significant difference with regard to alexithymia or anxiety proneness.

PO2.125.
TOBACCO USE AMONG SCHOOL CHILDREN IN NORTH BENGAL, INDIA

S. Ramadugu
Military Hospital Jalandhar, Punjab, India

This study aimed to assess the prevalence and type of tobacco use, the role of parental use of tobacco and various other attributes related to its use among English medium secondary school children in a small town of North Bengal, India. An English questionnaire was administered by the author to students from class eight to class twelve in three different schools over a period of 3 weeks. A total of 848 students were administered the questionnaire, of which 492 were boys. It was found that 14.9% of all students were using some form of tobacco. 85.8% had begun after the age of 10 years. 39.4% of tobacco users' parents were also using tobacco, vs. 29.0% of non-tobacco user children's parents. Tobacco use is significant among school going children and daily use is alarmingly high. Parental use of tobacco, movies and sport icons appear to be important in initiating children into smoking.

PO2.126.
KNOWLEDGE AND ATTITUDE OF A GROUP OF CHRIST MINORITIES TOWARD ILLEGAL SUBSTANCE USE IN TEHRAN

A. Farhoudian, F. Mohammadi, F. Jafari, A. Manookian, M. Sadeghi, A.R. Abidi, P. Maleki
Iranian Research Center for Substance Abuse and Dependence, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran; Aftab Society Non-Governmental Organization, Tehran, Iran; University of California, Davis, CA, USA

The aim of this study is the assessment of a group of Christ minorities' knowledge and attitude toward addiction in Tehran. This cross-sectional survey has been conducted on 47 Christ participants in an addiction prevention workshop in May 2007 in Tehran. All Christ who were living in Tehran have been informed systematically about participation in the workshop. Hopelessness, psychological problems, drug availability, and the relationship with drug users were the most important issues to initiate substance through the eyes of the participants. A majority remarked that craving, not being supported by family, and continuing relationship with drug users were the most important risk factors; and following the treatment up and pursuits of counseling with rehabilitation centers were the most important factors in current abstinent users for relapse. The most had a decent knowledge about the hazards of the common/widespread drugs.

PO2.127.
CAFFEINE CONSUMPTION IN AN ITALIAN SAMPLE OF PATIENTS WITH DIFFERENT PSYCHIATRIC DIAGNOSES VS. HEALTHY CONTROL SUBJECTS

R. Paggini, C. Carmassi, C. Taponecco, G. Ciampa, G. Consoli, D. Marazziti, A. Ciapparelli, L. Dell'Osso
Department of Psychiatry, Neurobiology, Pharmacology and Biotecnology, University of Pisa, Italy

Different studies highlight that, similarly to other psychoactive substances, caffeine may provoke a clinical dependence syndrome; further, it would be able to trigger symptoms of anxiety, depression and even psychoses. The aim of this study was to compare caffeine intake, rates of dependence, intoxication and withdrawal in psychiatric patients (P) vs. healthy control subjects (C). Three-hundred sixth-nine P and 104 C were assessed by a structured interview with the DSM-IV-TR criteria for caffeine withdrawal and intoxication and for substance dependence applied to caffeine. Diagnoses included: mood disorders (MD, 213), anxiety disorder (AD, 49), schizophrenia spectrum disorder (SSD, 33) and eating disorders (ED, 74). The maximum lifetime intake (mg/day) was significantly higher in P than in C ($p<0.05$), particularly in patients with ED vs. C ($p<0.01$). No difference was detected between P and C in terms of current intake, despite in patients with ED it was significantly ($p<0.05$) higher than in those with AD or MD. The average caffeine intake in P before the onset of the psychiatric disorder was significantly higher in men than in women ($p<0.01$). The prevalence of dependence and intoxication was significantly higher in P than in C ($p<0.01$ and $p<0.05$, respectively). No significant differences were found between P and C in withdrawal rates. Our study suggests the importance to routinely assess caffeine consumption in psychiatric patients and especially in those with ED.

PO2.128.
VALIDATION OF THE CANNABIS ABUSE SCREENING TEST IN FRENCH MILITARY FORCES

C. Gheorghiev, M.D. Colas, P. Raffray, A. Benali, F. de Montleau
Percy Military Hospital, Psychiatry Unit, Clamart, France

The Cannabis Abuse Screening Test (CAST) is used in most representative surveys in France, while its validity in the general population is being evaluated. Our study aimed at enriching these data in a specific population, the military one. Its main objective was to validate the CAST as a tool for detecting problematic cannabis use, including both abuse and dependency. Five hundred and nine military people were included during 15 months up to March 2007. The survey methodology was based on a self-responded questionnaire and a psychiatric interview. Cronbach alpha test was used for internal validation and DSM-IV-TR criteria for external validation. Description of the consumption context used linear and logistic regression models. The psychometric qualities of CAST were confirmed, concerning both its internal consistency (α=0.87), that of its specificity (85%) and sensibility (85%), with definition of an optimal threshold of 3, concerning 21% of the population. Prevalence of cannabis abuse was 7.8% and dependency 1.4%. Psychiatric disorders were observed in a third of all patients. Consultations for cannabis misuse concerned less than 5% of all demands, leading to less than 10% of total or partial restricted aptitude. The CAST appears to be an efficient screening tool both by its discrimination qualities and its feasibility. Its use by military doctors seems adequate while facilitating the approach to cannabis consuming people.

PO2.129.
OBJECTIVE AND PERCEIVED IMPROVEMENT IN QUALITY OF LIFE DURING TREATMENT FOR SUBSTANCE ABUSE/ALCOHOL DEPENDENCE

R. Swift, A. Elshafei
New York Medical College, Metropolitan Hospital Center, New York, NY, USA

In our inpatient detoxification unit, we asked patients to complete the Cumming's Fifth Edition of the Comprehensive Quality of Life Scale, to study how much sobriety and rehabilitation could affect their quality of life. To date we have information from 110 patients. Thirty seven percent of these patients had psychiatric comorbidities, 55% were positive for hepatitis C and 4% were HIV positive. After aggressive treatment of psychiatric and medical comorbidities, there were significant changes on both the subjective and the objective section of the Quality of Life Scale. After a 12-18 month rehabilitation, on the sub-

jective scale, there was significant increase on all seven domains, and on the objective scale, the results were most significant on Safety where the score changed from 13% to 65%. The Quality of Life Scale indicates that after 12 to 18 months in a rehabilitation following treatment on a medically managed detoxification unit, patients subjectively perceive the quality of their life as improved in addition to the objective evidence of improvement.

PO2.130. PSYCHIATRIC DIAGNOSIS, INNER RESOURCES AND THEIR RELATIONS TO PATIENTS' OUTCOME IN METHADONE MAINTENANCE TREATMENT

Y. Abramsohn, D. Potik, E. Peles, S. Schreiber, M. Adelson
Adelson Clinic for Drug Abuse, Treatment and Research; Department of Psychiatry, Tel-Aviv Sourasky Medical Center; Tel Aviv University Sackler Faculty of Medicine, Tel Aviv, Israel

A large number of drug addicts have comorbid mental disorders that may be secondary or primary in the etiology of their addiction and frequently accompanied by a personality disorder. However, the personal inner resources (related to the salutogenic theory of Antonovsky, which defines the role of personality characteristics in coping with stress) may differ for each one of them. The sense of coherence (SOC) is a specific development of the salutogenic theory. Yet, the interaction between psychiatric diagnosis and personal inner resources, and their contribution to patient success in methadone maintenance treatment (MMT) is still unclear. This study aimed to compare the inner resources between groups of patients with a DSM-IV-TR Axis I, no axis I, and no Axis I or II psychiatric diagnosis, the stability of the inner resources after 1 year within the three subgroups, and its relation to outcome, among former heroin addicts currently in MMT program. Seventeen patients (18.9%) had an Axis I diagnosis, 69 patients (76.7%) had only an Axis II diagnosis, and 4 patients (4.4%) had no DSM-IV-TR Axis I or II diagnosis. The three SOC score components (manageability, comprehensible and meaningfulness) as well as total scores differed significantly at baseline between the groups: Axis I patients had the lowest SOC scores ($p=0.003$). SOC remained stable after 1 year in each diagnosis group. Only 6.3% of Axis I, vs. 55.2% of no Axis I and 66.7% of no Axis I or II patients, discontinued any drug usage during the follow-up period ($p=0.002$). Thus, being affected by any DSM-IV-TR axis I diagnosis was found to be a severe impedance to polydrug abuse discontinuation among former heroin addicts, currently MMT patients, one year after admission. The low SOC scores of these patients may reflect the difficulties and burden of mental conditions manifested within the context of polydrug abuse treatment and rehabilitation.

PO2.131. HEALTH PROVIDERS' DESCRIPTION OF THE THERAPEUTIC RELATIONSHIP IN TWO SUBSTANCE ABUSE TREATMENT FACILITIES WITH DIFFERENT EMPHASIS ON PSYCHIATRIC COMORBIDITY

E. Hoxmark, R. Wynn
Department of Specialized Psychiatric Services, University Hospital of Northern Norway, Tromsø; Department of Clinical Psychiatry, Institute of Clinical Medicine, University of Tromsø, Norway

Comorbidity of substance abuse and psychiatric disorders (dual diagnosis) is frequent and especially challenging to treat. This study examines how health providers at two different substance abuse treatment facilities approach patients with dual diagnoses. Health providers at a therapeutic community and a psychiatric hospital ward for patients with dual diagnosis were interviewed in focus group settings. Participants were given a short case history. They were asked to describe how they understood the patient's problems and how they would approach him. The analysis was based on a phenomenological method, following Giorgi. The analysis suggested that the providers in both institutions valued the building of a good relationship between the health providers and the patients, and that they perceived this relationship to be central to the treatment. They differed to a certain extent in how they described their methods in relationship building. There were also differences in how they valued the importance of the relationship between the patient and his or her key health provider. Furthermore, there were differences in how they valued the contact between patients, and how much importance they ascribed to the structure of the program itself. A greater emphasis on psychiatric comorbidity is connected with a description of closer relationships between staff and patients.

PO2.132. SCREENING AND BRIEF INTERVENTION IN HOSPITAL EMERGENCY DEPARTMENTS FOR PATIENTS WITH DRUG AND ALCOHOL ABUSE PROBLEMS: RESULTS OF A DEMONSTRATION IN WASHINGTON STATE

T. Wickizer, S. Estee, L. He, M. Shaw-Ford
Department of Health Services, School of Public Health, University of Washington, Seattle, WA; Washington State Department of Social and Health Services, Research and Data Analysis Division, Olympia, WA, USA

Drug and alcohol abuse are common in the US, accounting for significant mortality, morbidity and health care utilization. Screening and brief intervention (SBI) offers an approach to identify at risk substance users, to deliver brief therapy and then refer to substance abuse (SA) treatment if necessary. Research on SBI in Europe and the US has shown promising results. We evaluated the effect of a SBI demonstration established in 9 hospital emergency departments (ED) in Washington State, and analyzed two outcomes during a one-year follow-up period after SBI: reduction in health care costs and admission to treatment. Our intervention group consisted of 1,564 ED patients age 18 to 64, covered by Medicaid, who received a SBI from April 2004 to September 2006. The comparison group included 10,604 persons treated in a hospital ED in the same period but who did not receive a SBI. We used multiple linear regression to evaluate changes in health care costs over time, and used logistic regression to assess admission to SA treatment. Our analysis controlled for age, sex, health risk score, prior SA treatment, and other factors. The SBI program we evaluated was associated with a significant reduction in health care costs ($p=0.03$) per member per month, and a significant increase in the odds (OR=2.1; $p<0.01$) of admission to SA treatment. Thus, SBI appears to offer a promising approach to address SA problems for patients receiving medical care through hospital EDs.

PO2.133.
SPIRITUAL AWAKENING PREDICTS IMPROVED DRINKING OUTCOMES IN A POLISH TREATMENT SAMPLE

S. Strobbe, M. Wojnar, J.A. Cranford, A. Wnorowska, A. Jakubczyk, E.A.R. Robinson, K.J. Brower
Department of Psychiatry, University of Michigan, Ann Arbor, MI, USA; Department of Psychiatry, Medical University of Warsaw, Poland

Alcoholics Anonymous (AA) is a worldwide mutual help group, but relatively little research has been done outside of the United States in relation to this program of recovery. We examined the roles of meeting attendance and affiliation on drinking outcomes in a treatment sample in Warsaw, Poland. Data were collected at baseline (T1; n=154), one month (T2), and approximately one year (T3). The outcomes sample (n=118/154; 77%) was composed primarily of males (75%), with a mean age of 44.2±9.4 years, who had completed 12.6±3.4 years of education, were unmarried (56%), and unemployed (62%). In the 90 days prior to treatment, these participants averaged 23.5±26.9 drinking days and 18.3±11.6 drinks per drinking day, with Michigan Alcoholism Screening Test (MAST) scores of 35.6±9.0. AA meeting attendance alone did not predict improved drinking outcomes. In contrast, self-report of a spiritual awakening between T2 and T3 was significantly associated both with abstinence (OR 3.3; $p<0.05$), and an absence of any heavy drinking (OR 3.2; $p<0.05$). Factors associated with a spiritual awakening included any AA meeting attendance ($r=.22$; $p<0.05$), attending more than 5 AA meetings a week ($r=.23$; $p<0.05$), considering oneself to be a member of AA ($r=.28$; $p<0.01$), celebrating an AA sobriety birthday ($r=.20$; $p<0.05$), reading AA literature ($r=.43$, $p<0.001$), calling another AA member for help ($r=.29$; $p<0.05$), and the number of AA steps worked ($r=.21$; $p<0.05$) Finally, those who engaged in a greater number of AA-related activities were significantly more likely to report having had a spiritual awakening ($r=.436$; $p<0.001$).

PO2.134.
EFFICACY OF MOTIVATIONAL INTERVIEW IN ALCOHOL DEPENDENCE WITH PERSONALITY DISORDER COMORBIDITY

D. Vasile, O. Vasiliu, G. Grigorescu, D. Ojog
Department of Psychiatry, "Dr. Carol Davila" Emergency Military Central Hospital, Bucharest, Romania

Motivational interview is a client centered, directive method which increases the intrinsic motivation for behavioral change through exploring and resolution of ambivalence. Alcohol dependence is frequently diagnosed in patients with axis II disorders and the therapeutic approach often should include an augmenting motivation set of techniques. This study aimed to assess the efficacy of motivational interview in a group of alcohol dependence and personality disorder dual diagnosis patients. Twenty-two patients diagnosed with alcohol dependence (DSM-IV-TR) in our clinic were assessed in order to estimate their motivation for behavioral change. All the patients were also diagnosed with an axis II disorder. We compared motivational interview (n=12) administered in three weekly sessions to waiting list (n=10). At baseline and after 3 and 24 weeks, all patients were evaluated using the Alcohol Use Disorders Identification Test (AUDIT), the Global Assessment of Functioning (GAF) and the Clinical Global Impression (CGI). Patients receiving motivational interview presented a reduction in daily drinks of 45% after 3 weeks and maintained a 33% reduction at the follow-up evaluation. CGI decreased by 33%, while GAF increased by 27% at endpoint. The AUDIT score decreased by 15.6 points (week 6) and 10.2 points (week 24). The differences were significant ($p<0.01$) between groups for all variables at week 6. At week 24, the differences were significant ($p<0.05$) for daily drinks, AUDIT and GAF. These data suggest that motivational interview is an efficient technique for improving the prognosis of alcohol dependent patients with axis II comorbidity.

PO2.135.
A HARM REDUCTION PROGRAM SERVING CLIENTS WHO EXPERIENCE HOMELESSNESS AND ADDICTION TO ALCOHOL

D. Semogas, J. Evans
School of Nursing and Department of Geography, McMaster University, Hamilton, Ontario, Canada

Individuals who are homeless and live with alcoholism and serious health problems often become caught up in a cycle of repeated visits to emergency rooms, hospitals, detoxification centres, and jail. The Claremont House Special Care Unit (CHSCU) in Hamilton, Ontario is a homeless shelter delivering combined health and social service care for people experiencing homelessness and addiction to alcohol. The goal is to improve the quality of life of clients through the delivery of coordinated health care and managed alcohol treatment aimed not at abstinence but at harm reduction. There is little evidence demonstrating such programs to be cost effective in assisting people to regain a sense of self-control and stability following years of living without a home. We evaluated the effectiveness of this type of managed alcohol program by following a sample of 21 homeless individuals living on the streets and 37 clients of the CHSCU. Two years of outcome data have demonstrated that the frequency of emergency room use, hospitalizations, emergency medical service use, police encounters and time spent in jail among the CHSCU population was much less than the service use among those who were or remain on the street. These evaluation data have important implications for the delivery of psychiatric services to this extremely vulnerable population.

PO2.136.
ALCOHOLISM AND PSYCHIATRIC COMORBIDITY: IMPACT OF AN INTEGRATED APPROACH ON PATIENTS' GLOBAL FUNCTIONING

F. Olivani, C. Viganò, N. Ferrario, G. Valentini, G. Luce, G. Spagnolo, G. Ba
Department of Psychiatry, Department of Clinical Science Luigi Sacco, University of Milan, Italy

Many authors agree on the presence of an elevated comorbidity of psychiatric disorders (especially affective and personality disorders) in people with alcohol abuse. This comorbidity is associated with a worse outcome of treatment. In this paper we report our experience with integrated treatment for patients with alcohol dependence and psychiatric comorbidity. We compared the 2-year outcome of 20 alcoholics with psychiatric comorbidity treated in day hospital with that of 21 alcoholics without comorbidity undergoing outpatient treatment. Preliminary data analysis shows that 42% of the sample with comorbidity and 58% of that without comorbidity achieved and maintained alcohol abstinence during the two years of follow-up. The compliance and outcome was better in alcoholics with affective disorder than in those with personality disorders.

PO2.137.
SURVEY OF AN ALCOHOL SUPPORT GROUP WITHIN AN EDINBURGH PSYCHIATRIC TEACHING HOSPITAL

G. Stevenson
Department of Psychiatry, Stratheden Hospital, NHS Fife, Scotland, UK

Treatments for patients with alcohol misuse disorders follow a "biopsychosocial" model, and include acute intervention strategies, with longer-term objectives of harm-reduction or abstinence, relapse prevention, and rehabilitation. Various treatment settings exist including hospital-based and self-help groups. The Alcohol Problems Clinic (APC) support group, based daily in a psychiatric teaching hospital in Edinburgh, accommodates up to 25 clients per meeting with 2 staff facilitators per group. In this study, questionnaires were devised, piloted and refined for both clients and facilitators to record demographic details, perceived group usefulness, key themes and therapeutic factors. The questionnaires contained a number of graphic scales, in addition to both open and closed enquiries, and took approximately 10 minutes to complete. The survey was undertaken for a 14-day consecutive period, with the questionnaires distributed at the end of each group session. Data on 28 facilitators and 122 clients (average age: males 45 years; females 38 years) were collected. Facilitators bring a range of experience to the groups. The majority of clients attend between 1-4 times/week, and continue attending for at least 6 months. Many clients combine group attendance with supervised disulfiram. 42% of female and 22% of male clients co-attend alternative alcohol support agencies. A range of group themes and processes were identified. This hospital-based alcohol support group is seen to provide a valuable resource to many individuals with alcohol dependence problems. However, the added clinical benefits and cost-effectiveness of such hospital groups compared to non-statutory alcohol support organisations requires further investigation and analysis.

PO2.138.
OUTCOME IN PATIENTS WITH ACUTE OPIOID OR MULTIDRUG INTOXICATION

S. Vucetic-Arsis, S. Alcaz, I. Dimitrijevic, N. Petronijevic
Special Hospital for Addictions; Institutes of Psychiatry and Biochemistry, University of Belgrade, Serbia

This study aimed to evaluate the outcome in patients with an acute opiate or multidrug intoxication treated in the medical emergency department of the Special Hospital for Addictions in Belgrade between March 2003 and March 2008. Out of a total of 3758 patients, 611 were treated for acute intoxication in the department. Of these patients, 49.3% had a slight opioid intoxication, 20.4% had opiate overdose and 30.3% reported co-intoxication including more than two drugs (alcohol, central nervous system depressant drugs and cocaine). After adjustment for age, gender, history of addiction and cardiovascular disease, there was evidence that multidrug intoxications was associated with a higher risk of serious medical complications than acute opioid intoxication.

PO2.139.
IMPROVING TOBACCO CESSATION INTERVENTIONS AMONG LOW-INCOME AND MINORITY URBAN RESIDENTS IN THE US

P. Sheikhattari, F. Wagner
Center for Health Disparities Solutions and School of Community Health and Policy, Morgan State University, Baltimore, MD, USA

Low-income urban residents have high rates of tobacco smoking and are less likely to quit than the US general population. This study examines smoking behaviors of low-income urban residents and their perceptions about cessation services. Data were collected and triangulated through a cross-sectional survey and focus groups. Based on data from 1,442 participants of two adjacent low-income urban communities, key leaders were recruited into a partnership to enhance the effectiveness of tobacco cessation programs in their communities. Multivariate and qualitative analytical methodologies were used in collaboration with community partners. A multivariate logistic regression model compared current smokers with former and never smokers, including socio-demographic and risk perception variables. Based on the results, recommendations were generated to improve the quality of the smoking cessation programs. More than half (55%) of the total sample were current smokers, 33% never smoked, and 12% were former smokers. Compared to current smokers, married individuals had higher odds of being former smokers, as well as those with higher levels of education. Social support was perceived as an important factor with regards to increasing the odds of successful quit attempts among low-income and minority urban residents. Case specific, culturally appropriate, and collaborative services are key elements for a successful smoking cessation program targeting low-income urban residents.

PO2.140.
NEW DRUG ABUSE TREATMENT AND PREVENTION NEEDS IN JALISCO, MEXICO

O. Campollo, P. Sheikhattari, C. Alvarez, J. Toro, H. Sanchez, F.A. Wagner
Antiguo Hospital Civil, University of Guadalajara, Jalisco, Mexico; Morgan State University, Baltimore, MD, USA

We sought to improve on the few existing studies about treatment needs for drug abuse among youth in Mexico. This is the first survey representative of the state of Jalisco and sub-regions during the 21st century. A multi-stage random sample of high-school students of Jalisco was given a paper-and-pencil survey based upon an adapted version of the Drug Use Screening Inventory (DUSI) developed by Tarter et al (n=24,699; n=2,832). The DUSI showed adequate psychometric characteristics in this population. The statistical analyses accommodate the complex survey design, with attention to unequal selection probabilities and clustering of participants within schools. An estimated 44% of the students had smoked tobacco, one of five students was a current smoker, and one of four students used to smoke but had not smoked for a year or more. In contrast, 7.5% of the students reported having used marijuana, cocaine, or both. Behavioral problems, deviant peer affiliation, and troubled families were independently associated with drug use. The rates of cocaine use were higher than expected and indicate that changing patterns of drug use in Mexico may be creating new treatment needs and complexities.

PO2.141.
THE EFFICACY OF PSYCHIATRIC AND PSYCHOLOGICAL CONSULTATION ON A RESIDENTIAL TREATMENT UNIT FOR ADOLESCENTS WITH SUBSTANCE USE DISORDERS

A. Cavaiola
Department of Psychological Counseling, Monmouth University, West Long Branch, NJ, USA

This study examines the value and effectiveness of providing both psychiatric and psychological consultation in a short-term residential program for adolescents who manifest alcohol and other drug dependencies. A sample of 500 admissions (328 males, 172 females) were routinely administered, within 10 days of admission, a battery of psychological measures which included the SCL-90-R, the Tennessee Self Concept Scale (TSCS) and the Adolescent Life Events Inventory. These measures revealed that 33% of the sample had histories of physical or sexual abuse and that 20% had histories of suicidal gestures or attempts. These measures also revealed higher levels of psychological distress and lower self esteem among physical and sexual abuse victims and those who reported suicidal gestures and attempts. After identification through psychological screening, these adolescents were then referred for psychiatric consultation for purposes of treatment planning and pharmacological management. Adolescents referred for psychiatric consultation had significantly higher rates of treatment completion.

PO2.142.
THE STATUS OF THE USE OF DRUG SERVICES AMONG SUBSTANCE USERS IN TEHRAN: A QUALITATIVE STUDY

M. Vazirian, A. Farhoudian
Iranian National Center for Addiction Studies, University of Tehran Medical Sciences; Iranian Research Center for Substance Abuse and Dependence, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

The Asian Harm Reduction Network embarked upon a multi-site research conducted in four countries in Asia, including Iran, to gain insight in drug careers of young people and the impact of the environment. We report on the status of the use of drug services in 2006. Data were gathered through interviews with key informants; focus group discussions with family members, persons using drugs (PUDs), service providers, policy makers, law enforcement officers; and a quantitative survey with 281 PUDs. About 43% of the respondents had been in treatment, commonly detoxification followed by residential rehabilitation. The percentage of treated respondents is likely to be partly attributable to the recruitment mechanisms. The vast majority (90%) of PUDs with treatment experience had undergone more than one treatment. Knowledge levels of available services were very low. Overall, the use of drug-related services appears low, although the large majority of respondents reported severe drug-related problems. A large number of PUDs appear to go through life without ever accessing any drug-related services.

PO2.143.
SELF-TREATMENT AMONG DRUG USERS IN TEHRAN: A QUALITATIVE STUDY

M. Vazirian, A. Farhoudian
Iranian National Center for Addiction Studies, University of Tehran Medical Sciences; Iranian Research Center for Substance Abuse and Dependence, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

The Asian Harm Reduction Network embarked upon a multi-site research conducted in four countries in Asia, including Iran, to gain insight in drug careers of young people and the impact of the environment. We report on data concerning self-treatment among drug users in 2006 in Tehran. Data were gathered through interviews with key informants; focus group discussions with family members, persons using drugs (PUDs), service providers, policy makers, law enforcement officers; and a quantitative survey with 281 PUDs. Most PUDs went through periods during which they tried to reduce their intake or abstain. PUDs identified their parents, non-PUDs friends and partners as the people who should be involved in such efforts. Occupy oneself, avoid drug using friends, avoid going to certain places, pursue hobbies, move and spiritual focus were also mentioned as possible strategies. Maintain contact with PUD to gauge and exploit periods of readiness and willingness to reduce intake or abstain, developing mechanisms to recognize increased motivation to reduce one's intake, mobilizing and involving parents and other family members in primary and secondary prevention, seem to be crucial for success.

PO2.144.
ASSOCIATION BETWEEN ALCOHOL-RELATED GENE POLYMORPHISMS AND ALCOHOLIC LIVER CIRRHOSIS IN A KOREAN POPULATION

C.T. Lee, H.K. Lee, K.U. Lee, Y.S. Kweon
Department of Psychiatry, Uijeongbu St. Mary's Hospital, Catholic University of Korea, Gyeonggido, Republic of Korea

We investigated the possible association of allelic variants of glutathione S-transferase M1 (GSTM1), cytochrome p450 2E1 (CYP2E1), manganese superoxide dismutase (MnSOD), aldehyde dehydrogenase 2 (ALDH II) and alcohol dehydroegenase 2 (ADH II) genotypes with alcoholic liver cirrhosis (LC). Peripheral blood samples were collected and white cell genomic DNA was extracted from 146 alcohol-dependent patients and 150 healthy controls, which was then studied for the genotypes GSTM1, CYP2E1, MnSOD, ALDH II and ADH II and the occurrence of allelic variants, using allele-specific polymerase chain reaction amplification and restriction fragment length polymorphism (RFLP) analyses. Demographic and clinical characteristics did not significantly differ between LC and non-LC patients regarding age, sex, tobacco use and age of onset of withdrawal symptoms. The distribution of the GSTM1, CYP2E1, MnSOD, ALDH II or ADH II genotypes did not differ between LC and non-LC patients, but ALDH II and ADH II genotypes were associated with alcohol dependence in the whole sample ($p<0.01$). These findings indicate that alcohol-related genetic polymorphisms are not associated with the development of alcoholic LC in a Korean population.

PO2.145.
PATHOLOGICAL GAMBLING IN PATIENTS WITH COCAINE ADDICTION: COULD IT BE RELATED TO ALTERATIONS IN EXECUTIVE FUNCTIONS?

A. Madoz-Gúrpide, E. Ochoa, JJ. Vázquez
CSM San Blas; Hospital Ramón y Cajal; Hospital Rodriguez Labora, Madrid, Spain

Pathological gambling is common in cocaine consumers. One possible explanation of this association is a neuropsychological damage resulting from chronic consumption of cocaine. We assessed executive functions in chronic consumers of cocaine with a diagnosis of pathological gambling (n=4) or without pathological gambling (n=19), using the Card's test, the Zoo's test and the Wisconsin Card test, adjusting the results for race, age, schooling and sex. We did not find any significant difference between the two groups concerning the performance on these tests. These findings do not support the idea that pathological gambling is related to an impairment of cognitive performance in chronic cocaine consumers. Further studies are needed using modern tests which evaluate decision making.

PO2.146.
IMPAIRED FACIAL EMOTION RECOGNITION AND THEORY OF MIND IN METHAMPHETAMINE ABUSERS

Yang-Tae Kim, Do-Hoon Kwon, Woong Joe
Department of Psychiatry, Bugok National Hospital, Bugok-ri, Gyeongsang, Korea

Chronic use of methamphetamine causes behavioral disturbances, including depression, aggressive behavior, and social isolation. These alterations of social behavior may be attributable to impairments in social cognition. However, only few studies had been done to evaluate social cognition in MA abusers. The aim of the present study was to investigate whether MA abusers exhibit social cognition deficits in terms of facial emotion recognition and theory of mind (ToM). We also assessed executive function by the Wisconsin Card Sorting Test (WCST) to evaluate the impact of this function on social cognition. Thirty-seven MA abusers and twenty-six healthy subjects were enrolled in this study. All participants performed the Facial Emotion Recognition Task and advanced ToM tasks such the Eye Test and Hinting Tasks. The Korean Wechsler Adult Intelligence Scale-Revised and computerized versions of the WCST were also administrated. The performances of MA abusers on the Facial Emotion Recognition Task, Eyes Test and Hinting Task were poorer than those of healthy subjects. In the WCST, MA abusers completed significantly fewer categories and made more total and perseverative errors than healthy subjects. In addition, executive dysfunctions were correlated with impairments in facial emotion recognition and ToM within MA abusers. These findings lend further support to the idea that the capacity to identify emotions from facial expression and infer mental state of others is impaired in MA abusers. Furthermore, social cognition deficits of MA abusers may be partly explainable by executive dysfunctions.

PO2.147.
PAIN ASSESSMENT IN PATIENTS ON OPIOID MAINTENANCE THERAPY

N. Authier, C. Dalla Zanna, D. Richard, M. Sautereau, A.M. Tronche, A. Boyé, A.M. Harrand, C. Dubray, A. Eschalier, P.M. Llorca, P. Courty
Departments of Psychiatry and Addictology, Clinical Pharmacology, and Pharmacology and Toxicology, CHU, Clermont-Ferrand, France

Chronic administration of opioids has been associated with hyperalgesia, partially explaining the high rate of chronic pain problems in opioid maintenance therapy. We explored whether opioid maintained patients display a significant decrease of pain thresholds compared to matched control subjects. A clinical study with a three arms design was used. Subjects were matched for age and gender. Pain thresholds to a mechanical (electronic von Frey hair) and an electrical (pain matcher) stimulus were compared between patients with a diagnosis of opioid dependence according to DSM-IV-TR criteria (30 methadone and 30 buprenorphine maintained patients) and 30 control subjects. Psychopathological scales (ASI, HAD, SF36) were used to evaluate the three groups. We observed a significant decrease ($p<0.01$) in mechanical and electrical pain thresholds in methadone maintained patients compared to control subjects, whatever the time of assessment. A significant difference ($p<0.05$) was observed between buprenorphine or control subjects and the methadone group. There was no difference between buprenorphine treated group and controls. These findings suggest a significant decrease of pain thresholds in methadone maintained patients.

PO2.148.
TRAMADOL VS. METHADONE FOR MANAGEMENT OF ACUTE OPIOID WITHDRAWAL: AN ADD-ON STUDY

M. Salehi, M. Amanatkar, M. Barekatain
University of Medical Sciences, Isfahan, Iran

Opioid agonists such as methadone have been used widely in controlling opioid withdrawal symptoms. Tramadol, a partial opioid agonist, also has been prescribed to manage acute and chronic pain. We sought to compare the efficacy of tramadol and methadone in reducing the severity of opioid withdrawal symptoms. In a double blind clinical trial, 70 opioid dependent patients who used daily opium equal to 15 mg methadone were randomly assigned in two groups. In one group, methadone was started at 15 mg/day, while in the other group 450 mg/day tramadol was prescribed. Both drugs were tapered in a week and placebo was prescribed in the second week. The severity of withdrawal symptoms was assessed five times by Short Opioid Withdrawal Scale (SOWS). Data were analyzed by repeated measures analysis of variance, Mann-Whitney U, and Wilcoxon tests. There were statistically significant differences between the two groups in the severity of anxiety ($p=0.015$), irritability ($p=0.044$), palpitation ($p=0.018$), agitation ($p=0.037$), and dysphoria ($p=0.044$), all more common in methadone group. Comparison of side effects revealed statistically significant differences in sweating ($p=0.003$) and drowsiness ($p=0.019$) between the two groups (more frequent in methadone group). So, tramadol was more efficacious in controlling opioid withdrawal symptoms with lower side effects.

PO2.149.
PHARMACOKINETICS OF (S)-ZOPICLONE AND (S)-DESMETHYLZOPICLONE FOLLOWING DOSING WITH ZOPICLONE AND ESZOPICLONE

N. Brunello, P. Bettica, G. Maier, D. Nutt
Department of Biomedical Sciences, University of Modena and Reggio Emilia, Modena, Italy; GlaxoSmithKline, Verona, Italy; Sepracor Inc., Marlborough, MA, USA; Psychopharmacology Unit, University of Bristol, UK

The pharmacokinetic profile of a hypnotic drug is an important determinant of its clinical profile. This study compared the pharmacokinetics of two hypnotic non-benzodiazepine $GABA_A$ receptor modulators: single (S)-enantiomer, eszopiclone, and racemic (RS)-zopiclone. This was an open-label, randomized, crossover study. Eighteen healthy subjects (mean age: 30.4±7.8 years) were randomized to receive a liquid formulation of eszopiclone 3.5 mg as a single dose, a tablet formulation of eszopiclone 3.5 mg daily for 4 days, and a tablet formulation of zopiclone 7.5 mg daily for 4 days in one of six treatment sequences, separated by a 7-10 day washout period. Peak plasma concentration (C_{max}), time to C_{max} (T_{max}), half-life ($t_{1/2}$), and exposure ($AUC_{0-\infty}$) of (S)-zopiclone and its active metabolite, (S)-desmethylzopiclone, were assessed. All parameters were log-transformed except T_{max}, which was rank-transformed, and are presented as geometric least squares means. Data were normalized to a dose of eszopiclone 3.75 mg and compared using analysis of covariance. (S)-desmethylzopiclone pharmacokinetics differed following dosing with eszopiclone vs. zopiclone, with a shorter $t_{1/2}$ (8.7 vs. 12.3 hours, $p<0.05$) and lower $AUC_{(0-\tau)}$ (48.9 vs. 59.3 hr*ng/mL, $p<0.05$); C_{max} (3.9 vs. 4.0 ng/mL) and T_{max} (4.0 vs. 4.0 hours) were similar. (S)-zopiclone pharmacokinetics did not differ significantly following eszopiclone and zopiclone dosing. Thus, dosing with eszopiclone was associated with a shorter half-life and lower exposure to (S)-desmethylzopiclone than dosing with zopiclone. This difference in active metabolite pharmacokinetics may explain observed differences between eszopiclone and zopiclone in next-day functioning.

PO2.150.
LONG-TERM ESZOPICLONE TREATMENT IN PATIENTS WITH PRIMARY INSOMNIA: A TIME BY TREATMENT INTERACTION ANALYSIS

J. Puertas, K. Schaefer, H. Huang, J. Cooper
Hospital Universitario La Ribera, Alzira, Spain; Sepracor Inc., Medical Affairs, Marlborough, MA, USA; Sepracor Inc., Biostatistics, Marlborough, MA, USA; GlaxoSmithKline, Greenford, Middlesex, UK

Current insomnia therapies are often restricted to short-term use due to potential tolerance and dependency issues. Eszopiclone, a single-isomer, non-benzodiazepine $GABA_A$ receptor modulator, shows long-term efficacy in patients with primary insomnia. Data from two 6-month, double-blind, randomized studies were pooled to examine the potential for tolerance to eszopiclone treatment. Adults with primary insomnia received eszopiclone 3 mg (n=1141) or placebo (n=475) nightly and completed subjective assessments weekly via an interactive voice response system. Sleep latency (SL), wake time after sleep onset (WASO), total sleep time (TST), and next-day functioning measures were assessed monthly. Time by treatment interaction was assessed for these outcome variables. For each variable, a repeated measures analysis was performed using SAS PROC MIXED with treatment, month, month by treatment interaction, and baseline as fixed effects, and subject as a random effect. The dependent variables were the changes from baseline to each month. SL and WASO were log-transformed prior to analysis. Time by treatment analysis showed a lack of significant interactions for each of the outcomes assessed (SL, p=0.6975; WASO, p=0.7028; TST, p=0.0789; sleep quality, p=0.3348; daytime alertness, p=0.5140; ability to function, p=0.9441; physical well-being, p=0.3522). The observed lack of time by treatment interaction for individual measures of sleep and next day functioning suggests that the effect of eszopiclone treatment was not dependent on the duration of therapy. These analyses are consistent with an interpretation that tolerance to eszopiclone does not develop during 6 months of treatment.

PO2.151.
A COMPARISON OF SLEEP OUTCOMES IN PATIENTS WITH PRIMARY AND COMORBID INSOMNIA TREATED WITH ESZOPICLONE

A. Krystal, J. Cooper, H. Huang, K. Schaefer, C. Espie
Duke Medical Center, Durham, NC, USA; GlaxoSmithKline, Greenford, Middlesex, UK; Sepracor Inc., Marlborough, MA, USA;University of Glasgow Sleep Centre, Sackler Institute of Psychobiological Research, Southern General Hospital, Glasgow, Scotland

Insomnia may be primary or associated with comorbid conditions, such as major depressive disorder (MDD) and generalized anxiety disorder (GAD). Eszopiclone, a single-isomer, non-benzodiazepine $GABA_A$ receptor modulator under evaluation by the EMEA for the treatment of insomnia, has been assessed in insomnia patients with or without comorbid disorders. Five double-blind, randomized studies enrolled adults with either primary insomnia, or insomnia associated with MDD, GAD, perimenopausal symptoms, or pain of rheumatoid arthritis (RA). Patients received placebo or eszopiclone 3 mg nightly for 1 to 6 months. MDD patients also received fluoxetine 20-40 mg/day; GAD patients also received escitalopram 10 mg/day. All patients completed subjective assessments weekly via an interactive voice response system. Sleep outcomes included sleep latency (SL), wake time after sleep onset (WASO), and total sleep time (TST). Treatments were compared using analysis of covariance, with change from baseline as the outcome and baseline as the covariate. Over 2500 patients were enrolled altogether. In each study, eszopiclone was associated with significant benefits vs. placebo in SL, WASO, and TST at month 1. For example, mean changes from baseline SL (minutes) were: primary, placebo -19.9, eszopiclone -37.3; MDD, placebo -75.0, eszopiclone -119.5; GAD, placebo -30.0, eszopiclone -43.2; perimenopausal, placebo -35.8, eszopiclone -53.2, RA, placebo -22.0, eszopiclone -59.6; all $p<0.01$ vs. placebo. In conclusion, treatment with eszopiclone (3 mg/day) results in a consistent picture of significant sleep benefits across a range of patient populations with primary or comorbid insomnia.

PO2.152.
DIFFERENTIAL PHARMACOLOGICAL PROFILES OF THE $GABA_A$ RECEPTOR MODULATORS ZOLPIDEM, ZOPICLONE, ESZOPICLONE, AND (S)-DESMETHYLZOPICLONE

N. Brunello, J. Cooper, P. Bettica, G. Maier, D. Nutt
Department of Biomedical Sciences, University of Modena and Reggio Emilia, Modena, Italy; GlaxoSmithKline, Greenford, UK; GlaxoSmithKline, Verona, Italy; Sepracor Inc., Marlborough, MA, USA; Psychopharmacology Unit, University of Bristol, UK

The clinical effects of non-benzodiazepine $GABA_A$ receptor modulators may be partially explained by their selectivity for specific $GABA_A$

receptor subtypes. To understand better the pharmacology of these drugs, the binding affinity, potency, and effectiveness of zolpidem, racemic zopiclone, single-enantiomer eszopiclone, and the active metabolite of eszopiclone, (S)-desmethylzopiclone, were assessed at $\alpha1\beta2\gamma2$, $\alpha2\beta2\gamma2$, $\alpha3\beta2\gamma2$, and $\alpha5\beta2\gamma2$ $GABA_A$ receptor subtypes. Human embryonic kidney cells were transfected with recombinant receptor subunit cDNAs and used 48 hours later in radioligand binding assays to calculate receptor affinities (K_i, nM). *Xenopus* oocytes were injected with recombinant receptor subunit cDNA, and two-electrode voltage-clamp electrophysiology (oocytes clamped at -60 mV) was performed 48 hours later to measure potency (EC_{50}, nM) and effectiveness. Basal GABA-evoked response was determined, and effectiveness (maximum potentiation of GABA-evoked current) was measured in the presence of increasing modulator concentrations. Zolpidem was ranked highest for $\alpha1$ affinity and potency, but effectiveness at this receptor subtype was similar for zolpidem (149%), zopiclone (129%), and eszopiclone (115%). Eszopiclone was ranked highest for $\alpha2$ and $\alpha3$ affinity and potency, and also for effectiveness ($\alpha2$ 230%, $\alpha3$ 235%). (S)-desmethylzopiclone was ranked lowest in $\alpha3$ binding affinity and potency, but second in effectiveness (131%). In contrast, eszopiclone was ranked highest in $\alpha5$ affinity and potency, but third in effectiveness (55%). In conclusion, zolpidem, zopiclone, eszopiclone, and (S)-desmethylzopiclone have different effectiveness profiles at $GABA_A$ receptor subtypes, which do not necessarily correlate with their binding profiles. These differences in functional activity are likely to translate into differential clinical effects.

PO2.153.
TREATMENT OF SLEEP DISORDER IN TRAUMATIC BRAIN INJURY

A. Alao, S. Sachdeva, C. Chung
Polytrauma System of Care, Veterans Affairs Hospital, Syracuse, NY; Department of Psychiatry, SUNY Upstate Medical University, New York, NY, USA

Traumatic brain injury (TBI) affects nearly 1.5 million individuals in the United States each year. During peacetime, over 7,000 Americans with a diagnosis of TBI are admitted to military and veterans hospitals every year; this number increases significantly during combat, during which TBI may comprise up to 20% of survivor casualties. Pain and discomfort relating to injuries are frequent causes of insomnia in TBI patients. Insomnia can manifest as difficulty falling or staying asleep, early morning wakening and non-restorative sleep, and affects up to 30% of individuals with TBI. Because there are few studies on pharmacotherapy for sleep disturbances in TBI, many physicians base their intervention on experience with the general population. A literature review was performed and recommendations for treatment of sleep disturbances in patients with TBI are summarized here based on published findings. Non-pharmacological means should be the first-line treatment for sleep disturbances in patients with TBI. These include sleep hygiene and cognitive behavioral therapy. Physicians and other clinicians should pay attention to the specific sleep complaint, the adverse effect profile of the medication as well as the anticipated duration of treatment before deciding upon a sleep agent for patients with TBI.

PO2.154.
RELATIONSHIPS OF PSYCHOLOGICAL DISTRESS AND SLEEP STATUS WITH HPA AXIS FUNCTION IN A NON-CLINICAL POPULATION

H. Hori, Y. Ozeki, T. Higuchi, H. Kunugi
National Center of Neurology and Psychiatry, Tokyo, Japan

Various kinds of stress-related conditions and sleep disturbance are associated with alteration in the hypothalamic-pituitary-adrenal (HPA) axis function. Enhanced and blunted cortisol reactivity can both represent HPA axis dysfunction, but they are known to be linked to different types of psychopathology. The dexamethasone/corticotropin releasing hormone (Dex/CRH) test, a pharmacological challenge test which sensitively assesses HPA axis function, has been extensively used to identify HPA axis function in individuals with mood disorders and those with other stress-related psychiatric conditions; however, the associations of non-clinical psychological distress and sleep status with HPA axis function have not been well documented using the Dex/CRH test. Here we examined the relationships of cortisol response to the Dex/CRH test with subjectively perceived psychological distress (as assessed with the Hopkins Symptom Checklist) and quality of sleep (as assessed with the Pittsburgh Sleep Quality Index) in 94 volunteers without current DSM-IV Axis I disorders. Subjects were divided into three groups by cortisol reactivity, namely the normal, enhanced, and blunted reactivity groups. Compared to the other two groups, the blunted group reported greater psychological distress and poorer sleep quality in their everyday life, with statistical significance and trend-level significance, respectively. These results suggest that dampened HPA axis reactivity is associated with increased level of psychological distress and to some extent with poor sleep quality.

PO2.155.
VALIDATION OF THE FRENCH VERSION OF THE PITTSBURGH SLEEP QUALITY INDEX – ADDENDUM (PSQI-A) FOR THE EVALUATION OF POST-TRAUMATIC SLEEP DISORDERS

L. Jehel, M.A. Aoudia, D. Morali
Psychiatry Unit, University Tenon Hospital, Paris, France

Additional items of the Pittsburgh Sleep Quality Index (PSQI) have been proposed and validated by A. Germain for the evaluation of post-traumatic sleep disorders and night behaviours (PSQI-A). The validation study of the French version of the PSQI-A was run in the Tenon University Hospital in Paris. 73 patients with sleep disorders were divided into two samples, one with post-traumatic stress disorder (PTSD) and another without this disorder. Concerning structural validity, a significant correlation was found between the items and the total score of the PSQI-A ($r=.50$ to $.69$, $p<0.001$). As for internal consistency, the Cronbach alpha was .72. Concerning convergent validity with the Impact Event Scale-Revised (IES-R), the correlation was high ($r=.53$, $p<0.001$); the same was found with anxiety measured by the Hospital Anxiety and Depression subscale (HAD-A; $r=.47$, $p<0.001$). A good divergent validity was found with depression measured by the Hospital Anxiety and Depression subscale (HAD-D; $r=.28$, $p=0.815$). In conclusion, the French version of the PSQI-A shows a satisfactory psychometric validity and might be recommended for clinical and research applications.

PO2.156.
PSYCHOPATHOLOGY AND QUALITY OF LIFE IN OBSTRUCTIVE SLEEP APNEA SYNDROME

N.T. Economou, T.J. Paparrigopoulos, H. Giannakopoulou, F. Christidi, E. Perraki, A. Bonakis, I. Zalonis, I. Koutsourelakis, E. Vagiakis, C.R. Soldatos
First Department of Psychiatry and Neurologic Clinic, Eginition Hospital, University of Athens; Department of Critical Care and Pulmonary Services, Evangelismos Hospital, Athens, Greece

Purportedly untreated obstructive sleep apnea syndrome (OSAS) strongly correlates with depression and anxiety and influences most domains of health-related quality of life (QoL). This study aimed to investigate the relationship between the severity of OSAS and mood psychopathology and QoL. Thirty-three male patients (mean age 46.3±7.8 years) were diagnosed with OSAS on a clinical and polysomnography basis. Depression and anxiety were assessed using the Hospital Anxiety & Depression Scale (HADS); QoL was evaluated by the Short-Form Health Survey (SF-36). Mean values (±SD) were as follows: body mass index (BMI), 30.8±5.8; hemoglobin desaturation, 7.9±3.1; HADS anxiety subscale, 5.67±4.8; and HADS depression subscale, 4.2±3.8. A positive correlation was found between hemoglobin desaturation and depression ($p<0.001$). A negative correlation was found between BMI and physical functioning ($p<0.001$) and general health perceptions ($p=0.02$). In OSAS patients, depression and physical activity impairment are related to BMI but not to the other measures of OSAS severity. Symptoms of depression, however, are positively correlated with hemoglobin desaturation.

PO2.157.
COGNITIVE PROFILE IN PATIENTS WITH OBSTRUCTIVE SLEEP APNEA SYNDROME: A PRELIMINARY REPORT

F. Christidi, I. Zalonis, N.T. Economou, T.J. Paparrigopoulos, H. Giannakopoulou, E. Perraki, A. Bonakis, E. Vagiakis, I. Koutsourelakis, C.R. Soldatos
Neurological Clinic and First Department of Psychiatry, Eginition Hospital, University of Athens; Centre of Sleep Disorders, Department of Critical Care and Pulmonary Services, Evangelismos Hospital, Athens, Greece

Cognitive dysfunction is commonly reported in obstructive sleep apnea syndrome (OSAS). This study aimed to define the cognitive profile in OSAS patients by examining multiple cognitive domains. Twenty-nine male OSAS patients (mean age 45.9±7.6 years; mean education 12.8±2.7 years), diagnosed on clinical and polysomnography basis, and 27 well-matched normal controls (NCs) underwent a detailed neuropsychological assessment. Patients also completed the Epworth Sleepiness Scale (ESS) and the Hospital Anxiety (HAD-A) and Depression (HAD-D) Scale. OSAS patients performed worse than NCs on most neuropsychological tests, except for specific measures of attention (Trail Making Test-A) and memory (WAIS Digit Span; Babcock Story Immediate Recall Test). Differences reached significance at $p<0.01$ for measures of memory (Buschke Selective Reminding Test; Cued Recall), visuospatial-perceptual dexterities (Rey's Complex Figure Test) and executive functions (Wisconsin Card Sorting Test). Regarding the correlations among cognitive performance, nocturnal respiratory findings, daytime somnolence and degree of mood disorders, only the correlation between the HAD-A score and Cued Recall ($p=0.014$) was statistically significant.

PO2.158.
CHARACTERISTICS OF CATAPLEXY AND CATAPLEXY-LIKE SYMPTOMS IN PATIENTS WITH EXCESSIVE DAYTIME SLEEPINESS

S.P. Lee, J.H. Jeong, S.C. Hong, J.H. Han
Department of Psychiatry, St. Vincent's Hospital; The Catholic University of Korea, Suwon, Korea

The purpose of this study was to evaluate the characteristics of typical cataplexy in patients with narcolepsy and cataplexy-like symptoms in other sleep disorders by using the Stanford Center for Narcolepsy Sleep Inventory (SSI). From 2000 to 2006, 204 patients who visited the Sleep Clinic of St. Vincent's Hospital with excessive daytime sleepiness as their major symptoms were evaluated. Clinical interview, SSI, Multiple Sleep Latency Test (MSLT), HLA typing, hypocretin measurement were performed. In this study, 51 questionnaire items of the SSI were applied to differentiate triggering factors, types, duration and frequency of cataplexy in two groups. Typical cataplexy was triggered by pleasant emotions, like laughing, joking, and quick verbal response in a funny context. Cataplexy-like symptoms were triggered by physical fatigue, tension, stress, angry, excitement, and athletic activities which have negative emotions. The duration of typical cataplexy was shorter than that of cataplexy-like symptoms. The frequency of sudden muscle weakness was higher in the patients with typical cataplexy. Both HLA-DQB1*0602 allele and low CSF-hypocretin concentration (<110 pg/mL) were frequently observed in the typical cases. Our study is the first one defining the characteristics of cataplexy and cataplexy-like symptoms in excessive daytime sleepiness patients. Further study is needed to elucidate the pathophysiology of cataplexy.

PO2.159.
THERAPEUTIC CONSIDERATIONS FOR MALE CHILD SEXUAL ABUSE SURVIVORS

R. Alaggia
Factor-Inwentash Faculty of Social Work, University of Toronto, Canada

Child sexual abuse is often depicted as a phenomenon involving mostly female victims and male perpetrators. However, research consistently shows that sexual victimization of boys occurs at significant rates. Male survivors of sexual trauma are at risk of developing serious mental health problems, including depression, aggression, suicide, addictions, and sexual dysfunction. Therapeutic guidelines are offered based on a phenomenological study conducted by the author examining the lived experience of men sexually abused as children. Analyses of men's narratives about their abuse, and the meaning they make of that experience today offer valuable insights for therapists. While evidence based practice is slowly emerging for male survivors, these data point to the need for therapists to be mindful of the context of their client's lives. Themes of denial, rage, confusion about role in the abuse, feelings of "specialness", disturbances in sexuality and intimacy, feelings of loss, and hope and resilience surfaced. Findings suggest that therapists have a responsibility to ask male clients about sexual victimization, even when this is not the presenting problem but sexual abuse effects are present; an obligation to educate one's self on responding therapeutically to disclosure; a duty to receive training to counsel sexually victimized males; a responsibility to advocate for the development of men's services; and taking an active role in shifting attitudes towards men's vulnerabilities.

PO2.160.
TYPOLOGY OF BEHAVIOR PROFILES OF CHILDREN DISCLOSING SEXUAL ABUSE AND TRAJECTORIES OF RECOVERY AND DETERIORATION ONE YEAR LATER

M. Hébert, N. Parent
Université du Québec à Montréal/Universitè Laval, Montréal, Canada

While past research has helped us achieve a better understanding of the profiles of children disclosing sexual abuse (SA), the diversity of outcomes remains a challenge to the implementation of treatment guidelines. Jonzon and Lindblad argued in favor of a person-oriented statistical approach to identify different patterns of adaptation. As a complement to the more commonly used variable-centered framework, this approach offers the advantage of exploring extremes within general trends and across multiple spheres. A hierarchical cluster analysis was used to explore whether children disclosing SA could be divided into meaningful subgroups while considering behavior problems, post-traumatic stress and dissociation symptoms. The sample consisted of 290 French-speaking mother-child dyads (248 girls and 42 boys aged 7-12 years). Children completed self-report measures to assess post-traumatic stress symptoms, while mothers completed questionnaires to assess child's behavioral problems and symptoms of dissociation. Cluster analysis revealed four distinctive profiles, two of which identify children with significant behavioral problems: a) children with externalizing/social problems and b) severely distressed and highly dissociative children. Two clusters identify children functioning within norms: c) anxious-withdrawn children and d) resilient children. A one-year follow-up assessment was performed for 97 children. The typology is related to recovery and deterioration trajectories. Children with externalizing/social problems are the most likely to display clinical scores of dissociation one year later. These results suggest the need for a systematic and thorough assessment of children disclosing sexual abuse and of implementing differential treatment on the basis of the emerged typology.

PO2.161.
LIGHT THERAPY AS A TREATMENT FOR SEXUAL DYSFUNCTIONS

M. Valdagno, M. Roggi, L. Bossini, A. Fagiolini, V. Tallis, S. Trovarelli, R. Ponchietti, P. Castrogiovanni
Department of Neuroscience, Psychiatry Division, University of Siena, Italy; Department of Psychiatry, University of Pittsburgh School of Medicine, Western Psychiatric Institute and Clinic, Pittsburgh, PA, USA; Department of Urology, University of Siena, Italy

Seasonal trends have been demonstrated in reproduction and in sexual activities. The pineal seems to exert its hormonal effect at different levels of the reproductive axis, both at the hypothalamic-pituitary level and at the gonadal level. Based on these observations, we hypothesized that a treatment with bright light could favorably influence sexual function. Nine subjects (aged 39-60 years) were recruited in the outpatient clinic of the Urology Department of the University of Siena on the basis of a diagnosis of primary (i.e., not due to another illness or to a medication or a drug of abuse) sexual dysfunction and the absence of a mood disorder, as assessed via the Mini International Neuropsychiatric Interview. Subjects were randomly assigned to active light treatment (ALT) or placebo light treatment (L-PBO) and assessed at baseline (prior to starting ALT or L-PBO) and after 2 weeks of ALT/L-PBO treatment via the Structured Clinical Interview for DSM-IV-Sexual Disorders (SCID-S) and via a sexual satisfaction self-report, which asked to rate on a scale from 1 to 10 the level of sexual satisfaction. After 2 weeks of treatment, 3 of the 5 patients randomized to ALT no longer met the SCID-S criteria for a SD whereas the SD was still present in all the 4 patients in L-PBO group. A significant (p=0.001) improvement in the sexual satisfaction was observed in the ALT group, whereas no improvement was observed in the L-PBO group (p=0.39). Our findings suggest a favourable effect of bright light therapy on primary sexual dysfunctions.

PO2.162.
COPING STRATEGIES IN ANTIPSYCHOTIC-ASSOCIATED SEXUAL DYSFUNCTIONS

D. Vasile, O. Vasiliu, M. Vasile
Departmetn of Psychiatry, "Dr. Carol Davila" Emergency Military Central Hospital, Bucharest, Romania

Patients treated with typical and certain atypical antipsychotics develop various sexual dysfunctions which affect the patients' quality of life. The coping strategies used by patients to face these challenges need to be evaluated, as a first step for supportive therapy, compliance therapy and increasing of patients satisfaction with antipsychotic treatment. This study aimed to assess the psychological mechanisms used by patients treated with antipsychotics for coping with drug-induced sexual dysfunctions. We assessed 39 patients, 28 males and 11 females, mean age 40.2 years, diagnosed with chronic schizophrenia, paranoid (n=20), residual (n=10), catatonic (n=5) or disorganised (n=4) type, according to DSM-IV-TR criteria, in order to establish a correlation between the main categories of coping mechanisms and sexual dysfunctions. Patients received treatment prior to our evaluation with flupentixol decanoate (n=11), risperidone (n=11), amisulpride (n=9), clozapine (n=8). Patients included in our study presented the following sexual dysfunctions: reduced libido, erectile dysfunction, anorgasmia or retrograde ejaculation. Patients treated with antipsychotics who developed sexual dysfunctions often adopted maladaptative coping strategies, such as treatment discontinuation without medical counselling (n=11), self-medication (n=10), substance related disorders (use of alcohol, amphetamine, etc.) (n=8), social withdrawal (n=2), while only 8 patients (25.1%) adopted adaptive coping strategies, such as medical support request or psychotherapy request. There is an obvious need to ask antipsychotic-treated patients about their sexual functioning and to assess the coping strategies used to face these side effects. This evaluation should be the first phase in a management approach, which includes drug switch, additional medications and psychotherapy.

PO2.163.
SOCIODEMOGRAPHIC AND ETIOLOGICAL FACTORS IN MEN WITH SEXUAL FAILURE IN WEDDING NIGHT

S.D.A. Ahmed Al-Jiboori
University of Kirkuk, Iraq

Honeymoon sexual dysfunction means the inability of men to do first sexual intercourse with their virgin wives. Immediate causes include performance anxiety or fear of failure, lack of adequate stimulation, and relationship conflict. This study aimed to explore the sociodemographic and etiological factors concerning men sexual failure in wedding night. The study was undertaken between the period of December 2004 and December 2007 at Azadi general hospital, and included 60 male patients presented to the psychiatric out-patient clinic with the chief complaint of sexual failure in wedding night and in whom

organic causes had been excluded. The commonest age of patients was between 25-29 years (55%). Most of them were educated below secondary school (57%), unskilled worker (58%) and from a rural area (73%). The sexual dysfunction was erectile failure (90%). 72% of patients ascribed their problem to witchcraft, evil eye and jinn possession, while 7% of them attributed their problem to psychological causes. 22% of patients had previous history of consultation with non-psychiatric physicians for their problem, while 67% of them had previous history of contact with healers. In 73% of patients, marriage had been traditionally arranged and most of couples (75%) had had little contact during engagement. 88% of patients had spent their wedding night at their primary family home, 13% of them had foreplay before intercourse and only 3% had had a previous sexual experience.

PO2.164.
THE EPIDEMIOLOGY OF FEMALE CIRCUMCISION AND ITS ASSOCIATION WITH ANXIETY AND DEPRESSION IN NORTHERN TANZANIA

T. Tangen, R.T. Lie, A. Mykletun, E. Ringo, R. Stewart
University of Bergen, Norway; Kilimanjaro Christian Medical Hospital, Moshi, Tanzania; Institute of Psychiatry, King's College London, UK

Female circumcision is still widespread in Africa. Each year at least 2 million girls undergo this procedure. Somatic complications are numerous, but psychological effects are scarcely studied.The aim of this study was to test whether anxiety and/or depression is increased in women with circumcision. Women coming for delivery to Kilimanjaro Christian Medical center (KCMC) in Tanzania were asked about somatic health, sociodemographic factors and circumcision. Anxiety and depression were measured by Hospital Anxiety and Depression Scale (HADS). During a 4-month period, 1518 women were interviewed. Circumcision was reported in 26.5%. Twelve per cent had case-level anxiety (HADS>11), while 9% had depression. Circumcision was significantly associated with lower education, beeing married, Muslim religious affiliation, particular tribes, low standards of housing, low skilled occupation and rural residence. Anxiety and depression were significantly associated with lower education and lower socieconomic status, while neither anxiety nor depression was increased in circumcised individuals.

PO3.
CHILD PSYCHIATRY, CONSULTATION-LIAISON PSYCHIATRY, OLD AGE PSYCHIATRY, COMMUNITY PSYCHIATRY, FORENSIC PSYCHIATRY, PSYCHOTHERAPIES

PO3.1.
ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: ISSUES IN DIAGNOSTIC VALIDITY

L. Furman
Rainbow Babies and Children's Hospital, Cleveland, OH, USA

Attention-deficit/hyperactivity disorder (ADHD) is widely considered a neurobehavioral disease entity as defined by DSM-IV criteria. Yet lacking a biologic marker or objective test, the validity and exclusivity of the diagnosis have been questioned. Solid scientific evidence for a unique and unifying genetic, neuroanatomic or neuropsychological etiology or explanation for ADHD remains elusive. The clinical validity of widely used narrowband rating scales, including the Conners (CRS-R) and the Vanderbilt scales, has been questioned due to technical scale development problems, including use of the same population for both scale development and validation, clinical diagnosis not defined by DSM-IV criteria or interview, use of same informant for clinical diagnosis and scale development, and convergent validity demonstrated without prior clinical validation. Since symptoms of hyperactivity and inattention may also be due to multiple urgent and treatable conditions, including child abuse/neglect, learning and cognitive disabilities, emotional and developmental difficulties and psychiatric diagnoses, extreme caution in attribution to ADHD is urged. Outcome results at 36 months of the National Institutes of Mental Health sponsored Multimodal Treatment Study of Children with ADHD revealed that all treatment groups, *with and without stimulant medication*, were improved and did not differ significantly on any outcome measure; additionally, children receiving (vs. not receiving) stimulants showed significantly greater symptom deterioration from 24 to 36 months. Since approximately 6-10% of US children are estimated to meet criteria for ADHD, and millions receive stimulant medications as treatment, review of diagnostic validity for ADHD appears prudent.

PO3.2.
ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND BIPOLAR DISORDER AMONG ADOLESCENTS: NOSOLOGY IN QUESTION

N. Zdanowicz, A. Myslinski, C. Reynaert, D. Jacques, D. Tordeurs
Université Catholique de Louvain, Cliniques de Mont-Godinne, Yvoir, Belgium

The double diagnosis of attention-deficit/hyperactivity disorder (ADHD) and bipolar disorder (BPD) in its depressive or manic phase in children and adolescents is quite common. The present paper examines the clinical descriptions of both disorders, and addresses the methodological and nosological questions they raise. We carried out a review of the literature from MEDLINE, PsycArticles and PsycInfo data bases, using the keywords ADHD, BPD, Adolescence, as well as a review of specialised reference works. Whereas clinical and epidemiological communities suggest a bidirectional association between ADHD and BPD, more thorough analyses using both clinical and epidemiological perspectives suggest two distinct entities. Accordingly, we also discuss various theories accounting for the frequent co-occurrence of these two diagnoses. The double diagnosis of ADHD and BPD not only raises several hypotheses accounting for the emergence of both these syndromes in same patient, but also reminds us of the limitations inherent in the nosology of mental disorders.

PO3.3.
EXECUTIVE FUNCTION AND MOTIVATIONAL ASPECTS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

T.M. Bravo Collazo, M. Martin Reyes, M. Domínguez González, A. Reyes Berazain, R. Mendoza Quiñones, A. González Mustelier, M.A. Bobes Leon, M. Valdés Sosa
Cuban Neuroscience Center, Havana, Cuba

Attention-deficit/hyperactivity disorder (ADHD) is regarded as an umbrella construct that subsumes multiple potentially dissociable but overlapping cognitive profiles. The objective of this study was to reconsider the impairment of executive function (EF) in ADHD in the light of the distinction between affective/motivational ("hot") and more purely cognitive aspects ("cool") of EF, examining the performance on a neuropsychological battery (5 tasks). Twenty-five children with

ADHD and 25 healthy controls were administered measures of estimated intellectual ability, sustained attention, set shifting, inhibitory control, delay aversion, and decision-making. Behavioural ratings were obtained. The controls were matched in gender, age and IQ with the ADHD group. ADHD children performed worse than controls in all tasks. A discriminant analysis was conducted: the combination of all measures discriminated correctly 88% of children. Twenty percent of children with ADHD showed dysfunction only in "hot" EF, 8% in "cool" EF, and 60% had dysfunction in both. The presence of impairments in incentive, motivational and reward-related processing suggests that both "hot" and "cool" EF deficits are present in children with ADHD. The separability of motivational and EF processes support current dual pathway models of ADHD.

PO3.4.
DEPRESSION, ANXIETY, ALEXITHYMIA AND STRESS RESPONSE IN CAREGIVERS OF ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PATIENTS

C.T. Lee, S.P. Lee, J.H. Jeong, S.C. Hong, J.H. Han
Department of Psychiatry, Uijeongbu St. Mary's Hospital and St. Vincent Hospital, Catholic University of Korea, Gyeonggido, Republic of Korea

This study was designed to investigate depression, anxiety, alexithymia, and stress responses in caregivers of patients with attention-deficit/hyperactivity disorder (ADHD). The subjects were 38 ADHD patients' caregivers (all women, mean age: 37.5±6.5 years). The ADHD diagnosis was made by DSM-IV criteria. The Korean version of the Beck Depression Inventory (BDI), the State and Trait Anxiety Inventory (STAI), the Toronto Alexithymia Scale (TAS) and the Stress Response Inventory (SRI) were used for assessment. The BDI scores of caregivers were significantly higher than the control group (p=0.01). Seven of the caregivers (18.4%) and none of control group had BDI scores over 20 points. Calculated relative risk for ADHD in the presence of caregivers' depression was 1.516 overall (95% confidence interval, 1.234-1.862). In the caregiver group, the scores on the Stress Response Inventory were significantly higher than in the control group (p=0.006). No significant differences were found in the scores of STAI, STAI-S, STAI-T, and TAS. This study suggest that ADHD patients' caregivers are more likely to have depressive symptoms and have a higher stress response level than controls. Physicians should consider integrated approaches for caregivers' psychopathology in the management of ADHD.

PO3.5.
RESULTS OF THE ADORE STUDY IN ITALY: SYMPTOMS SEVERITY AND TREATMENT

P. Curatolo, G. Masi, A. Zuddas, F. Calamoneri, L. Margari, G. Dell'Agnello, F. Mancini, A. Rossi, M.J. Lorenzo, on behalf of the ADORE Study Group
Child Neuropsychiatry Clinics, Sant'Alessandro Hospital, Rome, Italy; Stella Maris Foundation, Calambrone, Pisa, Italy; University of Cagliari, Italy; University of Messina, Italy; Neurologic Clinic, Section of Child Neuropsychiatry, Bari, Italy; Eli Lilly Italy, Florence, Italy; Eli Lilly, Surrey, UK

The study aimed to present the final results concerning the Italian cohort of patients from the attention-deficit/hyperactivity disorder observational research in Europe (ADORE) study on symptom severity and treatment regimen prescribed. ADORE is a 2-year, prospective, observational study of attention-deficit/hyperactivity disorder (ADHD). 110 patients from Italy have been enrolled in the observation. A total of 62 patients (56.4%) were followed for the 24 months of the study. In patients performing all visits, the mean ADHD rating scale score decreased from 35.2±8.0 to 20.7±11.2. The mean inattentiveness score decreased from 17.7±4.5 to 11.0±5.7, and the mean hyperactivity/impulsivity score varied from 17.7±4.8 to 9.7±6.3. A similar improvement trend was observed in the Clinical Global Impression-Severity and the Child Global Assessment Scale scores. About one third of these patients (21/62) received a psychotherapy and 16 a pharmacotherapy. At the end of the 24 months, 16 patients received psychotherapy and the number of children with any pharmacotherapy increased to 18. Thus, the patients followed in the 24 months of the ADORE study presented an improvement of their clinical conditions. During the study, the number of patients receiving psychotherapy decreased, while the number of those receiving a pharmacotherapy slightly increased.

PO3.6.
EFFICACY OF ATOMOXETINE IN PEDIATRIC PATIENTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER AND COMORBID OPPOSITIONAL DEFIANT DISORDER

G. Dell'Agnello, D. Maschietto, A. Pascotto, F. Calamoneri, G. Masi, P. Curatolo, A. Rossi, S. Frediani, F. Mancini, L. Poole, R. Escobar, A. Zuddas, for the LYCY Study Group
Medical Department, Eli Lilly Italy; Unit of Child Neuropsychiatry, Local Health Unit 10, San Donà di Piave, Venice; Child Neuropsychiatric Units, University of Naples SUN, University of Messina, University of Rome Tor Vergata, University of Cagliari; Division of Child Neuropsychiatry, Stella Maris Foundation, Calambrone, Pisa, Italy

The primary objective of this study was to assess the efficacy of atomoxetine in improving symptoms of attention-deficit/hyperactivity disorder (ADHD) in paediatric patients with ADHD and comorbid oppositional defiant disorder (ODD), who did not respond to an initial parent training intervention. Patients aged 6 to 15 years, with ADHD and ODD (DSM-IV criteria) and with a score at least 1.5 SD above the norm on the ADHD subscale of the SNAP-IV scale, a SNAP-IV ODD subscale score ≥15 and a CGI-S≥4 were enrolled in the study. They entered a 6 week parent support; only subjects who did not respond to this program were randomized to receive atomoxetine or placebo in the following 8-week, double-blind phase. SNAP-IV ADHD and ODD scores; CGI-S; CPRS-R:S and CTRS-R:S; CHIP-CE were assessed at the beginning and at the end of both the parent training and the double-blind phase. Data of 137 patients were analysed for efficacy. All parameters did not significantly change during the parent training phase. In the randomised treatment phase, atomoxetine was associated with a significant decrease from baseline in mean scores of all SNAP-IV subscales (p<0.01 vs. placebo), and with a decrease from baseline in mean CGI-S score (p<0.001 vs. placebo). The CPRS-R:S (all subscales) and the oppositional subscale of the CTRS-R:S showed a significant improvement of the problem behaviours in both the familiar and the school environment. The CHIP-CE total and all domains scores improved from baseline in the atomoxetine group: statistically significant differences vs. placebo were found for risk avoidance domain (p<0.05), emotional comfort (p<0.01) and individual risk avoidance (p<0.01) subdomains. Thus, atomoxetine was associated with improvement in symptoms of ADHD and ODD, as well as in specific aspects of quality of life and general health.

The study was fully sponsored by Eli Lilly Italy.

PO3.7.
EFFECT OF ATOMOXETINE ON QUALITY OF LIFE AND ITS CORRELATIONS WITH ADHD CORE SYMPTOMS: A META-ANALYSIS OF CHILD AND ADOLESCENT ATOMOXETINE TRIALS FROM EUROPE AND CANADA

A. Schacht, R. Escobar, T. Wagner, P.M. Wehmeier
Eli Lilly and Company, Germany

We evaluated the effect of atomoxetine on quality of life (QoL) and its correlation with attention-deficit/hyperactivity disorder (ADHD) core symptoms in a meta-analysis of atomoxetine clinical trials in children and adolescents with ADHD. Data from five similar clinical trials (four conducted in Europe, and one in Canada, 8-12 weeks follow-up) were included. All studies included CHIP-CE parent ratings. Effect sizes of atomoxetine vs. placebo regarding CHIP-CE scores at endpoint were evaluated by ANCOVA and correlation coefficients to ADHD-RS scores were calculated. 794 patients aged 6-15 yrs. (mean 9.7) with mean baseline CGI-S of 4.8±0.9 and ADHD-RS of 41.8±8.04 were included. Baseline total CHIP-CE mean t-score (standard: 50±10) was 28.9±11.8, the strongest impairments were seen in risk avoidance (30.2±14.6) and achievements (30.5±10.4) domains. At baseline, CHIP-CE vs. ADHD-RS correlation was low (total: -0.345), except for the risk avoidance domain (-0.517). At endpoint, CHIP-CE improved significantly more for atomoxetine than for placebo ($p<0.05$) in total score (d=0.353), achievement domain (d=0.431) and both sub-domains (d=0.376 and d=0.316), risk avoidance domain (d=0.489) and both sub-domains (d=0.463 and d=0.387), and the emotional comfort sub-domain (d=0.268). Correlation between scales for change from baseline to endpoint was low (total: -0.364). Thus, QoL impairment in ADHD was found in CHIP-CE total score and several domains. CHIP-CE total score and several domains and subdomains improved with atomoxetine treatment in terms of effect sizes. Correlations between CHIP-CE and ADHD-RS were low to moderate at baseline and for changes. These findings suggest that measuring QoL adds relevant insights beyond core symptom evaluation in children and adolescents with ADHD.

PO3.8.
LONG-TERM SAFETY AND EFFICACY OF LISDEXAMPHETAMINE DIMESYLATE IN ADULTS WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

R. Weisler, J. Young, G. Mattingly, L. Squires, J. Gao, L. Adler
University of North Carolina at Chapel Hill, NC; Duke University Medical Center, Durham, NC; Rochester Center for Behavioral Medicine, Rochester Hills, MI; Washington University School of Medicine, St. Louis, MO; Shire Development Inc., Wayne, PA; Department of Psychiatry and Child and Adolescent Psychiatry, New York University Langone School of Medicine and New York VA Harbor Healthcare Systems, New York, NY, USA

This study aim to evaluate long-term safety and efficacy of lisdexamphetamine dimesylate (LDX) in adults (≤55 years) with attention-deficit/hyperactivity disorder (ADHD). It was a 12-month, open-label, single-arm study. For most subjects, baseline scores were from a previous 4-week, double-blind trial. Study dosage was optimized to LDX 30, 50, or 70 mg/d over 4 weeks, then continued for 11 months with dosage adjustment allowed. Mean change from baseline in ADHD Rating Scale (ADHD-RS) with adult ADHD prompts and Clinical Global Impressions-Improvement (CGI-I) were primary and secondary assessments, respectively. Safety assessments included adverse events (AEs), vital signs, and electrocardiogram (ECG). At endpoint (intent-to-treat, ITT; n=345), improvement in ADHD-RS total score was 60.7% (26.3; $p<0.0001$). For those who did (n=296) or did not (n=49) previously receive LDX, improvements in ADHD-RS total scores were 61.6% (25.1) and 55.1% (32.0), respectively. At endpoint, 84.1% of ITT subjects were much/very much improved (CGI-I score ≤2); at 12 months, 92.6% of subjects were much/very much improved. At last dose given, 17.5%, 32.4%, and 50.1% of subjects received 30, 50, or 70 mg/d, respectively. Twenty-eight subjects (8.0%) were discontinued due to AEs. Treatment-emergent AEs (>10%) included mild to moderate upper respiratory tract infection, insomnia, headache, dry mouth, decreased appetite, and irritability. Blood pressure and pulse changes were generally small and consistent with known stimulant effects. In conclusion, long-term treatment with LDX in adults was generally safe, with typically observed AEs, and sustained improvement in ADHD symptoms over 12 months.

This study was supported by funding from Shire Development Inc.

PO3.9.
LISDEXAMPHETAMINE DIMESYLATE DEMONSTRATED CONSISTENT EFFICACY IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER THROUGHOUT THE DAY UP TO 13 HOURS IN A LABORATORY SCHOOL STUDY OF CHILDREN

S. Wigal, S. Kollins, L. Squires, A. Childress
Child Development Center, University of California, Irvine, CA; Duke University Medical Center, Durham, NC; Shire Development Inc., Wayne, PA; Center for Psychiatry and Behavioral Medicine, Las Vegas, NV, USA

This study aimed to evaluate consistency and duration of lisdexamphetamine dimesylate (LDX) efficacy in children with ADHD across various rating scales. Children (6 to 12 years) with ADHD were enrolled in a laboratory school study of LDX (30, 50, 70 mg/day). The study consisted of two phases: open-label dose optimization (4 weeks) and randomized, double-blind, placebo-controlled, 2-way crossover (1 week each). The primary efficacy measure was the Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) deportment score. Secondary measures included SKAMP attention, work quality, and total scores; and Permanent Product Measure of Performance (PERMP) attempted and correct scales. These were measured predose and 1.5, 2.5, 5, 7.5, 10, 12, and 13 hours postdose. Safety measures included physical examinations, treatment-emergent adverse events (TEAEs), vital signs, and electrocardiogram. A total of 117 subjects were randomized; 111 completed the study. LDX efficacy was statistically significant at each postdose time point (1.5 through 13.0 hours), as measured by SKAMP (attention and deportment) and PERMP (attempted and correct), and at 2.5 through 13 hours for the SKAMP quality of work subscale ($p<0.005$). TEAEs during dose optimization included decreased appetite (47%), insomnia (27%), and headache (17%), each of which decreased in the crossover phase (6%, 4%, and 5%, respectively). In school-aged children with ADHD, symptom control with LDX was consistently maintained from the first time point measured (1.5 hours) through the last time point assessed (13.0 hours) on behavior, attention, and academic productivity scales. LDX was generally well tolerated.

This study was supported by funding from Shire Development Inc.

PO3.10.
METHYLPHENIDATE TRANSDERMAL SYSTEM PROVIDES A NON-ORAL, ONCE-DAILY TREATMENT OPTION FOR CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

S.B. Wigal, J. Turnbow, H. Abikoff, J. McGough, M. Madhoo
University of California, Irvine, CA; Westex Clinical Investigations, Lubbock, TX; New York University, New York, NY; University of California, Los Angeles, CA; Shire Development Inc., Wayne, PA, USA

This study aimed to evaluate the safety, efficacy, and pharmacokinetic profile of methylphenidate transdermal system (MTS) in children with attention-deficit/hyperactivity disorder (ADHD). Children (6 to 12 years) diagnosed with ADHD were enrolled in a randomized, double-blind, multicenter, laboratory classroom study comparing MTS with placebo. MTS patches contain methylphenidate solubilized in acrylic then mixed with a silicone-based pressure sensitive adhesive. After dose-optimization using patches with 27.5, 41.3, 55, and 82.5 mg of methylphenidate (MPH), patients were randomized to MTS or placebo patches for 1 week followed by a 1 week crossover. Patches were applied each morning and worn for approximately 9 hours. For all efficacy endpoints, mean scores were significantly improved ($p<0.0001$) with MTS compared to placebo. The mean percentage of d- and l-MPH delivered over the 9-hour dosing period was generally similar across all 4 patch sizes and ranged from 38% to 45% of the total MPH content within each patch. Median T_{max} for d- and l-MPH ranged from 7.1 to 8.8 hours. $AUC_{0\text{-}12h}$ and C_{max} for d-MPH and l-MPH increased in a generally dose proportional manner over the entire range of patch sizes, declining in a generally monophasic manner upon patch removal. Most (98%) adverse events were of mild to moderate intensity and skin adherence was >90% in the majority (72%) of subjects. Compared with immediate and long-acting oral formulations of MPH, MTS is associated with reduced blood concentration fluctuations, provides convenience with once-daily administration, and eliminates the challenge of swallowing large extended-release tablets, which may be problematic for many children.

This study was supported by funding from Shire Development, Inc.

PO3.11.
EFFECTS OF A METHYLPHENIDATE TRANSDERMAL SYSTEM IN CHILDREN WITH ATTENTION-DEFICIT/HYPERACTIVITY DISORDER

R. Findling, O. Bukstein, R. Melmed, F. López, F. Sallee, L. Arnold, M. Madhoo
University Hospitals Case Medical Center, Cleveland, OH; University of Pittsburgh School of Medicine, Pittsburgh, PA; Melmed Center, Scottsdale, AZ; Children's Developmental Center, Winter Park, FL; University of Cincinnati School of Medicine, Cincinnati, OH; Ohio State University College of Medicine, Columbus, OH; Shire Development Inc., Wayne, PA, USA

This study aimed to evaluate the efficacy and safety of methylphenidate transdermal system (MTS) compared to placebo with reference to osmotic release oral system MPH (OROS® MPH) in children with attention-deficit/hyperactivity disorder (ADHD) in a naturalistic community setting. This was a randomized, double-blind, multicenter, parallel-group, placebo-controlled, dose optimization study in children aged 6 to 12 diagnosed with ADHD using DSM-IV-TR criteria. Primary efficacy was assessed by clinicians using the ADHD-Rating Scale-IV (ADHD-RS-IV). Additional efficacy measures included clinician and parent global assessment ratings (Clinical Global Impressions-Improvement, CGI-I and Parent Global Assessment, PGA). The change from baseline to study endpoint in mean ADHD-RS-IV scores was -24.2 (±14.5), -22.0 (±14.9), and -9.9 (±14.1), for treatment with MTS, OROS methylphenidate, and placebo, respectively. Compared with the placebo group, a significantly higher percentage of subjects treated with MTS ($p<0.0001$) and OROS methylphenidate ($p<0.0001$) were rated as improved by CGI and PGA. Most adverse events observed with MTS treatment were mild to moderate in intensity. Subjects treated with MTS displayed statistically significant improvements in all efficacy measures used in this study, including the ADHD-RS-IV, CGI and PGA scales, compared with placebo.

This study was supported by funding from Shire Development, Inc.

PO3.12.
20 YEARS FOLLOW-UP IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER: A STUDY FROM ROMANIA

I. Dobrescu, F. Rad, C. Ciobanu
Child and Adolescent Psychiatry Department, Carol Davila University of Medicine and Pharmacy; Al. Obregia Psychiatry Hospital, Bucharest, Romania

This study aimed to evaluate socio-familiar and professional status after 20 years in patients diagnosed with attention-deficit/hyperactivity disorder (ADHD) in childhood. The sample included 38 patients referred to the child and adolescent department of our psychiatric hospital in 1983-1985, who received a diagnosis of ADHD. In 97% of them, a co-morbid diagnosis of conduct disorder was present. After 20 years, we re-evaluate these patients with respect to socio-familiar and professional status, using Conners' Rating Scale for adults (adapted) and a general questionnaire with 10 items. Of the recruited patients 26% had a gymnasium degree, 5% a professional school degree, 48% a high school degree. Twenty-one percent did not work, 11% worked irregularly, 82% had problems with impatience, 87% lost their temper very quickly, 42% had poor family relationships. These findings confirm that inattention and impulsivity often persist in adults with a childhood diagnosis of ADHD and affect their quality of life.

PO3.13.
OXIDATIVE STRESS IN ATTENTION-DEFICIT/HYPERACTIVITY DISORDER PATIENTS

H. Essawy, A. El Missiry, A. Soliman, I. El Ghohary, O. Kahla
Faculty of Medicine, Ain Shams University, Cairo, Egypt

Attention-deficit/hyperactivity disorder (ADHD) is a severe mental disorder to the extent that it impair the child's ability to function. Lipid peroxidation is used as an indicator of oxidative stress in cells and tissues. Measurement of malondialdehyde (MDA) is widely used as an indicator of lipid peroxidation. Many findings suggest that increased MDA, a destructive agent, could have an important role in the pathophysiology of ADHD. This work was designed to assess MDA as a marker of lipid peroxidation as well as the level of zinc as an antioxidant trace element in ADHD patients and controls to explore their role in the pathogenesis of this disorder. Twenty children with ADHD were diagnosed using DSM-IV. Laboratory tests included markers for lipid oxidation and lipid peroxidation (malonaldehyde level) and zinc status level. The study revealed an evidence of increased lipid oxidation and disturbed lipid peroxidation. The increased malonaldehyde level compared to controls ($p<0.001$) was

correlated to attention/hyperactivity, predominantly inattentive. Zinc levels were decreased compared to controls (p<0.001), but the difference was not statistically correlated with any ADHD subtype. The increased malonaldehyde level and the decreased zinc status and their correlation with the inattention profile support the oxidative stress theory in the pathogenesis of ADHD and the possible role of antioxidants in the treatment of the disorder.

PO3.14. ATTENTION DEFICIT AND HYPERACTIVITY SYMPTOMS IN AUTISTIC DISORDERS: A CROSS-SECTIONAL DESCRIPTIVE STUDY

C. Charnsil, P. Sriapai
Department of Psychiatry, Faculty of Medicine, ChiangMai University, ChiangMai, Thailand

The study aimed to assess the prevalence of attention deficit and hyperactivity symptoms in autistic patients and to assess the correlation between the occurrence of these symptoms and the severity of autistic disorders. This was a clinical-based cross-sectional study. We used the Childhood Autistic Rating Scale (CARS) and the SNAP-IV Teacher and Parent Rating Scale to evaluate autistic symptoms and attention deficit and hyperactivity symptoms in autistic patients who came to the hospital from October 1 to December 30, 2007. Thirty patients were recruited. Sixteen had mild to moderate autistic symptoms (CARS score <37) and 14 had severe autistic symptoms. All patients had attention deficit symptoms. Eighteen patients had hyperactivity/impulsivity symptoms. Spearman's r showed that there was a positive correlation between severity of autism and hyperactivity/impulsivity symptoms but not attention deficit symptoms. Although in the DSM-IV the presence of autistic disorders is an exclusion criterion for the diagnosis of attention-deficit/hyperactivity disorder, attention deficit and hyperactivity symptoms are common in autistic patients. This comorbidity may predict greater impairment in activities of daily living. In the treatment of autistic disorder, we should routinely screen for attention deficit and hyperactivity symptoms.

PO3.15. SOLUBLE DIPEPTIDYLPEPTIDASE IV LEVELS IN AUTISM: ASSOCIATION WITH ADAPTIVE BEHAVIOR

P. Orsi, D. Broglia, M. Marini, A. Pace, U. Provenzani, S. Ucelli di Nemi, E. Emanuele
Department of Psychiatry, University of Pavia, Italy

Dipeptidylpeptidase IV (DPP IV, or CD26) is an ubiquitously expressed protease that could play a role in the pathogenesis of several neuropsychiatric disorders in view of its capacity to cleave behaviorally active neuropeptides. Pilot findings in children reported a reduced CD26 activity in individuals with autistic spectrum disorder (ASD). Whether soluble CD26 (sCD26) levels may be altered in adult patients with ASD remains to be established. Moreover, it is unclear whether sCD26 levels may be correlated with clinical features of ASD. The present study investigates sCD26 levels in adult patients with ASD, and assesses their correlation with the Vineland Adaptive Behavior Scales (VABS) scores. Levels of sCD26 were measured in a total of 21 patients with ASD and 20 age- and gender-matched healthy comparison subjects. A sandwich-ELISA, recognizing human CD26 (Bender MedSystem, Vienna, Austria) was used. The serum level of sCD26 in the ASD group was significantly lower (median 443 ng/mL; interquartile range: 221-770 ng/mL) than in the control group (median: 689 ng/mL; interquartile range: 399-912 ng/mL). In addition, a highly significant inverse association was found between sCD26 concentrations and VABS communication subscale in simple correlation (r=-0.74; p<0.001) and linear regression analysis (β=-0.63, t=2.99; p=<0.01), after adjustment for age and gender. Altogether, our data add to the growing evidence that sCD26 may play a role in the pathophysiology of autism. Specifically, we have shown that this molecule may shape communication skills in this patient group.

PO3.16. CIRCULATING PEPTIDOGLYCAN RECOGNITION PROTEIN-1 LEVELS IN ADULTS WITH AUTISM: INFLAMMATION AS A KEY ELEMENT

P. Orsi, I. Bonoldi, M. Boso, L. Mancini, F. Podavini, P. Politi, E. Emanuele
Department of Psychiatry, University of Pavia, Italy

Growing evidence has now accrued that there might be an association between autistic spectrum disorder (ASD) and inflammatory phenomena. Peptidoglycan recognition protein-1 (PGLYRP-1), primarily expressed in polymorphonuclear leukocyte granules, is one of four types of human peptidoglycan recognition proteins; it is bactericidal for many Gram-positive and Gram-negative bacteria. We hypothesized that the production of PGLYRP-1 may increase in patients with ASD in response to gut microflora. In the present case-control study, a total of 20 adults with ASD (18 M and 2 F) and 24 age- and gender-matched healthy comparison subjects (20 M and 4 F) were enrolled. ASD patients were recruited from a farm community specifically designed for autistic adults. They scored more than 30 on the Childhood Autism Rating Scale (CARS). PGLYRP-1 was measured from thawed frozen plasma using a Biosite Inc. (San Diego, CA, USA) sandwich-ELISA assay. Levels of PGLYRP-1 were higher in ASD subjects compared to controls (median 22.4 [13.1-28.4] vs. 14.9 [10.4-22.6]; p<0.01). PGLYRP-1≥95th percentile (vs. <95th percentile) was significantly associated with the presence of ASD (OR 1.9; 95% CI 1.3-3.5; p<0.01). Adjustment for age, gender and C-reactive protein resulted in only a modest attenuation of the association, but it remained statistically significant (OR 1.6; 95% CI 1.2-2.5; p< 0.05). In contrast, no association with the CARS scores was seen. Our findings of increased plasma levels of PGLYRP-1 in ASD subjects support the hypothesis that a systemic response to peptidoglycan may contribute to ASD pathogenesis.

PO3.17. CLINICAL EXPERIENCE WITH ARIPIPRAZOLE IN THREE ADULT CASES WITH ASPERGER'S SYNDROME

S. Spanarello, M. Piselli, K. Amantini, R. Quartesan
Department of Psychiatry, San Giovanni Battista Hospital, Foligno; Division of Psychiatry, Clinical Psychology and Rehabilitation, Department of Clinical and Experimental Medicine, University of Perugia; Service of Mental Health of Bastia Umbra, Perugia, Italy

Asperger's syndrome is a pervasive developmental disorder characterized by impairments in social interaction, restricted interests and repetitive behaviours as seen in autism. Atypical antipsychotics have become indispensable in the treatment of a variety of symptoms in autistic spectrum disorder. They are frequently used to treat irritability and associated behaviours including aggression and self injury. They may also be efficacious for hyperactivity and stereotyped behaviour. Three men, aged respectively 22, 25 and 30 years, with lifelong, disabling Asperger's disorder and a 10-year medium history of failed psychotherapeutic and pharmacologic interventions, were prescribed

aripiprazole (15 mg/die), with dramatic symptomatic improvement. Multiple prior pharmacologic efforts over several years aimed predominantly at altering serotonin and dopamine neurotransmission resulted in treatment failure due to adverse effects, exacerbation of underlying symptoms, or nonresponse. Aripiprazole produced significant core symptom changes: improved sociability; increased self-awareness; reduced rigidity, anxiety, and irritability; and reduced repetitive and stereotyped interest and behaviour.

PO3.18. PERCEPTIONS OF PRIMARY SCHOOL TEACHERS ABOUT ASPERGER'S SYNDROME

V.I.O. Agyapong, M. Migone, B. Mackey, C. Crosson
Department of Child Psychiatry, Castleknock Child and Family Centre, Dublin, Ireland

The study aimed to assess the knowledge and perceptions of primary school teachers about Asperger's syndrome (AS). Structured questionnaires about AS were posted to 90 primary school principals for them to distribute to teachers in their schools. 343 completed questionnaires were returned by 54 principals, giving a response rate of 60%. Of these, 49% of the teachers reported that recognition and management of emotional and behavioural disorders was covered in their undergraduate training, whilst 58% said they had ever taught a child with AS. 90% said intense absorption in certain subjects was a feature of AS, 84% recognised lack of empathy and poor social interaction whilst 58%, 64% and 69.7%, respectively, recognised pedantic repetitive speech, clumsy or ill-coordinated movements or odd postures and poor non-verbal communication as features of AS. 71% said children with Asperger's Syndrome should be taught in mainstream classes. However, only 10.5% of the teachers believed that main stream schools in Ireland are adequately resourced to cater for children with AS. 87.2% said they saw the need for a closer collaboration between schools and psychiatric services in the management of children with AS whilst 96.2% said they would like to receive in-service training on the management of children with AS. In conclusion, most primary school teachers recognise the features of AS and want schools to have greater collaboration with psychiatric services regarding management of AS. An in-service training for teachers on the management of AS might be of benefit to children with AS.

PO3.19. EXPERIENCE OF SUPPORT IN MOTHERS OF CHILDREN WITH LEARNING DISABILITY

S.M. Kermanshahi, Z. Vanaki, F. Ahmadi
Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Islamic Republic of Iran

This is qualitative phenomenological study, which explored the experiences of support received by Iranian mothers who have children with learning disability. Twelve open interviews with six mothers of learning disabled children (7-12 years of age) were audio-tape recorded with prior agreement of the participants. The interviews were transcribed and the data analyzed using Van Manen's methodology. From 138 thematic sentences, two major themes emerged. The mothers' experiences could be interpreted as a sense of "being in the light"/"being in the shade" of support, with variations for the different participants. The results indicate that there is a need for more specialized and individually adjusted support for mothers of children with learning disability.

PO3.20. CHILDREN WITH LEARNING DISABILITIES: A PHENOMENOLOGICAL STUDY OF THE EXPERIENCES OF IRANIAN MOTHERS

S.M. Kermanshahi, Z. Vanaki, F. Ahmadi
Faculty of Medical Sciences, Tarbiat Modares University, Tehran, Islamic Republic of Iran

Nursing as a family-oriented profession involves supporting mothers of children with learning disabilities to gain an awareness of their role. However, few studies have explored the whole experience of such mothers. This study embarks on an understanding of experiences of Iranian mothers who have children with learning disabilities. A qualitative approach was adopted, using semi-structured interviews carried out with six Iranian mothers whose children attended a special school in Tehran. The data were analyzed in line with van Manen´s method. Two main themes were abstracted: being the centre of stress circles and being in the midst of life and death. Themes include care management challenges for self and child, experiencing through helplessness and hopefulness and experiencing self devotion and self neglect. Overall, a majority of mothers experienced a stressful life. The study concludes that Iranian mothers' experience of having a child with learning disability can be likened to the constant swing of a pendulum between two polarities of positive and negative feelings. This knowledge can provide a heuristic to help health staff guide mothers in adjusting to their children who have learning disability.

PO3.21. IRANIAN MOTHERS' PERCEPTIONS OF THEIR LIVES WITH CHILDREN WITH MENTAL RETARDATION

S. Kermanshahi, Z. Vanaki, F. Ahmadi, A. Kazemnejad, E. Mordoch, P. Azadfalah
Tarbiat Modares University, Tehran, Islamic Republic of Iran; Faculty of Nursing, University of Manitoba, Canada

This phenomenological study explored Iranian mothers' lived experiences of having a child with mental retardation. The study purposed to understand the essence of this experience within Iranian culture. The research questions were: How do mothers perceive having a child with mental retardation? How do mothers' manage this experience? What feelings do mothers experience? A purposeful sample strategy selected knowledgeable participants willing to reflect on the phenomena. Six mothers, whose children attended a School for Exceptional Children, participated in "in-depth" interviews. Mothers were between the ages of 28-42 years and their children were boys between the ages of 6-12 years. The six major themes were: challenging the process of acceptance, painful emotional reactions, the interrelatedness of the mother's health and the child's well being, struggles to deal with oneself or the child, inadequate support from the family and community, and anxiety related to the child's uncertain future. Mothers were parenting their children with minimal knowledge of the condition or how to optimally care for the child. Mothers experienced limited support from health and social services and within their families. This contributed to their feelings of isolation. Some mothers' spiritual beliefs helped them manage their situations. However, for most mothers, gendered child care expectations and the societal stigma against mental retardation compounded their feelings of struggle. Ongoing cross-cultural research on mothers' experiences will identify universal struggles and unique differences within the lived experience of having a child with mental retardation and inform meaningful strategies to assist mothers and their children.

PO3.22.
SERVICES FOR DEAF MENTALLY ILL CLIENTS IN ENGLAND AND WALES

P.S. Kundi, B.T. Monteiro
St. Mary's Hospital, Warrington, UK

There are more than 50,000 deaf people in the United Kingdom. Mental health problems occur more frequently in deaf children as compared to the hearing children. Deaf adults appear to suffer more from mental health problems then hearing adults. Deaf people find it hard to access mental health services. The hearing community are largely unaware of the unique identity and associated difficulties relevant to the deaf population. Services for deaf mentally ill clients are unique but fairly limited. There are only three specialist mental health services in the whole of the UK and a high secure service at Rampton Hospital. We have conducted a survey to identify the existing services for mentally ill deaf clients in England and Wales in the statutory, independent and voluntary sector. Letters were sent out to various organisations dealing with deaf mentally ill clients and further information requested from them regarding the services they offer and knowledge about any other local, regional or national services they were aware of. This paper aims to discuss the need for specialist mental health services for deaf people and provides an overview of the range of mental health service providers for the deaf people in England and Wales in the statutory, independent or voluntary sector.

PO3.23.
SELF DISCLOSURE, DEPRESSION, ANXIETY AND AGGRESSION IN INPATIENT ADOLESCENTS

N. Horesh
Department of Psychology, Bar-Ilan University, Ramat-Gan, Israel

This study aimed to examine the personality variable of self disclosure, or the tendency to share feelings with others, and its relationship to depression, anxiety, aggression in adolescents. Eighty adolescent inpatients in four university affiliated hospitals and 57 healthy adolescent controls were evaluated. The following measurements were employed: the Beck Depression Inventory, the State and Trait Anxiety Inventory, the Impulse Control Scale, the State and Trait Anger Expression Inventory, the Feeling and Acts of Violence Scale and the Shulman Self Disclosure Scale. There were significant negative correlations between depression, anxiety, impulsivity, and self disclosure to family members and significant positive correlations between control of anger and self disclosure towards family members, in the patient group. Self disclosure may be a risk/protective variable that is a focal point of intervention in preventing and treating psychopathology in adolescents.

PO3.24.
PHYSICAL AND MENTAL DISORDER COMORBIDITY IN A NATIONALLY REPRESENTATIVE SAMPLE OF US YOUTH: IMPACT ON MENTAL HEALTH SERVICE USE

E. Suardi, Jiang-Ping He, S.S. Shreeram, K.R. Merikangas
Department of Mental Health, St. Elizabeths Hospital, Washington, DC; National Institute of Mental Health, Genetic Epidemiology Research Branch, Bethesda, MD, USA

This study aimed to estimate the prevalence of mental and physical comorbidity and health service utilization in a nationally representative sample of US youth. Data on psychiatric disorders, physical disorders, and professional service were obtained from 3,042 children and adolescents aged 8 to 15 and a parent informant from the 2001-2004 NHANES, cross-sectional surveys of nationally representative sample of the US population. The Diagnostic Interview Schedule for Children was used to ascertain the 12 month prevalence of DSM-IV mental disorders. The weighted estimates and tests were performed in SUDAAN v9 to accommodate complex sampling design. The prevalence of a physical condition (including diabetes, asthma, anemia, overweight; and hay fever, repeated ear infection, frequent and severe headache) was 44.9% and the 12 month prevalence of any mental disorder was 26.7%. A total of 13.1% participants met 12-month DSM-IV mental disorder criteria for generalized anxiety disorder, panic disorder, major depressive disorder, dysthymia, eating disorder, attention-deficit/hyperactivity disorder, and conduct disorder. The others reported learning disability, stuttering/ stammering, and attention deficit. 17.7% reported both mental and physical conditions. There was a strong association between mental and physical disorders (OR=1.7; 95% CI 1.4-2.1). After adjusting for social and demographic characteristics, comorbidity was associated with a 2.5 times increase in healthcare utilization compared to those without comorbidity (OR 2.5; 95% CI 1.6-4.1). Our findings confirm prior local population studies of comorbidity among youth and suggest that physical and mental comorbidity has a strong impact on healthcare utilization. Integrated treatment of mental and physical disorders is clearly indicated. Future studies should examine the explanations for systematic patterns of comorbidity in youth.

PO3.25.
YOUTHS' BEHAVIORAL TRAJECTORIES AS INFLUENCED BY PSYCHIATRIC AND ENVIRONMENTAL FACTORS

A.R. Stiffman, B. Alexander-Eitzman
Washington University in St. Louis, George Warren Brown School of Social Work, St. Louis, MO, USA

By understanding the trajectories of mental health and behavioral problems, psychiatrists can better identify high risk subgroups that may be prime targets for intervention. Four hundred one urban and reservation American Indian adolescents were interviewed yearly from 2001 to 2003. Youth behavior, psychiatric (addictions and mental health) and environmental problems (family, peer, community, and services) were tracked over time. Using latent class trajectory models, we identified five distinct groups: 1. low stable: youths who started and stayed with a behavioral score less than the clinical cutoff (n=142); 2: low improving: started with a low score but improved more (n=175); 3. very high chronic: initial scores at the top of the clinically significant range and stayed there (n=5); 4: high improving: scores started as clinically significant but improved to the level of the Low Improving (n=30); and 5 high chronic: stable clinically significant scores (n=33). Of the three problem groups, high improvers were more likely to be from the reservation (odds ratio 5.94), and initially had greater family satisfaction (1.13), and fewer school problems (.84). Over time, the high improving group improved on both psychiatric and environmental problems. Psychiatric services were unrelated to behavioral trajectories. Environmental improvement may serve as well as psychiatric intervention in reducing the behavioral, mental health and addiction problems of all but the most extremely behaviorally disordered youth.

PO3.26.2
IMPROVEMENTS IN MENTAL HEALTH SIX YEARS AFTER LEAVING SCHOOL

J. Beitchman, E.B. Brownlie
University of Toronto; Centre for Addiction and Mental Health, Toronto, Ontario, Canada

The study aimed to examine progress in mental health adjustment between age 19 and 25 in two cohorts of youth. Participants were part of a longitudinal study in which 142 speech and language impaired children and their matched controls selected in a survey begun in 1982 when the participants were 5 years of age. Comprehensive mental health and cognitive measures were obtained on the speech/language impaired cohort and their matched controls at age 5, 12, 19 and 25. Using the Composite International Diagnostic Interview, the Global Assessment Scale, and measures of depression and anxiety, we compared mental health measures and academic achievement between the two groups at age 19 and again at 25. Differences in the rate of psychiatric disorders, including the level of functioning, and ratings of depression, anxiety, and substance use disorders while significant at age 19 were no longer significant at age 25. Youth with a history of speech and language impairments at high risk for school related academic problems show improvements in mental health functioning once they leave the school environment. Youth without a history of school related academic problems show little change in their mental health between age 19 and 25.

PO3.27.
RECKLESS BEHAVIOUR AND DEPRESSIVE SYMPTOMS IN ADOLESCENCE

R. Erkolahti, M. Nyström
Medical Faculty, University of Oulu; Child Psychiatry Clinic, Satakunta Hospital District, Pori; University of Turku, Finland

Adolescence is a time of emotional turmoil and heightened sensitivity. Twenty percent of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression. Depressive symptoms often manifest in risk behaviour and conduct disorders. Reckless behaviour means activity which increases the risk of harm. The aim of our study is to explore possible associations between reckless behaviour and depressive symptoms in adolescence. The study group consisted of 1,054 adolescents (465 boys, 589 girls) from normal comprehensive schools in Turku, a Finnish town with approximately 175,000 inhabitants. The mean age of both gender groups was 14.5 years and participants came from all social classes. The background and behavioural information was gathered with questionnaires. The depressive symptoms and mental distress were studied by the Children Depressive Inventory (CDI). There was a strong connection between lowered school achievement and depressive symptoms. Adolescents breaking the law, destroying the property, stealing, having shop lifting, drinking alcohol, using drugs, smoking and not using seat belts when travelling in the car had significantly more depressive symptoms than adolescents without reckless behaviour. These findings suggest that reckless behaviour may be a serious sign of adolescent depression.

PO3.28.
CHILD WELFARE WORKERS' USE OF TECHNOLOGY FOR PSYCHIATRIC REFERRALS

K. Foster, A. Stiffman
Washington University in St. Louis, MO, USA

Child welfare workers in the United States often serve as youths' gateway to psychiatric services. Referral decisions are made in complex environments where workers process varied information to make appropriate psychiatric service referrals. Decision support systems (DSS) have been demonstrated in medicine to be an important tool to connect clients to services, yet little research has been done on their role to enhance child welfare workers' referrals to psychiatric services. The present study uses quantitative and qualitative data to examine the use of a DSS among a sample of state child welfare workers as a possible tool to enhance youths' referrals to psychiatric services. Results indicate that workers use DSS as a third level strategy in their assessment and referral practices, but primarily rely on non-technological and non-standardized methods to conduct psychiatric assessments and to match services to youths' presenting problems. This study found that overall workers identify psychiatric problems only 68.8% of the time when such problems actually exist. It also uncovered important facilitators and barriers to DSS adoption, vital for the adherence to evidence-based practices. DSS are most successful when integrated into referral and client management systems and include workers' knowledge and experiences with psychiatric services. These findings demonstrate how technology can enhance child welfare workers' referrals to psychiatric services through technology.

PO3.29.
EARLY IDENTIFICATION OF MENTAL HEALTH ISSUES AMONG CHILDREN AND ADOLESCENTS: SCREENING FOR MENTAL HEALTH ISSUES IN SCHOOL SETTINGS

A. Manning, N. Tomasello, C. Dulmus, B. Nisbet
University of Buffalo, NY, USA

In the United States, an estimated 6.5 million children and adolescents suffer from depression. Countless others suffer from anxiety and other mood disorders. Mental health problems among children and adolescents can lead to poor academic achievement, school failure, school violence, suicide, and can exacerbate physical health issues. Even as suicide continues to be the second leading cause of death among adolescents in the United States, efforts to identify emerging mental health issues among children and adolescents continue to encounter barriers. School settings have long been the location for public health initiatives, including immunizations and physical health screenings for vision, hearing and scoliosis. At the same time, mental health issues continue to go either unaddressed or underaddressed in the school setting. Engaging school administration, parents and students can prove to be challenging with or without legislative mandates for mental health screening. Issues of stigma often prevent school and government officials from mandating mental health identification programs for school children. Mass screening of students can be done preventively in school settings to identify students who can potentially benefit from in depth mental assessment and follow-up services. We provide an overview of mental health screening tools for implementation with children and adolescents in the school setting and illustrate how school based screening can be applied to better meet their mental health needs.

PO3.30.
EVIDENCE-BASED FAMILY INTERVENTIONS FOR CHILD PROBLEM BEHAVIORS AND IMPROVEMENTS IN FAMILY FUNCTIONING

B. Thomlison
School of Social Work, Florida International University, Miami, FL, USA

The purpose of this review was to identify evidence-based family interventions in response to child and youth problem behaviors and improvements in family functioning. A systematic search of databases of published prevention intervention studies from 1980 through 2008 was conducted using a search protocol to code for research design, level of efficacy and outcomes attained. Programs effective in reducing risk factors and increasing protective factors are parent training, family therapy, and family skills training (also referred to as behavioral family therapy). The programs identified had maximum effect in improving parenting, family communication, family relationships, and youth functioning. These preventive interventions have the following characteristics: a) they were comprehensive (targeting family, peers and community) to modify a range of risk or protective factors and processes in children; b) they were more effective than child-focused or parent-focused only; c) parenting and family interventions were tailored to the developmental stage of the child or youth and specific risk factors in the family served; d) programs provided sufficient intervention to produce the desired effects and follow-up to maintain effects; e) to improve engagement, recruitment, retention and outcome effectiveness, programs were tailored to the cultural traditions of the families. In summary, policies need to be directed to improving the environments of children and youth rather than on changing individual characteristics or behaviors, and need to encourage multi-component, coordinated preventive interventions.

PO3.31.
EVIDENCE-INFORMED FAMILY INTERVENTIONS FOR IMPROVING HEALTH AND SOCIAL EMOTIONAL OUTCOMES IN HIGH RISK PARENT-CHILD RELATIONSHIPS

B. Thomlison
School of Social Work, Florida International University, Miami, FL, USA

The purpose of this research was to identify evidence-based family interventions for improving health and social emotional outcomes in mother-child relationships at risk for child maltreatment. A systematic search of databases of published literature, from 1980 through 2008, was conducted using a search protocol. Studies were coded for evidence regarding the research design and the level of efficacy and the outcomes attained. Eight evidence-based family intervention models were identified for reducing child physical abuse and neglect. Interventions are time-limited, ranging from 8 weeks to nine months. Multiple formats are used to deliver the interventions; individual and group interactive formats use activities such as videotapes and social learning techniques specifically targeted to type of abuse. As a group, the multi-component interventions target parents and the parent-child interaction context in home-based settings during early childhood. Interventions are delivered primarily by professionals who teach parenting competency skills. Targeting families of highest-risk children yield stronger effects in reducing recurring child maltreatment. Effective interventions for high risk parent-child relationships at risk of maltreatment tailor services to individual and family needs. Methods to engage parents are critical to outcomes and service provision.

PO3.32.
CULTURAL SENSITIVITY IN MANUALIZED PARENT TRAINING PROGRAM DISSEMINATION

L. Vitulano, K. Bearss, M. Vitulano, L. Scahill
Yale Child Study Center, New Haven, CT; University of Tennessee, Knoxville, TN, USA

A major challenge in child mental health is implementing effective, evidenced-based interventions in real world settings. The road map to accomplish this goal remains uncharted. This study examines a concerted effort put forth by an urban community mental health center in the US to disseminate a manualized parent training program (Common Sense Parenting, CSP). The CSP was intended to provide inner-city families with access to a therapeutic intervention program that teaches parents effective and appropriate family management skills for their child's conduct-disordered behavior. As most of the families seen at this center are minority families (43% African-American; 41% Latino), this research offers the opportunity to assess the systemic successes and barriers associated with disseminating a treatment to these underserved populations. Much is to be gained by conducting an in-depth analysis of issues that potentially complicate the process of disseminating an empirically-supported treatment into a community mental health center. Information gleaned from this data helps to improve continued efforts to disseminate the CSP treatment. In addition, investigators and clinicians can learn from these data ways to inform future efforts of similar institutions on barriers and promoters of successful treatment dissemination of evidence-based treatment programs. Finally, information from this study increases awareness of ethnic and cultural factors that may hinder efforts to disseminate manualized treatments in clinics serving minority and poor populations, and provide significant insight into potential modifications required to develop a culturally sensitive parent management program.

PO3.33.
EVIDENCE-BASED EARLY INTERVENTION SERVICES FOR INFANTS AND TODDLERS: A FAMILY-CENTERED APPROACH TO IMPROVE FAMILY MENTAL HEALTH OUTCOMES

N. Tomasello, A. Manning, C. Dulmus
School of Social Work, University of Buffalo, NY, USA

Almost 300,000 children in the United States from birth to three years of age are affected by developmental delay and/or disability. Disabilities have a lasting effect on a child's development and, in turn, have a psychosocial impact on the child's family. In addition, the limitations of a child with a disability often cause parents, siblings and other family members to experience stress, depression and feelings of helplessness. Accordingly, not only do children with disabilities have special needs, but families have unique needs as well. Families often require financial, social, psychological, and other family support services. Family-centered services, through early intervention (EI), aim at improving outcomes for the whole family and not solely for the child with a disability. This means that early interventionists assume a role as facilitator and collaborator, not as the expert whose knowledge exceeds that of the parents. However, although the EI system is governed by policies, such as the Individuals with Disabilities Education Act (IDEA), that direct providers to use family-centered practices, not all EI and other healthcare providers use such practices; there are barriers that interfere with the assessment and treatment of families within this system. We provide an overview of the EI Program for working with infants and toddlers and their families and illustrate how family-centered practice within an EI program framework can be applied in

health care settings to better meet a family's mental health and social needs.

PO3.34.
RELIABILITY OF THE DYADIC PARENT-CHILD INTERACTION CODING SYSTEM: A PARENT-CHILD OBSERVATION MEASURE FOR EVIDENCE-BASED TREATMENT OF OPPOSITIONAL DEFIANT DISORDER

P. Dolbear, L. Niec, J. Shanley
Central Michigan University, Mount Pleasant, MI; University of Oklahoma Health Sciences Center, Oklahoma City, OK, USA

The Dyadic Parent-Child Interaction Coding System (DPICS-III) is a standardized behavior analogue measure commonly used in evidence-based assessment and treatment of children with oppositional defiant disorder. Parent-child dyads engage in 25 minutes of play involving increasing amounts of parental control across three situations (Child Led, CL; Parent Led, PL; Clean Up). Each CL and PL segment requires a 5 minute warm-up phase prior to 5 minutes of coded interaction. However, it is unclear whether the warm-up promotes a more accurate assessment of parent-child interaction. This study evaluates parent and child behaviors across the DPICS segments by using survival analysis to investigate the relationship between behaviors by minute throughout the 25-minute assessment. Seventy-five community caregivers (76% female) and their 2.5 to 7 year old children (59% girls) engaged in the 25-minute DPICS interaction. Parents also completed measures about their parenting (e.g., Parenting Scale) and their children's behaviors (e.g., BASC and ECBI). Currently, data collection is complete and coding is underway. If our hypotheses are supported, reducing the length of the DPICS may provide a more reliable assessment of parent-child interaction styles, which will have significant implications for child evaluation and treatment planning.

PO3.35.
EVALUATION OF PROGRAMS TO AMELIORATE MARITAL CONFLICT AND IMPROVE ADJUSTMENT IN FAMILIES WITH CHILDREN OR ADOLESCENTS

E.M. Cummings, J.S. Cummings
Department of Psychology, University of Notre Dame, Notre Dame, IN, USA

Marital and family conflict is highly related to adjustment problems in both adults and children. Although research-based information has accumulated on optimal conflict resolution strategies, this information is not widely known or accessible. This paper will present the results of studies following randomized clinical trial designs to evaluate brief programs for ameliorating conflict and improving adjustment in families with children or adolescents. In a first study, a four-session psycho-educational program for families with elementary-school aged children was assessed. Couples with children between 4-8 years of age were randomly assigned to one of three groups: a parent-only group; a parent-child group; or a self-study group. Pre, post, 6 month and 1 year assessments were conducted. Participation in the treatment conditions significantly improved conflict behaviors in couples, with beneficial effects lasting through the 1-year follow-up. Positive changes also predicted improved marital satisfaction, parenting and child adjustment through the 1 year follow-up. A second program following a similar research design is targeting families with adolescents. Findings support the promise of brief, psycho-educational programs for improving marital and family conflict, which are strongly related to depressive symptoms, substance abuse, and relationship difficulties in adults and a wide range of psychological symptoms in children and adolescents. This program holds promise as a community-based resource or as an adjunct to clinical or psychiatric practices.

PO3.36.
GROUP PARENT-CHILD INTERACTION THERAPY: REDUCING BARRIERS TO EVIDENCE-BASED TREATMENT FOR CHILDREN WITH OPPOSITIONAL DEFIANT DISORDER

L. Niec, K. Triemstra, C. Gering
Central Michigan University, Mount Pleasant, MI, USA

Preschoolers with conduct problems are at high risk for serious negative consequences as they reach school age and adolescence, including poor academic functioning, peer rejection, antisocial activity, incarceration, and substance abuse. Childhood conduct problems are not highly responsive to medication; rather, the first line of treatment is parent management training. Research indicates that early interventions such as parent-child interaction therapy (PCIT) are highly effective and are generally more effective than interventions for older children. However, system factors such as cost of services and shortage of child mental health staff prevent many families from accessing treatment, suggesting the need for alternative service delivery formats. We conducted a random controlled trial to investigate the relative efficacy of group vs. individual PCIT. Families with children 3-6 years old who met diagnostic criteria for oppositional defiant disorder or conduct disorder were randomly assigned to either group or individual PCIT. Preliminary analyses found reductions in parent-reported child behavior problems and parenting stress from pre- to post-treatment, with no interaction by treatment condition. That is, children's conduct-disordered behavior significantly decreased over time, regardless of whether the family received group or individual PCIT. Results from a standardized parent-child observation measure are currently being coded to provide information about actual behavior change.

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PO3.37.
PITFALLS IN THE MANAGEMENT OF HIGH RISK FAMILIES: AN ANALYSIS OF SERIOUS CASE REVIEWS OCCURRING IN A MENTAL HEALTH SERVICE

M.R. Wiseman
South London and Maudsley NHS Foundation Trust, London, UK

Serious case reviews are carried out when a child dies or is seriously injured as a result of abuse or neglect. This study reviews a total sample of serious case reviews occurring within a mental health service, in order to identify common themes that emerge both from the characteristics of the families and from the service provision. The purpose of these reviews is to learn lessons to improve practice and to promote the welfare of children. Reviewing a series of these incidents provides a broader perspective on the risks and the service issues involved, than would arise from the findings of the individual reviews separately. The sample examined was the total number of serious case reviews involving an inner city Mental Health Trust over a six year period. 24 families, involving 26 children, were reviewed. The families had presented to a wide range of services, including child and adolescent services, adult mental health services, perinatal and substance

abuse services. Many were involved with more than one service. Relevant themes emerging from the families were identified. These risk factors included parental mental illness, domestic violence, minority ethnic group, non-attendance at school, and offending. Service factors that increased risks to these families were also identified.

PO3.38.
INITIAL EVALUATION OF A SCOTTISH REGIONAL CLINICAL SERVICE FOR YOUNGER ADULTS WITH MEMORY DISORDERS

G. Stevenson, M. Zeidler, R. Pendrey, A. Astell
Departments of Psychiatry, Neurology and Psychology, National Health Ssystem; School of Psychology, University of St. Andrews, Fife, Scotland, UK

The Fife clinical service for working age adults with memory disorders was established in 2006, serving a population of 350,000. It aimed to establish a multi-professional assessment clinic to evaluate referrals within 8 weeks, to provide nurses to act as "care co-ordinators" and to enhance age-appropriate support services. An independent evaluation examined the progress of the new service against the key aims and explored the experience of clinic attendees with a view to informing service development. Information that included demographic details and cognitive assessments were obtained from case notes of patients attending the clinic during the first year of operation (2006/7). Semi-structured interviews were conducted with the nurse co-ordinators and with patients and their significant others who had attended the clinic. Case notes for 22 patients (from a total of 26), 50% female, were reviewed. Patients waited on average 6 weeks from referral to clinic attendance. The mean age range was 44-56 years for females (mean 54 years) and 50-60 years for males (mean 57 years). The initial cognitive score on the Addenbrooke's Cognitive Examination was 36-94/100, mean 76, for females, and 50-92/100, mean 79, for males. For those diagnosed (91%), 35% had Alzheimer's dementia, with depression the next largest diagnostic category. Three patients and 5 spouses were interviewed, most of whom were satisfied with the service, but some had found the clinic stressful. Staff identified issues of service organisation and communication as areas for improvement. The evaluation highlighted progress in the establishment of this service, and identified areas for further service development and delivery.

PO3.39.
PATHWAYS TO PSYCHIATRIC CARE IN CHILD AND ADOLESCENT MENTAL HEALTH IN TIRANA, ALBANIA

V. Alikaj, A. Suli
Psychiatry Service, Department of Neuroscience, School of Medicine, University of Tirana, Albania

There has been almost no mental health service research in Albania. This study aimed to investigate the process of help seeking for child and adolescent psychopathology at the Child and Adolescent Mental Health Service (CAMHS) in Mother Teresa UHC, Tirana, Albania. Participants were 5-18 years old, newly referred children/adolescents during 2006. We used the Strengths and Difficulties Questionnaire for parents/children, pathways encounter form. A pathway diagram was drawn showing the main routes of care seeking. Patterns of care seeking and previous treatments for disorders within ICD-10 groups were described. The main pathways of seeking care resulted to be referral by hospital doctors and direct access. General practitioners had a limited role as "gatekeepers" for patients. In 72% of subjects, conduct, hyperactivity, depressive or anxiety disorders were diagnosed. Our findings highlight areas that require further attention if aspirations for community-oriented mental health care are to be realized in Tirana and Albania.

PO3.40.
A FOLLOW-UP OF EARLY ONSET SCHIZOPHRENIA

C. Martínez de Hoyos, H. Díaz Moreno, M. Blanco Prieto
Hospital Universitario Príncipe de Asturias, Madrid, Spain

Numerous studies have shown that early onset schizophrenia (i.e., schizophrenia with an onset in childhood or adolescence) is associated with a worse prognosis. These patients often have more emotional disabilities at work and in interpersonal relationships. The evolution in the first 6 months makes the difference, so it is very important to make the diagnosis and start treatment as soon as possible. We studied the clinical records of adult patients with a diagnosis of schizophrenia and antecedents of psychosis in their childhood or adolescence. We examined socio-demographic variables, the characteristics of the first psychotic episode, the initial and current treatment and global functioning in adult life. We identified 40 patients with a diagnosis of schizophrenia according to DSM-IV and an onset in childhood or adolescence. In these patients, atypical antipsychotics had been the first-line treatment at the beginning of the disorder and were still the main treatment at follow-up. Almost 80% of the patients were involved in work activities or attending psychosocial centers at the time of follow-up. These data may suggest a positive impact of early treatment on the course of schizophrenia with early onset.

PO3.41.
WORKING MEMORY AND STIMULUS PRESENTATION IN HOSPITALIZED CHILDREN WITH MAJOR DEPRESSION

F. Constantinidou
Department on Psychology, University of Cyprus, Nicosia, Cyprus

Research suggests that major depressive disorder (MDD) may affect working memory performance. List learning tasks are typically used to assess working memory. Studies with patients with memory impairments indicate that visual presentation enhances memory and learning. Stimulus presentation preferences have not been explored in children with MDD. This study investigated the effects of presentation modality (auditory, visual, and simultaneous auditory and visual) on the verbal learning performance of inpatients with MDD and in non-depressed children. It was hypothesized that pictures would facilitate working memory performance. Eleven children hospitalized for MDD aged 8-12 (mean age=10.5±1.4 years) were matched with 13 children without depression on variables such age, socioeconomic status, intelligence, and educational attainment. The California Verbal Learning Test-Children and an experimental multitrial free-recall paradigm were implemented. The experimental task incorporated three modalities: auditory, visual, and simultaneous auditory and visual. Mixed model MANOVA demonstrated that depressed subjects learned significantly fewer words than non-depressed controls across the three modalities ($p=0.026$). However, the rate of learning was similar between the two groups ($p=0.214$). Both groups improved during the repeated learning trials ($p<0.001$), and learned more items during the visual presentation ($p=0.004$) compared to the auditory presentation alone. Children with MDD did not demonstrate a significant retroactive interference (RI) effect ($p=0.445$). These results suggest that the visual (pictorial) presentation (with or without the simultaneous presentation of names) facilitates verbal learning in school age

children with or without MDD, and that MDD interferes with information encoding during verbal learning.

PO3.42.
CHEATING IN PRESCHOOL AND KINDERGARDEN CHILDREN

R. Holmes
Department of Psychology, Monmouth University, West Long Branch, NJ, USA

In a recent work, Bellinson addressed the use of board games in therapy sessions with children for the games' ability to reveal psychological meaning. The present research explored American preschool and kindergarten children's perceptions of and the emotional responses attributed to cheating. Participant observation and informal interviewing were employed in a natural (school classroom) rather than a clinical setting and game play occurred with peers rather than an adult. The children's individual motivations for cheating were context and actor dependent. Cheating during game play was motivated and justified in part by the games played, notions of fairness, and the acceptability of cheating by other players. As a group, the children cheated to win or be the best, a desirable goal in the United States and other individualistic cultures. Cheating appears to be an individualistic pursuit in a shared joint social experience. The children's emotional responses to cheating during play varied by age and whether the child was the victim or violator. Preschool children were happy when they cheated because it produced a desirable outcome and was linked to personal achievement. They reported being angry when someone else cheated. Kindergarten children were sad when another child cheated and embarrassed when they violated the rules. Since play is a social event and cheating is part of that interaction, how self interests are pursued in joint activity was also explored. Much is at stake when children cheat and such studies will help us understand this from the child's vantage point.

PO3.43.
SHOULD WE SUSPEND THE PUBERTY OF CHILDREN WITH GENDER IDENTITY DISORDER?

S. Giordano
University of Manchester, UK

Gender identity disorder (GID) is a condition in which individuals experience their "gender identity" as being incongruent with their phenotype. Transgender children who are not treated for their condition are at high risk of violence and suicide. Many are willing to take whatever help available, even by illegal sources, and this often traps them into the juvenile criminal system and exposes them to various threats. Endocrinology offers a revolutionary instrument to help children/adolescents with GID: suspension of puberty. Suspension of puberty raises many ethico-legal issues, and experts dissent as to whether children should be treated. In some countries, like the UK, the tendency is to defer treatment until puberty is complete. In other countries, the tendency is to intervene with hormone suppressant drugs just after the onset of puberty (Tanner stage 2 and 3). This paper examines the ethico-legal issues around suspension of puberty of minors with GID. It analyzes issues such as capacity to give consent in minors, ethics of providing experimental treatment to minors, professional responsibilities for omissions, and ethics of interfering with spontaneous development. I review recent clinical literature and make an ethical analysis on the grounds of clinical evidence, as well as of ethical and legal principle. I conclude that suspension of puberty not only is not unethical: if it is likely to improve the child's quality of life and save the child's life, it is indeed unethical to defer treatment.

PO3.44.
SHORT-TERM RESULTS OF THE ADMINISTRATION OF ARIPIPRAZOLE IN CHILDREN AND ADOLESCENTS WITH VARIOUS PSYCHIATRIC DIAGNOSES

A. Martorella
Children's and Adolescents' Psychiatrist at Maternal and Children´s Hospital "Dr. Tetamanti", Mar del Plata, Pcia. Buenos Aires, Argentina

We administered aripiprazole (from 2.5 up to 10 mg/day, according to children's age and weight) to 28 young patients (boys and girls, with an age ranging from 3 to 15 years) with various psychiatric diagnoses (autism, psychosis, defiant oppositive disorder), who had developed metabolic syndrome during long-term treatment with risperidone. After six months of treatment with aripiprazole, we observed an improvement of aggressive behaviour and language (as evaluated by weekly interviews and periodical school reports) and a reduction of serum prolactin and glucose levels. All children, except three, are still in treatment with aripiprazole and we plan to carry out a long-term follow-up.

PO3.45.
PATIENTS WITH AND WITHOUT PSYCHIATRIC COMORBID CONDITIONS RESPOND SIMILARLY TO HEADACHE TREATMENTS IN SPECIALTY TREATMENT CLINICS

B. Heckman, L. Himawan, K. Holroyd, R. Watakakosol
Department of Psychology, Ohio University, Athens, OH, USA

While many studies have characterized rates of psychiatric comorbid conditions in patients with headache disorders, far less research has examined if these disorders affect patients' responses to contemporary headache treatments. This naturalistic study examined if headache treatment effectiveness is related to the presence of a psychiatric comorbid condition in headache patients. A naturalistic cohort design. Between 2003 and 2007, 284 patients in headache specialty treatment clinics in the four largest cities in the state of Ohio were followed to study their responses to newly initiated preventive headache treatments and if treatment effectiveness was altered by the presence of a comorbid psychiatric condition. Psychiatric diagnoses were made using the PRIME-MD. Participants provided data on headache-specific quality of life and headache disability through self-report surveys at pre-treatment and 1-, 2-, and 6-month follow-up, while headache frequency and severity was assessed through 30-day daily diaries at pre-treatment and 6-month follow-up. Response to treatment was examined through growth curve models. Patients with psychiatric comorbid conditions reported significantly poorer quality of life and more frequent and disabling headaches than those without a comorbid condition at pre-treatment. Headache frequency and severity decreased significantly over treatment for patients with and without a comorbid psychiatric condition. Patients with a psychiatric comorbid condition reported significantly greater improvements in quality of life and reductions in headache disability over the course of treatment compared to those without a comorbid condition. In conclusion, contemporary headache treatments administered in headache specialty treatment clinics produce beneficial improvements in patients with and without psychiatric comorbid conditions, although treatment benefits are particularly evident in patients with psychiatric comorbid conditions.

PO3.46.
DEFICIT OF LEARNING AND MEMORY FUNCTION CAUSED BY A LESION IN THE MEDIAL AREA OF LEFT PUTAMEN: A CASE ANALYSIS

Si Yun Shu, Zhouyi Guo, Songhao Liu, Yongming Wu, Xinmin Bao, Hong Li
Department of Neurobiology, College of Optoelectronic Information, South China Normal University; Department of Neurology, Nanfang Hospital, Southern Medical University, Guangzhou, China

Lesions in memory-related brain regions very often cause deficits in learning and memory. The hippocampus, the prefrontal cortex, the amygdala and the basal nucleus of Meynert have been shown to be memory-related structures in the brain. Shu et al. discovered a group of fusiform neurons at the medial margin of the neostriatum in rats, cat, monkey and human brains and named it the marginal division of the neostriatum (MrD). The MrD was identified as contributing to learning and memory in rats. We present a unique case of a lesion located in the left MrD area that confirms this anatomic region's role in learning and memory in this report. A 13-year-old boy was hit by a car and admitted in our hospital. He was in his first year of junior high school and ranked no. 7 in his class of 50 children. He was discharged after the trauma recovered. Six months later, the patient complained of learning and memory difficulties. He was in second year of junior high school and had dropped the rank from seventh to fortieth in his class of 50 children. Magnetic resonance imaging revealed a focus of encephalomalecia in the medial left putamen without other lesions in his brain. A Chinese Stanford-Binet Intelligence Scale revealed significant deficit in memory. These findings support the importance of the medial part of the putamen in patients complaining of memory deficits not explained by alternative etiologies.

PO3.47.
NEUROPSYCHOLOGICAL PERFORMANCE IN ADULTS WITH CHRONIC EPILEPSY ON MULTI-ANTIEPILEPTIC DRUG TREATMENT

F. Constantinidou, S. Papacostas, D. Themistocleous, M. Nicou
University of Cyprus, Nicosia; Cyprus Institute for Neurology and Genetics, Cyprus

The primary objective of this study was to investigate verbal learning, working memory, and executive functioning abilities in Greek-Cypriots with epilepsy. This study is part of the first systematic research program exploring neuropsychological performance and quality of life issues in Greek-Cypriots with epilepsy. Thirty-five Greek-Cypriot adults with chronic epilepsy (ages 18-55) were matched to 35 neurologically normal adults on age, gender, and education levels. All participants with epilepsy were recruited from the Cyprus Institute of Neurology and Genetics and received antiepileptic therapy. A battery of neuropsychological tests and two quality of life assessments were implemented. Participants were screened for global cognitive decline and clinical depression. Mixed model MANOVA (a=.05) results indicated that the performance of participants with epilepsy was significantly lower than that of normal cohorts on repeated verbal learning tasks (RAVLT). Pairwise (a=.05) comparisons demonstrated that performance was lower on both verbal and non-verbal working memory measures, a=.05 (digit span forward/backwards, visual span forward/backwards, Rey Complex Figure Test, and paragraph recall immediate/delayed). In addition, performance was significantly lower (a=.05) on executive functioning and mental fluency tasks (COWAT, Symbol Digits Modalities Test, Trails A and B). Performance on executive tests correlated significantly (a=.05) with memory performance. Results indicate that chronic epilepsy hampers verbal learning and memory performance despite of the focus of the epileptic activity. Furthermore, the reduction in executive functioning which interferes with the use of active memory strategies contributes to the memory impairment observed in the present study. Finally, the implications of antiepileptic drug therapy on neurocognitive performance will be discussed.

PO3.48.
PUNDING AFTER BILATERAL SUBTHALAMIC NUCLEUS STIMULATION IN PARKINSON'S DISEASE

S. Bernardi, S. Ramat, L.M. Raglione, P. Marini, F. Ammannati, S. Sorbi, S. Pallanti
Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, USA; University of Florence, Italy; Institute of Neurosciences, Florence, Italy

"Punding" is the term used to describe a stereotypic motor behavior, in which there is an intense fascination with repetitive purposeless movements, such as taking apart mechanical objects, handling common objects as if they were new and entertaining, constantly picking at oneself, etc. As a phenomenon with features of both impulsivity and compulsivity, punding neurobiology is currently being explored. In order to evaluate the pathophysiology of punding and specifically the glutamatergic role in this phenomenon, we screened a population of Parkinson's disease (PD) patients that attended an ambulatory for subthalamic nucleus deep brain stimulation (STN DBS). We conducted a patient-and-caregiver-completed punding survey with 24 consecutive patients, using a modified version of a structured interview. Patients completed the Unified Parkinson's Disease Rating Scale (UPDRS), the Obsessive Compulsive Inventory and the Sheehan Disability Scale. Five (20.8%) of the 24 subjects were identified as punders, three men (60%) and two women. The punders were comparable to the nonpunders in terms of age, disease duration, hour/night sleeping, obsessive compulsive symptoms, distress, total daily dose of L-dopa equivalent units, decrement in daily L-dopa equivalent units permitted by DBS and the impact of DBS on overall "on" and "off" motor function. The punder and nonpunder groups statistically differed only with regard to time distance from DBS implantation: on average the punders started bilateral STN DBS 1.96 years before the nonpunder group. Punding, defined as a disinhibition of motor learning programs, may be induced by STN DBS, and its prevalence is much more common than previously suspected. In our sample punding was ego-syntonic, non-disruptive, "cue elicited" and characterized by low craving.

PO3.49.
TREATMENT OF CHRONIC PAIN WITH BUPRENORPHINE IN A VETERAN WITH TRAUMATIC BRAIN INJURY

A. Alao, C. Chung
Polytrauma System of Care, Veterans Affairs Hospital; Department of Psychiatry, SUNY Upstate Medical University, Syracuse, NY, USA

We report a case of a 27-year-old Iraq War veteran with no previous psychiatric history who sustained severe traumatic brain injury (TBI) following a blast injury from an improvised explosive device. The patient subsequently suffered severe anxiety symptoms controlled only with combined therapy with benzodiazepines and venlafaxine. Even more disabling, the patient also experienced intractable headache and

shoulder pain unresponsive to non-steroidal anti-inflammatory agents, tramadol, gabapentin, or NMDA-receptor antagonists. Given the risk of respiratory depression with his current medications, opioid analgesics were not favored for the management of his pain. The patient was started on sublingual buprenorphine at a dose of 8 mg three times daily, with significant improvement. This dose was maintained and the patient was able to function relatively pain-free. Chronic pain is a significant complication in patients with TBI and is reported by a majority of patients, regardless of the severity of the injury. The treatment of chronic pain among these individuals can be challenging. Patients with TBI may be on other medications for impulse control, such as anticonvulsants and benzodiazepines. Further treatment with narcotic analgesics may therefore increase the risk of respiratory depression. Buprenorphine is a partial mu agonist whose effects plateau at higher doses, at which time it begins to act like an antagonist. It is this property at higher doses that limits its dose-dependent respiratory depression. Buprenorphine thus has the advantage of effective analgesia with minimal sedation and may be useful to treat chronic pain among TBI patients already taking benzodiazepines. While clinicians should be aware of these possible benefits, more studies are necessary to evaluate the efficacy of buprenorphine among TBI patients with chronic pain.

PO3.50.
CD24 GENE POLYMORPHISM IS ASSOCIATED WITH THE DISEASE PROGRESSION AND SUSCEPTIBILITY TO MULTIPLE SCLEROSIS IN THE IRANIAN POPULATION

S. Vallian, M. Ronaghi
Division of Genetics, Department of Biology, Faculty of Science, University of Isfahan, Iran; Cellular Reprogramming Laboratory, Centro de Investigación Príncipe Felipe, Valencia, Spain

Only few studies have investigated the impact of the C allele of the CD24 gene on the risk and progression rate of multiple sclerosis (MS) and the results are controversial. This study was designed to provide more data on this issue in an Iranian population. The above mentioned single nucleotide polymorphism was genotyped in 217 Iranian MS patients and 200 ethnically matched healthy individuals. Our data revealed that individuals with CD24V/V genotype had a more than 2-fold increase in the risk of MS compared to those with CD24A/V and CD24A/A genotypes (p=0.0193, odds ratio 2.4882; 95% CI: 1.416-4.3722). Moreover, the progression of the disease in patients with CD24V/V genotype was significantly faster than in other patients.

PO3.51.
ASSOCIATION OF CD24V/V GENOTYPE WITH SUSCEPTIBILITY AND PROGRESSION OF MULTIPLE SCLEROSIS IN AN IRANIAN POPULATION

M. Ronaghi, S. Vallian, S. Saadatnia, M. Etemadifar
Division of Genetics, Department of Biology, Faculty of Science, University of Isfahan; Department of Neurosciences, Isfahan University of Medical Sciences, Isfahan, Iran

A CD24 single nucleotide polymorphism (SNP) and its contribution to multiple sclerosis (MS) was investigated in 217 patients and 200 healthy individuals in an Iranian population. The correlation of the SNP alleles with the progression of the disease was determined using expanded disability status scale (EDSS) and progression index (PI). The data revealed that individuals with CD24V/V genotype show 2-fold increase in relative risk of MS compared to patients with CD24A/V (0.27) and CD24A/A (0.25) genotypes (p=0.0193, odds ratio 2.4882; 95% CI: 1.416-4.3722). Moreover, the progression of the disease in patients with CD24V/V is faster than other patients, when examined by ANOVA and least significant difference (LSD) test. LSD analysis was statistically significant ($p<0.05$ and $p<0.01$). These results support the hypothesis that CD24 may function as a genetic modifier for susceptibility and progression of MS through the CD24V/V genotype.

PO3.52.
QUALITY OF LIFE IN MULTIPLE SCLEROSIS: INFLUENCE OF DEPRESSION, COGNITIVE IMPAIRMENT AND DISABILITY

V. Adomaitiene, R. Leonavicius, L. Ratkus, L. Kurauskiene, L. Malciene, R. Balnyte, K. Lauckaite
Departments of Psychiatry and Neurology, Hospital of Kaunas Medical University, Kaunas, Lithuania

Depression, cognitive impairment and disability may influence quality of life (QOL) in multiple sclerosis (MS) patients. Neuropsychiatric abnormalities are common in MS and add significantly to the burden of this chronic disease. Depression is the most pressing clinical problem facing MS patients, which may mimic and/or secondarily affect cognitive functions. The aim of our study was to evaluate QOL in MS patients compared with healthy controls, taking depression, cognitive impairment and disability status into account. We studied 40 patients with MS (13 men; 27 women; mean age 41.4 years, mean disease duration 6.6 years), diagnosed according to revised McDonald diagnostic criteria, and 90 control group volunteers (46 men; 44 women, mean age 40.7 years). We used the SF-36 inventory, a disease specific instrument recently validated in Lithuania. Each patient underwent a complete clinical assessment, including that of disability status (Expanded Disability Status Scale), cognitive function (Wechsler Adult Intelligence Scale), and depression (Hamilton Rating Scale for Depression). In terms of Pearson's correlation, there was a moderate inverse relationship between disability level and the SF-36 physical and mental composite scores, and a moderate to strong inverse correlation between depression or cognitive impairment and both the physical and mental composite scores. In a stepwise binary logistic regression, depression, disability and cognitive impairment level were confirmed to be significant and independent predictors of QOL. Our study clearly demonstrates that QOL among MS patients is affected by depression, cognitive impairment and disability status. QOL instruments can help to provide a broader measure of the disease impact and to translate these findings into improved methods of treatment.

PO3.53.
METHYLPHENIDATE IMPROVES COGNITIVE PERFORMANCE IN MULTIPLE SCLEROSIS

Y. Harel, M.A. Mor Lavie, A. Achiron
Lewenstein Rehabilition Hospital, Raanana; Multiple Sclerosis Center, Sheba Medical Center, Tel-Hashomer; Sackler School of Medicine, University of Tel-Aviv, Israel

Attention is one of the major cognitive domains adversely affected in multiple sclerosis (MS). The aim of the current study was to determine the effect of a single dose of methylphenidate on cognitive performance of MS patients with significant attention deficit. In a double-blind placebo-controlled study design, 26 MS patients with impaired attention were randomly assigned to receive a single dose of 10 mg methylphenidate or placebo. Attention was assessed using the paced auditory serial addition test for 3 and 2 second (PASAT3" and PASAT2") at baseline and one hour after drug or placebo administration. Methylphenidate significantly improved performance of both

PASAT3" and PASAT2" tests by 22.8% and 25.6%, respectively ($p<0.001$), while no significant changes were observed in placebo treated patients. These data suggest that administration of a single dose of methylphenidate significantly improves attention in MS patients with considerable attention deficit.

PO3.54. DEPRESSION IN PATIENTS WITH SYSTEMIC SCLEROSIS

D. Ferrari, C.U. Manzini, F. Lumetti, E. Tedeschini, C. Giubbarelli, C. Ferri, M. Rigatelli
Chairs and Units of Rheumatology and Psychiatry, University of Modena and Reggio Emilia, Modena, Italy

Systemic sclerosis (SSc) is a rare chronic rheumatic disease which has a great impact on patient's quality of life; nevertheless, only a few studies so far have focused on its psychiatric consequences. In the literature, depression is reported from 36 to 65% of SSc patients. In this study, 78 consecutive SSc patients (M/F: 6/72, age 53.7±12.1 years, disease duration 7.7±6.4 years) were evaluated for depression (Beck Depression Inventory, BDI), pain (Visual Analogical Scale, VAS), and disability (Health Assessment Questionnaire, HAQ). These indexes were correlated with extension of skin involvement (modified Rodnan Skin Score), presence of digital ulcers, pulmonary fibrosis, pulmonary hypertension, esofagopathy, arthropathy and disease activity. Different degrees of depression were found in 36/78 (46%) SSc patients (30% mild, 12% moderate, 4% severe); furthermore, 16/78 (20%) presented a depression of "clinical relevance" (BDI>16), but only 3/16 (19%) of them were treated with antidepressants and 2/16 (12.5%) with benzodiazepines. The BDI score significantly correlated with disease activity ($p=0.047$), VAS pain ($p<0.001$) and HAQ ($p<0.001$), but not with disease duration, Skin Score, presence of ulcers or any organ involvement. A clinical screening and a correct management of depression are recommended to improve SSc patients' psychological well-being and quality of life.

PO3.55. MANIC EPISODE ASSOCIATED WITH TEMPORAL LOBE EPILEPSY AND SCLEROSIS OF AMYGDALA AND LEFT HYPPOCAMPUS: A CASE REPORT

M. Darghal
Health Center of Psychiatry, Diour Jemaa, Rabat, Morocco

We report a case of a 23 year-old right handed woman with no personal or family history of psychiatric disorders, who was referred for temporal lobe epilepsy and a 2-week history of manic symptoms, including grandiosity, sexual hyperactivity, indiscretion, irritable mood, flight of ideas. During the initial interview, she appeared to be over friendly and had grandiose thoughts. Her speech was rapid. The magnetic resonance imaging showed a clear atrophy of the amygdala and the left hippocampus. Interictal EEG revealed paroxysmal discharges, frequently on the left temporal lobe. The diagnosis of manic episode was made according to the DSM-IV. After six months of treatment with olanzapine 10 mg/day and carbamazepine 600 mg/day, the patient improved significantly. Mesial temporal lobe epilepsy is the most common form of human epilepsy, and its pathophysiological substrate is usually hippocampal sclerosis. To our knowledge, there is not enough data on the prevalence of manic episodes in this condition.

PO3.56. A CASE OF ACUTE DISSEMINATED ENCEPHALOMYELITIS WITH PSYCHIATRIC MANIFESTATIONS

V. Adomaitiene, L. Malciene, K. Lauckaite, L. Kurauskiene, L. Ratkus
Departments of Psychiatry and Neurology, Hospital of Kaunas Medical University, Kaunas, Lithuania

Acute disseminated encephalomyelitis (ADEM) is a monophasic, immune-mediated disorder that produces multifocal demyelinating lesions within the central nervous system. Cognitive problems occur in 10-50% of patients with ADEM. The causative link between cognitive impairment and demyelinating lesions, and correlations between location of ADEM lesions and cognitive impairment are unresolved issues. Sometimes ADEM can present as an entirely psychiatric case. We present the case of a 36-year-old patient admitted to a psychiatric department with severe cognitive impairment, agitation and paranoid ideation who was found to have ADEM with slight neurological signs. Imaging and laboratory studies supported the diagnosis of ADEM. His mental state and cognitive functions significantly improved after steroid therapy (methylprednisolone 1 g per day, 3 days in a row) combined with an antipsychotic (amisulpride 200 mg/day).

PO3.57. ARIPIPRAZOLE FOR THE TREATMENT OF TOURETTE'S SYNDROME: A CASE SERIES OF 50 PATIENTS

C. Wenzel, K.R. Müller-Vahl
Clinic of Psychiatry, Social Psychiatry and Psychotherapy, Hannover Medical School, Hannover, Germany

Tourette's syndrome (TS) is a neuropsychiatric disorder characterized by motor and vocal tics. Dopamine blocking drugs (antipsychotics) are considered the most effective agents in the treatment of tics, although they are not effective in all patients and are often limited due to adverse effects. Aripiprazole is a novel atypical antipsychotic with dual agonist and antagonistic dopaminergic effects and partial serotonin-2A receptor antagonism. Since preliminary data suggested that aripiprazole may be effective and safe in the treatment of tics, we performed a prospective study in a large group of patients. Fifty patients (35 men, 15 women, mean age 27.1±12.5 years) recruited from our specialized TS outpatient clinic were treated with daily doses of 5-45 mg aripiprazole. In 47 patients insufficient pretreatment with another antipsychotic was switched to aripiprazole; only 3 patients were drug-naïve. Thirty-one patients (62%) exhibited a considerable reduction in tic severity (in 23 patients lasting more than 12 months). Several patients reported beneficial effects on behavioural comorbidities. 19 patients (38%) dropped out of treatment, 5 due to insufficient or decreasing efficacy, 8 because of intolerable adverse effects, 4 due to a combination of both and 2 for different reasons. Our results are in line with preliminary data suggesting that aripiprazole is an efficacious pharmacological option in the treatment of tics. However, in contrast to previous data, in 1/3 of our patients aripripazole was ineffective or not well tolerated.

PO3.58.
EFFICACY OF LAMOTRIGINE IN A CASE OF POST-ICTAL PSYCHOSIS WITH DELUSION OF ALIEN CONTROL

F. Bretel, S. Haouzir, L. Beherec, O. Guillin
Service Hospitalo-Universitaire, Centre Hospitalier du Rouvray, Sotteville-les-Rouen, France

We report the case of a 60 year old patient suffering from partial complex epilepsy secondary to a head injury. Compliance to antiepileptic treatment in this patient was poor, leading to cessation of drugs at several times. Secondarily, partial seizure became generalized. On two occasions during one year, the emergence of a post-ictal psychotic state with delusion of alien control and hallucinations led to the admission of the patient to a psychiatric unit. The resumption of treatment with lamotrigine alone was sufficient to remove any psychotic symptoms in a few days in the first episode. In the other one, the combination of loxapine with lamotrigine was needed.

PO3.59.
A PSYCHOTIC EPISODE ASSOCIATED WITH THE USE OF TOPIRAMATE IN A PATIENT WITH EPILEPSY

D.B. Jovanovic, N. Ilankovic, V. Bojic, I. Leposavic
Department for Organic Mental Disorders, Institute of Psychiatry, University Clinical Center of Serbia, Belgrade, Serbia

Topiramate is an antiepileptic drug, occasionally associated with psychotic exacerbations. We reported a case of a 29-year-old patient with pharmaco-resistant epilepsy (presenting with generalized seizures, partial seizures with secondary generalisation and complex partial seizures). Frequent seizures demanded use of combined anticonvulsant treatment (clobazam, pregabalin, topiramate, lamotrigine, lorazepam). The patient experienced a psychotic episode in 2006 (auditory hallucinations, obsessive thoughts and self harm), which coincided with the use of high doses of topiramate and remitted after dose reduction and administration of low doses of haloperidol. In October 2008, the patient developed an acute episode of confusion, with reduction of verbal and motor reactions, that lasted for several hours. Electroencephalography showed complex partial temporal seizures. Following a neurological check, the dose of topiramate was raised from 200 to 250 mg/day. Two days after, the patient developed a psychotic episode with imperative hallucinations and delusions of influence, resulting in a serious suicidal attempt. The use of topiramate may be associated with psychiatric adverse events, and the risk increases in the presence of complex partial seizures and cerebral pathology.

PO3.60.
VERTIGO: A REAL BURDEN BETWEEN MIND AND BODY

M. Forghieri, D. Monzani, C. Gherpelli, E. Genovese, M. Rigatelli
Department of Neuroscience, Modena and Reggio Emilia University, Modena, Italy

Recent advances in otoneurological and behavioural sciences have provided evidence for both a somatopsychic and a psychosomatic effect in the vertigo-anxiety linkage models. To better understand the relationship between vertigo attack and anxiety, we carried out three different trials regarding: a) the presence of stressful life events in the six months before the onset of a first episode of positional paroxysmal vertigo in 85 consecutive dizzy patients (Paykel's scale, SCL-90, BDI); b) the existence of somatopsychic effect in 206 consecutive dizzy inpatients re-examined after one year after a vertigo attack (HADS and UCLA-DQ); c) the comorbidity between general anxiety disorder and labyrinth hypofunction on vestibulo-spinal impairment in 20 patients. Patients with positional paroxysmal vertigo reported significantly more life events than controls ($p<0.005$) namely negative, objective negative impact and a poor degree of control ($p<0.005$). Higher levels of anxiety, depression and somatization were recorded in the pathological sample ($p<.005$). In patients suffering from vestibular disorders after one year from the last vertigo attack, there was a significant amount of anxiety and depression distress in respect to normal subjects ($p<0.005$). Finally, body sway was found to be increased under moving visual scenes in patients affected by high level of anxiety as compared to those with normal affect ($p<0.005$). These trials support the presence of both somatopsychic and psychosomatic effects in patients with vestibular disorders.

PO3.61.
IMPLICIT MEMORY UNDER ANESTHESIA

G.M. Gurman, B. Levinson, N. Weksler
Ben Gurion University of the Negev, Faculty of Health Sciences, Beer Sheva, Israel

In a daily clinical practice the anesthesiologist is happy to believe that his anesthetics produce a total loss of sensation and consciousness, but we have reasons to challenge this concept. Currently we have no precise measure of the level of depth of general anesthesia, but we assume that the anesthetic agents produce a shift from consciousness to oblivion, bypassing the unconscious mind. Regarding memory, there are two possibilities that can occur during general anesthesia. The first is true awareness or explicit memory, which means complete recall of the events occurring during anesthesia. Usually, true awareness occurs because of equipment failure or a human error during delivery of anesthesia. Depending on the patients' inner strengths, past history and general resourcefulness, the implications can be far reaching. The patient may present herself for psychiatric care months later with all the stigmata of a major depressive illness, such as massive irritability, insomnia, nightmares, bubbling anxiety, an overwhelming sense of impending doom and a preoccupation with death, all signs of the well known post-traumatic stress syndrome. But traumatic events that are held in the subconscious area have a far more profound and might often have unexpected effects on the patient's psyche. This is the area of major concern for the anesthesiologist: the world of implicit memory. Subliminal perception of messages during general anesthesia may have clinical implications, some positive (shorter stay in the hospital, for instance). But nobody can quantify the possible negative impact of implicit memory during anesthesia. We suggest that possible negative effects of implicit memory during anesthesia might be similar to those described by Freud in connection to his famous patient, Anna O. We propose a series of measures to be taken in the operating room in order to avoid possible negative effects of implicit memory. The so-called "operating room etiquette" is to be respected. The operating room personnel must refrain from referring to the anesthetized patient as he/she was not present. In addition, the operating room staff must do everything for preventing the patient being exposed to external stimuli of a disturbing kind.

PO3.62.
ASSOCIATION OF EARLY LIFE EVENTS AND HYPOTHALAMIC-PITUITARY-ADRENAL AXIS DYSREGULATION IN A SAMPLE OF PSYCHIATRIC OUTPATIENTS

M. Catena Dell'Osso, S. Gorini Amedei, F. Rotella, A. Palla, L. Faravelli, V. Ricca, G. Consoli, C. Faravelli
Department of Psychology, University of Florence, Italy

The role of stress in the aetiology of mental disorders has long been studied and is now considered critical for the onset of psychopathology. The hypothalamic-pituitary-adrenal axis (HPA) has been proposed as a possible neurobiological substrate for the negative consequences of life events. The aim of this study was to test the hypothesis that stress-related psychiatric disorders are characterized by HPA axis dysfunctions. The dexamethasone suppression test was used to evaluate HPA axis activity in 95 psychiatric outpatients irrespective of DSM-IV diagnosis and in 33 healthy controls. Basal cortisol levels did not differ between patients and controls, while significantly higher post-dexamethasone cortisol levels were found in patients (7.52±6.28 vs. 3.76±2.45; p<0.05). Non-suppressor patients were characterized by specific symptoms, including depressed mood, anhedonia, low self-esteem, asthenia, indecision, low affectivity, lack of concentration and psychotic symptoms. Early life events were significantly more frequent among non-suppressor patients (<0.05). HPA axis dysfunctions seem to be present in psychiatric patients irrespective of the DSM-IV diagnosis and to be associated to a specific symptoms pattern and to a history of stressful life events during childhood/adolescence.

PO3.63.
FAMILY FUNCTIONING AS A FACTOR CORRELATING WITH QUALITY OF LIFE IN PATIENTS WITH TYPE 2 DIABETES MELLITUS

M. Takaishi, T. Saeki, K. Ishida, K. Daikoku, S. Hiraoka, T. Komo, S. Tazuma, S. Yamawaki
Department of Psychiatry and Neurosciences, Graduate School of Biomedical Sciences, Hiroshima University; Department of General Medicine, Hiroshima University Hospital; Department of Diabetes Metabolism Internal Medicine, Hiroshima General Hospital; Harada Hospital, Hiroshima, Japan

This study aimed to investigate the relationship between diabetes-related quality of life and family functioning among patients with type 2 diabetes and their family members. Ambulatory patients with type 2 diabetes were drawn consecutively from the inpatient population participating in a two-week educational intervention program at Hiroshima General Hospital and Harada Hospital. Written informed consent for the study was obtained from the enrolled subjects. Before and after the intervention program, the subjects and their family members completed the Zung Self-rating Depression Scale, the Zung Self-rating Anxiety Scale (SAS), and the subjects also completed the Diabetes Quality of Life (DQOL) and the Problem Areas In Diabetes scale. Family functioning was assessed by the Family Assessment Device (FAD) before the program. Multiple regression analysis showed that lower SAS score at discharge (t=-3.430, p=0.001) and lower FAD Affective Involvement score (more adequate affective interaction in a family) assessed by a family member (t=-3.420, p=0.002) were significantly correlated with the increase of patient's DQOL score. The findings of the study suggest that diabetes-related quality of life might be correlated with family functioning, especially "affective involvement", reflecting the extent to which family members show interest in, and place value on, one another. Consequently, diabetes care professionals should devote attention not only to the patient but also to other family members, and intervene to promote appropriate affective interaction in the family.

PO3.64.
SUICIDE ATTEMPTS AND IDEATION IN TYPE 1 DIABETIC PATIENTS

A. Roy, M. Roy
Psychiatry Service, Department of Veterans Affairs, New Jersey Healthcare System East Orange, NJ; Institute of Ophthalmology, University of Medicine and Dentistry, Newark, NJ, USA

This study aimed to examine suicidality and its correlates in type 1 diabetic patients. Four hundred and thirty nine type 1 diabetic patients underwent a semi-structured interview and were asked if they had ever attempted suicide. Patients also completed the Childhood Trauma Questionnaire (CTQ), Hostility and Direction of Hostility Questionnaire (HDHQ), and Beck Depression Inventory (BDI). Of the 439 patients, 55 (12.5%) had attempted suicide and 46 (10.5%) had current suicidal ideation. Significantly more of the attempters were female. Attempters, compared to non-attempters, had experienced significantly more childhood trauma, had higher HDHQ hostility scores, had a more frequent lifetime history of smoking, alcohol abuse, and drug abuse; and had higher current BDI depression scores. Multivariate analyses showed that severity of childhood abuse, female sex, hostility, history of alcohol abuse, and depressive symptoms were significantly and independently associated with having attempted suicide. These findings suggest that patients with type 1 diabetes have a high risk of attempting suicide. Suicidal behavior in diabetics appears to be multifactorial and includes gender, developmental, personality, and psychiatric determinants.

PO3.65
THERAPEUTIC LIFE STYLE MODIFICATION PROGRAM CAN IMPROVE QUALITY OF LIFE IN WOMEN WITH METABOLIC SYNDROME

E.G. Oh, S.H. Kim, S.Y. Bang, S.S. Hyun, Y.K. Jeon, J.A. Im, M.K. Lee, J.E. Lee, S.H. Chu
Yonsei University College of Nursing, Seoul, Korea

The metabolic syndrome (MetS), with associated increased cardiovascular disease risk, is prevalent among postmenopausal women. Although therapeutic lifestyle modification (TLM) has been recommended as a cornerstone therapy, studies investigating the effects of TLM on health related quality of life (HRQOL) are limited. This study was to evaluate HRQOL outcomes of a six-month TLM in postmenopausal women with MetS. A randomized controlled design was used. Fifty-four women (mean age of 63.2 years) with Mets were recruited from community health centers and randomly assigned to the intervention (n=31) or control (n=23) groups. The subjects in the intervention group participated in a supervised weekly TLM session for six months. The TLM program consisted of health monitoring, education, aerobic exercise (40-min/session, 200 Kcal/day), and a low calorie diet with low carbohydrate (≈1300 Kcal/d). Those in the control group received a booklet about MetS and were instructed to maintain their usual diet and activities. HRQOL was measured using the MOS SF-36 before, during (month 3), at completion (month 6), and after completion of the TLM program (month 12). Generalized estimating equation (GEE) analysis was used to evaluate HRQOL outcomes. There were significant group by time interactions for physical function (p=0.017), general health (p=<0.001) and vitality (p=0.008). Physical function (mean 9.4-point change), general health

(mean 25.4-point change) and vitality scores (mean 14.9-point change) greatly improved in the treatment group over 6 months of TLM, compared with control group. However, the improvement of the HRQOL in the experimental group was not sustained at month 12. These data suggest that a systematic TLM program can improve quality of life in postmenopausal women with MetS.

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PO3.66. METABOLIC SYNDROME AND PSYCHIATRIC COMORBIDITY: THE MODENA PROTOCOL

S. Po, M. Cameli, M. Forghieri, C. Giubbarelli, L. Pingani, S. Ferrari, E. Chiurlia, D. Iaccarino, M.G. Modena, M. Rigatelli
Department of Neuroscience, Section of Psychiatry; Department of Emergency, Cardiology Unit, University of Modena and Reggio Emilia, Modena, Italy

The metabolic syndrome, with its associated complications, is a substantial public health problem, and its prevalence is increasing as a consequence of lifestyle changes. The prevalence of the syndrome among psychiatric patients has been previously studied in association with schizophrenia, bipolar disorder and depression. The aim of our study is to explore psychiatric morbidity in patients with the syndrome. A protocol for the assessment of psychiatric comorbidities through several rating scales (HAM-A, MADRS, HAM-D, SF-36, SCL-90, SQ, TCI) and a detailed psychiatric interview is being implemented in the assessment of patients with metabolic syndrome seen at the Cardio-Metabolic Center of Modena General Hospital. The relationship between psychiatric and cardiological morbidity will be evaluated.

PO3.67. FAMILY FUNCTIONING CORRELATES WITH PSYCHOLOGICAL MORBIDITY IN BREAST CANCER SURVIVORS: A 3-YEAR FOLLOW-UP STUDY

T. Saeki, M. Takaishi, T. Mantani, S. Tazuma, S. Yamawaki, T. Kataoka, S. Inoue
Graduate Schools of Biomedical Sciences and Health Sciences, Hiroshima University; Senogawa Hospital, Hiroshima, Japan

Considerable psychological morbidity associated with breast cancer has been documented, and there is some evidence to indicate that family functioning plays an important role for such morbidity. The purpose of the study was to identify family factors related to psychological distress among breast cancer survivors. One hundred ambulatory patients after mastectomy for stage I or II localized breast cancer were consecutively drawn from the outpatient population of the Mammary Gland Dispensary of Hiroshima University Hospital during the 6 month period from October 1999 to March 2000. Written consent was obtained after the patients and their husbands had been fully informed of the purpose of the longitudinal study. 74 patients participated in the study at more than three months after mastectomy (Time 1) and 63 survivors were followed up three years later (Time 2). The survivors completed the Zung Self-rating Depression Scale, the Zung Self-rating Anxiety Scale, the 20 item Toronto Alexithymia Scale, and the Family Assessment Device (FAD) at Time 1 and Time 2. Multiple regression analysis showed that Affective Responsiveness, one of 6 domains of perceived family functioning assessed by the FAD, at Time 1 significantly correlated with both depression and anxiety among survivors at Time 2. These findings suggest that inappropriate affective responsiveness in the family could predict later psychological distress among breast cancer survivors, and that psychosocial interventions that could improve affective responsiveness among family members might contribute to promoting breast cancer survivors' psychological well-being.

PO3.68. USING PERSONALITY CHARACTERISTICS TO INDIVIDUALIZE INFORMATION TO CANCER PATIENTS

G. Kallergis, C. Bentenidis
Faculty of Nursing, Department of Mental Health and Behavioural Sciences, University of Athens; Department of Psychiatry, Metaxa Cancer Hospital, Piraeus, Greece

Disclosure of information to cancer patients is an issue of continuous and great interest. There is a wide-scale debate underway about the questions "do we disclose diagnosis or not", "what should we tell", "how much information should we reveal". Usually, the answers to those questions are general rules of approaching the patient, instructions and general communication skills. What we are missing here is individualization, tailoring information and communication to each patient according to their own personality characteristics. The purpose of this paper was to provide a guide that will make individualization possible, taking into account personality characteristics. We provide a description of the main personality types and of how we can use character traits to inform a patient or, otherwise, how do we tailor information to a patient's personality characteristics. Thus, we address the questions of how much do we inform, what words should we use, what do we say, when do we say it and how can information be in line with the therapeutic relationship and patient follow-up. On the whole, there is the view that information within the context of doctor-patient communication should be a subject of training.

PO3.69. EFFECTIVENESS OF ESCITALOPRAM IN THE TREATMENT OF ADJUSTMENT DISORDERS DURING THE COURSE OF CANCER

L. Fei, R. Modiano, M. Garro
Unit of Psycho-Oncology, Department of Oncology, Careggi Hospital, Florence, Italy

The authors investigated the effectiveness of various antidepressants in the treatment of depressive adjustment disorders during the course of cancer. A sample of 40 patients (heterogeneous for sex, age, education, psychopathological condition, type and stage of disease) was treated for at least two months with one or more antidepressants (citalopram, sertraline, fluvoxamine, escitalopram, mirtazapine). Each subject had been previously evaluated by SCID I. Follow-up assessment was made by HADS, BDI and CGI-S at baseline, week 1, 2 and 4, and month 2, 3 and 6. From week 2 until month 6, escitalopram revealed its superiority vs. the other drugs in terms of lower drop-outs, better tolerability and better maintenance of antidepressant response.

PO3.70.
THE IMPACT OF DEPRESSION AND ANXIETY SYMPTOMS ON QUALITY OF LIFE AND FUNCTIONING IN PATIENTS WITH CANCER: A PRELIMINARY REPORT FROM NIGERIA

R. Uwakwe, S.N.C. Anyanwu, I. Modebe, H. Nzeakor, C. Umeokonkwo, N.N. Ezeama
Nnamdi Azikiwe University, Nnewi Campus, Anambra State, Nigeria

Previous studies have shown that a good proportion of patients with cancer suffer from psychiatric disorders. Psychological issues in cancer research in Nigeria are still scanty. The primary objective of the present study is to assess the symptoms of depression and anxiety and their effects on quality of life and functioning in a heterogeneous population of patients with cancer. Our sample consisted of patients with cancer seen in the Surgical Oncology Unit of Nnamdi Azikiwe University Hospital, a 750-bed tertiary health care and research institution in eastern Nigeria. The 26 item World Health Organization Quality of Life (WHO QoL Bref), Hospital Anxiety and Depression Scale (HADS), WHO Disability Assessment Schedule (WHO DAS) were used. Data collection started in 2007 and is still ongoing. Thirty-six patients have been recruited (32 females, 88.9%), aged 27-70 years, mean 50±11.2 SD. Anxiety and depression had the same rate (47.3%). Patients who had no anxiety or depression scored higher in all the QoL domains. The patients experienced various difficulties in all the WHO DAS domains. Neither QoL nor WHO DAS predicted depression or anxiety. Four patients (11.1%) had zero role performance. The total QoL did not correlate with the total WHO DAS scores (r=-.49, p=.08). All the four QoL domains correlated inversely with all the WHO DAS domains.

PO3.71.
ASSESSMENT OF DEFENSE MECHANISMS IN PATIENTS DIAGNOSED WITH TERMINAL STAGE CANCER

D. Vasile, O. Vasiliu
Department of Psychiatry, "Dr.Carol Davila" Emergency Military Central Hospital, Bucharest, Romania

During the evolution of cancer, various ego defense mechanisms are activated. Many of the patient's behaviors (compliance to treatment, relationships with family members, trust and authority investment in the therapeutic team) are related to the action of these defense mechanisms. The final stage of a cancer evolution stands as a difficult period for the patients, but also for their relatives. This study aimed to evaluate the association between ego defense mechanisms and Kubler-Ross stages of the reaction to dying. We used Perry's Defense Mechanism Rating Scale (DMRS) and a structured interview focused on reaction to the disease, in a group of 15 patients, 8 men and 7 women, mean age 67.3 years, diagnosed with cancer in metastatic stage. Patients were in different stages of the dying process and activated various defense mechanisms. Patients in the second stage frequently used projection (40%) and splitting (40%) and those in third phase used projection (33%) but also reactive formation (46%). The fourth phase was dominated by devaluation (46%), turning against the self (40%), autistic fantasy (25%). Those who reached the last phase had high level adaptive defenses such as affiliation (26%), humor (13%) and altruism (13%). Thus, there was a correlation between the defense mechanisms used and the stages of Kubler-Ross model. This is important to take into account in order to offer these patients adequate support from the therapeutic team.

PO3.72.
COMBINED TREATMENT FOR DEPRESSION IN A SAMPLE OF ONCOLOGIC PATIENTS

B. Rodríguez-Vega, P. Orgaz-Barnier, G. Benito-Ruiz, A. Palao-Tarrero, G. Torres-Sancho, C. Bayon-Pérez, A. Fernandez-Liria
Hospital La Paz; Hospital Príncipe de Asturias, Madrid, Spain

We studied 67 patients with major depression (according to the DSM-IV, as ascertained by the Structured Clinical Interview for DSM-IV, SCID) and colon, breast or lung cancer, who were randomly assigned to a combined treatment (antidepressant plus psychotherapy) or to drug treatment plus usual care. The main outcome measure was the Quality of Life Questionnaire Core (QLQ C-30) a specific measure of quality of life in cancer patients. All the subjects completed the QLQ C-30 at baseline and after 3 and 6 months of treatment. At 3 and 6 months, patients allocated to the combined treatment had a significantly greater improvement on every subscale of the QLQ (except on constipation and diarrhoea) compared with patients in the drug treatment group. Global health status was statistically different at six months of treatment.

PO3.73.
BODY MASS INDEX AND RISK FOR WHITE MATTER DYSFUNCTION IN HIV/AIDS

L. Bauer
Department of Psychiatry, University of Connecticut School of Medicine, Farmington, CT, USA

Within the brain, obesity and HIV/AIDS primarily affect white matter. An excess body mass index (BMI) or waist-to-hip ratio has been associated with either an increased prevalence of white matter lesions and hyperintensities, or a general increase in white matter volume. In addition, slowed neural processing times and increased evoked electroencephalographic response latencies have been documented. HIV/AIDS has been reported to effect similar, albeit greater, changes. The potential therefore exists for an elevated BMI and HIV/AIDS to interact. The present study investigated the independent and interactive effects of the absence (n=68) vs. presence (n=102) of HIV/AIDS, a normal (n=85) vs. overweight BMI (n=85), and the absence (n=64) vs. presence (n=106) of substance abuse or dependence on P300 electroencephalographic potentials (ERP). ERPs were recorded during a cognitive task designed to evoke subcomponents with frontal (P300a) vs. both frontal and nonfrontal (P300b) generators. The analysis revealed greater frontal P300a latencies among HIV-1 seropositive vs. seronegative participants. In addition, frontal P300a latency was further increased by a synergistic interaction of HIV/AIDS and BMI: the presence of both disorders was associated with greater slowing than could be explained by the sum of their independent effects. A history of substance abuse/dependence did not confound this interaction. Its interactions with HIV/AIDS or BMI were restricted to P300a and P300b amplitudes. As the obesity epidemic increasingly affects the HIV-1 seropositive population, and the disease processes interact, HIV/AIDS patients may again face neurophysiological or neuropsychological impairments which impact their quality of life and their risk for frank neurological signs or symptoms.

PO3.74.
PSYCHIATRIC COMORBIDITY IN END STAGE LIVER DISEASE PATIENTS WITH AND WITHOUT HIV INFECTION

V. Barbanti Silva, S. Ferrari, L. Pingani, M. Rigatelli
Department of Neuroscience, Section of Psychiatry, University of Modena and Reggio Emilia, Modena, Italy

An observational prospective study was conducted, comparing end stage liver disease (ESLD) patients with and without HIV. Baseline evaluation was made before the inclusion in the transplantation waiting list, by using the Transplant Evaluation Rating Scale (TERS) and the Montgomery-Asberg Depression Rating Scale (MADRS). A follow-up was made 12 months later. From January 2003 to December 2006 we assessed 553 patients: 39 with HIV and 361 without HIV. The two groups were homogeneous for gender (75% of male patients; p=ns) but not for age (46±5 vs. 56±9 years; p=ns). Psychiatric anamnesis was negative in 176 (49%) patients without HIV and in 6 (15%) patients with HIV (p<0.001). At baseline, psychiatric comorbidity was present in 33 HIV patients (85%) and in 148 non-HIV patients (41%) (p<0.001). At follow-up, the MADRS highlighted an improvement on all the items for HIV patients, but not for non-HIV patients. These data suggest that psychiatric comorbidity, in particular depression and anxiety symptoms, is more common in ESLD patients who are also HIV-positive, and that this comorbidity is responsive to treatment.

PO3.75.
A RANDOMIZED CLINICAL TRIAL EVALUATING A COPING IMPROVEMENT GROUP INTERVENTION FOR HIV-INFECTED OLDER ADULTS

T. Heckman, K. Sikkema, N. Hansen, A. Kochman, V. Heh
Ohio University College of Osteopathic Medicine, Athens, OH; Yale University School of Medicine, New Haven, CT; Duke University School of Medicine, Durham, NC, USA

Through 2006, more than 124,000 persons in the United States were 50 years of age or older when they were diagnosed with AIDS. This study examined if a 12-session coping improvement group intervention could reduce depressive symptoms in HIV-infected older adults compared to a 12-session attention-control support group and a no treatment control condition. A three-armed, randomized clinical trial with four assessment points was carried out. Between 2004 and 2007, 303 persons 50-plus years of age living with HIV/AIDS (203 men and 100 women, mean age=55.3 years) were recruited in New York City (n=240), Columbus, Ohio (n=33) and Cincinnati, Ohio (n=30). Using audio-computer assisted self-interviews, participants provided data on depressive symptoms, social support, and coping self-efficacy at pre-intervention, post-intervention, and 4- and 8-month follow-up. Intervention-related changes on outcome measures were examined using linear mixed models. All analyses controlled for pre-intervention values of outcome measures and participants' use of psychotropic medications. Coping intervention participants reported fewer depressive symptoms and greater coping self-efficacy at post-intervention and 4-month follow-up compared to attention equivalent and no-treatment controls (p<0.05), although intervention gains were lost by 8-month follow-up. Coping intervention participants received more support from friends at 8-month follow-up compared to attention equivalent and no treatment controls (p<0.05). These data suggest that coping improvement group interventions produce significant, albeit short-term, reductions in depressive symptoms and increases in coping self-efficacy in HIV-infected older adults.

PO3.76.
DEMORALIZATION IN HEART TRANSPLANTED PATIENTS: RELATIONSHIPS WITH MAJOR DEPRESSION AND PSYCHOLOGICAL WELL-BEING

L. Sirri, S. Grandi, E. Tossani, C. Magelli, G.A. Fava
Department of Psychology and Cardiovascular Department, University of Bologna, Italy

The relationship of demoralization with major depression and psychological well-being has received scanty research attention. In a sample of cardiac recipients, we examined overlap rates between demoralization and depression, the associations of demoralization with psychological well-being, quality of life and psychological distress, and whether they differed according to the addition of major depression. Ninety-five heart transplanted patients were administered the Structured Clinical Interview for DSM-IV and the Diagnostic Criteria for Psychosomatic Research (DCPR), leading to the identification of major depression and demoralization respectively. Patients also completed Ryff's Psychological Well-being Scales, Kellner's Symptom Questionnaire and the World Health Organization Quality of Life-Brief. Demoralization according to DCPR and DSM-IV major depression were found in 31 (32.6%) and 14 (14.8%) patients, respectively. Among depressed subjects, 35.7% were not demoralized and 71% of those with demoralization did not satisfy the criteria for major depression. Demoralization was related to impairments in quality of life and psychological well-being and was associated with higher psychological distress. The co-occurrence of a major depressive episode did not alter this pattern of associations. Thus, major depression and demoralization did not appear to be linked by a hierarchical relationship. Demoralization, as defined by DCPR, seems to collect several phenomenological manifestations of psychological distress and impaired well-being independently from major depression. Psychotherapeutic strategies for demoralized patients should be aimed at the promotion of the sense of mastery and amelioration of self-acceptance. Pharmacological strategies specifically addressing demoralization need to be developed.

PO3.77.
SELECTIVE SEROTONIN REUPTAKE INHIBITORS IN PATIENTS RECOVERING FROM ACUTE CORONARY SYNDROMES: A SYSTEMATIC REVIEW AND META-ANALYSIS

M. Mazza, M. Lotrionte, G. Biondi-Zoccai, A. Abbate, I. Sheiban, E. Romagnoli
Institutes of Psychiatry and Cardiology, Catholic University, Rome, Italy; Division of Cardiology, University of Turin, Italy; VCU Pauley Heart Center, Medical College of Virginia, Richmond, VA, USA

We sought to compare antidepressant therapy with selective serotonin reuptake inhibitors (SSRIs) vs. control treatment in patients with a recent acute coronary syndrome (ACS). BioMedCentral, CENTRAL, and PubMed were searched for pertinent studies (November 2007). Changes from baseline to follow-up in depression score, major adverse cardiac events (MACE) and hospitalizations were pooled with random or fixed-effect methods. Inclusion criteria for retrieved studies were randomized treatment allocation to an SSRI vs. control treatment, in patients with acute or recent (<4 weeks) acute coronary syndromes, reported as intention-to-treat. Eight randomized trials (3,454 patients) were included. Twelve studies were excluded because unpublished, ongoing, or duplicates. Subjects treated with SSRIs showed, after a median of 6 months, a significant improvement in depression

symptoms (average change in depression score=-2.05, 95% confidence interval: -3.95 to -0.15, p=0.03), and a significantly lower rate of re-hospitalization (absolute risk difference=10%, confidence interval: 1 to 19%, p=0.03). Therapy with SSRIs was notably safe, with similar rates of adverse events, including MACE, death, myocardial infarction or repeat revascularization (all p>0.05). These data suggest that antidepressant therapy with SSRIs, given its efficacy and safety, should be routinely considered in patients with a recent ACS and depression symptoms.

PO3.78.
PLATELET AND ENDOTHELIAL FUNCTIONING FOLLOWING SSRI TREATMENT FOR MAJOR DEPRESSION IN CORONARY ARTERY DISEASE: COMPARING RECENT DRUG TRIAL FINDINGS

L.T. van Zyl, V.L. Serebruany
Queen's University and Kingston General Hospital, Kingston, Canada; HeartDrug Research LLC and Johns Hopkins University, Baltimore, MD, USA

Major depression is an independent risk factor for increased morbidity and mortality in patients with coronary artery disease (CAD). Possible mechanisms include increased platelet activation and vascular endothelial dysfunction. The effects of major depression and treatment with two different selective serotonin reuptake inhibitors (SSRIs) on platelet activation and endothelial function were reviewed in the context of findings of well-designed and conducted trials, namely the platelet and endothelial sub-studies of SADHART and CREATE. Treatment of depression with sertraline in patients with CAD is associated with platelet and endothelium deactivation that correlates with blood levels of the active treatment substance. Studies demonstrate that citalopram also has potent anti-platelet effects. Platelet function is strongly negatively correlated to the plasma levels of sertraline and its inactive metabolite. In addition, citalopram has demonstrated SSRI-stimulated enhanced production of nitric oxide, the latter of which has favourable effects on vascular function in general. These findings link SSRI treatment of depression in patients with CAD and other peripheral vascular disease with lowered morbidity and improved survival potential.

PO3.79.
DEPRESSIVE, OBSESSIVE AND ANXIETY DISORDERS AMONG PATIENTS WITH CARDIOVASCULAR DISEASES

A. Mkrtchyan
Department of Psychiatry, Psychotherapy and Medical Psychology, National Institute of Health, Yerevan, Armenia

The purpose of the study was the investigation of depressive, obsessive and anxiety disorders among patients with heart diseases. Fifty patients with cardiovascular pathology aged 23-78 years (37 males and 13 females), were randomly selected and examined. Forty-five had ischemic heart disease and five other diseases. Depressive disorders were present in 62% of the sample, and anxious-hypochondriac disorders in 58%. Depressed patients often expressed complaints including pessimistic perception of the disease with overestimation of its severity and consequences, anxiety and hypochondriac fears related to somatic disease. The psychopathological structure of depression in persons with heart diseases is characterized by the predominance of anxiety and hypochondriac features.

PO3.80.
DEPRESSION IN RHEUMATIC PATIENTS

E. Tedeschini, D. Ferrari, M. Giunti, S. Ferrari, C. Ferri, M. Rigatelli
Psychiatry and Rheumatology Units, University of Modena and Reggio Emilia, Modena, Italy

We considered 30 consecutive patients with rheumatoid arthritis, RA (F:M=25:5; mean age 63±13 years; mean disease duration 12±8 years), 30 with systemic sclerosis, SSc (F:M=29:1; mean age 54±11 years, mean disease duration 7.9±6 SDys), 30 with fibromyalgia, FM (F:M=29:1; mean age 48±7 years; mean disease duration 3.3±1.9 years). We administered the Beck-Depression-Inventory (BDI), the Visual Analog Scale (VAS) of pain and the Health Assessment Questionnaire (HAQ). The prevalence of depression was 23.3% in RA, 46.7% in FM and 16.7% in SSc. The FM group had a VAS-pain significantly higher than RA and SSc, while the RA group had a higher disability. SSc patients complained, more than the others, about lack of familiar support and admitted that physical modifications induced by disease (PMID) substantially influenced their relations. These findings confirm the high prevalence of depression in rheumatic patients; this might be mostly related with pain in FM group, disability in RA, lack of familiar support and PMID in SSc. According to these findings, a screening using BDI might be helpful, and rheumatic patients should be managed using a multidisciplinary approach including psychiatric support.

PO3.81.
SUICIDAL IDEATION IN PATIENTS WITH RHEUMATOID ARTHRITIS

K. Michelidakis, J. Myriokefalitakis, M. Tsakiri
Department of Psychiatry and Department of Rheumatology, Asklipion Hospital, Voula, Athens, Greece

This study was carried out in 88 rheumatoid arthritis patients, who were evaluated for suicidal thoughts. Study participants were administered a semi-structured psychiatric interview as well as a series of standardized quantitative scales of mood, cognitive function and physical impairment. The psychometric instruments measuring the structure and expression of hostility, anxiety and depression were the HDHQ, the SCL-90R and the DSSI/SAD. Ten patients (11.3%) expressed significant suicidal intentions. Suicidal ideation was significantly associated with depressive disorders, especially major depressive disorder. The severity of physical illness was not an independent risk factor for suicidal ideation. Follow-up evaluations revealed that 8 of the 10 patients improved and were no longer suicidal. The patients whose depressive disorders did not improve remained suicidal at follow-up. The detection and treatment of depressive disorders among rheumatoid arthritis patients may play an important role in preventing suicide among patients.

PO3.82.
BARIATRIC SURGERY AND SUICIDE

L. Scheinkman, M. Thoscan, C.A. Mendonca Lima
Institute of Psychiatry, Federal University of Rio de Janeiro, Brazil; Hospital N.Sra da Oliveira, Guimaraes, Portugal

Bariatric surgery is a therapeutic intervention considered efficacious in the treatment of morbid obesity. It is at times recommended not only as a means of decreasing body weight, but also in an attempt to ameliorate quality of life, to decrease risk factors for other diseases associated with obesity and to help psychological functioning. Nevertheless, there is a subgroup of patients, not adequately studied so far,

in whom this type of intervention may be associated with an increase in suicide risk. We performed a systematic review of the literature looking at bariatric surgery and suicide, using key words such as "suicide", "bariatric surgery", "adverse effects", and "outcome". We found 53 articles looking at the association between suicide and bariatric surgery, in the last 28 years. Of those, only 6 (totaling 19,813 subjects) presented the actual number of completed suicide following bariatric surgery. Protocols are needed for candidates to bariatric surgery that take into consideration psychological and psychiatric factors.

PO3.83. MOTHERHOOD FOLLOWING INFERTILITY TREATMENT: PERINATAL ATTACHMENT AND WELL-BEING FROM PREGNANCY TO 12 MONTHS POSTPARTUM

E. Appelman
Bar Ilan University, Ramat Gan, Israel

The evolving technological procedures assisting the achievement of pregnancy and the increasing prevalence of motherhood after successful infertility treatment provide the backdrop to the urgency to examine the longitudinal effects of infertility on motherhood after successful treatment. Although infertility is believed to affect approximately one in every six couples, reports on the impact of successful infertility treatment on the transition to caregiving are preliminary, anecdotal and inconsistent. The aim of this longitudinal study is to examine the impact of successful infertility treatment on a woman's attachment to her infant and her own well-being from pregnancy to 12 months postpartum. The study examined the contribution of the woman's own attachment organization to the transition to caregiving and its role as moderating the relation between infertility, caregiving and maternal well being and marital satisfaction. It is suggested that the infertility crisis, which rekindles past attachment issues, challenges the re-organization of the attachment system, the ability to heal prior unfavorable attachment patterns and transition into a mature caregiver. The longitudinal study involves 100 primiparous women who were recruited during their second trimester of pregnancy, 50 of whom achieved pregnancy after treatment and 50 conceived spontaneously. AAI, Strange Situation, Edinburgh Postnatal Depression Scale, Speilberger's State-Trait Anxiety Inventory and Intimate Bonds Measure were among the indices used in this study. Women were assessed at five time points: second and third trimester and at 1, 6, and 12 months postpartum.

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PO3.84. ATTACHMENT STYLE AND PSYCHOPATHOLOGY PROFILE OF TURKISH INFERTILE WOMEN

G.B. Comert-Agouridas, C. Algan
Department of Psychiatry, Marmara University, Istanbul, Turkey

Attachment style is an important factor underlying the well-being and functioning of infertile persons. The aim of our study is to examine the contribution of attachment style to the psychopathology profile of primary infertile women who required assisted reproductive technologies (ARTs). We also want to examine if there are differences in the attachment styles of infertile women when they are classified according to the aetiology of their infertility (unknown/known reason) and their compliance with ARTs. This study involves 40 primary infertile women. The Turkish version of Mikulincer's Attachment Style Questionnaire, the Beck Depression Inventory, the Symptom Check List 90-R, the Stait-Trait Anxiety Inventory, and the Quality of Life (SF-36) Questionnaire are among the instruments used in the study.

PO3.85. PSYCHOPATHOLOGICAL FACTORS IN WOMEN BECOMING PREGNANT USING ASSISTED REPRODUCTION TECHNIQUES

M.I. Ramos-Fuentes, M.I. Cardoso, F.J. Vaz-Leal, N. Fernández-Sánchez, E.M. González-Iglesias, L. Rodríguez-Santos
University of Extremadura; University Hospital Network, Extremadura Health Services, Badajoz, Spain

The study was aimed to explore differences on a psychopathological basis between women who had conceived using in vitro fertilization techniques (IVF) and women who had conceived naturally. The sample consisted of 41 pregnant women; 28 of them had become pregnant after participating in an assisted IVF program and 13 had conceived naturally. All women were evaluated at week 20 of pregnancy, using the Symptom Checklist-90-Revised (SCL-90-R). Women in the IVF program had higher scores on the SCL-90-R anxiety scale (p=0.045) and lower scores on the SCL-90-R hostility scale (p=0.041) than women who had conceived naturally. Further research is needed to confirm these preliminary findings and to explore their potential impact on pregnancy outcome and future mother-infant attachment.

PO3.86. RELATIONSHIP BETWEEN PREMENSTRUAL SYMPTOMS AND SELF-PERCEPTION OF FEMININITY IN KOREAN WOMEN

Shin Young Suh
Department of Psychiatry, Bundang Cha Hospital, Pochon CHA university, Seongnam, Korea

This study aims to investigate the hypothesis that women with premenstrual syndrome (PMS) have more feminine perception of sex role than those without PMS. A total of 337 nurses participated as subjects. Of these subjects, 187 provided valid data and were included in the study. Evaluation tools were the Daily Record of Severity of Problems (DRSP) and the Korea Sex Role Inventory (KSRI). Subjects were grouped as no PMS and PMS. The PMS group consisted of subjects who marked at least one item in DRSP with functional disability. PMS and non-PMS groups showed a statistically significant difference in femininity and masculinity (p=0.05). The first item (depressed) and the 11th item (overwhelmed) had a negative correlation with femininity (r=-1.90, -1.56, respectively, p<0.05). This study suggests that perception of sex role as a female may have some degree of effects on symptom severity of PMS. Women with more feminine perception of their sex role may suffer less depression or feeling of being overwhelmed during PMS period. This result may imply that a cognitive approach which enables more feminine perception of sex role can help PMS patients cope better with their symptoms.

PO3.87.
EFFECT OF SELECTIVE SEROTONIN REUPTAKE INHIBITORS ON TEMPERAMENT AND CHARACTER IN PATIENTS WITH FIBROMYALGIA

M. Mazza, O. Mazza, M. Pomponi, M. Di Nicola, L. Padua, M. Vicini, P. Bria, S. Mazza
Institute of Psychiatry and Department of Neurosciences, Catholic University of Sacred Heart of Rome; Orthopaedic and Trauma Surgery, Bambino Gesù Paediatric Hospital, Palidoro-Rome, Italy

The purpose of the present study was to assess a group of patients with fibromyalgia and control subjects using the personality questionnaire proposed by Cloninger and to determine possible changes in the Italian version of the Temperament and Character Inventory-Revised (TCI-R) patterns of fibromyalgia patients after therapy with serotoninergic antidepressants (SSRIs). Sixty patients with fibromyalgia filled out the TCI-R and Beck Depression Inventory (BDI) before and after 6-month therapy with SSRIs (escitalopram 10 mg, fluoxetine 20 mg or paroxetine 20 mg). A total of eighty age-, sex-, and education level-matched healthy subjects were selected as a control group. Both in the pre-treatment and post-treatment period, patients were found to have higher harm avoidance (HA) and lower self-directedness (SD) scores than healthy controls. Besides, harm avoidance and self-directedness were state and trait dependent.

PO3.88.
STRESSFUL LIFE EVENTS, PERSONALITY DISORDERS AND PEMPHIGUS: DOES A LINK EXIST?

F. Rossano, E. Ruocco, F. Perris, A. Baroni, M. Fabrazzo, F. Catapano
Department of Psychiatry and Section of Dermatovenereology, University of Naples SUN, Naples, Italy

Psychological stress has been suggested to be a potential triggering factor of pemphigus. However, this hypothesis has not been thoroughly investigated. To this purpose, we explored recent stressful life events and personality disorders in 25 consecutive subjects with pemphigus. Baseline information was collected on demographic characteristics, family history, presence of psychopathology, the impact of stressful life events occurring within one year prior to onset of pemphigus, presence of Axis I and Axis II diagnosis, using standardized instruments. Patients affected by pemphigus were matched for number, age and gender with subjects with other skin diseases and with healthy volunteers. All pemphigus patients had a negative anamnesis for Axis I diagnosis. Pemphigus patients showed a significantly higher global score on the Comprehensive Psychopathological Rating Scale (CPRS) and the Montgomery-Asberg Depression Rating Scale (MADRS). Cases and controls did not differ regarding the total number of stressful events experienced. Uncontrollable and undesiderable events had occurred more frequently among pemphigus patients than controls. In 68% of pemphigus patients at least one personality disorder was diagnosed; there was a high prevalence of obsessive-compulsive and avoidant personality disorder. These findings suggest that stressful life events might increase vulnerability to pemphigus and that personality features might modulate individual susceptibility to illness.

PO3.89.
MEDICATING MALINGERERS: A CASE STUDY OF FEIGNED SICKLE CELL DISEASE

A. Welch, S. Sachdeva, C. Chung, A. Alao
SUNY Upstate Psychiatry, Syracuse, NY, USA

There are various complications of sickle cell disease (SCD), with the most common resulting from ischemia of the bone marrow. While depression, anxiety, and post-traumatic stress disorder have been described, psychiatric complications are not well documented in SCD. A 17 year old African American female entered the emergency room with right tibia and fibula fractures. She reported having SCD with bone pain crises previously treated with ketorolac and meperidine. On this occasion, radiological studies did not confirm sickle cell changes. A subsequent immunoglobulin electrophoresis came back hemoglobin AA. After the patient received notification she did not have SCD, she attempted to leave against medical advice. Her fractures were treated and she was discharged. DSM-IV defines malingering as "the intentional production of false or grossly exaggerated physical or psychological symptoms". One previous report of malingering sickle cell crises exists. This case pointed out that the motivation to gain narcotic analgesics is a determining factor for malingering vis-à-vis factitious disorder, in which the primary goal is to assume the sick role. Clinicians may assume the validity of a self-reported SCD history. In this case, physicians prescribed narcotics without objective evidence of SCD pathology. We suggest verification of SCD diagnosis in order to prevent unnecessary prescription of narcotics.

PO3.90.
MALINGERING IN SICKLE CELL DISEASE

A. Alao, L. Howard
Polytrauma System of Care, Department of Psychiatry, SUNY Upstate Medical University, Syracuse, NY, USA

Sickle cell disease (SCD) is a genetic disorder of the blood that most often affects people of African, Middle Eastern, Mediterranean, and Asian ancestry. In individuals homozygous for this trait, over 50% of the hemoglobin is hemoglobin S. Approximately one out of 600 African-Americans has SCD. This report will describe the case of a 27 year old African American who expressed suicidal ideation after his pain was not adequately controlled in the emergency room. He has had several visits to the emergency room including three previous hospitalizations for sickle cell bone pain crisis management. He went to the emergency room with intense pain in his right leg, which was not relieved by Ibuprofen. In the emergency room he was treated with 50 mg of meperidine and re-hydrated with normal saline. After two hours, the emergency room physician discharged him. The patient felt he was not adequately treated and requested more pain relief, but was denied. At this point, he expressed suicidal ideation with a plan to shoot himself when he got home. As a result, psychiatric consult was requested. Upon psychiatric evaluation, he reported that he did not really plan to kill himself. The psychiatrist recommended hospitalization of the patient in the medical unit and aggressive pain management protocol. This is a case of a patient with SCD in bone pain crisis who expressed suicidal ideation as a cry for help. While this behavior from patients should not be encouraged, patients with documented SCD in bone pain crisis should be adequately treated.

PO3.91.
EFFECTIVENESS OF PSYCHOEDUCATIONAL GROUP THERAPY IN AN ACUTE PSYCHIATRIC WARD

F. Margari, G. Viola, P. De Luca, M. Lorusso, G. Punzi, R. Mianulli, M. Achille, O. Todarello
L. Bini Unit, University Hospital of Bari, Italy

The aim of this study was the evaluation of a psychoeducational intervention in an acute ward, based on a cognitive-behavioural approach implemented by two weekly groups. The data analysed are based on a sample of 114 male inpatients, divided in an experimental group (61 patients taking part in the psychoeducational groups) and a control group (53 patients not involved in any of these activities). Psychopathological symptoms were assessed through BPRS and CGI scales administered at the first (T0) and the last day (T1) of hospitalization. Preliminary data of this study confirm the effectiveness of the psychoeducational groups in the implementation of the process of care in acute inpatients, fostering reciprocal aid-mechanisms among them and increasing their awareness of the symptoms.

PO3.92.
HEART RATE VARIABILITY BIOFEEDBACK FOR NON-INVASIVE STIMULATION OF VAGAL OUTFLOW

M. Mück-Weymann, R. Beise, D. Löllgen
Clinic of Psychotherapy and Psychosomatic Medicine, Dresden University of Technology, Dresden, Germany; Institute of Behavioural Medicine and Prevention, UMIT, Hall, Austria

In recent years, heart rate variability (HRV)-biofeedback has been proposed as a helpful tool to treat stress symptoms, asthma, hypertension, depression and panic disorders among others. HRV is characterised by multi-frequent oscillations during rest or states of relaxation, whereat the so-called respiratory sinusarrhyhtmia (RSA) is dominant. A relative stable rhythm is found around 0.1 Hz (6/min), representing the activity of the baroreflex loop. During RSA training the patient is asked to preferably breathe in the baroreflex-rhythm, resulting in a harmonized or coordinated state of heart rate, blood pressure and breathing frequency. A successful HRV-biofeedback can increase psychophysical relaxation as well as the vagal outflow to the heart. Possibly via a vagal pathway, it might have an impact on central nervous processes also (like an implemented "vagus pacemaker").

PO3.93.
CONSULTATION-LIAISON PSYCHIATRY IN PRIMARY CARE: AN EXPERIENCE IN MODENA, ITALY

E. Tedeschini, N. Colombini, E. Simoni, S. Ferrari, M. Rigatelli
Psychiatry Unit, University of Modena and Reggio Emilia, Modena, Italy

We report on a collaborative project between a primary care and a mental health service to improve treatment of common psychiatric disorders. Two groups of consultations for general practitioner (GP)-referred patients were defined: those at the mental health service in the years 2003-2004 and those at the GP clinic in 2006-2007. Sociodemographic and clinical data were collected by reviewing clinical charts. Sixty-one patients were referred and assessed at the GP clinics in the 8 months considered; 289 at the MHS in years 2003-2004. Comparing the two groups, no statistical differences were found as to diagnoses ($p>0.05$) and outcomes ($p>0.05$).

PO3.94.
SUCCESSFUL TREATMENT OF CO-MORBID CHRONIC PAIN AND MAJOR DEPRESSION WITH ECLECTIC/INTEGRATIVE PSYCHOTHERAPY AND PHARMACOTHERAPY: A CASE REPORT

K. O'Connor, S. Aslam
Division of Consultation Liaison Psychiatry, SUNY Upstate University, Syracuse, NY, USA

Patients with co-occurring chronic pain and depression are common and often challenging to treat. Chronic pain is a disorder with multifactorial origins, which include the original physical injury, but is also associated with abuse, "victimization", childhood neglect and a range of psychosocial stressors. Various medications, such as anti-depressants, anti-epileptics, non-steroidal anti-inflammatories, muscle relaxants and opioids, are commonly used as first line interventions. Medications alone can be effective, but a multidisciplinary approach which includes psychotherapy is often necessary. Cognitive behavioral therapy (CBT) has been shown to improve mood, decrease pain, improve fatigue and insomnia, as well as increase physical functioning and stress management. Deconstructive dynamic psychotherapy (DDP) has shown to be an effective treatment for the core symptoms of borderline personality disorder (BPD). We suggest that similar "core" symptoms can also arise in patients who are attempting to cope with chronic pain, including unstable self image, feelings of emptiness, fear of abandonment, intense interpersonal relationships, and reactivity of mood leading to episodes of depression, anxiety and possibly intense anger. We present a case of a 54 year old female patient with comorbid chronic pain and depression who improved significantly after treatment in the outpatient psychiatry clinic with medication management and eclectic psychotherapy. Combined CBT, DDP and supportive therapy techniques were utilized in this patient's care.

PO3.95.
CHANGE THE MIND AND YOU CHANGE THE BRAIN: FUNCTIONAL MAGNETIC RESONANCE IMAGING INVESTIGATES TREATMENT RESPONSE TO COGNITIVE BEHAVIORAL THERAPY IN PATIENTS WITH CHRONIC PAIN

M. Naylor, M. Krauthamer, J. Dumas, C. Filippi, P. Newhouse
Departments of Psychiatry and Radiology, University of Vermont, Burlington, VT, USA

This study aimed to investigate whether cognitive behavioral therapy (CBT) modifies the dysfunctional neural circuitry associated with chronic pain, as examined by functional magnetic resonance imaging (fMRI) using the emotional stimuli from the Ekman's Picture Set and from the International Affective Picture Set (IAPS). A two step experiment was carried out to test: a) whether there is a difference in amygdala reactivity to emotional stimuli between chronic pain patients and healthy controls; b) whether 11-week CBT has the potential to modify the dysfunctional neural circuitry associated with chronic pain. Nine patients with musculoskeletal chronic pain were enrolled and compared to healthy controls. Exclusion criteria were major depression, dysthymia, panic disorder, post-traumatic stress disorder (PTSD). In the first experiment, chronic pain patients showed increased amygdala activation relative to controls ($p<0.01$) during viewing blocks of Ekman's faces. This result was replicated with the IAPS pictures paradigm. Results suggest that a phenomenon described in PTSD and depression occurs also in chronic pain patients even when they do not meet criteria for PTSD or depression. In the second experiment, chronic pain patients performed the same tasks as in the first experi-

ment before and after 11-week CBT. Results showed decreased activation in amygdala and the primary somatosensory cortex (S-1) and increased activation in the medial frontal gyrus after 11-week CBT as compared to baseline ($p<0.01$). Furthermore, we found correlations between the post-group increase in TOPS Life Control Measure and decrease in the amygdala ($p=0.033$) and S-1 ($p=0.002$) activations. Our findings suggest that CBT effectively influences dysfunctional neural emotional circuitry in chronic pain patients.

PO3.96. PSYCHOPATHOLOGY AND CHRONIC PAIN

M. Lorusso, F. Puntillo, F. Margari, O. Todarello, F. Bruno
L. Bini Unit and Pain Therapy Unit, University Hospital of Bari, Italy

We studied 50 patients with chronic pain, aged between 31 and 82 years, assessed by a case record form and different instruments (Hamilton Depression Rating Scale, Brief Psychiatric Rating Scale, QL-Index, TAS-20, Barratt Impulsiveness Scale and Modified Overt Aggression Scale). Patients with depression tended to report more intense pain and pain in more locations than patients without depression. Untreated depression may adversely affect the response to interventions for pain and the patient's quality of life.

PO3.97. PREVALENCE OF PHYSICAL COMORBIDITY AND MEDICAL SCREENING AMONG CHINESE PSYCHIATRIC INPATIENTS

E. Lee
Department of Psychiatry, Chinese University of Hong Kong, China

This study explored the prevalence of physical comorbidity among psychiatric inpatients treated with antipsychotics and the pattern of glucose investigation prior to admission in Hong Kong. A total of 246 antipsychotic-treated psychiatric inpatients of a psychiatric unit from January to December of 2007 were randomly selected. Their glucose level prior to admission, past medical history, past psychiatric history and demographic data were retrieved from case records. 21.5% of subjects had physical comorbidity and 10.6% of subjects had diabetes mellitus. 68.3% of subjects had a glucose investigation prior to admission. Past history of physical disease, number of previous psychiatric admissions and age were factors associated with prior glucose investigation using binary logistic regression analysis. Use of second-generation antipsychotics, diagnosis, duration of mental illness and sex were not associated with prior glucose investigation. Physical comorbidity is common among psychiatric inpatients treated with antipsychotics. Regular medical screening may help to identify undiagnosed physical problems.

PO3.98. NEURONAL DEGENERATION AND AMYLOID DEPOSITION IN BRAIN IN DIFFERENT AGE GROUPS: A POST-MORTEM STUDY

A. Maqbool, H.R. Chaudhry, M. Tahir
Department of Psychiatry, Ram Hospital, Lahore, Pakistan

This was a post-mortem study of neuronal degeneration and amyloid deposition in the brain carried out in different age groups. Group I consisted of people less than 30 years of age, group II of people between 30 and 60 years of age and group III of people above 60 years of age. The study focused on cerebral cortex and hippocampus. The slides were stained with haematoxylin and eosin and Congo red stains, and were observed under light microscope. In individuals without any indication of having Alzheimer's disease, some degree of amyloid deposition was observed in the superior frontal gyrus, located principally in the layer II and III. This type of deposition was also well demonstrated in the hippocampus. "Corpora amylacea" were frequently found under the ependymal lining of the inferior horn of the lateral ventricle and in the subpial surface of cerebral cortex. There was considerable variance in the neuronal count in hippocampus and in frontal lobe of the cerebral cortex among different age groups.

PO3.99. EVALUATION OF A COMMUNITY-BASED GERIATRIC MENTAL HEALTH PROGRAM

D. Roane, K. Danis, M. Oberlink
Beth Israel Medical Center; New School for Social Research; Center for Home Care Policy and Research, New York, NY, USA

We are assessing the outcome of a community-based geriatric mental health program at the Lincoln Square Neighborhood Center (LSNC). The goal is to study 80 seniors at the LSNC, including 40 mental health program patients and 40 controls. Participants are administered the Brief Symptom Inventory (BSI), Personal Well-being Index, Satisfaction with Life Scale, and State Boredom Measure in an interview format. Interviews are repeated 3 months after baseline. In addition to these interviews, AdvantAge Initiative conducted a resurvey in 2008, including 136 residents, age 65 years and older, via telephone. According to the resurvey results, in the 2008 sample, 20% reported feeling depressed or anxious compared to 25% in 2002. Seventy-four percent of those affected individuals reported receiving help, an increase of 36% from 2002. Outcome study data has been collected on 32 individuals. This study group includes 69% females, 31% African-Americans, 50% Hispanics and 67% with low incomes. Preliminary analysis of the BSI in our treatment group reveals that 67% of subjects have significant psychopathology, including 41% with significant depression and 27% with significant anxiety. The BSI also demonstrates that 63% of individuals in the treatment group have a withdrawn and isolated lifestyle. Thus, the AdvantAge resurvey indicates that our program has succeeded in increasing the accessibility of mental health services in this elderly community. A preliminary examination of outcome shows that we are reaching a population which can benefit from such services. We hope to demonstrate that our approach decreases psychiatric symptoms and improves quality of life in the individuals who receive active treatment.

PO3.100. TREATMENT OF AGITATION AND PSYCHOSIS IN DEMENTIA: CLINICIANS' OPINIONS

M. Serby, D. Roane, M. Lantz, A. Cohen, A. Turok, T. Perlis
Department of Psychiatry and Behavioral Sciences and Baron Edmond de Rothschild Chemical Dependency Institute, Beth Israel Medical Center, New York, NY; Department of Psychiatry, Albert Einstein College of Medicine, Bronx, USA

Pharmacologic treatment of the behavioral and psychological symptoms of dementia (BPSD) has been affected in the United States by the Food and Drug Administration's (FDA) black-box warning about the use of atypical antipsychotics (AAs) in dementia and by the results of Clinical Antipsychotic Trials of Intervention Effectiveness-Alzheimer's Disease (CATIE-AD) study. This study sought treatment opinions about the effectiveness, safety and choices of medications for BPSD. An effort was made to identify factors contributing to treat-

ment choices. A 13-item questionnaire was administered to 140 attendees at the American Association for Geriatric Psychiatry's Annual Meeting (2007). Rates of responses to each question were tabulated. Secondary analyses correlated rates of response between certain questions to highlight factors influencing opinions. The largest number of respondents (48%) chose cholinesterase inhibitors (ChIs) for agitation and AAs for psychosis (72%). Many who chose AAs for psychosis ignored their own understanding of the black-box warning and the CATIE-AD results. People in practice for less than 15 years were more likely to heed the medicolegal implications of the black-box warning. Safety is a major concern when ChIs are chosen for agitation, while the preference for AAs in psychosis is often made despite the black-box warning and the findings of the CATIE-AD study. The rationale for the choice of AAs is unclear. A more definitive scientific basis for pharmacotherapy of BPSD is an essential need.

PO3.101.
RATES OF REMISSION AMONGST ELDERLY SCHIZOPHRENIA PATIENTS TREATED WITH LONG-ACTING RISPERIDONE

S. Tadger
Abarbanel Mental Health Center, Bat-Yam, Israel

Remission in schizophrenia has been considered until recently attainable only in a minority of patients. In elderly schizophrenia patients, remission is especially difficult to obtain, due to long disease duration, exposure over years to differing treatment regimes, long-standing side-effects, non-adherence, cognitive decline and physical co-morbidity. This study aimed to evaluate remission in elderly schizophrenia patients over a 1-year course of treatment with i.m. long-acting risperidone (LAR). We conducted a retrospective chart review of all elderly (60 years and older) schizophrenia patients admitted to a university affiliated tertiary psychiatric center. All patients evaluated were experiencing an exacerbation at time of admission. The criteria for remission were as defined by the APA's Remission in Schizophrenia Working Group. In addition, clinical status and improvement were quantified using the Clinical Global Impression scale. During 2006, 48 elderly schizophrenia patients were admitted to our center. Of these, 25 were treated with LAR, 18 women and 7 men, mean age 72 years (range: 62-81), mean disease duration 30.4 years (range:14-42) and mean number of previous hospitalizations 8.9 (range:1-21). Co-morbid physical illness was present in 12 patients. Of 25 patients treated with LAR, 19 (76%) continued uninterrupted treatment for 6 months or longer. In 6 patients treatment was discontinued due to insufficient response. Following 6 months of LAR treatment, mean dose 36.0 mg/2 weeks (range: 25-50), 18 patients were rated as "improved" or "very much improved" on the CGI-I scale. In 15/25 patients (60%), symptomatic remission was achieved. Thus, long-acting risperidone treatment was found to be effective in achieving remission among elderly schizophrenia patients. Tolerability was high. The inherent bias in a retrospective analysis is a limitation of this study. These findings need further support from prospective trials.

PO3.102.
A 12-WEEK, DOUBLE-BLIND, RANDOMIZED, PLACEBO-CONTROLLED STUDY EVALUATING THE EFFICACY AND SAFETY OF ESZOPICLONE IN ELDERLY OUTPATIENTS WITH PRIMARY INSOMNIA

S. Ancoli-Israel, A. Krystal, W.V. McCall, K. Schaefer, R. Claus, R. Rubens, T. Roth
University of California at San Diego, San Diego, CA; Duke University Medical Center, Durham, NC; Wake Forest University Health Sciences, Winston-Salem, NC; Sepracor Inc., Marlborough, MA; Myriad Genetics Inc., Salt Lake City, UT, USA; Henry Ford Sleep Disorders Center, Detroit, MI, USA

The $GABA_A$ receptor modulator eszopiclone provides short-term sleep benefits to elderly patients with primary insomnia. This study was conducted to evaluate the long-term effects of eszopiclone in elderly outpatients. This was a randomized, placebo-controlled study. After 1 week of single-blind placebo, eligible participants (aged 65-85 years) with primary insomnia (total sleep time, TST, ≤6 hours; wake time after sleep onset, WASO, ≥45 minutes) received double-blind eszopiclone 2 mg (n=194) or placebo (n=194) nightly for 12 weeks, then single-blind placebo for 2 weeks. Electronic daily diaries captured subjective sleep (TST; sleep latency, SL; WASO) and daytime function outcomes. Treatments were compared using analysis of covariance. Adverse events (AEs) were monitored. Eszopiclone significantly improved all sleep and daytime function outcomes relative to placebo at each timepoint during double-blind treatment (all $p \leq 0.02$). After treatment discontinuation, sleep outcomes were significantly improved compared to baseline in the eszopiclone group ($p \leq 0.01$). The most commonly reported AEs were headache (eszopiclone 13.9%, placebo 12.4%) and unpleasant taste (eszopiclone 12.4%, placebo 1.5%). In conclusion, eszopiclone significantly improved patient-reported sleep and daytime function relative to placebo in elderly patients with primary insomnia. Improvements occurred rapidly and were sustained for 3 months, with no rebound insomnia following treatment discontinuation. Eszopiclone was well tolerated.

PO3.103.
RELIABILITY AND VALIDITY OF THE KOREAN VERSION OF THE MEMORY IMPAIRMENT SCREEN AS A DEMENTIA SCREENING INSTRUMENT

S.M. Chang, S.H. Jeong, H.D. Rim, S.J. Lee, U.S. Jeong, H.Y. Jo, J.M. Woo, J.Y. Lee
Department of Psychiatry, Kyungpook National University School of Medicine, Daegu; Department of Psychiatry, Seoul National University Boramae Hospital, Seoul, Korea

The aims of this study were to develop the Korean Version of Memory Impairment Screen (MIS-K), to assess its reliability and validity, and to show its usefulness as a dementia screening instrument. A total of 124 participants (34 dementia patients and 90 normal controls) were administered the MIS-K, the B-ADL (Korean version), the L-IADL (Korean version), the MMSE-KC, the BDS-K (Korean Behavioral Dyscontrol Scale) and the GDS (Geriatric Depression Scale). The inter-rater reliability, test-retest reliability and internal consistency of the MIS-K were analyzed. To verify the concurrent validity of MIS-K, correlations with the other tests were analyzed. The sensitivity and specificity for each cut-off point of MIS-K were estimated and the receiver operator characteristic (ROC) curve method was performed to get its optimal cut-off point. The MIS-K was found to have significantly high internal consistency, inter-rater reliability, and test-retest reliability. The significant correlations of MIS-K with other tests were

also shown. The optimal cut-off point was estimated as 5/6, and the sensitivity and specificity were 0.94 and 0.93, respectively. The ROC curve analysis indicated that the diagnostic efficiency of MIS-K was comparable with that of MMSE-KC. We conclude that the MIS-K has not only high reliability and validity, but is also useful as a screening instrument for dementia.

PO3.104.
PATTERN OF CEREBRAL ANOMALIES IN OLDER PERSONS WITH SCHIZOPHRENIA OR ALZHEIMER'S DISEASE

M. Boccardi, D. Paternicò, A. Prestia, C. Geroldi, A. Adorni, G.B. Frisoni
IRCCS S.Giovanni di Dio, Fatebenefratelli, Brescia, and AFaR (Associazione Fatebenefratelli per la Ricerca), Rome, Italy

Different cognitive impairment is described for people with Alzheimer's disease (AD) and for elderly people with schizophrenia, but the differences in the patterns of cerebral anomalies at direct comparison of the two conditions is unknown. The study aimed to identify the differences in the grey (GM) and white matter (WM) of people with geriatric schizophrenia and AD with voxel-based morphometry (VBM). Twenty elderly subjects with schizophrenia (age: 67.7±6.2; sex: 10 females) from a psychogeriatric ward, 19 consecutive outpatients with AD (73.2±9.0; 12 females) and 19 controls (73.1±7.3; 14 females) underwent high resolution 3D magnetic resonance imaging. VBM was performed with SPM2, (optimized protocol). P was set at 0.05-*FDR* corrected for the comparisons with controls and at 0.005 uncorrected for direct comparisons of patient groups. Subjects with schizophrenia compared to controls had smaller GM in the thalamus, parahippocampal gyrus and putamen. Smaller clusters of atrophy were located in the cingulate, insular, frontal and occipital gyri. AD patients vs. controls had atrophy in the thalamus, medial frontal gyrus, and parietal lobe, extending to the cuneus and precuneus. On the direct comparison of schizophrenia vs. AD, a cluster of atrophy could be observed in the precuneus of AD patients. The WM experiment showed atrophy along the whole corpus callosum in schizophrenics vs. controls and, although to a lesser extent, in the AD sample vs. controls. On the direct comparison the schizophrenia sample exhibited smaller WM volume in the right cerebellum. Thus, the patterns of GM and WM anomalies were largely overlapping in schizophrenia and AD patients, but the two samples showed an opposite trend, with greater GM involvement in the AD sample, and more WM anomalies in the schizophrenia sample. This may reflect the different pathogenesis of the two conditions: degenerative in AD and developmental in schizophrenia.

PO3.105.
TREATMENT OF LATE LIFE DEPRESSION ASSOCIATED WITH MILD COGNITIVE IMPAIRMENT

R.M. Chenderes, C. Mila, D.M. Podea, P.D. Nanu
Departments of Psychiatry and Neurology, University of Arad, Romania

The aim of this study was to determine the influence of mild cognitive impairment (MCI) on the outcome of late life depression. We recruited 60 patients diagnosed with late life depression (ICD-10 and DSM-IV criteria, age over 65 years) and MCI (score between 21 and 28 on the Mini Mental State Examination, MMSE). The patients were divided into two groups: group A (30 patients treated with mirtazapine, 15-30 mg/day, and piracetamum, 1600 mg/day) and group B (30 patients treated with mirtazapine only) The evaluation was done at recruitment, after 6 weeks and after 6 months of treatment. Cognitive impairment was evaluated with the MMSE and depressive symptoms with the Montgomery-Asberg Depression Rating Scale (MADRS). The average of MMSE scores for group A were 26.3 at recruitment, 27.9 after 6 weeks and 28.6 after 6 months. Group B improved by only 1.5 points after 6 weeks (from 25.7 to 27.2) and by only 1.8 points after 6 months (from 25.7 to 27.5). The improvement on the total MADRS score was 7.6 points for group A vs. 4.9 points for group B after 6 weeks and 11.2 and 7.3 points, respectively, after 6 months. These data suggest that MCI has a better outcome in patients treated with antidepressants and nootropics than in those treated only with antidepressants.

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PO3.106.
ANTIOXIDANTS ASSOCIATED WITH NOOTROPICS IMPROVE MILD COGNITIVE IMPAIRMENT IN A POPULATION OVER 65 YEARS OLD

D.M. Podea, P.D. Nanu
Departments of Psychiatry and Neurology, University of Arad, Romania

With aging, oxidative stress may cause mild cognitive impairment (MCI). We evaluated the improvement of cognitive functions using nootropics alone or nootropics associated with antioxidants in a late life population with MCI. We included 60 patients with MCI (Mini Mental State Examination, MMSE score between 21 and 28), over 65 years of age. They were divided into two groups: group A (n=30) treated with piracetam (1600 mg/day); group B (n=30) treated with coenzyme Q10 (30 mg/day) plus piracetam (1600 mg/day). They were evaluated using MMSE at admission, and after 1, 3 and 6 months of treatment. After 1 month of treatment, the mean MMSE score improved by 0.2 points in group A and 0.4 points in group B. After 6 months of treatment, those treated with piracetamum+CoQ10 had an increase in the MMSE median score of 3.3 points, vs. 1.3 points in group A. The association of piracetam and CoQ10 may improve the cognitive functioning by several mechanisms: the reduction of inflammation, excitotoxicity and oxidative stress, or the triggering of axonal/dendritic sprouting.

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PO3.107.
CONCEPT OF DEPRESSION-DEMENTIA INTERMEDIATE ZONE

T. Kobayashi, S. Kato
Department of Psychiatry, Jichi Medical University, Tochigi, Japan

In this rapidly aging society, clinicians are faced with more and more mentally disordered elderly people. Among mental disorders in the elderly, depression and dementia are the most common in clinical practice. However, both sometimes coexist, succeed each other, and confuse clinicians. It has been argued that depression can be distinguished from apathy in dementia by its emotional responses expressed as negative thought about self, present, and future, despair, helplessness, and pessimism. It has been pointed out that depressive symptoms such as sadness, diurnal variation in mood, early and late insomnia allow to differentiate major depression from Alzheimer's disease. However, the distinction is not always so clear in clinical situations. Our clinical experience with patients who develop dementia after the

onset of depression, patients with residual dementia after treatment for depression, and patients with reversible dementia-like symptoms, namely pseudodementia, suggest that depression and dementia are not clearly distinguishable states. The clinical concept of depression-dementia transition zone, which includes pseudodementia and depression in Alzheimer's disease as examples, is proposed. The relationship between depression and manifestation of dementia symptoms is discussed from a broader standpoint, referring to the concept of psychological tension by Pierre Janet.

PO3.108. TREATING MILD COGNITIVE IMPAIRMENT WITH AN HERBAL AGENT

C. Mila, R.M. Chenderes, D.M. Podea
Department of Psychiatry, University of Arad, Romania

Rhodiola-rosea is an herbal alternative treatment for mild cognitive impairment (MCI). Its extract have complex effects on brain function. The aim of this study was to determine, comparatively, the outcome of the patients diagnosed with MCI treated with nootropics (piracetam) and Rhodiola-rosea. The study included 40 elderly patients diagnosed with MCI (score between 21 and 28 points on the Mini Mental State Evaluation (MMSE). These patients were divided in two groups: 20 patients treated with piracetamum 1600 mg/day (group A); 20 patients treated with Rhodiola-rosea 2 capsules/day (group B). The patients were evaluated by the MMSE at the inclusion into the study, after 1 month and after 6 months of treatment. The average MMSE scores at recruitment was 23.7 for group A and 24.1 for group B. After 1 month of treatment, cognitive performance improved by 1.45 points in group A and 1.5 points in group B. After 6 months of treatment, cognitive performance improved by 4 points in group A and 2.75 points in group B. Thus, the outcome after 1 month of treatment was approximately the same, and after 6 months was better for patients treated with nootropics.

PO3.109. FACTORS INFLUENCING SENSE OF POWER IN ELDERLY PEOPLE IN IRAN

M. Ravanipour, S. Salehi, F. Taleghani, H. Abedi, M.J. Schuurmans, A. De Jong
Boushehr University of Medical Sciences, Boushehr, Iran; Isfahan University of Medical Sciences, Isfahan, Iran; University of Applied Sciences, Utrecht, The Netherlands

Older adult population is increasing in Iran as well as in the rest of the world. Power is a resource for living that is present in all individuals, and has a positively uplifting effect on quality of life. In a grounded theory approach, we searched for the factors influencing sense of power. Twenty-six elderly people were interviewed about the concept of power. The interviews were analyzed using Strauss and Corbin analysis technique. The main categories that emerged from this qualitative study included: awareness of personal changes, adaptation, role playing, perceived self ability, independence, being under self control, and self-management. Elderly people's informed acceptance of their changes, willing and trying to maintain their independence and roles by the aid of adaptive mechanisms confirm their ability in managing their lives and eventually remain in control of their own lives and keep the perception of self ability. Self-management plays a role as a core category in the concept of power in Iranian elderly.

PO3.110. BRIDGING THE SERVICE BARRIER: A PSYCHOGERIATRIC OUTREACH INITIATIVE FOR FRAIL OLDER PERSONS

J. Kua, Y.S.C. Tan, J.L. Yeo
Aged Psychiatry Community Assessment and Treatment Service, Institute of Mental Health/Woodbridge Hospital, Singapore

The Aged Psychiatry Community Assessment And Treatment Service (APCATS), launched in 2006, provides community psychogeriatric case management for frail elderly with mental disorders. Regular telephonic consultations for caregivers and home medication delivery are also components of the service. The key outcome measures include hospital admission, length of stay, and caregiver burden (ZBI, NPI-CDS). Rating scales used to assess intervention include the MADRS (for depression), the NPI (for behavioral symptoms in dementia) and the CGI-C. The Modified Barthel Index (MBI) is used to quantify the functional status of the patients. At the end of 2 years, 128 patients were assessed. The mean age was 77.0±8.7 years; 51.6% were female; 54.7% were diagnosed with dementia, 21.1% with depressive disorder and 19.6% with psychotic disorders. At baseline, 33.3% had a MMSE of <10. Forty percent had severe or complete functional dependence (MBI<60). 103 were followed up for 6 months or more. At 6 months, 65.6%, 81.3%, 81.3% and 54.7% had at least 20% improvement on the MADRS, NPI, NPI-CDS and ZBI respectively. 75.3% were rated to have improved on the CGI-C. Comparing the 6 months post and pre-enrollment, the total number of hospitalizations was reduced from 57 to 9, and total LOS reduced from 2565 to 271 days. The mean difference in number of admissions between post-APCATS and pre-APCATS was -0.60 ($p<0.001$). The mean LOS post-APCATS was significantly lower than pre-APCATS: -18.7 days ($p<0.001$). These data validate the clinical utility and effectiveness of APCATS in reducing hospitalization.

PO3.111. MOBILE PHONE VIDEO STREAMING IN ALZHEIMER'S DISEASE: USER CASE REPORTS

S. Mason, M. Donnelly, D. Craig, C. Nugent, P. Passmore, M. Mulvenna
Department of Geriatric Medicine, Belfast City Hospital/Queens University of Belfast; School of Computing and Mathematics, University of Ulster, UK

Demographic changes highlight the need to address disabilities associated with the costly morbidities of old age such as dementia. Easy to use technological solutions offer a means of home support. The present research project focuses on assisting persons with early Alzheimer's disease (AD) in the area of memory support through the delivery of frequent memory cues. Specifically, we are developing an entirely novel system to permit caregivers to record video reminders for scheduled transmission over-the-air. The reminders are delivered in the form of a video message, displayed on a mobile phone to provide a "virtual carer" for the person with AD. Initially, three young controls navigated the programme and recorded reminders. Feedback was generally favourable. The system was user friendly, but message volume was poor and the weight of the device a possible drawback. The second control group (2 sets of older participants) gave positive feedback. Audio volume of the delivered messages was still reported as an issue. Finally, the system was piloted with two AD/carer couples. Initially feedback was positive and the carer navigated the system with ease. Technical problems, which occurred during the trial, hindered full analysis of the system's potential. Initial feedback of the system has

been positive. Overall, it was found simple to use and navigate. Further field testing is required to validate technical functionality and the effectiveness of the approach as a reminding tool.

PO3.112.
LONGITUDINAL CORRELATES OF CAREGIVER RECOGNITION OF DEMENTIA IN THE COMMUNITY

S.J. Cho, P.V. Rabins, B. Black, J. Kasper, H.B. Lee
Department of Psychiatry, Gachon University of Medicine and Science, Incheon, South Korea; Department of Psychiatry and Behavioral Science, School of Medicine, Johns Hopkins University, Baltimore, MD, USA

Early recognition of dementia by the caregiver allows appropriate diagnosis, intervention, and treatment for improving morbidity. But the caregiver often does not recognize dementia, especially in its early stages, which results in the late detection of the illness. The objective of this study is to examine predictors of recognition of dementia by the caregiver in the community. The Memory and Medical Care Study (MMCS) is a three-year, prospective cohort study of community elders who are at high risk for dementia. Of the 498 elderly participants of MMCS, 349 subjects were diagnosed with dementia based on a validated neuropsychological battery. Out of 349 subjects with dementia, 164 subjects (47.0%) whose dementia diagnosis was unrecognized by their caregiver at baseline comprised the study sample. We examined predictors of caregiver recognition of dementia during a three year follow-up period by comparing baseline subject characteristics (sociodemographic variables, caregiver-rated health and mental health of elderly participants, and health and mental health-related variables) of those with recognized vs. unrecognized dementia. During the three year follow-up, the caregiver recognized dementia in 60 (36.6%) out of 164 subjects. Multivariate Cox regression analysis revealed that only poor caregiver-rated mental health of elderly participant predicted caregiver recognition of dementia. These data suggest that the rate of caregiver recognition of dementia is low in the community. Some interventions are needed for the caregiver to be more vigilant in the recognition of dementia for cognitively impaired elders.

PO3.113.
WHO PAYS THE PIPER: DEPRESSION TREATMENT AMONG THE US ELDERLY AND THE IMPACT OF COST-SHARING

S. Crystal, A. Akincigil, M. Siegel
Center for Pharmacotherapy, Chronic Disease Management, and Outcomes, Institute for Health, Rutgers University, New Brunswick, NJ, USA

Variations in healthcare coverage and required cost-sharing, particularly for medications, may affect depression treatment among the elderly. We examine roles of these and other factors among elderly diagnosed with depression in the Medicare Current Beneficiary Survey, a large, nationally representative sample of U.S. elderly. Prescription drug coverage quality was measured by ratio of out-of-pocket to total prescription drug expenditures (<30% = "comprehensive" coverage), controlling for gender, age, race/ethnicity, education, income, perceived access to care, functional impairment, disease severity, self rated health and comorbidities. Coverage and its quality were both predictive of treatment. Relative to no-coverage, the OR in 1999-2004 was 1.38 (CI 1.01-1.89) for limited coverage and 2.46 (CI 1.77-3.41) for comprehensive coverage. Other self-reported access barriers did not predict treatment; results did not change when treatment was defined as either psychotherapy or antidepressant. We also found continued racial disparities in treatment rates. In 1999-2004, African Americans continued to have lower odds of receiving antidepressant treatment (OR=.51; CI .36-.74), as did individuals with income under 150% of poverty. There was no evidence of improvement in the gap for African Americans from the 1992-98 period, when the odds ratio for treatment was .56 (CI .34-.91). Results indicate that disparities in depression treatment persist for African American elderly in the U.S. diagnosed with depression; that the extent of required cost-sharing as well as the presence of coverage predict treatment; and that lack of comprehensive prescription drug coverage may be a barrier to access to treatment for depression among the elderly.

PO3.114.
CONSULTATION-LIAISON PSYCHIATRY FOR THE ELDERLY: AN ITALIAN EXPERIENCE

M. Forghieri, L. Pingani, C. Giubbarelli, S. Po, M. Rigatelli
Department of Neuroscience, Section of Psychiatry, University of Modena and Reggio Emilia, Modena, Italy

We retrospectively analysed psychiatric consultations for elderly people collected in 2007 at the Modena General Hospital, gathering information concerning sociodemographic data (age, sex) and clinical data (department requiring consultation and reason for referral, main organic pathology following ICD-9-CM classification, psychiatric diagnosis clustered following ICD-10 classification and psychopharmacological treatment suggested after consultation). Geriatric patients constituted 20.9% of all psychiatric referrals; their mean age was 75.6±7.5 years and they were predominantly females (62.9%). The hospital ward most frequently requiring psychiatric consultation was internal medicine (24.8%) and the most common reasons for referral were psychopathological assessment without specific symptom indication (31.1%) and suspected depression (27.9%). The most common organic pathologies were gastrointestinal diseases, and the most frequent psychiatric diagnoses were those of the F40-49 ICD-10 group (35.5%). Combined therapy with SSRIs and benzodiazepines was predominantly prescribed after the consultation (25.4%).

PO3.115.
COMBAT EXPOSURE AND MENTAL HEALTH: THE ROLES OF GUILT, RESENTMENT, AND FORGIVENESS

M. Lyons, J. Simpson, B. Jerskey, K. Brady, M. Tsuang
Boston University, Boston, MA; Veterans Affairs Boston Health Care System, Boston, MA; Brown University, Providence, RI; Tewksbury Hospital, Tewksbury, MA; University of California, San Diego, CA, USA

We examined how the relationship between combat exposure and several mental health variables is influenced by guilt, resentment, and forgiveness. Subjects were 157 monozygotic twin pairs from the Vietnam Era Twin Registry in which one man experienced high levels of combat in the Vietnam war and his co-twin did not serve in Vietnam. We assessed the twins about 30 years after the war. Combat veteran had poorer outcomes than their non-combat twins across the range of mental health variables. We quantified the effects of combat by calculating the difference between each combat veteran and his twin on the SF-36 Mental Health Scale, the Trait Anger Scale, the Existential Well-Being scale, and a scale of life satisfaction. Subjects who resented the war-related suffering they experienced compared to others and subjects who felt guilty about their wartime activities reported poorer mental health, less life satisfaction, and greater trait anger. Subjects with "survivor guilt", i.e., guilty feelings about surviving while others

did not, also had poorer mental health, life satisfaction, existential well-being, and greater trait anger. Combat veterans who reported having forgiven themselves and having forgiven others reported better mental health, life satisfaction, and existential well-being and less trait anger.

PO3.116. PSYCHOPATHOLOGY AND PSYCHOLOGICAL LONG-TERM FUNCTIONING AMONG AFRICAN UNACCOMPANIED REFUGEE MINORS IN AUSTRIA

J. Huemer, N. Karnik, C. Spatt, S. Voelkl-Kernstock, M.H. Friedrich, H. Steiner
Department of Child and Adolescent Psychiatry, Medical University, Vienna, Austria; Department of Psychiatry and Behavioral Sciences, Stanford University School of Medicine, Stanford, CA, USA; Department of Anthropology, History and Social Medicine and Department of Psychiatry, University of California School of Medicine, San Francisco, CA, USA; Sigmund Freud University, Vienna, Austria

In our population of African unaccompanied refugee minors in Austria (URMs), measures of post-traumatic stress disorder (PTSD) and general psychopathology revealed scores below the reported levels in refugee youth. Thus, the objective of the study was to probe these findings by analysing stress management and defensiveness and to measure psychological long-term functioning. We used the UCLA PTSD Index for DSM-IV, the Mini International Neuropsychiatric Diagnostic Interview for Children and Adolescents (MINI Kid) and the Weinberger Adjustment Inventory (WAI). The sample included 41 African URMs (male: 31; age range 15-18 years, mean 16.9 years). PTSD levels and psychopathology symptoms were below the scores reported in previous studies in refugee populations (MINI Kid: 19.5%; UCLA PTSD Index for DSM-IV: 17.1%). The internal consistency of the WAI was comparable to previous studies. WAI dimensions (repressive defensiveness, denial of distress, restraint and distress) differed significantly from the American norms: African URMs showed significantly ($p<0.05$) elevated levels of all mentioned dimensions, with repressive defensiveness reaching the highest scores. These results reveal the high degree of stress these adolescents are managing by minimization, denial and effortful emotional self-regulation. In a stress and strain paradigm, the described psychological pattern reflects their capability to be resilient and cope with adversity, without exhibiting high levels of psychopathology. However, they most likely retain sensitive trigger points for dysfunction which could be activated by sudden changes in allostatic loads, resulting in internalizing and externalizing morbidity.

PO3.117. FREQUENT ROAD RAGE AND PSYCHIATRIC DISTRESS

R.G. Smart, R.E. Mann, G. Stoduto
Social, Prevention and Health Policy Research, Centre for Addiction and Mental Health, Toronto, and Department of Public Health Sciences, University of Toronto, Canada

Road rage is a serious cause of death and injury in many countries. Cases have been reported from most countries in Europe, North America, Australia, and the Middle East. Road rage has been associated with high rates of psychiatric distress and with explosive disorders. However, the most serious road rage cases involving death and injury are caused by a relatively few frequent road ragers. More information is needed about the psychiatric problems of serious road ragers. The aim of this study is to examine the relationships between psychiatric distress and frequent road rage involvement. This study reports data on amount of road rage victimization and perpetration incidences in the last 12 months and measures of psychiatric distress derived from the 12-item General Health Questionnaire (GHQ-12) for a representative sample of 5,454 adults in Ontario. Regression analyses were implemented on total road rage victimization and total perpetration with sex, age, education, kilometres driven in a typical week, driving on busy roads, depressed mood-anxiety and social functioning scales of the GHQ-12 as independent variables. We found that as road rage victimization and road rage perpetration incidences increased the depressed mood-anxiety scores increased. The social functioning score was not found to be related to total road rage victimization or perpetration incidences. The results suggest that frequent road rage victims and frequent road rage perpetrators have elevated depression and anxiety. Further research should be undertaken to explain how mental health relates to road rage.

PO3.118. THE EFFECTIVENESS OF SCHOOL-BASED ANTI-BULLYING PROGRAMS: A META-ANALYTIC REVIEW

C. Ferguson, C. San Miguel, J. Kilburn, P. Sanchez
Texas A&M International University, Laredo, TX, USA

Youth violence, including bullying and other serious violent behaviors, has received increased political and scientific attention over the last several decades. While violent behavior among youth and in the schools has declined over the past decade, the victimization of children by other children in school settings remains a major issue of concern. In response to this concern, a number of prevention and intervention programs have been developed to reduce the incidence of bullying and violence in schools. This meta-analysis attempted to examine the impact of school-based anti-bullying programs. Results suggested a significant effect for anti-bullying programs of r=.12. However, this result seemed to be slightly influenced by publication bias, and did not meet the adopted threshold for "practical significance". The effect for programs targeted specifically at at-risk youth was slightly better, but overall, anti-bullying programs produce little discernible impact on youth participants.

PO3.119. INTIMATE PARTNER VIOLENCE SCREENING AND TREATMENT IN THE WORKPLACE

D.M. Felblinger, D. Gates
University of Cincinnati, OH, USA

The purpose of this study was to survey occupational health nurses who were direct care providers/case managers regarding their beliefs about their ability to screen for and treat domestic violence/intimate partner violence in the workplace. The specific research aims were: a) identify the educational training that occupational health nurses receive about workplace screening for and treatment of domestic violence; b) describe the occupational health nurses' beliefs about their ability to complete workplace screening for and treatment of domestic violence. Four hundred sixty four nurses providing direct care or case management throughout the United States anonymously completed the mailed instrument Occupational Health Nurses' Survey on Screening for Domestic Violence in the Workplace. Results of the study showed that, although occupational health nurses consider domestic violence screening and treatment to be components of their nursing role, they do not believe that they have had adequate training to competently and comfortably complete the screening and treat-

ment aspects of domestic violence care. The occupational health nurses also did not perceive that there were existing policies in their workplace to assist them in dealing with domestic violence cases. This study provided baseline information about screening and treatment for domestic violence by occupational health nurses in the workplace. Information from the study can be used as the foundation for future policy development and intervention research that benefits multiple stakeholders, including employees, employers, nurses and academicians.

PO3.120.
INCIVILITY, BULLYING, AND DISRUPTIVE BEHAVIORS IN THE WORKPLACE

D.M. Felblinger
University of Cincinnati, OH, USA

Incivility, bullying, and disruptive behaviors are intimidating forces that threaten the well-being of all health care providers in the workplace. The presence of these behaviors impacts the organizational climate and their negative effects multiply if left unchecked. Some healthcare providers are unfortunately accustomed to tolerating behaviors that are outside the realm of considerate conduct and are unaware that they are doing so. In order to eradicate incivility, bullying, and disruptive behaviors, health care providers and administrators must first understand what they are. There is a need for education and the development of strong codes of conduct and clear reporting mechanisms. Specific interventions are presented to target these behaviors, involve substantial input from all stakeholders, encourage interdisciplinary dialogue, reduce fear of retribution, and hold all team members accountable. Interventions that support organizational commitment to the health and well-being of all staff and administrators are also introduced. Development of interventions to facilitate safe clinical care and a collaborative environment requires thoughtful exploration and recreation of the conventional health care setting.

PO3.121.
PSYCHIATRIC MORBIDITY IN VICTIMS OF HUMAN TRAFFICKING IN SOKOTO, NIGERIA

M. Yunusa, A. Obembe
Department of Psychiatry, Usmanu Danfodiyo University, Sokoto, Nigeria

The study aimed to determine the sociodemographic characteristics and the prevalence of psychiatric morbidity among victims of human trafficking in Nigeria. Using a sociodemographic questionnaire and General Health Questionnaire (GHQ) – 28, all consenting adult victims rescued by National Agency for the prohibition of traffic in persons and other related matters (NAPTIP) were interviewed. The sociodemographic questionnaire was used to determine the sociodemographic features of the victims while the GHQ-28 was used to determine the presence of psychopathology. Only females were found in this study. Although their age ranged between 15 and 30 years, they were mostly young adults with poor educational achievement and low socioeconomic status. The prevalence of psychiatric morbidity among the victims was found to be high. The relevance of mental health input in rehabilitation of victims is discussed.

PO3.122.
CHARACTERISTICS OF DELIBERATE SELF-HARM PATIENTS IN A TEACHING HOSPITAL IN SRI LANKA

S. Williams, W.M.S.K. Wijesinghe, L. Warnakulasuriya, T. Fernando, L. Fernando, M.U.P.K. Peris, K.A.L.A. Kuruppuarachchi
Department of Psychiatry, Faculty of Medicine, University of Kelaniya; North Colombo Teaching Hospital, Ragama, Sri Lanka

Deliberate self-harm (DSH) is considered a major public health burden worldwide. Suicide prevention strategies often target this population as the risk of subsequent suicide is hundred fold in this group. The characteristics of this population may vary in different regions of the world. A descriptive study was conducted after informed written consent on all consecutive patients admitted following DSH to the North Colombo Teaching Hospital, Sri Lanka, over a period of one year. Data was collected using a structured questionnaire. The Beck suicide intent scale was administered to assess severity of intent. Nine hundred patients were included in the study. The female:male ratio was 2.8:1. The majority (58%) were young (16-25 years). Most were single (61%), employed (47%), living with a family member (81%), had not passed the eleventh grade ordinary level examination (60%) and had three or more siblings (48%). Previous psychiatric treatment (4.6%), alcohol consumption (5%) and previous attempts at DSH (24%) were lower than in studies in high income countries. Relationship problems with spouse or another family member accounted for the majority of the attempts (72%). Nineteen percent had been separated from one or both parents in childhood and 1% reported sexual abuse in childhood. The majority (56%) had low intent. There were similarities and differences in the characteristics of our patients with DSH, when compared with other studies, particularly in high-income countries. Higher first time DSH, lower alcohol and drug abuse, low intent and lack of a previous history of psychiatric illness suggest that the population at risk for DSH in low and middle-income countries may be different.

PO3.123.
PREVENTION AND INTERVENTION OF CYBER ABUSE TARGETING CHILDREN AND ADOLESCENTS: A SYSTEMATIC REVIEW TO EVALUATE CURRENT APPROACHES

F. Mishna, C. Cook, M. Saini
University of Toronto, Canada

The Internet provides innumerable possibilities for growth among children and youth, including benefits such as social support, identity exploration, and development of interpersonal and critical thinking skills, as well as educational benefits generated from access to knowledge, academic support, and worldwide cross-cultural interactions. The Internet is, however, concurrently a site for abuse and victimization. The incidence of cyber abuse is growing dramatically, including cyber bullying, cyber stalking, cyber sexual solicitation, and cyber pornography, with detrimental short and long term effects on the psychosocial functioning of the children and involved youth. As a result of increased reporting of cyber abuse, greater emphasis has been placed on developing prevention and intervention strategies to protect children online. This paper presents the results of a systematic review of literature – including electronic bibliographic databases, grey literature, journal hand searching and personal communication – evaluating the effectiveness of cyber abuse interventions. The review included experimental and quasi-experimental prevention and intervention strategies that targeted children between the ages of 5 to 19 years, uti-

lized a comparison group, and examined an outcome related to cyber abuse. Results suggest that education-based cyber abuse interventions increase Internet safety knowledge among participants, but have no clear impact on risky online behavior.

PO3.124.
VALUES OF MEDICINE VS. VALUES OF THE JUDICIARY: CLINICAL IMPACT

R. Peele, P. Gorji, M. Razavi
George Washington University and US Department of Justice, Washington, DC, USA

The values of the judiciary have a major impact on the values of medicine. Both the judiciary and medicine value a careful, respectful focus on the individual, but their respective approaches to this focus clash. Whereas the judiciary assumes an inherent conflict between the parties in pursuing justice, medicine assumes no inherent conflict in pursuing health. The judiciary pursues its factual determinations formally, adversarially, and with highly rational rules of evidence; medicine pursues its factual determinations informally, cooperatively, and empirical rules of science. The judiciary's fact determinations are made by laypersons; whereas medicine's fact determinations are made by experts. Judicial decisions as to facts represent the endpoint, and are fixed and final. Medicine's decisions as to facts are flexible and subject to change. The judiciary's focus is on process and is scholastically based; medicine's focus is on results and is empirically based. The judiciary's concern about error is expressed in the thought that better ten persons be found innocent than one person be found guilty. Medicine's concern about error is expressed in the thought that better ten people be hospitalized unnecessarily than one die. The judiciary's adopted theories become permanent, medicine's adopted theories are tentative and subject to empirical tests. The judiciary has to assume a free will in order to preserve a sense of culpability. Medicine has to assume deterministic models to achieve therapeutic predictability.

PO3.125.
REPEATED TRIALS AS A STRESS FACTOR LEADING TO RELAPSE IN FORENSIC PSYCHIATRY

M. Markopoulou, O. Georgiadou, I. Dini, A. Paganas, K. Bobotas
Department of Forensic Psychiatry, Psychiatric Hospital of Thessaloniki; Health Centre of Litochoro, Katerini, Greece

It has been observed that numerous stress factors can precipitate changes in the mental state of psychiatric patients. A literature review reveals a strong correlation between these stress factors and the positive symptoms of psychosis, aggression or violent behavior. Fifty patients who had committed crimes and could not be held accountable due to mental illness, now hospitalized in the Forensic Department of Psychiatric Hospital of Thessaloniki, were studied. In most cases the patients relapsed when they had to go through declassification trial in order to be found well enough to continue their treatment as outpatients. It is true that the judgement is rejective in the first 5-6 trials as regards especially for the manslayers. So, it is more probable for them to be released in the fifth or sixth trial, since they have already been under compulsory detention and treatment for a sufficient time. However, it seems that, although they express their wish to be discharged, most patients have difficulty coping with that change. The clinicians and specialised members of the staff should prepare psychiatric patients for their discharge after long hospitalisation.

PO3.126.
AUDIT ON SECLUSION OF PATIENTS IN PSYCHIATRIC INTENSIVE CARE UNITS

H. Reddy, S. Dye
Oxfordshire and Buckinghamshire Mental Health, Amersham, UK

During seclusion it is always good practice to follow advanced directives of the patient; to record evidence of de-escalation techniques used; to record parameters such as pulse, blood pressure and temperature; to monitor food, drink and personal hygiene; to record all administered medications. Independent review should be done if the seclusion extends beyond 8 hours, informing the next of kin. Retrospective audit was carried out on 20 inpatients. Analysis was carried out on the notification form, record form, procedure checklist and records. Twenty percent of patients had advanced directives; most patients were offered de-escalation techniques; 20% of patient's next of kin were informed. In recording of observations, there was less than 50% compliance. Independent review was done if the seclusion extended beyond 8 hours. This audit emphasizes the need of careful consideration of the patient's autonomy, of following advanced directives, of involving the patient and carers in the decision making process and of proper documentation, which invariably reflects a good practice.

PO3.127.
RESTRAINT AND SECLUSION: THE IMPORTANCE OF STAFF RELATED FACTORS

R. Wynn, A.M. Kvalvik, T. Hynnekleiv
Department of Clinical Psychiatry, University of Tromsø; Division of Psychiatry, Innlandet Hospital, Reinsvoll, Norway

Restraint and seclusion are used in many countries. It has been suggested that staff related factors are of importance to their use. A questionnaire was distributed to staff working at eight psychiatric wards (three emergency wards, two intermediary wards, one rehabilitation ward, and one security ward) in two Norwegian counties. Respondents were presented with simulated case histories and asked how they would intervene when facing patients that were either self-harming or violent. Emergency strategies were grouped according to degree of restrictiveness, ranging from the unrestrictive (talking, offering medication) to the highly restrictive (restraint, seclusion). Chi-square and regression analyses were performed. One hundred seventy one (62.8%) responded. Staff were more likely to favour a highly restrictive intervention when the patients were physically violent or acutely self-harming. Male staff and unskilled staff were significantly more prone to choosing a highly restrictive intervention. Type of ward, staff age or duration of employment did not significantly impact choice of emergency strategies. Although it may be challenging for staff to balance the need for staff and patient safety against the need for compassionate care, the study found that staff may use a range of different interventions in emergency situations. Cultural factors, including attitudes of staff, are important with regard to how violent and self-harming patients are cared for.

PO3.128.
PORTRAITS OF DOMESTIC HOMICIDE: A 15-YEAR RETROSPECTIVE REVIEW

D. Bourget, P. Gagné, A. Labelle
University of Ottawa and University of Sherbrooke, Canada

The authors conducted a retrospective clinical study based on the examination of all coroner files on victims of familial homicide since

1991 in the province of Quebec, Canada. In one of the largest study on this topic to date, the authors were able to identify a total of 840 consecutive records of victims who were murdered in the context of familial or domestic violence. These records were reviewed in detail and compiled by the same two psychiatrists. The importance of obtaining a clear understanding of familial homicide is underscored by indications that a high proportion of those homicides are perpetrated by individuals who suffer from a major mental illness. Spousal homicide represented about half of the domestic homicide, followed in frequency by filicide (22%), parricide (12%) and fratricide (2%). In contrast to spousal homicide, where a similar proportion of victims died by firearm or use of a sharp object, and parricide, where the majority of victims died by sharp object, most victims of filicide (excluding fatal battering) died by a method that caused minimal injury or pain.

PO3.129.
ETHICAL ISSUES IN PSYCHIATRIC CARE: AN INDIAN VIEW

A. Mallik, D. Roy
Kothari Medical Centre and Appolo Hospital, Kolkata, India

No area of medicine is so concerned with ethics as the field of psychiatry. In India, there is a wide variation of caste, creed and religion. Hence, building a cooperative and trusting relationship with the patients has always been an essential factor to enable psychiatrists to foster the healing process. But, in reality, ethics in psychiatry is usually wrongly stated or assumed in our practice. This is because psychiatry remains a low priority compared to other branches of medical science in India. Apathy and ignorance of family members of mental patients, social stigma, unpredictable prognosis and variable treatment modalities are the probable reasons. In India, a practicing psychiatrist has to take more responsibility in management of mental disorders in spite of workload, criticism by family members or vested interested people. Harassment by over-enthusiastic patient party, pseudo-social activists, politicians is inevitable and a practicing psychiatrist needs careful consideration for such interference.

PO3.130.
DETENTIONS OF OLDER ADULTS IN A SCOTTISH HEALTH REGION UNDER THE 1984 AND 2003 MENTAL HEALTH LEGISLATION – A COMPARATIVE STUDY

G. Stevenson
Department of Psychiatry, NHS Fife, Scotland, UK

Mental health detentions in older adults (over 65 years) is an underreported topic compared to working age adults, but the demographic shift towards an older population is likely to alter this, and may influence future mental health service configurations. This study compared detentions of older adults in a Scottish health region under the previous 1984 legislation to those detained under the current 2003 mental health legislation. Data were collected prospectively on all older adults detained in Fife (with a population of 350,000) during a 12 month period in 1994-1995 under emergency powers of the Mental Health (Scotland) Act 1984, and for all older adults in the same health region detained in 2008 under the replacement Mental Health Care & Treatment (Scotland) Act 2003. The detaining medical practitioners were interviewed, generally by telephone, following each detention, and a structured questionnaire was utilised to record demographic information of detainees, their previous mental health contacts, psychiatric diagnoses, alcohol and drug usage, self-harming behaviours, violence towards others, police involvement, and experience of the detaining practitioner in the use of mental health legislation. Initial results show a changing pattern of detentions of older adults in this Scottish health region. Reasons for this are proposed and discussed in view of the changes in Scottish mental health legislation.

PO3.131.
AN EVALUATION OF MENTAL STATUS OF STAFF IN A TURKISH PRISON

G. Özgür, L. Baysan Arabacı, S. Yıldırım, S. Bozkurt, N. Gördeles Beşer
Ege Üniversitesi Hemşirelik Yüksek Okulu, İzmir; Niğde Üniversitesi Zübeyde Hanım Sağlık Yüksekokulu, Niğde, Turkey

This research was made to evaluate mental status of staff in a Turkish prison. Thirty-three prison staff accepted to be included in the study. Data were collected by an ad-hoc form and the SCL-90-R. The mean age of staff was 42.5±4.5 years; 93.9% of them were male; all of them were married; 54.5% of them were graduated from high school. The mean Global Severity Index score was 0.7±.0.6. The level of distress was higher in those whose age was 40 or higher, who were graduated from high school, who worked 48 hours per week, who had been working in a prison 20 years or more. The higher scores were found on the subscale anger (1.1±0.9), obsessive-compulsive (0.9±0.6), somatization (0.9±0.8), paranoid thinking (0.8±0.7) interpersonal sensitivity (0.7±0.7).

PO3.132.
FIRST-EVER ADMITTED PSYCHIATRIC INPATIENTS: CLINICAL CHARACTERISTICS AND REASONS CONTRIBUTING TO ADMISSION

G. de Girolamo, F. Guzzetta, R. Miglio, G. Santone, A. Picardi, B. Norcio, R. Bracco, for the PROGRES-Acute group
Health Care Research Agency, Emilia-Romagna Region, Bologna; Department of Mental Health, Local Health Unit of Cesena; Department of Statistics, University of Bologna; United Hospitals of Ancona and Polytechnic University of Marche, Psychiatric Clinic, Ancona; Mental Health Unit, Center of Epidemiology, Surveillance and Health Promotion, National Institute of Health, Rome; Department of Mental Health, Local Health Unit, Trieste, Italy

First admission to a psychiatric facility represents a major personal event for patients and their families, as well as a very expensive form of psychiatric treatment. Aim of this study is to describe socio-demographic and clinical characteristics of first-ever admitted patients and to identify reasons contributing to admission. Data were obtained from a national survey carried out in Italy in public (n=130) and private (n=36) facilities admitting acute psychiatric patients (PROGRES-Acute). Cluster analysis was used in order to identify homogeneous patients' groups. Three-hundred thirty-seven patients were at their first admission. Median age at admission was 40; about 46% of subjects were not receiving any treatment in the month preceding admission. Social/work functioning problems, social withdrawal and conflict with family members were the most common reasons contributing to admission. Cluster analysis identified four patient groups with notably different socio-demographic and clinical characteristics. First admitted patients represent a highly heterogeneous group of patients. Early intervention research should consider this socio-demographic and clinical variety in order to better allocate resources and develop special intervention programmes.

PO3.133.
PATTERNS OF CARE IN PATIENTS DISCHARGED FROM ACUTE PSYCHIATRIC INPATIENT FACILITIES: A NATIONAL SURVEY IN ITALY

A. Preti, P. Rucci, A. Gigantesco, G. Santone, A. Picardi, R. Miglio, G. de Girolamo, for the PROGRES-Acute group
Department of Psychology, University of Cagliari, Italy; Department of Psychiatry, School of Medicine, University of Pittsburgh, PA, USA; Mental Health Unit, Center of Epidemiology, Health Surveillance and Promotion, Italian National Institute of Health, Rome, Italy; Psychiatric Clinic, United Hospitals of Ancona and Polytechnic University of Marche, Ancona, Italy; Faculty of Statistics, University of Bologna, Italy; Health Care Research Agency, Emilia-Romagna Region, Bologna, Italy

The present study focuses on the characteristics of patients scheduled for discharge enrolled in the framework of a nationwide survey of acute psychiatric inpatient facilities in Italy, and their pattern of care, i.e., two topics that have rarely received comprehensive attention. Socio-demographic and clinical characteristics, and pattern of care of 1,330 patients discharged from public (n=130) and private (n=36) inpatient facilities in Italy were assessed during an index period in the year 2004. The most common diagnoses were schizophrenia and bipolar disorder. Polypharmacy (prescription of two or more drugs of different classes) was the sample's most frequent form of treatment, involving more than 90% of patients; approximately 25% of these patients received more than one antipsychotic drug. Treatment with a combination of different antidepressants was less frequent (ranging from 6% to 15%, according to the facility type). Patients of male gender, single, and unemployed were more likely to be discharged to community residential facilities or to other inpatient facilities than to their homes. Families were significantly involved in decisions about patients' discharge and this emphasizes their role for patients' support after the hospital stay, as well as the burden of informal care of severe psychiatric patients. This study provides important information for improving the care of patients admitted to public and private inpatient facilities in a country that has closed down all its mental hospitals, providing all psychiatric care by a network of community-based mental health services.

PO3.134.
TRIAGE: A NEW MODEL FOR ACUTE INPATIENT PSYCHIATRY

M. Lanzaro
Department of Psychiatry, Camden and Islington Foundation NHS Trust, London, UK

The aim of this paper is to describe a new model of psychiatric care which has been used for 18 months across an adult psychiatric service in North London. The Grove Centre opened in August 2005 and is a purpose-built inpatient unit. We have 44 inpatient beds on three wards: Fleet, Solent and Isis. Isis is a 12 assessment unit and the local consultants provide input to assist with initial triage/assessment (up to 21 days). Fleet and Solent are intermediate (second triage step) wards and both have 16 beds, with one whole-time equivalent consultant and two trainees. The introduction of the new model has apparently resulted in a more efficient use of beds, with encouraging preliminary results in terms of bed occupancy and other performance indicators, with good feedback from patients and staff. The model supports the evolving relationship between inpatient and community services through a whole system approach, and aims to better meet patient needs and minimise the length of stay by providing meaningful integrated therapeutic interventions. An audit has been planned to determine whether benefits persist or disadvantages emerge. The role of the dedicated consultant(s) is discussed, in the light of the changing roles for mental health staff auspicated by the principles of "new ways of working" in the UK.

PO3.135.
FIRST RESULTS ON THE MENTAL HEALTH OF THE POPULATION LIVING IN THE EPIDEMIOLOGIC CATCHMENT AREA IN MONTREAL, CANADA

J. Caron, D. Pedersen, M. Perreault, M-J. Fleury, A. Crocker, A. Brunet, J. Tremblay, S. Beaulieu, G. Turecky, V. Nair, M. Daniel, M. Cargo, Y. Kestin , M. Tousignant
Douglas Mental Health University Institute, McGill University, Montreal, Quebec, Canada; School of Health Sciences, University of South Australia, Adelaide, Australia; University of Montréal, Quebec, Canada

We received a grant from the Canadian Institute of Health Research to develop the first Epidemiological Catchment Area Study in Canada. Five neighbourhoods in the south-west of Montreal regrouping 258,000 persons will be studied. The objectives of that research program are: a) to examine the links and interactions between individual determinants, neighbourhoods' ecology (physical and socioeconomic environment) and mental health in each areas of the predetermined region; b) to identify the conditions facilitating the integration of individuals with mental health problems in each community and the obstacles to that integration, such as social stigma and antisocial behaviour; c) to understand the impact that social, economical and physical aspects of neighbourhoods' ecological context have on mental health using a geographic information system; d) to verify the adequacy of mental health services in relation with the needs of the population**.** The methods include a longitudinal epidemiological study under the form of a community survey, followed by qualitative studies of particular issues (i.e., services organization, social stigma and social support actualization). The longitudinal study, using standardized instruments, includes a randomly selected sample of 2,400 individuals aged from 15 to 65 years, who will be interviewed at a two-year interval. We present the results of the first wave of the research program, including the incidence and prevalence of psychological distress, mental disorders, substance abuse, parasuicide and risky behaviour; quality of life; risk and protective factors in mental health and the effects of poverty.

PO3.136.
GENERAL PRACTICE AND MENTAL HEALTH CARE: DETERMINANTS OF OUTPATIENT SERVICE USE

H.-M. Vasiliadis, R. Tempier, A. Lesage, N. Kates
Department of Community Health Sciences, University of Sherbrooke, Quebec; Department of Psychiatry, University of Saskatchewan, Saskatchewan; Department of Psychiatry, University of Montréal, Quebec; Department of Psychiatry and Behavioural Neurosciences, McMaster University, Ontario, Canada

This study aimed to examine the determinants that lead Canadian adults to consult family physicians (FPs), psychiatrists, psychologists, psychotherapists and other health professionals for mental health reasons and compare the determinants of service use across provider types. Data from the CCHS1.2 was used for persons aged 18 years and older (n=35,236). A multivariate logistic regression was used to model

outpatient consultations with different providers as a function of predictive determinants. Three types of variables were examined: need, enabling factors and pre-disposing factors. Among need, the most common predictors of service use for mental health reasons were depression and panic attacks, followed by the presence of chronic conditions, panic disorders, psychological well-being and self-perceived stress. Among enabling factors, tangible social support was an important predictor. Among predisposing factors, males were less likely to consult with a FP and other resources but not psychiatrists; marital status played a role in consulting psychologists (single vs. married people were more likely to consult), and people with less education were less likely to consult psychologists and other health providers. Need factors were the most important predictors of both psychiatrist and combined FP and psychiatrist consultation in the previous year. Gender barriers remain, however, and promotion campaigns in seeking mental health care should be aimed towards males. Further, education barriers exist in the use of specialty providers of psychotherapy, and policies should thus focus on rendering these services more accessible to disadvantaged individuals.

PO3.137. THE PSYCHIATRIC TEAM: A SPACE TO WORK AND LIVE IN

S. Ferrari, V. Barbanti Silva, M. Pighi, S. Mimmi, M. Rigatelli
Department of Neuroscience, University of Modena and Reggio Emilia; Department of Mental Health, Local Health Unit, Modena, Italy

Team work in psychiatry is a very specific feature of organization of care, especially in the Italian tradition and daily practice. Improving knowledge of variables that might influence and determine team work was the aim of the study. A 15-item ad-hoc questionnaire was created and administered to 241 professionals of Modena mental health centres (response rate 62.7%), collecting sociodemographic data, professional characteristics, level of satisfaction and identification, and opinions on "ideality" and "reality" of team work. Satisfaction rate was 49%, identification rate 59%. Team work seems to function well as to "information circulation" and "making practical decisions", but is lacking as to "reciprocal understanding" and "reciprocal emotional support". Level of correspondence between ideal and real team work is strongly correlated to satisfaction, identification and sex of professionals, but not to age and duration of service.

PO3.138. VERONA SERVICE SATISFACTION SCALE-32 (VSSS-32): PERSIAN TRANSLATION, CULTURAL ADAPTATION AND EVALUATION OF ITS PSYCHOMETRIC PROPERTIES

A. Nejatisafa, S.J. Mousavinia, A. Nazemian, Y. Motaghipour, V. Sharifi, H. Amini, N. Zhand, N. Vakili
Psychiatry and Psychology Research Center, and Department of Psychiatry, Tehran University of Medical Sciences, Tehran, Iran

Satisfaction with psychiatric services is an important goal for providers and its measurement is relevant to those who assess mental health services. The Verona Service Satisfaction Scale-32 (VSSS-32) is a multi-dimensional questionnaire developed to address the methodological concerns about measurement of satisfaction in psychiatric patients. The acceptability, sensitivity, content validity and test-retest reliability of the original Italian version and English version of the VSSS have already been demonstrated in various studies. The main objective of this study was to translate the English version of VSSS-32 to Persian, to adapt it for Iranian culture and to investigate the performance characteristics of the Persian version intended to measure patient satisfaction with psychiatric care. The VSSS-32 was translated to Persian according to WHO guidelines. In addition, its understandability, feasibility, internal consistency, test-retest reliability and concurrent validity, in comparison with Client Satisfaction Questionnaire-8 (CSQ-8), were investigated in 200 patients with schizophrenia and bipolar disorder. Some adaptations were made to bring about cross-cultural comparability. The VSSS-32 questions were generally understandable and acceptable for Iranian patients. Cronbach's alpha coefficient for internal consistency was 0.77. Test-retest reliability of 0.75 showed reasonable stability over time. The VSSS had good correlation with CSQ-8 ($r=0.75$, $p<0.001$). The VSSS-32 Persian version demonstrated good psychometric properties and conceptual rigor and is thus reliable tool for examining satisfaction with psychiatric care in Iranian patients with schizophrenia and bipolar disorder.

PO3.139. CONSUMER AND CARER PERSPECTIVES ON PSYCHOTROPIC PRESCRIBING AND ADMINISTRATION: FINDINGS FROM A META-SYNTHESIS OF PREVIOUS RESEARCH

K. Usher, K. Foster
James Cook University, Cairns, Australia

The effective prescribing, taking and administration of psychotropic medications involves the perspectives of a number of key stakeholders, including the clinician, consumer and carer. Guidelines for prescribing and administration of psychotropic medications generally focus on the knowledge, skills and responsibilities of the clinician. However, a comprehensive approach to psychotropic prescribing and administration requires that the perspectives of consumers and carers are understood and addressed in order to enhance consumer and carer satisfaction and attain optimal medication adherence and efficacy. This meta-synthesis draws on findings from previous research and the authors' clinical experience to identify key consumer and carer issues regarding psychotropic medication and make recommendations to enhance prescription and administration guidelines for clinicians. Issues relating to psychotropic medications for special populations including young people, indigenous persons and the older person are also included. Thematic findings on consumer perspectives on taking psychotropic medications include both positive and negative factors such as pain and side effects; stigma; assessment and education on medications and their effects/side effects; modes of administration; non-adherence; and availability of social support. The quality of the relationship with the clinician is a particularly important factor that was highlighted in the analysis. Carer perspectives identify that subjective distress relating to carer responsibilities and the effects of the consumer's mental health problem; medication administration and monitoring responsibilities; and needs for information and education on the mental health problem and medications were major findings. According to findings of the meta-synthesis, a respectful and inclusive approach that is client centered is recommended.

PO3.140.
DRUG NON-COMPLIANCE: THE INFLUENCE OF PATIENT'S KNOWLEDGE OF SIDE EFFECTS

V.I.O. Agyapong, R. Bangaru, R. Kirrane
Department of Psychiatry, Connolly Hospital, Dublin, Republic of Ireland

The study aimed to assess the sources of patients' knowledge of the side effects of medications and the effects of their knowledge on their compliance with prescribed medications. 476 patients attending psychiatric services were randomly selected and asked to fill a questionnaire designed to assess parameters relevant to the objectives of the study. The mean age was 41 years (SD=12), with 39% being males, and 73.1% having at least secondary education. Overall, 8% of respondents said they were not aware of any side effects of the medicines they are taking presently. 13.4% reported that they never read or enquire about side effects of their medication before taking it for the first time, with a high proportion of these being males (17.9% vs. 10.7%; p=0.03). 46.2% of patients reported that they have had concerns about taking their medication because of their knowledge of side effects with females more likely to have such concerns than males (49.8% vs.40.8%; p=0.02). Finally, when asked if they would have taken the medicines prescribed for them now if they were told initially of all the side effects, 51.0% answered "more likely", with a higher proportion of these being males (56.7% vs. 49.5%; p=0.06). These data suggest that the knowledge of side effects of medication has a potential to impact adversely on compliance with prescribed medicines, more so in female patients compared to males patients.

PO3.141.
MEDICATION ERRORS IN PSYCHIATRIC CARE: INCIDENCE AND REDUCTION STRATEGIES

B. Grasso, D. Bates, M. Shore
Veterans Administration Clinic, Saco, ME; Harvard Medical School, Boston, MA; Harvard Medical School, Needham, MA, USA

The Institute of Medicine (IOM)'s Quality Chasm Series described the substantial risk of unintended harm for recipients of healthcare and provided recommendations for harm reduction and prevention. Starting in 2003, the IOM Committee on Crossing the Quality Chasm – Adaptation to Mental Health and Addictive Disorders commissioned a series of papers on patient safety research, harm reduction, and prevention strategies applied to persons with psychiatric and substance use disorders. For example, "The Safety of Healthcare for Individuals with Mental Illness and Substance Use Disorders", as yet unpublished, reviewed patient safety concerns in all aspects of psychiatric and substance abuse treatment. The IOM charge is to review the results of studies in peer-reviewed journals over the last 10 years and earlier major studies (if still relevant) that have addressed the incidence, severity and costs of medication errors. Special attention should be given to errors that arise at the interface between care settings. The authors should also review peer-reviewed journals on the causes/risk factors of medication errors in the psychiatric care setting, paying particular attention to workforce issues. In addition, for the psychiatric care setting, the author(s) will identify the approaches to reducing medication errors recommended by major health care organizations. This charge arises from the dearth of published medication error research in psychiatry.

PO3.142.
PREVENTING MENTAL HEALTH DISORDERS USING INTERNET TECHNOLOGY

H. Christensen, K.M. Griffiths, K. Bennett, A. Bennett, A. Neil, P. Batterham, A. Mackinnon
Centre for Mental Health Research, Australian National University, Canberra, Australia

This paper aims to describe the development, efficacy, adherence and cost effectiveness of an internet based prevention program for depression and anxiety. Three randomised controlled trials of the program were conducted in 2004 (n=504), 2006 and 2007 (n=1500). Adherence data was collected from the data base in 2007 (n=82,000). All trials found a reduction in either anxiety and depression symptoms. Follow-up from one study demonstrated continued effects at 12 months. Internet programs have potential for offering prevention and early intervention in community and school settings. The problems associated with the delivery of automatised prevention programs are discussed. Next generation programs should target specific disorders, and provide personalised evidence based interventions. Prevention research should consider incorporating diagnostic categories and examine individual characteristics that predict prevention response.

PO3.143.
PEER-LED GROUP EDUCATION FOR FAMILY MEMBERS AND FRIENDS OF PEOPLE WITH MENTAL ILLNESS

J. Stephens, K. Ratcliff, J. Farhall
La Trobe University and Mental Illness Fellowship of Victoria, Bundoora, Australia

Family members of people with a serious mental illness frequently report high levels of burden, depression and stress. Well Ways is a peer-led group education program for family members and friends who provide care for people experiencing a mental illness. Unlike professional-led psychoeducation programs which aim to prevent the relapse of the person experiencing a mental illness, Well Ways views the carer as a valid target for assistance and focuses on reducing carers' negative outcomes via the provision of information and support. Since 2001, more than one thousand participants have completed Well Ways throughout Australia. The current paper examines the impact of the program on participants' experience of burden and their psychological well-being (n=500). We examine the differing effectiveness of Well Ways for diverse groups of participants based on relationship to the person with mental illness, gender and socio-economic background. We also investigate possible therapeutic mechanisms by which the program effects change.

PO3.144.
VALIDITY OF PERCEIVED CRITICISM: ASSOCIATIONS WITH PERCEIVER CHARACTERISTICS AND RECIPROCAL CRITICISM

C. Gerlsma, M.A.J. van Duijn
University of Groningen, The Netherlands

Expressed emotion (EE) research has shown that a critical attitude in psychiatric patients' spouse, relative, or caregiver adversely affects the course of various disorders, such as schizophrenia, depression, anxiety, post-traumatic stress disorder, and eating disorders. Recent reviews recommend clinicians and researchers to use the self-report Perceived Criticism (PC) as a practical index of EE. PC addresses the patient's point of view with the single item "How critical is your spouse/relative

of you?". To remedy the unstability associated with single-item measurement, multi-item scales have been developed too. Like EE, PC predicts the course of various psychiatric disorders. However, little is known about PC's validity. We examined to what extent PC is associated with the perceiver's current depressive and marital complaints, and to what extent PC measures reciprocal criticism. Forty couples from the general community completed self-reports of PC, depressed mood, and marital dissatisfaction, and expressed their feelings about their partner in a brief EE-interview (five minute speech samples). Multilevel analyses suggested that PC-scores depended primarily on the partners' expressions of criticism, and to a lesser extent on the perceiver's depressive and marital complaints. Individuals who perceived more criticism also tended to express more criticism. Findings fit in well with theoretical formulations regarding EE, and support the usefulness of PC measures as practical alternatives for the assessment of EE.

PO3.145.
VALIDITY OF PERCEIVED CRITICISM: ASSOCIATIONS WITH INTERPERSONAL BEHAVIOUR

C. Gerlsma, M.A.J. van Duijn
University of Groningen, The Netherlands

Recent reviews recommend clinicians and researchers to use the self-report instrument Perceived Criticism (PC) as a (very) short and practical index of expressed emotions (EE). However, little is known about PC's validity. We examined to what extent PC is a reflection of how partners actually interact with each other. Thirty-four couples from the general community completed self-reports of PC and participated in a videotaped problem solving interaction. The verbal and nonverbal features of the interactions were coded with the Kategoriensystem für partnerschaftliche Interaktionen (KPI). Interrater reliability was satisfactory. Multilevel analyses showed that PC scores were consistently related to objective ratings of the partners' verbal and nonverbal expressions of criticism. Individuals who perceived more criticism also tended to express more negative nonverbal behaviour. Findings fit in well with theoretical formulations regarding EE, and support the usefulness of PC measures as practical alternatives for the assessment of EE.

PO3.146.
VALIDITY OF PERCEIVED CRITICISM: MOOD STATE DEPENDENCY AND ASSOCIATIONS WITH MALADAPTIVE CORE BELIEFS

N.M.P. de Ruiter, C. Gerlsma
University of Groningen, The Netherlands

Recent reviews recommend that clinicians and researchers use the self-report Perceived Criticism (PC) as a practical index of expressed emotion (EE). However, little is known about PC's validity. We examined to what extent PC is mood state dependent and associated with perceivers' maladaptive core beliefs. We compared the traditional single-item with a multi-item measure of PC. One hundred and fifty college students provided self-report data on maladaptive cognitive schemas, mood and PC, and, after the induction of a positive or negative mood, again provided data on mood and PC. Regression analysis indicated that the single-item PC measure was unrelated to the intra-individual factors assessed in this study, whereas the multi-item PC measure was associated with maladaptive cognitions on defectiveness and shame. In an analysis of variance, neither of the PC measures showed mood state dependence. Findings concur with other authors' suggestions that PC scales are relatively independent from intra-individual characteristics and appear useful as extremely short and practical indices of the amount of interpersonal criticism in dyadic relationships.

PO3.147.
IMPLICIT AND EXPLICIT SELF-ESTEEM MEASUREMENT: RELATIONSHIP OF PATIENT STATUS TO SYMPTOM STATE AND THERAPEUTIC COURSE

M. Sullaway
Pacific Psychological Associates, Los Angeles, CA, USA

This paper focuses upon how the Implicit Associations Test (IAT) can be of use in clinical assessment. Fifty-four psychotherapy outpatients were administered an evaluation protocol including the implicit self-esteem and explicit self-esteem and the Mini International Neuropsychiatric Interview. Results were found for high/high self-esteem vs. low/low self-esteem for number of treatment sessions, level of psychopathology, and probability of being prescribed psychotropic medication. The conceptual problems of fitting IAT into clinical practice are considered, as well the questions of how to compare normative subject responses with those of clinical subjects in response style and test-taking motivation.

PO3.148.
PARENTS' PERCEPTIONS OF PARENTING WITH A MENTAL ILLNESS

E. Mordoch
Faculty of Nursing, University of Manitoba, Canada

This grounded theory study explores how parents living with mental illness perceive their parental roles and what resources are needed to assist them. The study will: a) provide pilot data to support the development of an intervention study targeted to parents with mental illness and their children; b) incorporate parents' perceptions into the development of a substantive theory on the relationship between parents and their children; c) enhance the limited research on the experience of fathers with mental illness. One in five Canadians will experience mental illness in their lifetime, with 15-50% being parents. Research has established their children are at increased risk for mental health problems; however, few resources are allocated to assist parents within their parenting roles. Canada has not developed an integrated program of research or national policy determining services for these parents or their children. Our study includes parents who: have received ongoing psychiatric treatment for the past two years within the health care system and who live full or part time with their biological children, ages 6 to18 years. To ensure a description of the breadth of experiences, parents are not limited to a specific mental illness diagnosis. Data collection methods are field notes, participant observation, demographic forms, and semi-structured interviews.

PO3.149.
PERCEPTIONS OF CHILDREN LIVING WITH A PARENT WITH A MENTAL ILLNESS

E. Mordoch
Faculty of Nursing, University of Manitoba, Canada

This grounded theory study examined the perceptions of children living with a parent with a mental illness. The study aimed to construct a substantive theory that would explain how children perceived and managed the experience of living with a parent with a mental illness. Data were collected through interview, participant observation and field notes. Twenty-two children between the ages of six and sixteen,

who were living part or full time with a parent with a mental illness, were interviewed. Theoretical sampling identified incidents and participants; ten children were interviewed twice. Data collection and analysis were undertaken concurrently. Constant comparative analysis developed the substantive theory via open, selective, and theoretical coding. The basic social psychological processes suggest children focus their energy on finding the rhythm with their parents while maintaining the frame, by establishing connections within a safe and comfortable distance between themselves and their parents. To find the rhythm, children monitored their parents and their daily rhythms and then adjusted to their parents' behaviours attempting to maintain family security, stability, and connections to their parents. In maintaining the frame of their relationships with their parents, children preserved themselves by finding a way to have a life and identity of their own without being engulfed by the mental illnesses. The children gauged how able they were to preserve themselves and how much they were prepared to remain invested in their parent/child relationships. The findings suggest that most of these children were comfortable in their homes and wished to be there, that children and parents co-existed in reciprocal relationships and that the children were often managing their circumstances with little information about the mental illnesses or external help. All of the children navigated through the ongoing emotional currents that affected their efforts to find the rhythm and to maintain the frame. These children valued their parents and were able to see their parents beyond the mental illnesses; nevertheless, they experienced painful emotions while managing their circumstances. The findings from this study have important implications for mental health services, professional education and research, as well as for policy development, to address the larger issues that affect these children and their families.

PO3.150.
TREATMENT STATUS AND CARE POLICY OF PERSONS WITH SCHIZOPHRENIA IN RURAL CHINA

Mao-Sheng Ran, C. Lai-Wan Chan, E. Yu-Hai Chen, Wen-Jun Mao, Shi-Hui Hu, Cui-Ping Tang, Fu-Rong Lin, Li Li, Y. Conwell
Department of Social Work, University of Guam, Mangilao, Guam, USA; University of Hong Kong, Hong Kong; Chengdu Mental Health Center, Chengdu, China; Xinjin Mental Health Hospital, Chengdu, China; Department of Psychiatry, University of Rochester, NY, USA

This study aimed to explore the treatment status of persons with schizophrenia in rural China. A 10-year follow-up investigation (1994-2004) among persons with schizophrenia (n=510) was conducted in Xinjin County, Chengdu, China. About half of patients (48.4%) contacted a doctor as first and took antipsychotics after the onset of their illness. 24.4% of patients first sought help from a traditional healer. About one fifth of patients (21%) received traditional Chinese medicine treatment, 43.0% patients sought help from traditional healers, and 73.6% took antipsychotics. The rate of total absence of any treatment in these patients was 26.4% in 2004, and 30.6% in 1994. More patients were taking medication in 2004 (7.5%) than in 1994 (6.1%) ($p<0.001$). The rate of previous hospitalization in these patients was 31.2% in 2004, and 23.1% in 1994 ($p<0.001$). These data suggest that the treatment status of persons with schizophrenia is very poor in rural China, and that many patients do not receive any treatment and seek help from traditional healer first.

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PO3.151.
PHYSICAL HEALTH CONSIDERATIONS IN THE MENTALLY ILL POPULATION: A HOLISTIC APPROACH TO CARE

H.L. Millar
Carseview Centre, Dundee, Scotland, UK

There is growing evidence that people with severe mental illness carry an increased risk of cardiometabolic disease. For a variety of reasons, this population do not readily access health services. The Dundee Health Screen Clinic is a unique service which was set up to offer health screening along with healthy lifestyle interventions. In a cross-sectional analysis, data was collected from 240 patients with severe mental illness prescribed antipsychotic medication. The overall prevalence of metabolic syndrome in this population was 39.7% using the International Diabetic Federation Definition (2005), highlighting a high level of unmet which has been similarly reflected in the US and Europe. Patients treated with atypical antipsychotics had a significantly higher rate of metabolic syndrome than those prescribed typical antipsychotics. In our sample there were high levels of dyslipidaemia and hypertension, but relatively few patients were prescribed lipid lowering agents or antihypertensive agents. In addition to health screening, the Dundee Health Screen Clinic provides a lifestyle programme offering dietary and lifestyle advice including exercise programmes and smoking cessation. These findings only add to the weight of evidence regarding the excess burden of physical comorbidity in the mentally ill population and the need for easily accessible health screening services to improve the quality of lives of this population.

PO3.152.
RELATIONSHIP BETWEEN PSYCHOLOGICAL WELL-BEING AND GENERAL HEALTH IN A SAMPLE OF UNIVERSITY STUDENTS IN IRAN

A.A. Bayani, A.M. Kocheki, H. Goodarzi
Islamic Azad University, Azadshahr, Iran

Health is a multidimensional concept which, besides lack of illness, includes the feelings of happiness and well-being. The objective of this study was to investigate the relationship between psychological well-being and general health among university students. A sample of 145 students from the Islamic Azad University of Azadshahr was randomly recruited. They were administered a demographic questionnaire, a general health questionnaire, and several scales of psychological well-being. There was a statistically significant correlation between psychological well-being dimensions (self-acceptance, positive relation with others, autonomy, purpose in life, personal growth, and environmental mastery) and general health. Thirty-five percent of variance in general health was accounted by the indicators of psychological well-being.

PO3.153.
EFFECTIVENESS AND COSTS OF DAY HOSPITAL VS. INPATIENT TREATMENT IN POLAND

P. Piotrowski, A. Kiejna
Department of Psychiatry, Wroclaw Medical University, Wroclaw, Poland

The study aimed to analyse the effectiveness and costs of day hospital vs. inpatient treatment. 215 patients were randomly assigned to day hospital (n=107) or inpatient ward (n=108). Patients were interviewed at 6 time points, from 3 months before admission to 12 months after discharge. Psychopathology was assessed by BPRS,

QoL by MANSA, and treatment satisfaction by CAT. Costs of hospital treatment were assessed from clients' and payer's perspective. Objective rehospitalization rates were determined on basis of National Health Fund (NHF) reports. Both day hospital and inpatient treatment were effective in alleviating symptoms ($p<0.001$). Inward patients were significantly more frequently rehospitalized 3 months after discharge ($p=0.003$). One year after discharge, a lower overall level of psychopathology was reported in the inpatient group ($p=0.02$), which, however, still had a higher rate of rehospitalizations. Inward patients were more satisfied with treatment at discharge ($p=0.002$). Costs *per capita* during index hospitalization were equal, but 3 months after discharge and during the whole period of study, inpatient treatment was significantly more expensive for NHF ($p=0.006$ and $p=0.003$, respectively).

PO3.154.
TRANSFORMING MENTAL HEALTH AND ADDICTION SERVICES IN CANADA: WILL THE KIRBY REPORT MOVE THE SYSTEM FORWARD?

R. Tempier, K.E. Mosier
Department of Psychiatry, University of Saskatchewan, College of Medicine Saskatoon, Saskatchewan, Canada

This paper summarizes the features of the 2006 national report entitled "Out of the Shadows at Last: Transforming Mental Health, Mental Illness and Addiction Services in Canada". This report, led by Senator Kirby, made 118 recommendations and emphasized the need for an emerging recognition that mental illness must be viewed with the same seriousness as physical illness. It outlines appropriate recommendations on the development of a national action plan on mental health and mental illness and addictions treatment services in Canada. A key recommendation of this Kirby report was the formation of the Mental Health Commission of Canada, which occurred in 2007. Its key initiatives are to: facilitate the development of a national mental health strategy; conduct a 10-year anti-stigma campaign, and build a knowledge exchange centre. Canada is well poised to transform its mental health care system and these initiatives could be an example for other countries to develop their own mental health plan.

PO3.155.
THE USE OF THE MOOD DISORDERS QUESTIONNAIRE IN A RESIDENTIAL ALCOHOLISM TREATMENT PROGRAM

D.K. Hall-Flavin, M.A. Frye, D.A. Mrazek, D. McGovern, T.D. Schneekloth, V.M. Karpyak, L.L. Loukianova, J. Biernacka, M. Drews
Mayo Clinic Department of Psychiatry and Psychology and Mayo Clinic College of Medicine, Rochester, MN, USA

Despite the high prevalence of comorbid bipolar disorder and alcohol dependence, and particular risk for bipolar women, little is known about the relationship between the two disorders and the needs of comorbid individuals in addiction treatment. Accurate identification of comorbidity is critical to the understanding of effective treatment interventions. We recently reported on a retrospective study noting a strong signal between female gender, alcoholism severity, and bipolar disorders in our Intensive Addiction Program. Conclusions were limited, however, due to surprisingly low numbers of patients identified with bipolar disorder, out-of-step with extant epidemiologic data. In response to this and in an effort to improve our practice, we report on preliminary data from an ongoing descriptive pilot study conducted over a three month period of time involving all patients admitted to the Mayo Clinic Intensive Addiction Program. This is an abstinence-oriented 28-day outpatient residing program emphasizing a multidisciplinary treatment approach. Nearly two-thirds of patients report alcohol to be their only drug (one-third) or primary drug of dependence among other drugs (and additional one-third). Using the Mood Disorders Questionnaire, a self-administered well-validated screening instrument, 12 of 52 patients (24%) consecutively admitted to IAP during the three-month period screened positive. Each individual who screened positive was administered the Mini International Psychiatric Inventory, with the substantial majority demonstrating evidence of a bipolar spectrum disorder. This is a substantially higher prevalence than that we previously noted.

PO3.156.
DEVELOPING A NATIONAL MENTAL HEALTH CARE PROGRAM IN CAMBODIA

G. Oravec
Wilford Hall Medical Center, Lackland, TX, USA

The study aimed to examine the development of psychiatric services in Cambodia and the evolution of the National Program for Mental Health (NPMH), with a focus on the state of psychiatric services in the country today. The investigator traveled to Cambodia to meet with government officials and observe the practice of local psychiatrists. Since 1994, the NPMH has trained 26 psychiatrists, 45 psychiatric nurses, 270 general practitioners, and 297 primary nurses. The program has created 61 psychiatric outpatient departments representing 24 of Cambodia's provinces and municipalities. International funding increased from 129,000 USD annually in 1994 to 486,000 USD in 1998 but decreased to 382,000 USD in 2002. Annual outpatient psychiatric visits increased from 9,615 in 1995 to 56,373 in 2005, while the number of new psychiatric cases rose from 212 to 8,795 over the same period; with the most commonly diagnosed illnesses being anxiety (36.4%), depression (24.9%) and schizophrenia (15%). The NPMH has successfully integrated mental health into the Cambodian health care system and has expanded psychiatric services throughout the country. Increasing consultations and new psychiatric cases indicate greater public awareness of mental illness as well as increased utilization of mental health services. While decreasing funds may threaten the program's sustainability, increasing accessibility of resources to the rural population is helping Cambodia recover from its violent history and this model can be applied to other developing or post-conflict societies.

PO3.157.
TOWARDS AN EVIDENCE-BASED MENTAL HEALTH POLICY: THE LITHUANIAN EXPERIENCE

D. Puras
University of Vilnius, Lithuania

After the WHO Ministerial Conference on Mental Health (Helsinki, 2005), a political decision was made in Lithuania to develop a new national mental health policy based on modern evidence and values. An analysis of the existing situation revealed poor public mental health indices (high rates of suicides, different forms of violence), an intolerance of the population to vulnerable groups, including mentally ill persons, and an ineffective mental health system. The largest amount of human and financial resources in the field of mental health, by historic tradition, are allocated to segregated psychiatric institutions, specialized hospitals and large residential social homes, thus creating and reinforcing a vicious circle of stigma, social exclusion, helplessness and lack of tolerance. The draft of an ambitious mental health policy was

developed by a task force appointed by the Minister of Health. After debates which lasted 2 years, the Parliament adopted the new national mental health policy in 2007. The basic principles of the new policy are: protection of human rights of persons with mental health problems, moving from system of segregated residential institutions to a community based system of services, involvement of primary care in provision of mental health services, investing in modern psychosocial technologies to reach a better balance in biopsychosocial paradigm, promotion of principles of autonomy and participation of users of mental health services. One of the main obstacles in the implementation phase will be lack of culture of independent monitoring and evaluation, so that decisions need to be based on evidence and not on pressure from interest groups or historical principle of budget allocation. For example, culture of evaluation in most countries of Eastern part of Europe has been based during last decades on statistics reflecting process, rather than outcomes (number of doctors, beds, visits, etc.).

PO3.158. AN ANALYSIS OF MENTAL HEALTH SERVICE PROVISION AND UTILISATION IN SLOVENIA BY USING THE EUROPEAN SERVICE MAPPING SCHEDULE METHODOLOGY

L. Šprah, M.Z. Dernovšek
Scientific Research Centre, Slovenian Academy of Sciences and Arts; Educational and Research Institute Ozara Ljubljana, Ljubljana, Slovenia

Mental health is becoming one of the priorities for European health care policies. The European Service Mapping Schedule (ESMS) is an internationally applicable instrument for description and classification of mental health services and their use. We aimed to explore mental health service provision and utilization in Slovenia by using the ESMS methodology. Two hundred fifty-one mental health services in 12 catchment areas were involved in the study. The European Sociodemographic Schedule was used to describe the characteristics of the areas, and the ESMS to measure service provision and utilization. Twenty-eight out of 32 service types described in the ESMS mapping tree were found in Slovenia. Among them, 39% outpatient and community services, 25% self-help and non-professional services, 21% day and structured activity and 15% residential services fulfilled the ESMS criteria. Marked differences between regions were observed in patterns of service provision and utilization.

PO3.159. MENTAL HEALTH SYSTEM BASED IN PRIMARY CARE: A BRAZILIAN EXPERIENCE

S.A. Saraiva, E. Cremonese
Secretaria Municipal de Saúde, Florianópolis, Brazil

The mental health system of Florianópolis, the capital of Santa Catarina state in Southern Brazil, underwent a process of re-modeling, after the detection of its fragmentation, with mental health professionals working in isolation, and the need for integration with primary care. The process consisted of different stages: approach, proposal, construction and evaluation in conjunction with the health care providers. The main strategies were: organization of the mental health care based on the family health team, on a regional basis, with a collaboration between family health and mental health teams; coordination of the different mental health resources (family health teams, mental health teams, centers of psychosocial care and hospitals); design of treatment protocols and reorganization of pharmacological treatment; and the offering of psychological support groups for the family health team. Although being a slow process with conflicting positions between different social actors, this restructuration is providing a unification of the health resources and the adoption of integrated interventions, resulting in better health care for the population.

PO3.160. A RETROSPECTIVE STUDY ABOUT SUPPORTED EMPLOYMENT PROGRAMS AIMED AT PEOPLE WITH MENTAL DISORDERS IN A NORTHERN ITALIAN TOWN

C. Buizza, A. Bartoli, S. Lechi, C. Bonetto, E. Riva, A. Ghilardi, R. Pioli
Clinical Psychology Section, Faculty of Medicine and Surgery, University of Brescia; Local Health Unit of Brescia; Regional Union of Associations for the Mental Health, Milan; Section of Psychiatry and Clinical Psychology, University of Verona; IRCCS Fatebenefratelli, Brescia, Italy

This survey aims to describe psychosocial factors and work setting conditions that could play a role in the job maintenance of people with mental illness. A retrospective study on the supported employment programs was conducted for the period 2004-2005 in a group of people with mental illness. Data were collected with respect to: typology, duration and outcomes of the supported employment programs; characteristics of the users; levels of satisfaction for users, caregivers, tutors and professionals involved in the supported employment programs; social network and quality of life for users; family burden for caregivers. One hundred nineteen supported employment programs related to 84 users were assessed. The sample was constituted of 69% males, with mean age of 38 years (±8); 81% had an invalidity certificate and 19% a disadvantage certificate; the most frequent diagnoses were psychoses (47.7%) mood disorders (21.1%) and personality disorders (21.1%). A regression model showed that the variables that significantly contributed to the maintenance of the supported employment programs were the direct engagement vs. the formative training, the number of pre-engagement interventions and the number of post-engagement interventions, both aimed at the users. The availability of data regarding the outcome of the supported employment programs represents an important instrument to develop specific strategies aiming to promote, through the maintenance of a job, patients' full social integration.

PO3.161. MENTAL HEALTH AND VOCATIONAL REHABILITATION: THE IMPACT OF ETHNICITY AND GENDER ON CLIENT SUCCESS

E. Dunbar, T. Marsh
Pacific Psychological Associates, Los Angeles, CA; School of Psychology, Walden University, Minneapolis, MN, USA

With the increase in demand for mental health and vocational rehabilitative services, particularly among traditionally under-served populations (e.g., ethnic minorities), identifying contributing factors to treatment success is critical. This study examined the relationship between treatment service outcomes and individual demographic variables in an adult population of a department of rehabilitation clients. Treatment outcome categories were classified as "successful" (e.g., ready for employment, employed) or "unsuccessful" (e.g., no services provided, service interrupted, incarcerated). Of particular interest was the possible interaction between counselor ethnicity and gender and client ethnicity and gender on client outcome. Chi-square analysis revealed that counselor/client dyads with matching ethnicity resulted in significant-

ly greater client outcome success than did counselor/client dyads with non-matching ethnicity ($p \leq 0.03$). However, counselor/client gender match was not found to be a significant predictor of client outcome success.

PO3.162. RELIGIOUS PRACTICE AND STIGMA TOWARD MENTAL DISORDERS: IMPLICATIONS FOR INTERVENTIONS

G. Milstein, K. Flannelly, M. Vaaler
Department of Psychology, City College, City University; HealthCare Chaplaincy, New York, NY, USA

Worldwide, stigma is a significant barrier to mental health care. Religious congregations are one setting with potential for interventions to reduce stigma. This study assessed the potential efficacy of such intervention. We analyzed data from the United States General Social Survey (n=1,245). Each respondent was presented with one of five vignettes depicting mental illness or substance abuse, and asked to report the likelihood that they would engage in activities representing each of five different social distance categories. Three groups were compared based on the frequency of their religious attendance. We found a hierarchy of increasing social distance by category ($p<0.001$): friend, neighbor, social contact, co-worker, in-law. A second hierarchy increased according to the presenting problem ($p<0.001$): emotional distress, depression, schizophrenia, alcohol, cocaine. In three categories we found significant linear trends of less social distance with greater religious attendance: friend ($p<0.01$), social contact ($p<0.01$) and co-worker ($p<0.05$). The findings suggest that stigma interventions should target mental illness before substance abuse, and that it would be more effective to conduct community based programs before workplace education. Furthermore, the data encourage researchers to conduct stigma interventions within religious communities.

PO3.163. ASSESSMENT OF AN EDUCATIONAL INTERVENTION TO FIGHT STIGMA TOWARD PEOPLE WITH MENTAL ILLNESS IN SECONDARY SCHOOL STUDENTS

C. Buizza, R. Poli, F. Spinogatti, E. Agrimi, A. Ghilardi, R. Pioli
Faculty of Medicine and Surgery, University of Brescia; Azienda Ospedaliera Istituti Ospitalieri of Cremona; IRCCS Fatebenefratelli, Brescia, Italy

The study aimed to assess the effectiveness of a method developed to change the stereotypes and the social exclusion toward people with mental illness in a sample of high school students. The sample consisted of 707 high school students of two towns in Northern Italy: Brescia and Cremona. The students underwent an educational session, based on the distribution of fliers and other information materials. The session was attended also by a person with mental illness. The total sample of students was assessed with a questionnaire, the Myths and Facts about Schizophrenia School Evaluation, administered at baseline and after 3 months. After three months 554 students (78.4%) filled the questionnaire. In both groups, after the educational intervention, the knowledge of the causes of mental illness improved and the level of prejudice decreased. Furthermore, with regard to the Brescia sample, the percentage of students that would have fear to speak with a person who has suffered from mental disease decreased after the educational intervention. This method seems to attenuate social intolerance toward people with mental illness, changing prejudices and stigma, and to make students more knowledgeable on the topics of mental health, and on the available help for people facing psychological challenges and/or mental illness.

PO3.164. BURNOUT AMONG MENTAL HEALTH PROFESSIONALS: A TUNISIAN EXPERIENCE

L. Zaghdoudi, S. Halayem, I. Maalej, R. Zeremdini, M. Ben Bechir, R. Labbène
Department of Psychiatry C, Razi Hospital, La Manouba, Tunisia

The burnout syndrome consists of physical as well as mental exhaustion observed in professionals whose work needs continuous contact with other people. Psychiatrists as well as psychiatry nursing staff are considered to be vulnerable to experiencing burnout. The purposes of this study are to investigate the prevalence of burn out syndrome in practitioners, residents and nurses working in a psychiatric hospital in Tunisia. It also aims to investigate the relationship between burnout, depression, and a variety of personal variables, including age, gender, marital, parental and personal difficulties within this population. A cross-sectional study was conducted in nursing staff (n=54), residents (n=41) and practitioners (n=12) in Razi Hospital in Tunisia. The Maslach Burn-out Inventory, the Beck Depression Inventory and a general questionnaire on demographic factors were used. High levels of burnout were detected: 23.5% in the high range on the Emotional Tiredness sub-scale, with higher scores among nurses (35.8%). Nurses also presented high scores in depersonalization and in alteration of personal achievements. These high scores were correlated to depression and to personal difficulties. Residents had high scores in alteration of personal achievements, and practitioners had lower scores on the Maslach Burn-out Inventory. Our results are somewhat comparable to those of studies in other countries. The strong relationship between personal difficulties and burnout seems to be more specific to the nursing sample.

PO3.165. THE TORONTO ADDIS ABABA PSYCHIATRY PROJECT: EDUCATIONAL EFFECTS OF AN INTERNATIONAL OUTREACH PROGRAM ON PSYCHIATRY RESIDENTS

S. Brook, D. Wasylenki, C. Pain
University of Toronto, Canada

Since November, 2003, the Toronto Addis Ababa Psychiatry Project (TAAPP) has been operating as a collaborative partnership between the University of Addis Ababa, Ethiopia and the University of Toronto, Canada, to build and sustain the first Psychiatric Residency Program in Ethiopia. Previously Ethiopia had only 7 psychiatrists for a population of 77 million people. There are currently 10 residents enrolled in the program and 30 psychiatrists practicing in the country. Teams from the University of Toronto, including Department of Psychiatry faculty and residents, have been working with faculty and students in Addis Ababa for one-month periods four times each year. This research represents a qualitative study of the University of Toronto residents who have participated in the project. An extensive interview including a semi-structured component is used to characterize resident experience. We are exploring whether this international mental health elective is increasing cultural competency, knowledge and appreciation for public health issues and acquisition of "health advocate", "scholar", and "collaborator" skills. Background information has been obtained by interviewing faculty in Addis and Toronto. Resident participants are now being interviewed. Study data will be ana-

lyzed using a modified grounded theory method for qualitative research. This study will provide important information about the impact of international outreach experiences in developing countries on psychiatry residents in Toronto.

PO3.166.
EXPERIENCE OF MEANING IN DAILY OCCUPATIONS AMONG UNEMPLOYED PEOPLE WITH SEVERE MENTAL ILLNESS

E. Argentzell, C. Hakansson, M. Eklund
Faculty of Health and Society, Malmo University, and Department of Health Sciences, Division of Occupational Therapy and Gerontology, Lund University, Sweden

Local authorities in Sweden are responsible for providing meaningful daily occupations for people with severe mental illness. However, many people with severe mental illness lack daily occupations that they perceive as meaningful. People with mental illness usually perceive greater well-being when engaged in paid work. Knowledge about how people with severe mental illness find meaning in non-work occupations is important in order to develop programmes of meaningful daily occupations for this group. This study aimed to examine the meaning daily occupations may bring to those who are severe mentally ill and unemployed. Twelve unemployed people with severe mental illness were interviewed regarding their experience of meaning in daily occupations. Meaning was experienced in occupations that helped the informants control their mental illness, i.e., being socially engaged, independent and creative and being able to develop as a person. Meaning was also experienced when taking care of oneself by, for example, enjoying rest and relaxation. Substitutes for paid work were found, among other things, in having a productive role at a day centre or in household tasks. Rehabilitation for this group must be allowed to take many forms, and people with severe mental illness should be allowed to play a more active role in the rehabilitation process. Supported work placement programmes and programmes at work-oriented day centres should be further developed.

PO3.167.
PSYCHIATRIC MORBIDITY AMONG THE HOMELESS AND HOSTEL DWELLERS OF THE CITY OF EDINBURGH, SCOTLAND

G. Stevenson
Department of Psychiatry, Stratheden Hospital, NHS Fife, Scotland, UK

The Edinburgh Homeless Outreach Project (HOP) was established in 1992 to assist roofless and hostel dwellers in Edinburgh to gain appropriate access to existing mental health and alcohol support services. HOP assesses approximately 300 new contacts per year. Medical psychiatric assessment can be obtained from the homeless outreach psychiatric clinic. This study aimed to determine psychiatric, medical and social morbidity in patients referred for psychiatric assessment by HOP staff, over a one year period, with data obtained from psychiatric case notes, HOP staff, and semi-structured patient interviews. Patient outcome one year after their initial clinic assessment was determined using the above sources, in addition to other patient service contacts. Data were collected from 26 males and 6 females, the majority of whom were single, originated from out of Edinburgh, and lived in hostel accommodation. Significant medical morbidity was recorded in 44% of patients, with 69% being admitted previously to psychiatric hospitals and 50% detained under mental health legislation. Diagnostically, 42% males and 67% females had schizophrenia, 25% had personality disorder, with 46% exhibiting alcohol-dependence. Illicit substance misuse was recorded in 41% and a forensic history in 59%. Patients received depot antipsychotic medication (41%), oral antipsychotics (28%), antidepressants (19%), and anticonvulsants (12%). At one-year follow-up, 44% of contacts were in permanent accommodation, 34% in hostel accommodation, 6% in jail, and 3% had died. These data suggest that specialist services for homeless and hostel dwellers in Scotland's capital deal with a significant level of mental illness and drug abuse, and maintain high levels of engagement with this itinerant population.

PO3.168.
PERSONALITY AND MENTAL HEALTH: AN INVESTIGATION OF SOUTH AFRICAN POLICE TRAINEES

J. Richter, E. du Preez, N. Cassimjee, L.E.Lauritz, M. Ghazinour
Centre for Child and Adolescent Mental Health Eastern and Southern Norway, Oslo Norway; Department of Psychology, University of Pretoria, South Africa; Basic Training Program for Police Officers, University of Umeå, Sweden

There is much evidence that personality traits are related to mental health status. On the one hand, personality traits of police officers have been described to be distinctive compared to the normal population. Police work is often described as one of the most stressful occupations; consequently, psychological disorders have been often diagnosed in police officers. Are there particularities related to personality and mental health in South African police trainees? Can personality traits predict psychological symptoms? 1150 black or coloured police trainees at the Police Academy of Pretoria were investigated by means of the Temperament and Character Inventory and the Symptom Checklist-90, revised. The South African police trainees evaluated themselves generally as low in Novelty seeking and Harm avoidance, combined with a tendency of low Cooperativeness, but high in Self-transcendence and Persistence compared to normal population data from the US, Sweden, and Germany; their self-evaluated mental health status was worse compared to Swedish and German normal population data except for depression and anxiety. Personality and socio-demographic variables explain between 11% (paranoid ideation in males) and 28% (anxiety in females) of the variance of psychological symptoms. Specially designed prevention modules in order to improve resilience, taking into account the personality particulars of police trainees, should be developed and implemented into police training.

PO3.169.
THE EFFICACY OF A STRUCTURED PLANNING AND EVALUATION APPROACH IN PSYCHIATRIC REHABILITATION

A. Gigantesco, R. Pioli, P. Morosini
Unit of Mental Health, Italian National Institute of Health, Rome; Fatebenefratelli Scientific Institute, Brescia, Italy

This study investigated whether a specific structured planning and evaluation approach called VADO (in English, Skills Assessment and Definition of Goals) resulted in improved personal and social functioning among patients with chronic schizophrenia. A total of 85 patients with chronic schizophrenia who were under a stable medication regimen were randomly allocated to the VADO-based intervention or to routine care; 78 completed the program. Interventions were carried out in nine Italian day treatment or residential rehabilitation facilities. Assessment at the beginning of the study and at the one-year

follow-up included the Personal and Social Performance scale (PSP) and the Brief Psychiatric Rating Scale Version 4.0 (BPRS). Clinically significant improvement was defined as an increase of at least 10 points on the PSP or a decrease of at least 20 percent on the BPRS total score. At baseline, average PSP scores in the experimental group and in the control group were 33.9±8.1 and 34.0±11.2, respectively (possible scores range from 1 to 100, with higher scores indicating better functioning). At six months, the score improved markedly in the experimental group (40.8±10.9), while minimal change was observed in the control group (35.3±11.6). The difference between groups was significant (difference of 6.9 points compared with 1.3 points; $t=2.21$, $df=81$, $p<0.05$). At 12 months, the same trend was observed (difference of 12.0 points compared with 3.5 points), and the difference between groups was both statistically and clinically significant ($t=2.99$, $df=75$, $p<0.01$). In conclusion, a significant improvement in functioning was observed among patients treated with the VADO approach.

PO3.170. DEVELOPING, DELIVERING AND EVALUATING TRAINING SESSIONS FOR PRIMARY CARE MENTAL HEALTH LINK WORKERS

A. Bowers, F. Burnett
St. Albans Community Mental Health Team, Hertfordshire, UK

The New Way of Working model is a multi-disciplinary process. Its purpose is to enable all qualified staff to extend their clinical practice to enable those clinicians with the most experience and skills to work with service users with the most complex needs. By enhancing current roles, clinicians can benefit from increased job satisfaction and career development. The organization benefits from a more efficient use of resources and patients benefit from improved service delivery. The aim of this study is to evaluate the impact of an educational intervention targeted at non medical mental healthcare professionals preparing for newly developed roles within a New Way of Working organization. Twenty-six members of the St. Albans Community Mental Health Team were invited to attend fourteen educational seminars. These interactive sessions were aimed at improving clinical skills and confidence in the assessment and management of patients with mental illness. A pre/post test questionnaire was administered to evaluate change in confidence levels. All twenty-six workers attended at least one session. Following the educational intervention there was a 19% absolute increase in confidence regarding mental disorder assessments and an 18% absolute increase in confidence in relation to making diagnoses in patients with mental disorder. There was a 23% absolute increase in confidence regarding familiarity with NICE guidance in relation to mental illness. Data collected from this study indicates that a targeted training programme to non-medical healthcare professionals improves overall knowledge and confidence in assessing and managing patients with mental illness.

PO3.171. PHYSICAL, EMOTIONAL AND SOCIAL PROBLEMS IN FEMALE TURKISH IMMIGRANTS

E. Babaoglu Akdeniz, F. Oz
Hacettepe University, Ankara, Turkey

The aim of this study was to assess the physical, emotional and social problems of female Turkish immigrants who leave in the German city of Neuss. We included 26 female Turkish immigrants who applied for consulting services to a German solidarity service organization, called "Caritas". A focus-group methodology was applied in three sessions. A psychoeducational counselling was provided, based on cognitive therapy and problem solving methodologies. The most common physical problems were head and joint pain, gastric symtoms, fatigue and palpitation. Emotional problems included low self-esteem, depressive symptoms, loneliness and anger. Social problems included language barriers, change in the entertainment interests, social isolation, ineffective community coping. A significant impact on these problems was observed by applying group counselling.

PO3.172. THE ULYSSES SYNDROME AND ITS RELATIONSHIP TO SOCIOCULTURAL VARIABLES: A STUDY IN FOGGIA, ITALY

M. Ferretti, F. Padalino, A. Bellomo, M. Nardini
Department of Medical Sciences, Division of Psychiatry and Clinical Psychology, University of Foggia; Department of Neurologic and Psychiatric Sciences, University of Bari, Italy

The study aimed to check the possible interrelationships between the stress experienced by a multicultural group of immigrants, their integration process and a series of symptoms from several areas of psychopathology known as the Ulysses syndrome. A structured interview was used in a sample of adult immigrants referred for psychiatric consultation to a university department. A direct relationship was found between the stress experienced by the immigrants and their symptomatology. The occurrence of the Ulysses syndrome and the impact of sociocultural factors on its phenomenology was verified.

PO3.173. THE VERONA PARTNERSHIP PROGRAM: CONSUMERS' PARTICIPATION, EXPECTATIONS AND OPINIONS

L. Berti, C. Bonetto, D. Cristofalo, L. Burti
Department of Medicine and Public Health, Section of Psychiatry and Clinical Psychology, University of Verona, Italy

In Verona, the collaboration between a psychiatric self-help association, the Department of Mental Health and a non-profit organization results in a psychosocial program offered to more than five hundred members who are involved, according to the principles of mutual help. Previous studies have shown that this program may help reduce inpatient stays and costs of care, enhance insight, protect against the increase of unmet needs and improve satisfaction in relevant areas even in the case of severely ill mental patients. The purpose of this study was to portray patterns of members' participation, assess members' goals, evaluate the ability of the program to meet their expectations and explore possible correlations with clinical and social characteristics. Data were collected with a semi-structured interview and instruments of the South-Verona Outcome Project (GAF, DAS, CAN, LQL, BPRS). The Psychiatric Case Register provided socio-demographic and clinical data. Eighty-seven subjects terminated the study; they had attended the program for various periods of time, from less than a year (22%) to the entire period considered (3 years: 14%); most of them reported goals concerning free time activities and health. Subjects were generally satisfied with the degree of achievement of their goals, the sharing of goals with staff and the amount of help received, particularly if their perceived needs were related to the area of social functioning. Members who described the experience with the association as positive reported also an greater overall satisfaction in life.

PO3.174.
THE EMILIA PROJECT: THE STORY SO FAR

P. Flores, R. Izquierdo, E. Leahy, C. Masferrer, T. Dominguez, E. Palomer, I. Dawson
Hospital del Mar, Barcelona, Spain; Nordland Hospital, Bodø, Norway

EMILIA is a Sixth Framework European Project aimed at reducing social exclusion of mental health service users, challenging the conventional role of users and professionals. The innovative aspect of EMILIA are the involvement of users as experts and their participation as researchers and teachers while also forming part of the study group. Eight European countries have participated as demonstration sites. Thirty users have been recruited at each site. Users have completed training programmes in topics such as social network support, recovery, families, and strengths. EMILIA is four years old and one year on after the training. In this paper, two sites, Barcelona and Bodø, compare and evaluate the results of the training by analysing increased user empowerment, users involvement within mental health institutions, and increased user's involvement in meaningful activities. The comparison between these two sites reflects cultural and social differences, but also shows several similarities.

PO3.175.
A RANDOMIZED TRIAL OF A HOME AFTERCARE SERVICE FOR PATIENTS WITH SEVERE MENTAL DISORDERS IN IRAN

V. Sharifi, H. Amini, M. Tehranidoost, M. Yunesian, M. Jalali-Roudsari, P. Sobhebidari, A. Manouchehri
Department of Psychiatry, Roozbeh Hospital; Psychiatry and Psychology Research Center, Roozbeh Hospital; School of Public Health, Tehran University of Medical Sciences, Tehran, Iran

The study aimed to explore the effectiveness of a home care service for patients with severe mental disorders compared to follow-up treatment as usual (TAU) in Iran. A total of 120 patients were included (60 with schizophrenia and 60 with bipolar disorder). They were randomized to receive either home care (60) or TAU (60). Home care consisted of home visits by multidisciplinary teams, including general practitioners, nurses, and social workers supervised by psychiatrists. Home visits were scheduled as biweekly for the first three months following discharge and then on a monthly basis. Patients were followed for 12 months after discharge and were assessed for symptomatology, functioning, quality of life, service satisfaction, and relapse and rehospitalization rates. In the 12-month follow-up, the relapse and rehospitalization rates were significantly lower in the home care group, compared with TAU. In addition, functioning was superior in those receiving home care compared to TAU. Other outcomes were comparable between groups. These findings suggest that home care service is an effective mode of community-based aftercare for patients discharged from the hospital. Its cost-effectiveness should be assessed in future studies.

PO3.176.
COMMUNITY THERAPY: A STRATEGY OF ACCESS TO MENTAL HEALTH CARE

R. Lucena, M. Ferreira, M. Dias, V. Carvalho, H. Wallot
Universidade Federal da Paraíba, Brazil; Université du Québec à Montréal, Canada

Community therapy (CT) is a group intervention originally developed in a slum area in the Northeast of Brazil two decades ago. Today it is widely utilized across the country. This study aimed to describe community therapy and understand its ongoing expansion and application in community settings. A qualitative exploratory study was conducted. Data were collected through semi-structured interviews, participant observation and document analysis. CT is anchored on systems theory, communication theory, Paulo Freire's pedagogy of freedom, and cultural anthropology. It consists of weekly group meetings of low income patients seeking help in primary care settings. Sessions lasting on average an hour and half are conducted by a community therapist and a co-therapist with the goal of alleviating patient distress. They involve the discussion of a specific subject defined by group participants, largely composed of women, retired people, and adolescents. Patients have the opportunity to talk about their suffering and learn coping strategies from other members of the group. CT is also an intervention to promote patient psychoeducation, and the development of social networks of support. It is being included in national public policies of mental health. CT is a group intervention to deliver mental health care to lower class patients that has evolved uniquely from Brazilian culture and creativity. It emerged from local experience and has now been adopted by millions. However, before more public money is invested in CT, evaluative research is needed to measure its impact on the mental health of Brazilians.

PO3.177.
PSYCHIATRIC DOMICILIARY VISITS IN A RURAL MILIEU

M.E. Gorender, M. Gomes, V. Barbosa, R. Varjão Oliveira-Junior, B.M.C. Trindade, F.O. Lima, T.B.J. Luz, M.P. Flores, M.B. Sá
Department of Neuroscience and Mental Health, Federal University of Bahia, Brazil

Domiciliary visits in psychiatry represent a rarely explored issue. This paper reports on the program of domiciliary visits in the city of Ipirá, Bahia, Brazil. The main goal was to verify the reasons why visits were asked, their efficacy, the diagnoses involved and other relevant epidemiological data. The study focused on the visits made between September 2007 and March 2008 (30 visits to 27 patients). The main diagnosis was schizophrenia (40.7%); the most frequent reasons why visits were asked were refusal of treatment (37%) and problems in access to services (29.6%). The most frequent therapeutic intervention was the use of depot antipsychotics (37%) and arranging for social security benefits (29.6%). Of the patients, 66.7% improved significantly, concerning both symptoms and social and family relationships. These excellent results suggest that further studies on psychiatry domiciliary visits are warranted.

PO3.178.
DEMOGRAPHIC AND CLINICAL PROFILE OF PATIENTS RECEIVING ELECTROCONVULSIVE THERAPY AT A PSYCHIATRIC HOSPITAL IN LAGOS, NIGERIA

N. Okewole, M. Dada, A. Raji, A. Owoeye
Psychiatric Hospital, Yaba, Lagos, Nigeria

The study aimed to obtain a profile of patients receiving electroconvulsive therapy (ECT) in a psychiatric hospital in Nigeria. Hospital records of patients receiving ECT newly from January 1, 2000 to December 31, 2007 were reviewed for demographic information, clinical diagnosis and indication for ECT use. Analysis was done using SPSS 14. There were a total of 222 cases, ranging from 45 in 2000 to 21 in 2007. Mean age was 31.7±9.6 years. Male:female ratio was 1:2. 58.2% were single, while 45% were unemployed. 28.9% had had con-

tact with a psychiatric facility before presentation. Clinical diagnosis ranged from schizophrenia (44.8%), severe depression (27.8%), bipolar disorder (15.5%) to puerperal psychosis (8.2%). Indications for ECT included psychosis (41.6%), severe depressive episode (25.8%), catatonia (23.7%) and manic episode (7.4%). There has been a decline in use of ECT over the years. Females were twice as likely to receive ECT. Schizophrenia remains the most common diagnosis while the commonest indication for ECT is unresolved psychosis.

PO3.179. EVALUATION OF SEVERE OUTGROUP BIAS IN TERMS OF PSYCHOPATHOLOGY

E. Dunbar
Pacific Psychological Associates, Los Angeles, CA, USA

Research during the last fifty years has attempted to define prejudice as a social cognition/error in thinking phenomenon, a personality-trait phenomenon, or a group membership phenomenon. Of additional interest is the relationship between pathological bias and clinical diagnostic symptoms. The question of how to assess pathological bias is described in terms of both conventional psychometric measures and behavior-specific methodologies. This is augmented by the review of a facet-specific clinical rating tool, the Outgroup Hostility Scale (OHS). Assessment on a triad of indicators of bias as a co-occurring pathological syndrome is presented. Other measures discussed include the Gough Prejudice (Pr) scale, which is one of the few inconspicuous personality measures related to out-group bias.

PO3.180. THE DEFENSE STYLE QUESTIONNAIRE AND PSYCHIATRIC DISORDERS: A COMPREHENSIVE META-ANALYSIS

R. Calati, O. Oasi, D. De Ronchi, A. Serretti
Institute of Psychiatry, University of Bologna; Department of Psychology, Catholic University, Milan, Italy

The concept of defense mechanisms is of great importance in clinical practice. The aim of the present meta-analysis is to compare different defenses, assessed using the Defense Style Questionnaire (DSQ), throughout a spectrum of psychiatric diagnoses. We searched for all publications studying the association between DSQ defenses and psychiatric disorders. Data were entered into the Cochrane Collaboration Review Manager Software and analyzed by RevMan analysis 1.01. Mature style was found significantly lower in mood disorder patients; neurotic style was found higher in mood disorder, panic disorder and all anxiety disorder patients. A dissimilarity between depressive and anxious profiles emerged, since the former profile was mainly characterized by low mature and high neurotic scores, while the latter by high neurotic style only. The present results could suggest specific strategies in clinical and psychotherapeutic management of patients with different mental disorders.

PO3.181. FACTORS RELATED TO RETENTION IN A RANDOMIZED CONTROLLED PILOT STUDY TESTING THE IMPACT OF A COMBINED MOTIVATIONAL INTERVIEWING-COGNITIVE-BEHAVIORAL VIOLENCE PREVENTION TREATMENT APPROACH

S. Chermack, M. Walton, R. Murray
University of Michigan Addiction Research Center, Ann Arbor, MI, USA

This study examined predictors of retention in a randomized controlled pilot study testing the impact of a combined motivational interviewing – cognitive-behavioral violence prevention treatment (Integrated Violence Prevention Treatment: IVPT) delivered as a supplement to alcohol and drug treatment services. Participants were 85 men and 34 women who were randomized to either IVPT or a control condition. Both the IVPT and control conditions involved up to six individual sessions. The mean age of the sample was 35.3 years, 48% were Caucasian and 36% African American (16% were other minorities), and 67% were on probation/parole. Approximately 60% reported heavy drinking, 55% cannabis use and 65% cocaine use. Recent cocaine use predicted poor session attendance, and those in residential treatment attended significantly more sessions compared to those in outpatient treatment. Further, there were significant interactions involving treatment condition, race and probation/parole status, indicating that IVPT was related to more sessions attended for African-American participants compared to others, as well as more sessions for those who were not currently on probation/parole. The findings demonstrate that, among other factors, recent cocaine use appears to be a marker of poor retention in a violence prevention treatment trial. Further, it appears that compared to standard outpatient treatment, residential settings may offer a greater opportunity to provide more intensive supplemental treatments targeting violence prevention. Finally, the IVPT approach resulted in higher levels of session attendance for African-American participants, and may be particularly useful for boosting attendance of those without the "external" motivator of current legal pressures.

PO3.182. SENSE OF COHERENCE AND SOCIOECONOMIC FACTORS AS PREDICTORS OF CHANGE IN DEPRESSIVE SYMPTOMS IN SHORT-TERM PSYCHOTHERAPIES

P. Haaramo, O. Lindfors, M.A. Laaksonen, P. Knekt
Biomedicum Helsinki, National Public Health Institute, Social Insurance Institution, Helsinki, Finland

Sense of coherence (SOC) has been shown to predict remission from depression. The dependence of this relationship on socioeconomic variables is, however, poorly known. The present study considered the effect modification of five socioeconomic variables on the prediction of SOC on changes in depressive symptoms. In the Helsinki Psychotherapy Study, 163 psychiatric outpatients, aged 20-46 years and suffering from depressive disorder, were treated with solution-focused therapy or short-term psychodynamic psychotherapy. Sense of coherence was assessed with Antonovsky's 29-item Sense of Coherence scale (SOC) and five socioeconomic variables (i.e., sex, age, marital status, education and socioeconomic status) were enquired at start of treatment. Depressive symptoms were assessed both at baseline and 4 times during a 1-year follow-up using Beck Depression Inventory (BDI). SOC predicted changes in symptoms. Patients with good SOC

recovered better from depression than patients whose SOC was poor. This association was modified by sex, education, marital status, and socioeconomic status. In married or co-habiting patients and among students, however, the symptom level decreased irrespective of the SOC level. In men and patients with basic education, no notable recovery from depression was found even among those with high SOC levels. In conclusion, SOC is a good predictor of change in depressive symptoms, but this association varies between socioeconomic groups. Thus, the information on the patient's SOC level and socioeconomic background may be useful in predicting therapy outcome and choosing the treatment for patients suffering from depression.

PO3.183. CHOICE OF LENGTH OF PSYCHOTHERAPY BASED ON A SUITABILITY SCORE

M.A. Laaksonen, P. Knekt, O. Lindfors
National Public Health Institute, Social Insurance Institution, and Biomedicum, Helsinki, Finland

The outcome of psychotherapy has been found to depend on the patient's pre-treatment personality characteristics and interpersonal predispositions. These psychological characteristics have also been suggested to differentiate the patient's suitability for short- and long-term psychotherapy. In this study, the predictive value of a psychological suitability assessment scale and a suitability score based on it was compared in short- and long-term psychotherapy. Altogether 326 psychiatric outpatients from the Helsinki Psychotherapy Study, aged 20-46 years, and suffering from depressive or anxiety disorders, were randomized to short- or long-term therapy and followed for 3 years. The patient's psychological qualities were assessed with a 7 item Suitability for Psychotherapy Scale (SPS) at baseline and a suitability score of the 7 items was formed. Psychiatric symptoms were measured with the Symptom Check List, Global Severity Index (SCL-90-GSI). Three patient groups were revealed when the suitability score was used to predict symptom course: patients with more good than poor values in the 7 suitability measures benefitted sufficiently from short-term therapy, whereas patients with more poor than good values needed long-term therapy to recover, and patients with all 7 values poor failed to benefit from either short- or long-term therapy. It was noted, however, that almost half of the patients received considerably auxiliary treatment besides the study treatment, thus resulting in longer treatments than intended. The length of therapy needed to recover may be predicted before start of therapy. The effect of auxiliary treatment needs to be further clarified, however.

PO3.184. QUASI-EXPERIMENTAL STUDY OF THE EFFECTIVENESS OF PSYCHOANALYSIS VS. LONG- OR SHORT-TERM PSYCHOTHERAPY IN PSYCHIATRIC OUTPATIENTS

P. Knekt, O. Lindfors, C. Renlund, P. Haaramo, M. Laaksonen, T. Härkänen, E. Virtala, and the Helsinki Psychotherapy Study Group
Social Insurance Institution; National Public Health Institute; Biomedicum Helsinki; Helsinki University Central Hospital; Rehabilitation Foundation, Helsinki, Finland

The Helsinki Psychotherapy Study showed that short- and long-term psychotherapy are insufficient treatments for part of patients with depressive or anxiety disorder. Psychoanalysis might help such patients, but the empirical evidence is scarce. The effectiveness of psychoanalysis in comparison with short- and long-term psychotherapy was evaluated in the present study. A total of 326 psychiatric outpatients from the Helsinki area, the majority with depressive disorder, were randomly assigned to solution-focused therapy or to short- or long-term psychodynamic psychotherapy. Furthermore, 41 patients suitable for psychoanalysis were included. The patients were followed for 5 years from start of therapy. Primary outcome measures were depressive symptoms, measured by the self-reported Beck Depression Inventory (BDI) and the observer-rated Hamilton Depression Rating Scale (HDRS), and anxiety symptoms measured by the self-reported Symptom Check List, Anxiety scale (SCL-90-Anx) and the observer-rated Hamilton Anxiety Rating Scale (HARS). The statistical analyses were based on an intention-to-treat design. A significant reduction of symptoms was noted in all treatment groups during the follow-up. Recovery was fastest in both short-term therapy groups and slowest in the psychoanalysis group. After 5 years of follow-up, however, psychoanalysis resulted most effective. About 82% of the patients receiving psychoanalysis recovered from their symptoms (i.e., BDI<10), whereas for the other treatment groups the recovery rates varied from 48-67%. The corresponding effect sizes were 2.0 and 1.1-1.4, respectively. In the long run psychoanalysis might be more effective than long-term or short-term therapies. The results are, however, preliminary and no firm conclusions can be drawn.

PO3.185. CHANGES IN SELF-CONCEPT FOLLOWING SOLUTION-FOCUSED THERAPY AND SHORT- AND LONG-TERM PSYCHODYNAMIC PSYCHOTHERAPY

O. Lindfors, P. Knekt, E. Virtala, E. Heinonen, M. Laaksonen, and the Helsinki Psychotherapy Study Group
Biomedicum Helsinki, Social Insurance Institution, National Public Health Institute, Helsinki University Central Hospital, and Rehabilitation Foundation, Helsinki, Finland

Self-concept pathology is manifested through subjective suffering and interpersonal problems, and is considered to be essential in the pathogenesis of depressive and anxiety disorders. The possible differential effectiveness of short- and long-term psychotherapies in producing changes in self-concept has not previously been studied, however. We compared the effectiveness of three modalities of psychotherapy on self-concept improvement during a 3-year follow-up. Altogether 326 patients, 20-46 years of age, with depressive or anxiety disorder were randomized to solution-focused therapy, short-term or long-term psychodynamic psychotherapy. Self-concept was measured with the Structural Analysis of Social Behavior (SASB) questionnaire at baseline and at 7, 12, 24 and 36 months after it. Altogether 10 self-concept dimensions were assessed, the primary outcome measure being the Affiliation (AF) score, indicating the overall self-concept in a positive-negative axis. During the first year after start of treatments, self-concept improved more rapidly in short-term therapies, especially in solution-focused therapy, than in long-term psychotherapy. Toward the end of the three-year follow-up, improvement continued in both psychodynamic therapy groups. Long-term psychotherapy produced significantly larger beneficial changes in self-concept than solution-focused therapy at the 3-year follow-up. These differences were observed in the primary SASB AF score and in the dimensions of Self Blame/Self Affirm and in Self Neglect. Short-term psychodynamic psychotherapy outperformed solution-focused therapy in Self Attack by producing more decreased scores at the end of the follow-up, while no difference was noted between the psychodynamic therapies. The results may indicate specific effects of the psychodynamic modalities on personality-related changes during and after treatment.

PO3.186.
ETHICAL BOUNDARIES IN GROUP PSYCHOTHERAPY: A PROPOSAL FOR PREVENTION

E. Guerra, M. Blanco, S. Salas
Mental Health, Alcala De Henares, Madrid, Spain

Studies of ethical transgressions in group psychotherapy have not been plentiful, especially those concerning transgressions of non-sexual nature, although the latter are not rare. We reviewed the literature concerning this issue by a PubMed search covering the period between 1992 and 2008. We classified the relevant papers among those concerning sexual and those dealing with non-sexual transgressions, including issues of informed consent, confidentiality, documentation, friendly relations and services. We conclude that there is a need to provide adequate and effective information to users before the beginning of therapy. We propose the use of a simplified form of informed consent in order to prevent transgressions.

PO3.187.
A "CREATIVE ATTITUDE" FOR PSYCHIATRY AND PSYCHOTHERAPY

R.M. Holm-Hadulla
University of Heidelberg, Germany

Making a link between science and the humanities, the author demonstrates that creative shaping is a fundamental aspect of the human experience of reality. Unfortunately the term *creativity* (and its relevance for psychiatry and psychotherapy) is mostly used in a vague and ill defined way. Thus, cultural roots and salient elements of creativity are described. Aesthetic experience and creative shaping play a crucial role in the psychiatric and psychotherapeutic encounter for both patients and psychiatrists/psychotherapists. At first the influence of aesthetic judgement on the diagnostic process is analysed. Creative experience is shown to constitute a specific and unique form of access to the patient's reality. Secondly, general creative principles of the therapeutic interaction are outlined. Through modern hermeneutics, the truth claims of aesthetic shaping of experiences can be established in epistemological terms. The basic principles of hermeneutics – historicity, language and communicative experience – find their therapeutic counterparts in memory, narrative shaping and therapeutic interaction. Psychiatric and psychotherapeutic treatment is demonstrated to be simultaneously a science and an art. A "creative therapeutic attitude" may serve as a basis for the treatment with different psychotherapeutic techniques as well as with medication.

PO3.188.
MEDICAL EMPATHY AND ITS CORRELATION TO AGE AND GENDER AMONG MEDICAL STUDENTS IN VENEZUELA

J. Sánchez Delgado
University of Carabobo, Venezuela

This study aimed to analyze the relationship among medical empathy, gender and age within medicine students of the Aragua Campus of Universidad de Carabobo. The sample consisted of 435 students in the last three years of their medical training. We used the "S" version of Jefferson's Medical Empathy Standardized Scale and a demographic questionnaire. The general medical empathy values were between the 60th and 80th percentile, with decreasing values for perspective taken (80th percentile), compassion (70th percentile) and placing oneself in someone's s place (60th percentile). There were significant differences according to age (F=4.136; p=0.007) and sex (F=9.981; p=0.002). These data suggest that medical students are in general very empathic and that empathy is greater in younger students and in women.

PO3.189.
STABILITY AND RELIABILITY OF THE ASSESSMENT OF REFERENTIAL THINKING BY THE REF SCALE

J.F. Rodríguez-Testal, M. Valdés-Díaz, M.M. Benítez-Hernández, S. Fuentes-Márquez, E. Fernández-Jiménez, M.C. y Senín-Calderón
Department of Personality, Assessment and Psychological Treatments, University of Seville, Spain

In previous works we showed the usefulness of the REF scale to assess referential thinking, although this measure is not specific for psychotic patients. More recently, we studied variables predicting referential thinking. In this study, we explored the stability and reliability of the assessment of referential thinking by the use of the scale. We included in the REF scale some masked sincerity items from the Eysenck Personality Inventory, in order to control biases in the responses. We employed a longitudinal design (brief time-series) in three patients (one with psychotic disorder not otherwise specified, one with paranoid personality disorder, and one with schizoid personality disorder), recording the REF scale total score and intensity score, in addition to sincerity. Preliminary results indicate stability in the total scale but not in intensity score. Scores of sincerity suggest that the values are reliable.

PO3.190.
THE MULTIDIMENSIONAL NATURE OF HUMAN EMPATHY ASSESSED BY THE EMPATHY QUOTIENT

E. Bora, L. Baysan Arabaci
Melbourne Neuropsychiatry Centre, University of Melbourne, Australia; Ege University School of Nursing, Department of Psychiatric Nursing, Bornova İzmir, Turkey

The factorial structure of the Empathy Quotient (EQ) was tested by coadministration of explanatory and confirmatory factor analysis methods. Principal component analysis suggested a four-factorial structure, including cognitive empathy, emotional response, empathic concern and social skills. Females were superior to males in all dimensions and between-group difference was especially pronounced for emotional response and empathic concern dimensions. Items loaded on a single affective empathy factor in previous studies were loaded on two separate factors (emotional response and empathic concern) in this study. Confirmatory factor analysis also favoured 4-factorial model over 3-factorial and other models. Cognitive empathy was only correlated with the emotional response factor. Affective empathy may consist of two separate dimensions: one more basic emotional contagious-like dimension and a more personality-trait like dimension (sympathy).

PO3.191.
THE RELATIONSHIP BETWEEN DEPRESSION AND EMOTIONAL INTELLIGENCE: A STUDY ON UNDERGRADUATE STUDENTS IN IRAN

A. Asghar Bayani
Islamic Azad University, Azadshahr, Iran

Depression and depressive symptoms are among the most common of all mental disorders and health complaints. The main objective of this study was to examine the relationship between emotional intelligence and depression among undergraduate students. The undergraduate

students of the Islamic Azad University, Azadshahr branch (183 women, 123 men) took part in the study. Their ages ranged from 18 to 51 (mean 25.4±6.1); 124 were married, and 182 were single. All the respondents completed a series of questionnaires, including the Farsi version of the Trait Emotional Intelligence Questionnaire, the Depression Anxiety Stress Scale. A significant negative correlation has been found between the scores on the Trait Meta-Mood Scale and the Depression Anxiety Stress Scale ($r=-.43$; $p<0.0001$) for the total group and also separately for men and women.

PO3.192.
THE ROLE OF RELIGION IN PSYCHOTHERAPY IN THE MIDDLE EAST CONTEXT

A.M. Abdel-Khalek
Kuwait University, Kuwait

Approximately 95% of adults in the United States profess to believe in God or some kind of higher power, and 87% affirm that religion plays a fairly or very important role in their lives. Abdel-Khalek and Thorson found that both Egyptian and Kuwaiti college students scored much higher than the Americans in intrinsic religiosity. Consistent with this finding, but in another context, an extended research project indicated statistically significant and positive correlation between religiosity and subjective well-being, happiness, satisfaction with life, love of life, optimism, positive emotions and self-rating of physical and mental health. On the other hand, we found a significant negative correlation between religiosity and psychopathology, namely anxiety and depression. Based on these findings, it is safe to hypothesize that religion has the potential to be integrated, implicitly or explicitly, in the psychotherapeutic procedures, particularly cognitive behavioral therapy (CBT), among clients from the Middle East. Religious coping skills could be used that utilize the client's religious beliefs and practices. A preliminary study with master's degree students in psychology indicated the possibility of applying religious beliefs and practices in psychotherapy in Kuwaiti patients. By and large, religion can be a powerful way to cope with life stresses including disease, in developing healthy quality of life, and in building resilience, especially in religious societies in the Middle East.

PO3.193.
RELATIONSHIP BETWEEN DEPRESSION AND TRUST IN GOD AMONG UNDERGRAUDATE STUDENTS IN IRAN

M.M. Naderi
Islamic Azad University, Azadshah, Iran

This study explored the relationship between depression as a mental disorder and trust in God among undergraduate students in Iran. It was a descriptive-analytic study. Three hundred eighty-five university students were asked to complete the Beck Depression Inventory (BDI) and a Trust in God scale. The data were analyzed by SPSS software. There was a significant negative relationship between depression and the extent of trust in God. This relationship remained significant after controlling for education, birth order, sex and age.

PO3.194.
PSYCHOTHERAPY AS A CREATIVE PROCESS: AN APPLICATION IN A DYNAMIC INTERACTIVE THERAPY GROUP

R. Mahfouz, M. Arafa, M. Mohamed
Psychiatry Department, Minia University Hospital, Egypt

Traditionally, psychotherapy has been less often defined as a process of creation than of helping, education, personal development, and repair. There has been only scant empirical research done connecting the creative and psychotherapeutic processes. This study tried to investigate the research question: "Can psychotherapy follow the same stages of a well known creativity model?". Textual data transcripts were derived from audio and video recordings of group psychotherapy sessions that were held in Minia Psychiatry Department, Egypt. Data was qualitatively analyzed using the Interpretative Phenomenological Analysis. We aimed to follow the evolutionary phases of the therapeutic process and find if they could be categorized into certain stages that can match the stages of a well-known creativity model, either Wallas' (1926) or Barron's (1988). Wallas proposed that creativity proceeds through four phases: preparation, incubation, illumination and verification. Barron has developed his four-phase "psychic creation model": conception, gestation, parturition, and bringing up the new. Barron's model of creativity is thought to involve more conscious, intentional and directive work in the creative process and it also emphasizes the very characteristic painful experiences at the moments of the emergence of the new (birth/change). Wallas' model is thought to involve more unconscious work with much emphasis on the sudden illumination of insights in the moments of change. The stages of studied therapeutic process, as analyzed by the researcher from the transcribed scripts, could be well-matched with those of Barron's model of the creative process, and could not with those of Wallas' model of creativity. The theory that emerged from this study can provide practicing therapists, instructors, and students a deeper understanding of the process variables and contributory factors to creative therapeutic outcomes in psychotherapy.

PO3.195.
WHAT DO WE REALLY KNOW ABOUT MINDFULNESS MEDITATION?

A. Chiesa, D. De Ronchi, A. Serretti
Institute of Psychiatry, University of Bologna, Italy

In the last decades, the scientific community showed an increasing interest towards a group of meditations called mindfulness meditation (MM). The aim of the present work is to give an integrative overview of MM, considering neurobiological, genetic and clinical features, and providing a relationship between these data. A literature search was conducted using MEDLINE, ISI web of knowledge, the Cochrane database and references of selected articles. Articles in English language, published until March 2008, were included. The neurobiological and clinical modifications induced by meditation are mainly modulated by an activation of the prefrontal cortex and a deactivation of the amygdala, suggesting a more conscious reflexive rather than automatic reactive awareness. Electroencephalographic studies evidenced an increase in alpha and theta activities, which are related to relaxation states. MM showed efficacy in the prevention of depression relapses, in anxiety disorders, substance/alcohol abuse, heart diseases and chronic pain, in the reduction of stress, anxiety, depressive levels and in the improvement of quality of life in many disorders and in healthy people. These effects appear to be mediated by both psychological mechanisms, such as a development of meta-

cognition and of a non-judgemental awareness of experiences, and biological mechanisms, such as a reduction in cortisol levels and a release of endogenous beta-endorphin. MM appears to be a promising tool for many mental and physical disorders. Unfortunately, several limitations affect the included studies, such as small samples size, lack of standardization, randomizations and double blinding. However, the present evidence is encouraging and further better designed studies are warranted.

PO3.196.
THE BEGINNING OF MEDICAL COURSE AND ITS IMPACT ON THE HEALTH OF STUDENTS: A REPEATED CROSS-SECTIONAL SURVEY IN A BRAZILIAN UNIVERSITY

E. Oliva-Costa, T. Andrade, A. Lima Jr., C. Góis, A.C. Aquino-Rosa, L. Porto, M. Alencar, M. Costa
Federal University of Sergipe; Federal University of Bahia, Brazil

This study aimed to assess the prevalence of common mental disorders (CMD) and associated risk factors among students of medicine during the first three periods of medical course. We carried out a repeated cross-sectional survey in students of Medicine of the 2006/1 class, who were investigated in the first, second and third period of the medical course, using an ad-hoc questionnaire and the Self-Report Questionnaire (SRQ-20). The prevalence of CMD was 12.5% in the first semester, 25.6% in the second and 15.2% in the third. The decrease of the prevalence in the third period was associated with a part-time strike, with fewer class, homework and requests, reinforcing the idea that the teaching-learning process as an impact on the development of CMD.

SPONSORED EVENTS

SPS1.
THE LONGITUDINAL COURSE OF TREATMENT OF SCHIZOPHRENIA
(organized by Eli Lilly)

SPS1.1.
TREATING FROM THE FIRST EPISODE

M. Davidson
Department of Psychiatry, University of Tel Aviv, Israel

Schizophrenic psychosis is a chronic condition affecting all areas of vocational and social functioning and patients' quality of life. Treatment with antipsychotic medication, although far from ideal, can suppress symptoms for lengthy periods of time. As such, prompt and effective treatment, ideally implemented at onset of symptoms, is imperative. However, treatment is often delayed or interrupted due to environmental variables and/or patient-related factors. It is reasonable to assume that a patient's perception of the first encounter with treatment, the first episode of psychosis, will affect life-long cooperation with treatment. It is therefore essential to select the most effective treatment with the least adverse effects at the beginning of illness. Since no biological markers exist to indicate which individual patient will best respond to what drug, the selection of the drug has to be based on aggregate results of the recent first-episode trials. We explore the challenges and strategies of treating schizophrenia over the longitudinal course of this illness starting with the first episode.

SPS1.2.
REHOSPITALIZATION, MORTALITY AND LONG-TERM OUTCOMES: RECENT FINDINGS FROM THE FINNISH NATIONAL REGISTRY

J. Tiihonen, J. Lönnqvist, K. Wahlbeck, T. Klaukka, L. Niskanen, A. Tanskanen, J. Haukka
Department of Forensic Psychiatry, University of Kuopio and Niuvanniemi Hospital, Kuopio; Departments of Clinical Physiology and Internal Medicine, Kuopio University Hospital, Kuopio; Department of Psychiatry, University of Helsinki and Helsinki University Central Hospital, Helsinki; Department of Mental Health and Alcohol Research, National Public Health Institute, Helsinki; National Research and Development Centre for Welfare and Health (STAKES), Helsinki; Social Insurance Institution of Finland, Helsinki; Psychiatric Unit, Vaasa Central Hospital, Vaasa, Finland

It is widely believed that the introduction of second-generation antipsychotics during the 1990s may have had a major adverse influence on mortality in schizophrenia. However, no long-term data have been published to verify this hypothesis. Moreover, it is not known if there are any significant differences in mortality between specific antipsychotic treatments. Nation-wide registers in Finland were used to compare the cause-specific mortality among individuals with schizophrenia (N=66,881) vs. the total population (N=5.2 million) during the years 1996 to 2006, and to link this data with the use of antipsychotic treatments and mortality during the 11-year follow-up period. While the proportional use of second-generation antipsychotics increased from 13% to 64% during follow-up, the gap in life expectancy between patients vs. general population did not increase between 1996 (25.0 years) and 2006 (22.5 years). When compared with the current use of perphenazine monotherapy, the highest risk for overall mortality was observed for quetiapine (adjusted HR 1.44, 1.08-1.94), and the lowest risk for clozapine (0.66, 0.52-0.83; $p<0.001$ for the difference between clozapine vs. any other antipsychotic). Long-term cumulative exposure to any antipsychotic treatment (7-11 years) was associated with lower mortality than no use at all (0.82, 0.78-0.85). Among patients with at least one filled antipsychotic prescription, there was an inverse relationship between mortality and duration of cumulative use of antipsychotic medication (HR for trend per exposure year 0.80; 0.77-0.82). These data suggest that long-term use of antipsychotics is associated with lower mortality when compared with no antipsychotic use among patients with schizophrenia. Second-generation antipsychotics are a highly heterogeneous group concerning mortality. Surprisingly, clozapine appears to be associated with a substantially lower mortality than any other antipsychotic.

The study was supported by the Ministry of Health and Welfare, Finland

SPS1.3.
ATYPICAL ANTIPSYCHOTICS: HOW ROBUST IS THE EVIDENCE?

L. Citrome
Nathan S. Kline Institute for Psychiatric Research, Orangeburg, NY, USA

Every day in clinical practice decisions have to be made regarding medication treatments. In the management of schizophrenia, the decision to switch or to stay with a given antipsychotic can be complex. The philosophy of evidence-based medicine requires the thoughtful clinician to incorporate the best available research evidence into an

individualized treatment plan, taking into account clinical experience and patient preferences. Putting theory into practice necessitates the use of special tools to appraise the research evidence that we encounter. It is not sufficient to scrutinize the p value of a clinical study result – that is only the likelihood that a result is due to chance or not. The p value does not tell us about the magnitude of the effect and for that we need a different kind of measure. One important and intuitive tool that measures effect size is number needed to treat (NNT), which can be used to calculate the *clinical* significance of a *statistically* significant result. We review the results from recent large effectiveness trials and examine the balance between efficacy, tolerability, and adherence, using the concept of NNT, its analogue, number needed to harm (NNH), and introduce the concept of likelihood to be helped or harmed (LHH). For example, in phase 2E of the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE), for every three patients randomized to clozapine versus quetiapine, one additional patient completed the study on their randomized medication, hence the NNT to avoid an early discontinuation for any cause is 3 in favour of clozapine versus quetiapine, a strong effect size. In the European First Episode Schizophrenia Trial (EUFEST), NNT for early discontinuation for any cause was 4 in favour of amisulpride or olanzapine versus haloperidol. One can calculate the NNT for any binary outcome, such as weight gain in excess of a certain threshold or being hospitalized for an exacerbation of schizophrenia, and compare these in a sensible manner to rationally make switch or stay medication decisions for an individual person.

SPS2.
PREVENTION OF RECURRENCES AND COMPLICATIONS IN THE LONG-TERM TREATMENT OF BIPOLAR DISORDER
(organized by Sanofi-Aventis)

SPS2.1.
LITHIUM SALTS IN THE PREVENTION OF RECURRENCES IN MOOD DISORDERS

L. Tondo
Department of Psychology, University of Cagliari, Italy; Harvard Medical School, Boston, MA, USA; Lucio Bini Mood Disorder Center, Cagliari, Italy

Randomized controlled and open label trials indicate that long-term treatment with lithium is particularly effective in preventing manic or depressive recurrences in all forms of bipolar disorder (BPD), and is considered the gold standard for mood stabilizers. We reviewed recently published reports on this issue, in collaboration with colleagues of the Harvard-McLean International Consortium for Bipolar Disorder Research. Efficacy of lithium in preventing recurrences is achieved in about 60% of BPD patients. Despite this high proportion of patients with favorable responses, the use of this treatment has been eroded by highly competitive marketing of other agents, particularly some anticonvulsants and antipsychotics. Based on the available evidence, both types of drugs are less effective than lithium, and only lamotrigine and aripiprazole have received Food and Drug Administration approval for long-term, prophylactic treatment in BPD. Lithium treatment is similarly effective in BPD types I and II, in patients with depression following mania vs. mania following depression, and in patients whose treatment was started even years after illness onset. In rapid-cycling (RC) patients, lithium is less effective than in non-RC cases, as are all mood stabilizers, but lithium is more effective than the alternatives tested. Lithium treatment is also virtually uniquely effective in preventing suicidal acts in BPD patients (this effect has been documented only for clozapine in schizophrenia and antidepressants in major depression patients over age 65). Important limitations of lithium and many other psychotropic drugs given for more than several months are that recurrences of all types are more prevalent and occur earlier after rapid than gradual discontinuation, with a particularly high risk after rapid discontinuation for pregnancy, in which lithium has been associated with rare cardiac malformations that are usually readily diagnosed and treated.

SPS2.2.
THE USE OF VALPROATE AND OTHER ANTICONVULSANTS

G. Perugi
Department of Psychiatry, University of Pisa, and Institute of Behavioural Sciences G. De Lisio, Pisa, Italy

Mania and bipolar I depression continue to be underestimated, because either bipolar patients' insight is poor, or detection of manic symptoms is not always straightforward. The principles of bipolar I management are relatively straightforward: using mood stabilizers such as lithium or valproate, avoiding antidepressants if at all possible and limiting them to relatively short courses, augmenting with an atypical antipsychotic when deemed necessary for psychotic exacerbations. Thyroid augmentation is seldom necessary today, unless a female patient on lithium develops subclinical hypothyroidism. Electroconvulsive therapy is the treatment of choice for depressive stupor and should be considered for severe suicidal mixed states. Antidepressant use may be problematic for a large number of patients suffering from bipolar depression. Mood stabilizers are the first choice in the treatment of bipolar depression, with the addition of antidepressants only in the most resistant cases. Atypical antipsychotics, in particular quetiapine, should be considered in non-responders or when psychotic or mixed features are present. The new anticonvulsants with reduced side effects might represent promising therapeutic tools: in particular, lamotrigine seems to be efficacious in the treatment of bipolar depression and in the prevention of rapid cycling and depressive recurrences. The frequent coexistence of bipolar disorder and anxiety, impulse control, eating and substance use disorders is a substantial clinical challenge pertaining to a large number of patients. Valproate has been shown particularly useful in comorbid anxiety and substance and alcohol abuse. Finally, the unresolved question of mixed states haunts clinicians in their daily practice. The latter are very common in bipolar inpatients, but they are scarcely studied and seldom even recognized. Unfortunately, hypomanic symptoms during depressive episodes – such as racing thoughts, hypersexuality and psychomotor acceleration – are overshadowed and not considered as possible indicators of mixed state by the contemporary classificatory systems. On clinical grounds, augmentation with a mood stabilizer (especially valproate) or an atypical antipsychotic (those with sedative properties) is valuable in excited, labile, impulsive depressive mixed states.

SPS2.3.
A SHORT PSYCHOEDUCATIONAL INTERVENTION FOR PATIENTS WITH BIPOLAR DISORDER

A. Erfurth
Department of General Psychiatry, University of Vienna, Austria

Psychoeducation has an increasingly important role in bipolar disorder, since its efficacy is now documented by several controlled studies. Unfortunately, outside university institutions, it is very difficult to

provide intense psychoeducation in closed groups with more than 20 consecutive modules. Our programme consists of only six open modules, and the patients can visit the group as long as they want. The modules are highly flexible and can be learned quickly by experienced therapists without losing time to create materials such as a life chart, an early warning list, and an emergency plan. Not only is the content of material valuable and easily to comprehend, but it also brings with it an optical attraction, since various forms of presentation (CD, transparency, print version) are used. The programme can also be used by non-psychiatrist professionals (e.g., social workers, nurses and psychologists). It is currently being used successfully in more than one hundred hospitals and institutions throughout German speaking countries. While modern drugs are accessible today to a great majority of bipolar patients, psychoeducation is not. The long-term goal of the therapeutic approach is to offer access to group psychoeducation to as many bipolar patients as possible.

SPS3.
LIVING WITH SCHIZOPHRENIA: BEYOND ACUTE SYMPTOM CONTROL
(organized by AstraZeneca)

SPS3.1.
REPLACING SCHIZOPHRENIA: TOWARDS DSM-V AND VI

R.M. Murray
Institute of Psychiatry, London, UK

There is increasing dissatisfaction with the traditional Kraepelinian dichotomy between schizophrenia and bipolar disorder. There is considerable symptom overlap between the two disorders; they share many epidemiologic characteristics and both respond to antipsychotics. As a result, alternative methods of describing psychotic patients are being considered for DSM-V and ICD-11, and perhaps the most popular are symptom dimensions. Numerous factor analytical studies of symptom ratings have been carried out, with the majority suggesting five main factors: positive, negative, disorganization, mania, and depression. Some claim that dimensions provide more useful information about clinical needs and future outcome than traditional diagnosis. However, our evidence is that, because diagnostic categories also provide information, the best solution is to use both: i.e., DSM-V should give patients a categorical diagnosis as at present but also rate them on symptom dimensions. Nevertheless, it is clear that this is only an interim solution. In the long run, diagnosis needs to be made on the basis of aetiopathogenesis. The evidence suggests that dopamine dysregulation is intrinsic to all psychosis. New technologies are beginning to enable us to demonstrate this in patients. Perhaps by DSM-VI we will not diagnose psychosis but rather dopamine dysregulation disorder and subdivide it according to specific pathogenetic pathways, e.g., developmental or non-developmental.

SPS3.2.
NEW MODELS OF DELIVERY OF ANTIPSYCHOTIC DRUGS

L. Pani
PharmaNess, Pula, Cagliari; Institute of Biomedical Technologies, National Research Council, Milan, Italy

Managing psychotic disorders, most prominently schizophrenia and bipolar mood disorders, still represents one of the major challenges in psychiatric practice. In the acute phase (lasting weeks to months), the major goals of antipsychotic treatment are to prevent harm, control agitation, aggressive and disturbed behaviour, reduce symptoms, effect a rapid return to the best level of functioning and initiate an alliance with the patient and his or her family. In the acute treatment phase, rapid response is essential and special attention should be paid to the presence of suicidal ideation or command hallucinations. Antipsychotic treatment continues beyond the acute phase into the stabilization and maintenance phases. The goals of prolonged treatment are to ensure that the patient's level of functioning and quality of life is maintained or improved, while the symptoms are controlled and side effects avoided. With regard to long-term treatment, tolerability and quality of life issues become increasingly important. Oral formulations of antipsychotics are generally characterized by a relatively rapid rise and fall in plasma concentrations, with levels above and below threshold being associated with an increased risk of side effects and reduced antipsychotic efficacy, respectively. Achieving steady plasma levels at which the drug achieves maximum symptom control, but below levels at which adverse events occur, remains therefore the ideal profile. Approaches to reduce the peak-to-trough fluctuations compared with immediate-release oral agents include the use of extended-release oral medications which have smoother plasma concentration-time profiles or specific forms such as liquid forms, rapidly dissolving tablets, as well as preparations for acute intramuscular administration or long acting depot formulations.

SPS3.3.
CHALLENGES IN SCHIZOPHRENIA: TRANSLATING PHARMACOKINETICS INTO CLINICAL FIELD

R.S. Kahn
Department of Psychiatry, Rudolf Magnus Institute of Neuroscience, University Medical Centre Utrecht, The Netherlands

Quetiapine XR presents the same active substance as found in immediate release quetiapine (IR), which is a well-established antipsychotic agent. The original formulation (IR) has previously demonstrated its efficacy in acute schizophrenia and, since the active substance is identical in both formulations, efficacy between XR and IR is highly unlikely to differ. Indeed, compared to the IR formulation, the efficacy of XR is generally similar, as demonstrated in study 132, and also when medication is switched between the IR and XR formulations. Moreover, several studies have shown a dose-response relationship for quetiapine IR, with higher doses leading to more symptom reduction in acute schizophrenia. Therefore, it is not surprising that a similar effect was found for quetiapine XR: in study 132, 600 mg was more effective than 400 mg. There is no data, nor is there any evidence, suggesting the XR formulation to be less effective than the IR formulation. The clinical data show that the tolerability profile of XR is similar to that of IR when IR is titrated at the labelled titration, starting at 50 mg. This indicates that XR is well tolerated when administered at the doses proposed on the product label. These data therefore demonstrate that quetiapine (in the XR formulation) can be safely started in doses that are several times higher than those used to initiate treatment in acute schizophrenia with quetiapine IR. The major advantage of the new formulation (XR) is that patients can reach an effective dose of quetiapine sooner than when treatment is initiated with quetiapine IR. This fact is important both for patients and for their physicians. Schizophrenia is a severe and potentially life-threatening disease that should be treated as early and effectively as possible. In this respect, it is clear that starting with a higher dose of quetiapine than has been possible thus far (without inducing more

side effects), and reaching an effective dose much earlier, provides a clear advantage for the treating physician and for the patient.

SPS4.
THE LONG-TERM TREATMENT OF MAJOR DEPRESSION AND ANXIETY: ARE SUCCESSFUL OUTCOMES ACHIEVABLE?
(organized by Eli Lilly and Boehringer-Ingelheim)

SPS4.1.
REMISSION AND PREVENTION IN MOOD DISORDERS

J.C. Nelson
University of California, San Francisco, CA, USA

Major depressive disorder (MDD) and generalised anxiety disorder (GAD) are common psychiatric disorders. They are not only associated with significant emotional distress, but can result in marked functional impairment. Each disorder is associated with the other. About 1 in 4 MDD patients has a lifetime history of GAD, while 60% of GAD patients have a history of or current MDD. The treatment goal in both disorders is remission. Treatment that falls short of remission is more likely to result in relapse. Because of the association of anxiety and depression, there has been interest in whether the presence of one affects the response of the other. We present results which suggest that drug efficacy in depression is maintained in the presence of high anxiety or co-morbid GAD even if placebo effects or response to the non-specific aspects of treatment are reduced. Because both disorders are associated with relapse, prevention of relapse is as important as acute treatment. We discuss the challenges and potential strategies to achieve these goals.

SPS4.2.
CAN UNTREATED MOOD DISORDERS LEAD TO NEUROBIOLOGICAL CHANGES?

D.J. Nutt
Psychopharmacology Unit, University of Bristol, UK

Recent studies have shown that mood disorders not only have neurobiological underpinnings, but may also have neurobiological consequences. When patients with mood disorders fail to achieve remission, persistence in neurochemical imbalances may lead to neuroanatomical damage with loss of both neurons and their supportive cells, the glia. This dysregulation of neural circuitry can then lead to exacerbation of symptoms and progression of the mood disorder due to functional and structural changes within the brain. Treatment with antidepressants can address the neurochemical imbalance, thereby slowing or stopping the progressive dysregulation and possibly reversing the damage through increased expression of positive factors within the brain. With data showing that longer and more frequent episodes of mood disorder can lead to worse outcomes, it becomes a matter of urgency for clinicians to diagnose and address mood disorders as quickly and accurately as possible, to reduce the potential for neuronal damage in their patients.

SPS4.3.
CLINICAL CHALLENGES OF LONG-TERM TREATMENT OF MOOD DISORDERS

T.E. Schlaepfer
University of Bonn, Germany

Given the often chronic nature of mood disorders, appropriate treatment may require the use of both short-term and long-term strategies for attaining remission, preventing relapse, and optimising patient psychosocial functioning. When long-term treatment is necessary, clinical challenges may arise in determining how long and how much treatment a patient may need. Looking beyond measures of symptom severity or improvement by utilising objective measures of social functioning can provide important supplementary information to the clinician. This combination of symptom and function evaluation gives a clearer clinical impression of the need for treatment and can aid the clinician in making treatment decisions, especially in terms of maintenance treatment.

SPS5.
STARTING OUT RIGHT IN THE MANAGEMENT OF SCHIZOPHRENIA AND BIPOLAR DISORDER
(organized by Bristol-Myers Squibb and Otsuka Pharmaceuticals)

SPS5.1.
THE NEED FOR EFFECTIVE TREATMENT FROM THE OUTSET

A. Fagiolini
University of Pittsburgh, PA, USA; University of Siena, Italy

Effective treatment of mental disorders such as schizophrenia and bipolar disorder has evolved from a focus on management of acute episodes to provision of life-long treatment. In particular, key goals now include long-term quality of life and satisfaction of patients, carers, and physicians, who are key to improving adherence. Choosing an antipsychotic can be difficult as there are numerous issues to consider, including short- and long-term efficacy and safety issues, which in turn, are related to adherence. The short-term efficacy of antipsychotics has been demonstrated in schizophrenia, and, for some of them, in mania. However, long-term trials have to be designed taking into account both efficacy and physical health assessment. Efficacy data from clinical trials should be available both in comparison with placebo and in comparison with reference drugs, and combination therapy outcome should also be assessed. In some circumstances the route of administration may be an important consideration, and the efficacy and safety of intramuscular formulations of new antipsychotics have been demonstrated in several trials. When choosing an antipsychotic drug, physicians should look carefully at the data available across the range of agents. Optimal treatment for patients with schizophrenia or bipolar disorder can be provided only if treatments with demonstrated efficacy and safety are initiated as early as possible and maintained throughout the long term.

SPS5.2.
SCIENTIFIC RATIONALE FOR WHAT WE OBSERVE IN THE CLINIC

G. Gründer
Department of Psychiatry and Psychotherapy, University of Aachen, Germany

Knowledge of the receptor-binding profiles of antipsychotics can help optimise the efficacy and safety of treatment. For example, activity at dopamine receptors plays a role in psychosis, while activity at serotonin receptors is associated with impact on mood, cognition and anxiety symptoms. High-affinity dopamine D_2 receptor binding and slow dissociation, however, may lead to extrapyramidal symptoms and hyperprolactinaemia. Activity at other receptors, such as histamine H_1, muscarinic and α-adrenergic receptors, may also be associated with adverse events. Attention should be paid to the pharmacokinetic implications of the route and mode of administration (oral, intramuscular or long-acting). While short-term adverse events may be associated with mode of administration, there is no evidence for different long-term tolerability profiles. In patients who experience side effects, appropriate short- or long-term co-medications should be added. Switching from one antipsychotic to another may be desirable, such as in the event of insufficient efficacy or unacceptable safety issues, such as weight gain. Switching medication may, however, be associated with amplified or muted treatment effects, hangover effects relating to the half-life of the previous agent, and adverse events relating to receptor up-regulation. Switching must therefore be carried out according to appropriate psychopharmacological principles, with a clear understanding of the pharmacokinetic profiles of the agents involved (e.g., by cross-titration with appropriate titration strategies). Balancing efficacy and tolerability is essential in patients receiving antipsychotic medication, and careful attention to the receptor-binding and pharmacokinetic profiles of the different agents can minimise adverse events and improve outcomes.

SPS5.3.
THINKING LONG-TERM FROM THE START

M. De Hert
University Psychiatric Centre, Leuven Catholic University, Kortenberg, Belgium

Compliance with antipsychotic therapies in patients with severe mental disorders is a major concern for clinicians. The need for long-term antipsychotic treatment may be challenged if a patient has difficulty accepting the prospect of life-long administration or has concerns over the potential adverse events (AEs) associated with antipsychotic drugs. The early onset of AEs, such as akathisia or agitation, may increase the likelihood of poor long-term compliance by encouraging patients to self-manage. This can lead to treatment discontinuation and/or poor adherence, which may result in reduced efficacy and negatively impact the long-term prognosis. People with severe mental disorders often have impaired physical health. This may be related to their lifestyle, their difficulty accessing healthcare services or to side effects of antipsychotic medication. Reduced physical health is linked to drug-induced hyperprolactinaemia, and to an increased prevalence of weight gain, diabetes and dyslipidaemia. These latter metabolic disturbances have been shown to increase a patient's risk of developing cardiovascular disease, with potentially serious consequences. The propensity to cause metabolic disturbances varies between antipsychotic agents and data suggest that the unwanted metabolic effects of some antipsychotics may be reversed by switching to an agent with a more favourable side effect profile. Considering the concern over compliance with antipsychotic therapies and the risk of metabolic disturbances, it is important to provide a therapeutic agent that is effective at treating the symptoms of the mental disease and does not further impact on the physical health of the patient from the outset of the illness.

SPS6.
AGOMELATINE: OPTIMIZE THERAPY FOR ALL DEPRESSED PATIENTS
(organized by Servier)

SPS6.1.
CIRCADIAN RHYTHMS: STRONG EVIDENCE ON HOW TO APPROACH DEPRESSION

E. Frank
Western Psychiatric Institute and Clinic, University of Pittsburgh School of Medicine, Pittsburgh, PA, USA

Although life in industrialized society masks endogenous circadian rhythms that were more apparent centuries ago, circadian rhythm regularity and synchrony have great importance for all aspects of human health and well-being. Indeed, our knowledge of this relationship grows almost daily, with evidence that everything from organ systems to gene products benefit from circadian integrity. Our research group has focused on the relationship of circadian regulation and psychiatric illness, particularly mood disorders. Nearly 20 years ago we articulated a "social zeitgeber" hypothesis concerning the way in which life events that disrupt an individual's normal routines could initiate a cascade that, in vulnerable individuals, might lead to an episode of depression or mania. Since that time we have developed two lines of evidence in support of this hypothesis. First, we demonstrated that life events characterized by social rhythm disruption are temporally associated with onset of mood episodes. We subsequently demonstrated that a psychotherapeutic intervention which specifically targets regularizing of daily routines is associated with the prevention of both manic and depressive episodes and that the protective effect of the treatment is directly related to the extent to which patients increase the regularity of their social rhythms. More recently, this same intervention has been shown to be associated with recovery from bipolar depression and significant improvement in occupational function. We discuss the implications of these findings for the treatment of all depressions.

SPS6.2.
PHARMACOLOGICAL PROFILE OF AGOMELATINE: THE FIRST MELATONERGIC ANTIDEPRESSANT

G. Racagni
Center for the Study of Neuropharmacology, University of Milan, Italy

Beyond the classical monoamine hypothesis, which has limitations, a variety of research approaches have been followed to obtain more effective treatments for depression, with better safety profile and more rapid symptoms relief. Among these approaches, the regulation of circadian rhythms in mammals has attracted growing interest, because the disruption of circadian rhythms is now well described in depressed patients, suggesting that the human circadian system is a key player in the etiology and in the treatment of mood disorders. This led to the synthesis of agomelatine, an agonist with high affinity for melatonergic MT_1 and MT_2 receptors, and antagonist at 5-HT_{2C} receptors. As expected from its pharmacological profile, agomelatine was able to synchronize circadian rhythm patterns in several animal

models of circadian disturbances. Moreover, agomelatine showed clear antidepressant-like activity in well-validated animal models of depression, including the forced swimming test, the learned helplessness model, and the chronic mild stress paradigm. Interestingly, in microdialysis studies, agomelatine does not modify extracellular levels of serotonin and specifically increases norepinephrine and dopamine in the frontal cortex. Furthermore, agomelatine significantly reduces glutamate release without affecting GABA release and prevents the stress-induced upregulation of glutamate release. Finally, thanks to its lack of binding to other receptors or enzymes, agomelatine has a favorable safety profile and is devoid of the classic side effects reported with tricyclics, selective serotonin reuptake inhibitors and serotonin-norepinephrine reuptake inhibitors. The involvement of melatonergic and 5-HT_{2C} receptors in the antidepressant efficacy of agomelatine, probably through a synergistic action, is discussed.

SPS6.3.
AGOMELATINE: PROVEN EFFICACY ON ALL DEPRESSIVE SYMPTOMS

P.M. Llorca
Hôpital Gabriel Montpied, Clermond Ferrand, France

The innovative first melatonergic antidepressant agomelatine is a potent agonist at MT_1 and MT_2 melatonergic receptors and an antagonist at 5-HT_{2C} receptors, differing therefore from existing antidepressants. Several clinical studies versus placebo and comparators, in the short and long term, have demonstrated its efficacy and safety for the treatment of major depressive disorders. Pooled data from 3 short-term, placebo-controlled studies confirmed the efficacy of agomelatine in the total population (Hamilton Depression Rating Scale, HAM-D total score and core symptoms) as well as in the most severe patients. The onset of antidepressant action is observed earlier in the course of the treatment: at week 2 the rate of responders was significantly greater with agomelatine than with sertraline (20.0% versus 10.9%, p=0.027). Agomelatine was significantly superior to sertraline in the mean decrease in the HAM-D total score from baseline (p=0.031) and in anxiety symptoms after 6 weeks of treatment (p=0.016). According to the characteristic action of agomelatine, we observed a significant difference in favor of agomelatine compared to sertraline (p<0.01) in the rest/activity cycle at week 1; and a greater improvement in getting to sleep and quality of sleep, daytime alertness and feeling good from week 1, in comparison with venlafaxine. These data confirm the antidepressant efficacy of agomelatine in relieving the complete spectrum of depressive symptoms, representing therefore a very reasonable option for all depressed patients.

SPS6.4.
AGOMELATINE: RELIEF ENSURED AT EACH AND EVERY STAGE OF DEPRESSION

P. Gorwood
Hôpital Sainte-Anne, Paris, France

Agomelatine is an innovative antidepressant: agonist at melatonergic MT_1 and MT_2 receptors and antagonist at 5-HT_{2C} receptors. To demonstrate the efficacy of agomelatine in treating major depressive disorder (MDD) in both the acute and maintenance phases of treatment, the data of three long-term studies are considered. A 6-week, randomized, double-blind study compared agomelatine (25-50 mg/day) and venlafaxine (75-150 mg/day), followed by a treatment extension period of 18 weeks; a second study with the same design compared agomelatine and sertraline (50-100 mg/day); and a 10-month trial assessed the prevention of relapse with agomelatine versus placebo. As early as week 1, agomelatine improved daytime alertness, feeling good, getting to sleep, and quality of sleep. Clinical Global Impression - Improvement (CGI-I) scores were significantly higher with agomelatine than with venlafaxine, as was the rate of responders. The comparison with sertraline showed a superiority of agomelatine in the rest/activity cycle at week 1 and in the responder rate at week 2. After 6 weeks of treatment, the significant differences previously observed in favor of agomelatine versus venlafaxine (CGI-I) or sertraline were maintained. After 6 months, agomelatine resulted in superior global improvement as defined by the CGI-I when compared with venlafaxine and Hamilton Depression Rating Scale (HAM-D) responders when compared with sertraline. Finally, agomelatine reduced the risk of relapse by 56.3% compared with placebo (p<0.0001), after 6 and 10 months of treatment. Altogether, these results show that agomelatine provides fast and sustained relief of depression and is therefore efficacious in treating MDD in both the acute and maintenance phases of treatment.

SPS7.
MANAGEMENT OF SCHIZOPHRENIA: A HOLISTIC APPROACH
(organized by Janssen-Cilag)

SPS7.1.
MODIFYING THE PHARMACOKINETIC AND PHARMACODYNAMIC PROPERTIES OF ANTIPSYCHOTICS FOR IMPROVED OUTCOMES

L. Pani
PharmaNess, Pula, Cagliari; Institute of Biomedical Technologies, National Research Council, Milan, Italy

Although atypical antipsychotics have provided clinical advantages over conventional medications, data from trials such as the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) have highlighted that there is still a need for improved medications. One approach to optimize antipsychotic activity is to modulate the pharmacokinetic profile and thus deliver improved pharmacodynamic effects. Oral formulations of antipsychotics are generally characterized by a relatively rapid rise and fall in plasma concentrations, with levels above and below threshold being associated with an increased risk of side effects and reduced antipsychotic efficacy, respectively. For atypical antipsychotics, efficacy begins at approximately 60% occupancy of the D2 receptor, and occupancy above 80% can lead to extrapyramidal side effects. Approaches to reduce the peak-to-trough fluctuations compared with immediate-release oral agents include the use of long-acting injectable agents which have smoother plasma concentration-time profiles. For those patients who prefer oral agents, alongside the choice of agents such as olanzapine, quetiapine, ziprasidone and risperidone, there is the option of using paliperidone ER, which uses oral osmotic pump extended-release technology. This provides a continual release of medication, leading to minimal peaks and troughs in plasma concentrations over a 24-hour period. A sustained release formulation of quetiapine is also currently being assessed in clinical trials.

SPS7.2.
WHY DO SO MANY PATIENTS SWITCH THEIR ANTIPSYCHOTIC MEDICATION?

P. Falkai
Georg-August Universität, Göttingen, Germany

With the availability of a range of antipsychotics, physicians are in a position to provide schizophrenia patients with the most appropriate medication for the management of their disease. The second generation antipsychotics, in particular, have diverse receptor profiles, which translate to variable efficacy levels and adverse events in different patients. If a particular medication is not treating patients in an optimal manner, or the patient has persistent positive or negative symptoms or is intolerant to the treatment, then the prescribing physician may choose to switch the medication. Factors to consider when switching patients include whether the correct dose of the current antipsychotic is being administered, the patients' adherence to medication, interference from substance abuse and any serious psychosocial difficulties that could impact upon efficacy. Patients may also be switched if there are serious tolerability issues with the current medication; however, in these cases, the risk of poorer symptom control must be considered before switching. If tolerability is the reason for switching, a lower dose of the current therapy can be prescribed in an attempt to resolve the tolerability problem without affecting symptom control. If the patient is to switch medications, there are four common approaches that can be taken: abrupt switch, cross-taper switch, taper switch and hybrid switch. Potential problems associated with switching medication include withdrawal symptoms induced by cholinergic rebound or dopamine supersensitivity. During the transition period, the impact of the new antipsychotic on concomitant medications and comorbid medical conditions should be assessed. Another factor to consider during the transition period is the potential for altered pharmacokinetics if two therapies are being co-administered, as this could result in additional adverse events or lower efficacy. Many studies have shown an improvement in clinical efficacy as well as side-effect benefits of switching to oral antipsychotics, including the new extended-release formulations, which provide a smoother pharmacokinetic plasma profile.

SPS7.3.
QUALITY OF LIFE AND FUNCTIONING IN SCHIZOPHRENIA: BACK TO LIFE

P. Gorwood
Hôpital Sainte-Anne, Paris, France

After an acute or first episode, reducing positive symptoms, so that the schizophrenic disorder is sufficiently stabilized, was considered for a long time as the most appropriate goal for psychiatrists. With the progress of treatment, the possibility to get into symptomatic remission became so clearly recognised that strict criteria were proposed. According to the Andreasen criteria of symptomatic remission, no core symptom of schizophrenia should be too severe, for a period of 6 months. The next logical step could be aiming at functional remission, as it represents the most important expectation of the patients and their relatives. Proposing criteria, or even instruments, to assess functional remission is nevertheless difficult. This objective is worth trying, for six reasons. First of all, within the concept of symptomatic remission, functionality is already assessed, as symptoms should not interfere too much with the everyday life of the patient (according to the severity criteria). Therefore, functional remission as a concept is already detected and used. Second, with the difficulty of clinicians to use the "efficacy studies" (controlled randomized trials), different "mega trials" were proposed in order to get closer to what the clinician deals with in everyday practice. Some of these studies based their endpoint on functional outcome rather than on symptomatic remission. Third, increasing the level of functioning might have a beneficial impact on symptomatic level, as recently demonstrated, meaning that it is possible to see the relationship between symptoms and function the other way round. Fourth, the importance of treating early and completely the very first episodes of schizophrenia was shown by data on duration of untreated psychosis (DUP) and other related aspects. Many studies demonstrated that this might be particularly true when functional remission is targeted. Fifth, the prognosis of schizophrenia is explained by cognitive impairment much more than by the severity of acute positive symptoms. Atypical antipsychotics might have a specific pattern of action on these dimensions. Lastly, whatever the specificities of treatment, adherence remains one of the most important problems, in all chronic disorders, and particularly in schizophrenia. The benefit of antipsychotics with easy prescription and taking (for example, not requiring dose tapering) and with favourable pharmacokinetics (avoiding peaks and troughs, therefore reducing the risk of side effects and too low dosages) is now established by numerous studies.

SPS8.
THE POTENTIAL ROLE OF NOVEL ATYPICAL DEPOT FORMULATIONS IN THE TREATMENT OF SCHIZOPHRENIA
(organized by Eli Lilly)

SPS8.1.
WHY ARE COMPLIANCE AND ADHERENCE SUCH A CHALLENGE?

J. Peuskens
Department of Psychiatry, Campus St. Jozef, Kortenberg, Belgium

Novel antipsychotics and psychotherapeutic and psychosocial rehabilitation programmes support patients with schizophrenia to maintain their integration in society. The course of schizophrenia is, however, still characterised by many psychotic relapses and an evolution toward a psychosocial deficit. Psychotic relapse fuels the progression of the illness, as it is associated with more significant brain atrophy, prolonged hospitalisation, loss of treatment response, and vocational and social disruption. Although continuous antipsychotic therapy is highly effective in preventing psychotic relapses and necessary to maintain symptom remission, first as well as multiepisode patients with schizophrenia often are not or are only partially adherent to antipsychotic maintenance treatment, and, as such, up to 80% will relapse one or two years after successful treatment of an acute psychotic episode. Guidelines for long-term antipsychotic maintenance are often ambiguous and fail to highlight the importance of continuous maintenance treatment and the impact of poor adherence. Partial adherence is difficult to evaluate and is often underestimated and underreported. Partial adherence affects the majority of patients and results in more significant residual symptoms, higher risk of suicide, psychotic relapse, and rehospitalisation, and vocational and social disruption. Also, it is difficult to evaluate treatment response and optimise antipsychotic maintenance therapy due to the uncertainty about the use of the medication prescribed. Many factors influence adherence, and approaches to improve adherence need to address patient attitude and experience, medication characteristics, and environmental aspects. Long-acting injectable antipsychotics can ensure relapse prevention and optimise treatment response by offering con-

tinuous antipsychotic protection. They ensure medication delivery and free the patient (and the family) from taking medication; the therapeutic alliance may be enhanced by regular contact with the treatment team; and, contrary to a common misperception, patients may actually prefer injections to oral therapy. Long-acting injectables, especially second-generation long-acting injectables, should be considered not as a last resort but as a first-choice treatment option and should be discussed with all – first as well as multiepisode – patients in a shared decision making process.

SPS8.2.
A CLINICAL REVIEW OF THE EFFICACY AND SAFETY OF OLANZAPINE LONG-ACTING INJECTION

H.-P. Volz
Department of Psychiatry, University of Jena, Germany

Schizophrenia can have devastating consequences for patients and their families and thus requires early and effective treatment. Yet, medication noncompliance and relapse is common. Eighty-two percent of patients with schizophrenia relapse within the first five years of treatment and 73% of patients relapse because of noncompliance. Several potential benefits are associated with long-acting antipsychotics, including prevention or delay of relapse, controlled administration, stable plasma levels of the drug, and patient convenience. Olanzapine long-acting injection is another option now available for the treatment of patients with schizophrenia. We review the efficacy and safety of this drug.

SPS8.3.
STRATEGIES TO HELP SWITCH TO DEPOT MEDICATIONS

T. Lambert
University of Melbourne, Parkville, Australia

An antipsychotic medication regimen producing intolerable or damaging adverse events or failing to induce symptomatic remission may require modification in order to provide the patient with the best possible outcome. Reluctance among clinicians to switch medications in all but the most obvious cases of failure has been brought on by the occurrence of emergent antipsychotic-switching syndromes experienced by patients following rapid transition between agents with different pharmacologic properties. Such syndromes include the "withdrawal triad", comprising cholinergic rebound, supersensitivity psychosis, and emergent withdrawal dyskinesias, and can also include an activation syndrome, which may occur after switching from a highly sedative agent or as an effect of initial prodopaminergic drive. Adverse outcomes can be minimised by thoughtful planning and execution of gradual switch procedures. Strategies to consider include the abrupt switch, preferred only with patients suffering from a serious adverse event; the taper switch, where a new medication is initiated with the immediate full dose with concurrent tapering of the previous antipsychotic; and the cross-taper switch, during which the old medication is tapered while the new medication is simultaneously titrated up. While these techniques can be individually tailored into a hybrid switch strategy, most experts recommend the cross-taper switch as the safest way to prevent relapse. Though seemingly counterintuitive, carefully planned polypharmacy, with appropriate tapering of new, old, and adjunctive medications, maximises the probability of attaining stable monotherapy as a means to a successful therapeutic outcome.

SPS9.
IMPROVING CARDIOVASCULAR HEALTH IN THE MENTALLY ILL
(organized by Pfizer)

SPS9.1.
EFFECTIVE STRATEGIES FOR CARDIOVASCULAR RISK REDUCTION IN THE GENERAL POPULATION

J. Camm
St. George's Hospital Medical School, London, UK

Cardiovascular disease causes nearly half of all deaths in Europe and is the leading cause of death in most European countries. As well as the effect on patients' health and the high risk of secondary cardiovascular events, there is considerable personal burden on patients and their families associated with cardiovascular disease. However, through risk factor identification and intervention, rates of cardiovascular disease mortality are falling in many European countries. Unfortunately, this does not appear to be the case in patients with severe mental illness. It is well established that those with psychiatric illness have a greater prevalence of metabolic complications and elevated cardiovascular risk factors. These have led to an increase in the cardiovascular risk in those with severe mental illness and have resulted in the majority of excess mortality in this population. This is not just due to aspects of lifestyle and possible genetic predisposition, but also to types of medication, such as atypical antipsychotics. In the same way as the general population, those with severe mental illness have modifiable and non-modifiable risk factors that contribute to their cardiovascular risk. It is vital that the modifiable risk factors are systematically measured to determine the overall level of cardiovascular risk. In Europe, the cardiovascular risk of an individual in the general population is assessed using the SCORE test, which estimates the risk of suffering a fatal cardiovascular event over the next 10 years. If the risk is ≥5%, primary prevention is recommended to reduce risk. The measurement of risk factors should be done by a combination of proactive screening and regular monitoring, with intervention to reduce those risk factors which are elevated. The management of abnormally high risk factors is critical in preventing cardiovascular events and improving patient outcomes. This is true for primary prevention of cardiovascular events and secondary prevention in those with established cardiovascular disease. In both cases the priority is multiple risk factor management to target levels through lifestyle and standard pharmacological management, such as statins, oral glycaemic agents and anti-hypertensives. In those with psychiatric illness, as medication side effects may also contribute to cardiovascular risk factors, medication review and switching may be a key step in reducing these risk factors. Cardiovascular risk reduction programmes have been undertaken in the general population for many years with wide success. Smoking cessation and improved access to emergency cardiovascular medicine have produced major reductions in the impact of cardiovascular disease across the world. This has been demonstrated by the falling number of deaths due to cardiovascular disease in regions such as Europe and North America. Collaboration between specialities is vital in order to improve the outcomes for patients with psychiatric illness. Joint working of those in psychiatry, cardiology and diabetes can help psychiatrists improve their management of cardiovascular risk factors and motivate them to take responsibility for their patients' overall health, not just their mental illness.

SPS9.2.
CARDIOVASCULAR DISEASE IN SEVERE MENTAL ILLNESS: ROLE OF PSYCHIATRISTS IN EFFECTIVE RISK MANAGEMENT

J. Newcomer
Center for Clinical Studies, Washington University School of Medicine, St. Louis, MO, USA

Patients with severe mental illness have a life expectancy that is approximately 25 years shorter than the general population. The majority of these premature deaths are due to cardiovascular disease, not suicide, and while cardiovascular disease mortality has declined in the general population, relative risk has increased in psychiatric patients. Psychiatric patients, including those with schizophrenia, have a higher prevalence of key cardiovascular risk factors. These risk factors are due to a combination of genetic, lifestyle and treatment related effects. In any case, a key approach to improving cardiovascular and metabolic outcomes is to perform appropriate screening and monitoring for cardiometabolic risk factors and to intervene as necessary when elevated risk is identified. The identification of elevated levels of key risk factors can be facilitated through the use of simple tools that can be readily incorporated into psychiatric practice. This opportunity has prompted the development of a risk factor screener. This screening and monitoring tool is a simple checklist of factors that should be measured, recorded and tracked. Recent evidence has shown that risk reductions can be achieved by switching appropriate patients from medications with greater to medications with lesser adverse effects on metabolic parameters, potentially leading to improvements in plasma lipids and glucose and favorable reductions in body weight. Strategies for switching medications are also discussed, including needed discussions with patients, the use of slow cross taper or titration approaches and the potential value of temporary use of benzodiazepines. Combined attention by psychiatrists to both psychiatric and medical risks, particularly attention to the management of cardiometabolic risk, offers significant opportunities to improve long term health outcomes in this population. This can be achieved by establishing collaborations with primary care providers, as well as cardiovascular and diabetes specialists, to effect cardiovascular risk screening of mentally ill patients and the management of elevated risk factors when identified.

SPS9.3.
CHALLENGES AND SOLUTIONS FOR EFFECTIVE CARDIOVASCULAR RISK MANAGEMENT IN THE INPATIENT PSYCHIATRY SETTING

P. Mohr
Prague Psychiatric Centre, 3rd Faculty of Medicine, Charles University, Prague, Czech Republic

It has been well documented that psychiatric patients have a shorter life expectance than the general population and that the majority of this excess mortality is due to cardiovascular disease. In the hospital setting, the priorities of management of acute episodes of schizophrenia and bipolar disorder are different from the long-term goals of treatment. Here, treatments are required to be efficacious, reliable and have a quick onset of action. Many of these key criteria are met by intramuscular formulations of antipsychotic agents, which have become a key part of the management of acutely agitated patients. However, a paradox exists in the acute setting when looking at the overall health of patients. There is a greater availability of laboratory testing and medical personnel to screen and manage cardiovascular risk, alongside a potentially safer and controlled environment to switch medication. This is often competing with the pressing need for quick symptom control. Moreover, funding, time and resource issues are barriers that need to be overcome in order to improve holistic care for psychiatric patients in hospitals. However, if these can be overcome, the inpatient setting represents an ideal opportunity for patients to be screened for cardiovascular risk factors. Once identified, it may also be possible to achieve more with lifestyle advice and pharmacological management of risk factors, as the patients are in a more controlled environment. Examples of some of the work we have undertaken locally have shown what can be achieved in hospitals to improve the cardiovascular health of patients. Within this environment switching between antipsychotics, where appropriate, may be achievable and successful. Switching to a metabolically neutral antipsychotic, such as ziprasidone or aripiprazole, can improve cardiovascular risk factors and therefore reduce cardiovascular disease in these patients. Evidence has shown that successful switching can be achieved in the acute setting with continued symptom control and a reduction in cardiovascular risk factors.

SPS9.4.
CHALLENGES AND SOLUTIONS FOR EFFECTIVE CARDIOVASCULAR RISK MANAGEMENT IN THE OUTPATIENT PSYCHIATRY CLINIC

J.M. Montes
Hospital Ramón y Cajal, Universidad de Alcalá de Henares, Madrid, Spain

Patients with severe mental illness like schizophrenia or bipolar disorder present a higher risk for cardiovascular diseases than the general population. Unfortunately there is a tendency to underdiagnose and undertreat somatic illness in these patients due to social and medical barriers. The paradox that exists in the community setting is again a cause of conflict for psychiatrists. In the outpatient setting patients have the need for long-term stable treatment that has a small impact on their physical health, but there is a hesitance to switch from an established treatment and less access to the necessary laboratory testing. In the outpatient setting the barriers which exist are similar to those in hospitals. Lack of funding, resources and time continue to be a problem and can be seen as preventing psychiatrists from caring for the overall patient. Access to health care resources needs to be improved, including screening and monitoring clinics for those with mental illness. The provision of integrated treatments is also vital, including psycho-educational programs with aspects aimed at promoting physical health. There is also a need to educate psychiatrists in the community setting about the importance of cardiovascular risk factors as well as educating general practitioners in the community about the health needs of psychiatric patients. Therapeutic measures for controlling specific cardiovascular risk factors should be implemented when necessary. More screening and better risk factor management can be implemented in outpatient psychiatry clinics and can improve the cardiovascular outcomes of patients. Furthermore, switching patients to a metabolically neutral antipsychotic, like ziprasidone or aripiprazole, which is associated with less of an impact on risk factors, can lead to a reduction in cardiovascular risk. Therefore, switching in the community setting should be considered as a strategy for achieving physical and mental health improvement.

SPS9.5.
IMPROVING CARDIOVASCULAR HEALTH IN THE MENTALLY ILL. PSYCHOLOGICAL BARRIERS AND THE QUESTION OF MOTIVATION

K. Alptekin
Department of Psychiatry, Dokuz Eylül University School of Medicine, Izmir, Turkey

Many studies have demonstrated high morbidity and mortality rates among patients with chronic mental illness, due to psychotropic medication side effects, lack of physical health monitoring and unhealthy life style. Despite compelling mortality data demonstrating the size of the problem of cardiovascular ill health in psychiatric patients, not enough action has been taken by the psychiatry community and there continues to exist resistance to change. It has been discussed that lack of funding, time constraints, resource issues and lack of tools to monitor physical health are barriers to improving holistic care for psychiatric patients, but motivation is also a contributing barrier. Motivation is strongly related to the beliefs of the patients about their health and their insights into their condition. Therefore, it is essential for physicians to communicate with their patients about their beliefs regarding their mental and physical health. Addressing motivation is key if we are to make differences to the lives of our patients. Some of the issue comes from a lack of understanding of the importance of the holistic approach to mental and physical health. Education is a key factor in overcoming the lack of motivation, as has been demonstrated in the psychiatry community. One of the challenges facing the psychiatry community is to reframe their conflict around the need for symptom control versus physical health. Ignorance of physical health in psychiatric patients should not occur and fear of cardiovascular disease should be used as a motivating reason to change behaviour. The existence of preventable death of patients should be adequate motivation for psychiatrists to start taking action and we must, as a psychiatry community, start to educate our colleagues back in our own countries about the need to work more for the good of the overall patient. Improving the mental and physical health of patients is not only a job for the psychiatrists. There is an important role to be played by nurses, general practitioners and carers in achieving better health outcomes, as well as a role for the patients themselves to improve their own health. All these groups are important in the care of those with severe mental illness and must work together to both improve patient care and motivate each other. One important need in the future is greater collaboration across disciplines, to improve the care for the mentally ill. Also, it is essential to develop health promotion tools and implement awareness programmes regarding physical health of the mentally ill.

SPS10.
BEYOND REMISSION: THE IMPORTANCE OF MANAGING RESIDUAL SYMPTOMS OF MAJOR DEPRESSION
(organized by GlaxoSmithKline)

SPS10.1.
IS REMISSION AN ACHIEVABLE GOAL IN CURRENT CLINICAL PRACTICE?

G. Papakostas
Department of Psychiatry, Massachusetts General Hospital, Harvard Medical School, Boston, MA, USA

In a research setting, remission from a depressive episode is usually defined as depression severity scores below a certain threshold level (≤7 on the 17-item Hamilton Rating Scale for Depression, $HAMD_{17}$ or ≤10 on the Montgomery-Asberg Depression Rating Scale, MADRS). However, this may not necessarily mean resolution of the depressive episode, or all depressive symptoms. In addition, normalisation of psychosocial functioning and improvement in quality of life are often overlooked outcomes, although they are important and independent predictors of long-term treatment course. Unfortunately, for a large proportion of patients, periods between depressive episodes are not symptom free. The most common residual symptoms reported include fatigue, irritability, sleep disturbances, anxiety and decreased interest or pleasure. Residual symptoms, particularly fatigue, have been linked to poorer clinical and psychosocial outcomes, suicide, non-compliance and an increased risk of relapse/recurrence. Moreover, patients who continue to report residual symptoms have higher healthcare utilisation rates. Early onset of partial treatment response may predict patients who are more likely to achieve remission. The importance of treating to remission and managing residual symptoms is therefore paramount. Even a modest difference in antidepressant efficacy, if sustained, may have important public health implications. In general, remission rates are modest and comparable (approximately 30-50%) among the newer antidepressant therapies including the selective serotonin reuptake inhibitors (SSRIs), the serotonin and noradrenaline reuptake inhibitors (SNRIs), i.e., venlafaxine, duloxetine, milnacipran; the noradrenaline and dopamine reuptake inhibitor (NDRI), bupropion; and receptor antagonists, e.g., mirtazepine. However, emerging studies suggest that certain psychopharmacologic approaches may result in a greater resolution of specific, targeted residual symptoms in patients with major depressive disorder.

SPS10.2.
NON-REMISSION AND RESIDUAL SYMPTOMS: INPACT ON PATIENT'S WELL-BEING?

S. Pallanti
Department of Psychiatry, University of Florence, Italy; Department of Psychiatry, Mount Sinai School of Medicine, New York, NY, USA

Despite the benefits associated with remission of a major depressive episode, many patients continue to experience residual symptoms that can negatively impact their psychosocial functioning and quality of life, as well as increase their risk of disease progression and relapse/recurrence. Potential obstacles to achieving remission include incorrect or inadequate diagnosis, insufficient treatment, lack of adherence and tolerability, and failure to recognise and treat residual symptoms. Although residual symptoms are common among patients with major depression, few studies have been conducted to systematically assess their extent, nature and impact on treatment outcome.

Results from a recent market research study, conducted in 221 patients (self-reported depression) across Germany (n=103) and Spain (n=108), found that 71% reported symptoms that took longer to respond to antidepressant medication (n=150/221; 72 (70%) Germany, 78 (72%) Spain). The most common symptoms reported included feeling sad or empty (48%), sleep problems (41%), inability to enjoy life (31%), fatigue (27%), feelings of worthlessness (27%), diminished ability to concentrate (24%), feeling agitated (21%) and loss of interest (20%). These patient-reported symptoms are similar to residual symptoms reported in clinical trials. The involvement of patients in clinical decision-making has been shown to improve treatment adherence, clinical outcomes and patient satisfaction. However, patient involvement in therapeutic decisions has been shown to be minimal. A recent study in Italy showed that psychiatrists (n=16) made minimal attempts to involve patients in treatment decision-making. Further research is needed to more precisely characterise residual symptoms, to assess the most appropriate management strategies and to increase patient involvement in their own treatment.

SPS10.3.
TREATMENT DECISIONS IN DEPRESSION: TARGETING TREATMENT TO ADDRESS RESIDUAL SYMPTOMS

D.J. Nutt
Psychopharmacology Unit, University of Bristol, UK

Studies indicate that <35% of patients achieve remission and, of these, approximately 50% will continue to experience two or more residual depressive symptoms. The most common residual symptoms identified from a number of studies include fatigue, irritability, sleep disturbances, anxiety and decreased interest or pleasure. The monoamine neurotransmitters (NTs) noradrenaline, serotonin, and dopamine are known to play a major role in the underlying pathophysiology of depression. In addition, these NTs may preferentially regulate different aspects of mood, cognition and behaviour. By choosing a treatment regimen which is selective for one monoamine NT or broader (≥2 NTs), it may be possible to tailor pharmacologic approaches to better address individual patient needs. There are two main pharmacological strategies to address residual symptoms: a) adding a second antidepressant (combination) or non-antidepressant (augmentation, e.g., lithium, atypical antipsychotics) or b) switching to another antidepressant. Theoretically, agents which boost dopaminergic (and noradrenergic) neurotransmission may be effective in reducing residual symptoms of fatigue, sleep disturbances, and enhancing interest and pleasure. In a meta-analysis, bupropion (a noradrenaline and dopamine reuptake inhibitor, NDRI) provided greater resolution of symptoms of fatigue and sleepiness compared with selective serotonin reuptake inhibitor (SSRI) treatment. Combination treatment with psychostimulants, dopamine agonists and NDRIs may increase antidepressant responsiveness. A recent meta-analysis showed that patients randomised to switch to a non-SSRI antidepressant (bupropion, mirtazapine, venlafaxine) may be more likely to experience remission than patients switched to a second SSRI (risk ratio = 1.29, p≤0.007), although a previous analysis failed to demonstrate a greater advantage when switching out of class.

SPS11.
ANXIETY, DEPRESSION AND PAIN: TOGETHER FOREVER?
(organized by Boehringer-Ingelheim)

SPS11.1.
DEPRESSION AND RELEVANT SYMPTOM CLUSTERS

M.E. Thase
University of Pennsylvania School of Medicine and Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA

Although major depressive disorder is often talked about as a single condition, in reality it is a very heterogeneous illness. Symptom patterns differ somewhat for men and women and across age groups and, of course, over time the symptom profile can change for a particular individual. One approach to try to reduce heterogeneity has focused on describing various subtypes of the disorder, with atypical, endogenous/melancholic, and psychotic presentations of depression having shown some enduring value, particularly for differential therapeutics. Another strategy takes a dimensional approach, with particular symptoms or constellations of symptoms graded in terms of severity or intensity. As clinicians we are biased in favor of binary or subtype approaches, although dimensional models may provide a better fit with the data. In addition to the dimension of global severity, recent research has suggested that two other dimensional symptoms, anxiety and pain, convey important clinical information about our depressed patients' functional status and prognosis. In addition to reviewing the prevalence and correlates of these symptoms, this paper discusses important treatment and prognostic implications of pain and anxiety associated with depression.

SPS11.2.
THE ROLE OF GENETICS IN THE DIAGNOSIS AND TREATMENT OF DEPRESSION

A. Serretti
Institute of Psychiatry, University of Bologna, Italy

The role of genetics in the diagnosis and treatment of depression is getting clearer and closer to clinical practice. From a diagnostic point of view, the possibility has been recently discussed to include genetic markers in the DSM-V, but the lack of clear replications suggested caution. More interesting data come from the impact of genetics on treatment response. In fact, up to 60% of depressed patients do not respond completely to antidepressants and up to 30% do not respond at all. Among the many reasons leading to non-response, such as inadequate treatments and comorbid conditions, genetic liability plays an important role. Genetic factors contribute to about 50% of the antidepressant response. This means that knowledge of the patient's genetic profile may predict antidepressant response, thus leading to alternative treatments since the beginning. A genetic profile will be a routine test in everyday clinical practice only when all genes influencing response will be discovered and validated. Studies are still underway and we have preliminary but sound results. As an example, the Food and Drug Administration recently suggested to include genetic testing in routine clinical practice regarding carbamazepine. As far as antidepressants are concerned, a growing number of gene variants have been independently associated with short-term response to selective serotonin reuptake inhibitors. They include the functional polymorphism in the upstream regulatory region of the serotonin transporter gene (5-HTTLPR), but also many other genes in the serotonin system and other systems. These data,

although preliminary, are promising in the perspective of an individualized therapy.

SPS11.3. PERSONALISED PHARMACOLOGICAL TREATMENT FOR MAJOR DEPRESSIVE DISORDER

A. Fagiolini
University of Pittsburgh, PA, USA; University of Siena, Italy

Despite advances in the understanding of major depressive disorder (MDD), rapid, complete and sustained recovery remains a challenge. A number of studies have pointed to the lack of strong efficacy differences among the antidepressants. However, it is widely recognized that many patients respond only to specific antidepressants. Indeed, the group of patients with MDD is not as homogeneous as the DSM may seem to suggest. Differences exist for the specific symptoms that are present during a depressive episode, for the presence of other psychiatric disorders (e.g., anxiety disorders) and for the presence, type and intensity of the concomitant medical burden. These differences could explain why different patients respond to different antidepressants, although the overall percentages of responders may not differ across clinical trials. Methodologically, what is essential to move the field forward is a multidisciplinary assessment approach that integrates sophisticated depression and comorbid disorders phenotyping, with the goal of achieving a more personalized pharmacological treatment of major depressive disorder. This paper reviews the data regarding the efficacy of antidepressants on specific subtypes and clusters of symptoms of MDD and comorbid psychiatric and medical diseases, with the goal of identifying a set of clinical characteristics that can inform and personalize the treatment choice.

SME1. SITES OF ACTION OF ANTIDEPRESSANTS: FOCUS ON SARI *(organized by Angelini)*

S. Kasper
Department of Psychiatry and Psychotherapy, Medical University of Vienna, Austria

Different neurobiological changes have been documented in major depression, which are also linked to the mechanisms of action of antidepressant treatment. Neurogenesis in relation to neurotransmitter systems has been a focus of a number of basic psychopharmacological studies. Various sites of action are involved in antidepressant treatment, but the serotonin and norepinephrine transporter as well as the 5-HT_{1A} and 5-HT_{2A} receptors are mostly reported to be of clinical relevance. The serotonin transporter reuptake inhibition plus a 5-HT_{2A} antagonistic effect is different from a 5-HT_{1A} agonistic effect. Neurobiological studies indicated that 5-HT_{1A} receptors are located in many brain areas, which are connected with the prefrontal cortex (hippocampus, septum, raphe, etc.). Those studies suggested that endogenous serotonin decreases and 5-HT_{1A} agonists increase activity of prefrontal cortical neurons. This difference is due to the activation of 5-HT_{1A} receptors in non-cortical areas. Therefore, the brain function is differently affected by SSRIs plus 5-HT_{2A} antagonist combination and by 5-HT_{1A} agonists, which have demonstrated only a weak anxiolytic and not a very effective antidepressant mechanism. The mechanism of action of trazodone, which encompasses a serotonin reuptake inhibition as well as the 5-HT_{2A} antagonistic property, targets major important CNS structures, which are linked to the regulation of mood, sleep, anxiety as well as depression. Clinical studies with this compound have demonstrated beneficial effects in major depression as well as sleep disturbances and anxiety symptoms. It is evident that trazodone exerts an indirect 5-HT_{1A} agonistic property together with direct 5-HT_{2A} antagonism which can be viewed as an example of intramolecular polypharmacy. This mechanism exploits the synergy that exists between two mechanisms of action and is linked to antidepressant therapeutic properties.

SME2. SEROTONIN REUPTAKE INHIBITORS: UNIQUE DRUGS OR JUST A CLASS OF DRUGS? *(organized by Lundbeck)*

M.E. Thase
University of Pennsylvania School of Medicine and Philadelphia Veterans Affairs Medical Center, Philadelphia, PA, USA

There is little debate about the fact that the introduction of the selective serotonin reuptake inhibitors (SSRIs) in the late 1980s or early 1990s dramatically changed the pharmacologic treatment of the depressive disorders. In most countries, the SSRI class of antidepressants includes six drugs (ordered in terms of introduction to the United States): fluoxetine, sertraline, paroxetine, fluvoxamine, citalopram, and escitalopram. Although these drugs are grouped together as a functional class for good reason (i.e., all six drugs are reasonably potent and relatively specific for blocking the serotonin uptake transporter), the various members of this class are not interchangeable and, looking across the class, there are both pharmacokinetic and pharmacodynamic differences that can have important clinical implications for individual patients. This paper reviews some of these differences, with a particular focus on differences in side effect profiles and treatment efficacy.

SME3. SHORT- AND LONG-TERM CONSIDERATIONS IN BIPOLAR DISORDER *(organized by AstraZeneca)*

E. Vieta, A. Young
University of Barcelona, Spain; University of British Columbia, Vancouver, BC, Canada

Bipolar disorder is a chronic psychiatric illness characterised by cyclical episodes of mania and, more predominantly, depression, interspersed by periods of relative euthymia. Long-term treatment is necessary to prevent recurrence/relapse, stabilise mood, and reduce subsyndromal symptoms, suicide risk and cycling frequency. Antipsychotics are an established and effective treatment for bipolar mania and there is considerable evidence that some of these agents have efficacy against bipolar depression. Olanzapine-fluoxetine combination (OFC) and, to a lesser extent, olanzapine have been shown to effectively reduce depressive symptoms. Additionally, results from the four large BOLDER I and II and EMBOLDEN I and II studies showed that quetiapine monotherapy significantly improved Montgomery-Asberg Depression Rating Scale (MADRS) and Hamilton Depression Rating Scale (HAM-D) scores compared with placebo. The persistent nature of bipolar disorder and the considerable impact of symptom recurrence warrant the evaluation of long-term treatments that may delay/prevent recurrence to improve patient outcomes/quality of life. A number of atypical antipsychotics now have this indication: e.g., aripiprazole and olanzapine are licensed for maintenance treatment as monotherapy for bipolar I disorder. Quetiapine is the only atypical

antipsychotic currently approved in the USA and several other countries for monotherapy treatment of both acute bipolar mania and depression. In addition, quetiapine has recently been approved for maintenance treatment of bipolar I disorder in the USA as adjunct therapy to lithium or divalproex. Evidence supporting the efficacy of long-term quetiapine as adjunct or monotherapy is provided by five double-blind, placebo-controlled studies. Efficacy and tolerability data from these trials and the latest studies with other antipsychotics are reviewed.

SME4.
EFFICACY OF ZIPRASIDONE IN THE TREATMENT OF RESISTANT SCHIZOPHRENIA
(organized by Pfizer)

E. Sacchetti
Department of Psychiatry, University of Brescia, Italy

The randomized, double-blind, 18-week MOZART core study showed that ziprasidone has efficacy comparable to that of clozapine with an improved safety profile with regard to weight, fasting glucose, and lipid parameters in treatment-resistant and/or treatment-intolerant schizophrenic patients. The aim of the study was to determine the long-term efficacy of ziprasidone in treatment-resistant schizophrenic patients. Subjects who completed the MOZART core study and who responded to treatment with ziprasidone (≥20% reduction in Positive and Negative Syndrome Scale, PANSS total score) were enrolled in a 1-year, open label, flexible-dose extension study. Subjects initially received the same dosage of ziprasidone (80-160 mg/day), upon which they completed the double-blind core study. Of the 45 patients who completed the core study, 42 were enrolled in the extension phase. The mean change from core study baseline in PANSS total score was -37.0 (95% CI -41.8 to -2.2; $p<0.001$; ITT-LOCF n=42) for patients treated with ziprasidone on entry to the extension study. Following 1 year of oral ziprasidone, the mean change in PANSS total score from core study baseline was -32.2 (95% CI -39.1 to -25.3; $p<0.001$; n=42). Of the 40 ITT patients who entered the extension study, 28 (70%) maintained ≥20% reduction in PANSS total score (vs. core study baseline) at the extension phase end point. The safety evaluation showed no clinically significant detrimental effects. Thus, the efficacy of ziprasidone observed during a 18-week, double-blind core study of treatment-resistant or treatment-intolerant schizophrenic patients was generally maintained during a 1-year follow-up period.

SME5.
WHAT THERAPEUTIC INNOVATIONS FOR PATIENTS WITH MAJOR DEPRESSION?
(organized by the Center of Neuropharmacology, University of Milan)

G. Racagni, A.C. Altamura
Center of Neuropharmacology, Department of Pharmacological Sciences; Department of Psychiatry, University of Milan, Italy

Increased awareness of the limitations of existing antidepressant treatments, which almost exclusively target the monoaminergic systems, provides a strong impetus for the development of novel antidepressant treatments with a unique target of action. Emerging evidence suggests that affective disorders are often characterized by abnormal patterns of circadian rhythms and that the human circadian system may hold important clues regarding the etiology and treatment of affective disorders. We highlight some of the preclinical and clinical findings of an innovative treatment for depression: agomelatine, the first melatonergic antidepressant. We examine the unique pharmacological profile of agomelatine, a melatonergic MT_1 and MT_2 receptor agonist and 5-HT_{2c} receptor antagonist, which has shown its ability to resynchronize circadian rhythms as well as its antidepressant effects in several validated animal models of depression. Short-term placebo-controlled studies have proven the antidepressant efficacy of agomelatine, which is maintained over the long term, whatever the severity of depression. Using direct head-to-head comparison studies, recent data show the superiority of agomelatine versus sertraline and venlafaxine. Clinical advantages of agomelatine for depressed patients are underlined with respect to its good tolerability. Early recognition and treatment of sleep disturbances is important to obtain remission and to prevent episodes of recurrent depression. Thanks to its original receptor profile (melatonergic MT_1, MT_2 agonist and 5-HT_{2c} antagonist), agomelatine is able to improve the very frequent sleep disturbances of depressed patients, by restoring daytime functioning, and by resynchronizing, from the first days of treatment, the architecture of sleep.

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