

LETTER

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Evaluation of social relationships in elderly by animal-assisted activity

Pet therapy had its origins in the USA in the early 1960s and is based on the hypothesis that the relationship between different species may have a therapeutic effect.

Generally, the emerging opinion is rather supportive of the use of animals for companionship and for the promotion of physical, social, and emotional health of the elderly, but only a few studies have been conducted in this regard.

In Italy, more than 8 million of the 57 million inhabitants are over 65 years old and about 2 million are over 80 years old – and these numbers are likely to increase as life expectancy continues to rise. Some studies conducted on cognitively intact elderly residing in an institutional setting have reported positive outcomes with pet therapy, leading to reduced feelings of solitude and isolation and improvements in social relationships (Savishinsky, 1992; Fick, 1993; Richeson, 2003).

Therefore, a zootherapeutic project was undertaken in a nursing home for elderly people in Naples, Italy. This project started in February 2008 at the Home Health Care for the Elderly. In this letter, we present the results of the work conducted in 2009–2010, in which we proposed a rehabilitative psychosocial activity with a group of patients, mediated by a team of two dogs and two clinical operators.

The two dogs used in the intervention were a 7-year-old female Labrador, and a 3-year-old sterilized female Australian Shepherd. The dogs were specifically trained as co-therapists and underwent regular veterinary checks, according to guidelines of the US Center of Disease Control. Operators involved in the study received special education and have accumulated many years of experience in the field, according to guidelines of the Delta Society. Additionally, the dogs have been trained with regard to their behavior and carefully inspected by veterinary behaviorists, while health checks have been made by veterinarians attached to the Public Health Service. The clinicians in the zootherapeutic team were a veterinarian and a physician. The veterinarian was trained in counseling, while the physician was specialized in psychological symptoms and in the proxemic reading of group activities.

A sample was selected of 20 subjects, two males and 18 females, with dementia (30%) and organic disorders (70%) in high comorbidity with

psychiatric (depressive) disorders and cognitive deficit, with an average age between 69 and 89 years. The sample excluded those residents with a fear of animals or allergies to animals. This general assessment profile was aimed to provide an overall description of the intervention effects, to find a specific area of sensibility to the intervention. Each session lasted one hour, and was performed weekly, on the same afternoon, and it was video-recorded with the patients' permission. Before starting each session, a clinical update was planned with the geriatrician caring for the patients. According to the clinical condition of the patients and the weather, the session was performed indoors or outdoors. In this activity setting, the subjects sat together in a half circle with the team interacting socially or individually. All the interactive work with the pets was divided into two kinds: caring and playing.

The tests used to assess the general clinical impact of our pet therapy intervention were: Mini-Mental State Examination (MMSE; Folstein *et al.*, 1975), Geriatric Depression Scale (GDS; Yesavage *et al.*, 1983), performance test of activities of daily living (ADL; Katz *et al.*, 1963). All these standardized tests were executed before the activities and six months after.

The rating scales used in this study explore a wide group of psychiatric, cognitive, and adaptive variables. The mean ADL score was 2.40 at T0 and 2.20 at T1. A particular subgroup of 15/20 patients (75%) showed the same values at T0 and T1. The mean of GDS score was 9.00 at T0 and 9.50 at T1. No subgroup or individual showed significant values, apart from 4/20 (20%) patients who had a light decrease (2 points) in their depressive mood. The mean MMSE score was 16.75 at T0 and 15.75 at T1. All the participants took part regularly in the proposed activity, without missing sessions. No statistically significant difference was found between T0 and T1 in the whole group.

The results of the MMSE show normal deterioration of cognitive functions in geriatric age. It is remarkable that there was a significant improvement in the subgroup with the lowest cognitive function. This result suggests that the treatment described stimulates participation and residual cognitive function in patients who are in a serious condition but who are still able to work in a team.

The assessment of independent living (ADL), measured six months later, shows a slight worsening only in one group of patients, particularly those with serious cognitive impairment, indicating instead that a large part of the sample retained its skills, in contrast to the general trend of the age group evaluated. This can be partly attributed to the

stimulus of empathic perception, personal and social, in the zootherapy group.

The results of the GDS showed a reduction of depression in the group of elderly patients with neurological and/or internistic disabilities. This result proves that the zootherapeutic activity group is successful and low cost.

As expected, in the cognitive area (MMSE) no different extent or slow decline in the logical-mnemonic skills were observed.

The level of evidence according to Evidence Based Medicine (EBM) is based on prospective studies in small groups without control, relevant evidence in a generally new field, and especially in the treatment of this type of patient groups.

Finally, this pilot study, although limited in some statistical and methodological issues, indicates that it is possible to use and necessary to further explore the benefits of animal therapy in the areas of personal autonomy and psychological function in groups of elderly hospitalized persons, particularly in subgroups with problems of depressed mood but without serious mental impairment, independently of motor disabilities or, more importantly, difficulties in verbal language.

Conflict of interest

None.

Description of authors' roles

LFM realized the study design, performed the activities of pet therapy, coordinated the zootherapeutic team, analyzed the data, and revised the paper. MF participated in the study design, and wrote and revised the paper. AS analyzed the data, and wrote and revised the paper. EA and MT carried out the emotion and behavioral assessment and analyzed the data. FM revised the paper. ADM checked the dog health status and ensured relationship with ASL NA1. AF revised the paper.

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