



Clinical psychology

## Meeting the emotion! Application of the Federico II Model for pet therapy to an experience of Animal Assisted Education (AAE) in a primary school

*Rencontrer l'émotion ! Application du modèle fédéricain pour le zoothérapie à une expérience de l'éducation assistée par animal (EAA) dans une école primaire*

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### Abstract

Authors discuss some criteria they found useful for an Animal Assisted Education (AAE) intervention in a primary school aimed to promote, in children, interaction with animals, helping them to acknowledge their own emotions and those of others. Generally, these interventions are considered as a valid support for children with emotional or behavioral disorders, but they can also be an interest of Health Psychology as a protective factor against marked statuses of stress, anxiety and difficulties in training programs. In this paper, authors propose an intervention realized according Guidelines proposed in the Federico II Model for Pet Therapy, with a team was made by a psychologist and a veterinarian, with a specific training in Human–Animal Interaction (HAI), a dog and three donkeys. The intervention, addressed to 21 students belonging to a third grade class (8 years old), aimed to promote a contact with primary emotions such as

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joy, anger, fear, sadness, disgust, surprise. The proposed activities, guided by a playful approach, helped children to recognize and understand these emotions and to develop their relational skills.

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*Keywords:* Animal assisted education; Health psychology; Human–animal interaction; Multidisciplinary approach; Intervention in school; Emotions

## Résumé

Les auteurs discutent sur les critères qu'ils ont trouvés utiles pour un éducation assistée par animal (EAA) intervention dans une école primaire, utilisé pour promouvoir, chez les enfants, l'interaction avec les animaux, en les aidant à reconnaître leurs propres émotions et celles des autres. En règle générale, ces interventions sont considérées comme un support valable pour les enfants qui souffrant de troubles affectifs ou comportementaux, mais ils peuvent être également un intérêt de psychologie de la santé, comme un facteur de protection contre les états marqués de stress, l'anxiété et les difficultés dans les programmes de formation. Dans cet article, les auteurs proposent une procédure réalisée selon les directives proposées dans le modèle fédéricain pour le zoothérapie, avec une équipe composée d'un psychologue et un vétérinaire avec une formation spécifique en relation entre les humains et les animaux, un chien et trois ânes. L'intervention, adressée à 21 étudiants appartenant à une troisième classe (8 ans) de qualité, est destinée à promouvoir en contact avec les émotions primaires telles que la joie, la colère, la peur, la tristesse, le dégoût, la surprise. Les activités proposées, guidées par une approche ludique, ont aidé les enfants à reconnaître et à comprendre ces émotions et de développer leurs compétences relationnelles.

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*Mots clés :* Éducation assistée par animal ; Psychologie de la santé ; Interaction homme–animal ; Approche pluridisciplinaire ; Intervention à l'école ; Émotions

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## 1. Introduction

In this paper, we describe some criteria considered useful for an Animal Assisted Education (AAE) experience; these activities are part of Animal Assisted Interventions activities (AAI), also known as Pet Therapy, recognized as auxiliary therapies in medical and psychological interventions (Menna, 2016; Fine, 2011; McCardle, McCune, Griffin, Esposito, & Freund, 2011; Wilkes Jane, 2009; Rainone et al., 2016). Generally, AAI are a valid support for children and elderly people, or disabled and psychiatric patients because the presence of an animal in a psychological setting is an emotional catalyst that can often speed up clinical processes (Menna, 2016; Santaniello, Dicé, Gerardi, Menna, & Valerio, 2016); it also facilitates the development of empathy processes, social relationships and can mitigate stressful emotions or conflict dynamics (McNicholas & Collis, 2000).

In school contexts, studies about AAE Interventions have highlighted how psychological activities with animals promote the development of cognitive and emotional skills, which allow students to simplify orientation and definition of future goals (Berry & Katsiyannis, 2011; Fine, 2011; Tissen, Hergovich, & Spiel, 2007; Anderson & Olson, 2006). Furthermore, the interaction with animals can be considered as an interest of Health Psychology as a protective factor against marked statuses of stress, anxiety and difficulties in training programs: it is also appropriate for children with emotional and behavioral disorders,

because it can improve difficult emotional conditions, such as low mood, loneliness and depression, linked to school contexts or training failure (Adamle, Riley, & Carlson, 2009).

An AAE intervention can also stimulate the achievement of relational tasks as the understanding of emotions, the integration and declination of them in the school context, the maintenance of a proper and respectful behavior toward the other members of the group. In fact, it is useful to promote the evolution of awareness and responsibility in the interaction with the animals, with an eye on stimulating growth and maturation for the involved children (Santaniello et al., 2016; Menna, 2016; Fine, 2011).

We are currently questioning about best practices in the implementation of the AAE interventions. In the following study we refer to the Federico II Model for Pet Therapy (Menna, 2016), a scientific model for Animal Assisted Intervention, based on Human–Animal Interaction, that we consider an Inter-Specific Relationship (Menna, 2016). The foundation of this model is the Complexity Theory (Morin, 1990), considering the setting of intervention as a complex system that can be understood just considering all its components (e.g. environmental factors or relational aspects between participants) (Menna, 2016). It is also referred to the Zooanthropology discipline (Marchesini, 2005), that considers animals as hetero-specific subjects that actively contribute to the development of human relationships (Menna, 2016). On these assumptions, we consider, as basis of our model, the concept of Reference Animals, considered in its Otherness (Marchesini, 2005) as active part in the healing process and presuming that the interaction with it, mainly based on game, prompts for a preconception free communication that is more spontaneous and helps the users to find confidence in their own selves (Menna, 2016).

The following experience shows a specific application of this model within, an AAE program involving children in the primary school. This children were compelled to reach a contact with their own and other children's emotions, as well as prompt socialization and dialogue sharing in class groups (Dicé & Zoena, 2017; Freda & Dicé, 2017; Dicé, Dolce, & Freda, 2016). These dynamics require complex relational skills that children can learn, throughout their training, and use them for their decisions and evolutionary changes, difficulties or moments of uncertainty (Martino & Freda, 2016; Martino, Onorato, D'Oriano, & Freda, 2013; De Luca Picione & Freda, 2016; Valsiner & De Luca Picione, 2017; De Luca Picione & Valsiner, 2017). We considered this specific context as useful to implement these interventions and understand how the interaction with the animals can help children in the achievement of their relational tasks (Kotrschal & Ortbauer, 2003; Anderson & Olson, 2006; Endenburg & Van Lith, 2011; McCardle et al., 2011; Wilkes Jane, 2009).

## 2. Objectives

In this study we present an experience of AAE within the primary school, aimed to promote the understanding of primary emotions in children (Axia & Bonichini, 2001) through the interaction with the operators and the animals involved (Menna, 2016) and to help them in recognizing such emotions in themselves, the animals and their companions.

This is a preliminary observational study, aimed to explore operational criteria necessary to structure future experimental research designs, with a measurement of the effects of proposed activities and a comparison with a control group.

### 3. Methods

#### 3.1. Context and participants

We present an AAE Intervention carried out in a primary school in Naples, a city of Southern Italy. We involved all the children ( $n=21$ ) attending third class (median age: 8.03 years), 9 M (median age: 8.45 years) and 12 F (median age: 8.07 years). All parents signed written informed consent forms. Teachers were bystanders during all the interventions, as non-participant observers.

The intervention lasted six meetings; five of them have taken place in the school and the last one in the Federico II Experimental Center for Poultry and Rabbit, Naples.

#### 3.2. The interdisciplinary team

According to this model, we rely on an interdisciplinary team founded on the recognition of each different role and skill, enabling participants to address adequately their positions and needs. We involved (Menna, 2016):

- a Psychologist with a specific training in Human–Animal Interaction (HAI), as accountable of the clinical intervention;
- a Zootherapist Veterinarian, as guarantor of the safety of the Human–Animal Interaction (HAI);
- Co-Therapist Animals, as referents of the Otherness. In our study, two types of animals were involved: a dog and three donkeys, offering different relational approaches.

The dog, thanks to a long history of co-evolution, has developed a common communication system with humans. For its natural attitudes of openness, affection, curiosity and sociability, it has always been considered a facilitator within social relationships. It can read the proxemics and behavioral aspects of the other, and tune into other's emotional state. Moreover, its playful nature makes them constantly looking for new contacts and able to quickly acclimate in new contexts (Ekman & Friesen, 1976; Bloom & Friedman, 2013). In our intervention, the dog involved was Lola, a Boston Terrier breed female dog about 16 months, certain somatic characteristics, as defined brachycephalic short snout, make it very attractive to users, especially children. The choice to work with Lola was dictated by its ability to relate in a composed and tender manner with the users, to seek contact with humans through requests for care, play and affection.

The dog was trained to HAI, particularly with the children, during an educational program at the La Voce del Cane (The Dog's voice) Dog Educational Center (Naples, Italy), following the guidelines of the Italian National Educational Sports Center (CSEN chinophilia). All procedures needful to guarantee a high standard of animal welfare of the dog were considered. The relationship between the veterinarian and Lola was tended to reinforce a strong intimacy and a communicative code of gestures and sounds, based primarily on non-verbal language. The power of this relationship was encountered in having full respect for diversity and mutual spaces. This report was chosen because it could be useful to teach children how to relate to the "other" without talking.

The donkey, instead, is a soft to touch animal, helpful, intelligent, patient, strong, independent but very cooperative, empathetic, extremely mild, attentive and friendly that lets you work with children, adults and people with different degrees of disability. The donkey is an excellent facilitator in the construction of motivational processes, being able to promote, through active and

positive stimuli the emotional and cognitive development of the person (Capretti, 2010; De Rose, Cannas, & Reinger Cantiello, 2011).

The donkeys involved were Carmela, ForzaNapoli and Tango, three Amiatina breed donkeys, respectively 7, 3 and 2 years old. They have been socialized within the first days of life and seek contact with humans spontaneously, but in different ways. Carmela, which is also the mother of the other two donkeys, has a very slow approach, reserved and selective, that search the contact with the person in distress; ForzaNapoli, is a full male, it is curious but careful and delicate with humans, especially with children. Tango, the newest member, is a full male with a very playful approach to humans, characteristic certainly also related to age, it indulges in intense physical contact (grooming Inter-Specific through curries, and energetic brush strokes).

### 3.3. *The choice of the setting*

We resorted to the group intending it as a setting within which students can build new meanings regarding the proposed content, facilitating the possibility of interactive exchanges and expanding their points of view. We believe that the active group can facilitate the emergence of new reflections and the recognition of new dialogic and relational skills against other points of view (Margherita, 2009; Freda & Esposito, 2016; Esposito, Freda, & Bosco, 2015).

In our experience, the group meetings promoted the interaction between students and animals. The activation of relational experiences such as play, cooperation, confrontation with each other, have helped the children to exchange views on emotions; this also thanks to the reflection of his own feelings in those of his companions, the ability to reduce isolation and to the strengthening of the collaboration with others and with the animals.

### 3.4. *Declination of the intervention*

The intervention lasted five monthly group meetings (preceded by an introductory meeting), lasting about an hour each. Each of them has been constituted by a first part, in which took place a game activity with the animals, and a second part, in which was held a group discussion.

Now we will proceed to the description of the experience, with particular attention to the need to support children in the interaction with the animal in its role as facilitator of contact with their own and others' emotions.

We have tried to find, for our intervention, some criteria of outcome in the possibility, for all the children involved, to participate at the activities and, at the end of each meeting, to deal with the operators about the proposed content.

#### 3.4.1. *First meeting. Meeting Lola: the familiarization with the dog*

We allowed the children to freely interact with Lola (e.g. demand for a caress or paw), which facilitated direct contact and knowledge of the dog.

During the group talk, we thought together about the increasing of their confidence and their exploratory behavior and the children were able to experience emotional signals expressed by the dog.

#### 3.4.2. *Second meeting. Knowing the enthusiasm: the relay game*

We proposed the children to play with Lola exchanging a witness (a rag ball), being careful to don't drop it and involving Lola in a way that it would not feel stress nor any sense of frustration.

During the group talk, we thought together about concentration and mutual encouragement, indication of an emerging partnership and solidarity in the group. This recreational activity also helped the children to contact their sense of belonging to the class and strengthen the bonds of affection between mates and to make attention to Lola's emotional world.

#### 3.4.3. *Third meeting. Knowing the anger and disgust: the otherness nut*

We propose to the children to play with a cube which reported, on each face, a drawing of a child and a dog, expressing the emotions of anger and disgust. Each child imitated expressions and discussed the reasons behind such emotions. Moreover, the discussion about the emotion of disgust has been deepened within the subject of the ingestion of foods that are not healthy, highlighting differences about substances that could be good or not for children or for dogs (e.g. hay, wild mint, ethyl alcohol).

During the group talk, we discussed together about emotions' adaptive value: the children considered how anger and disgust are useful for the detection of dangers, threatening situations and for the avoidance of them.

#### 3.4.4. *Fourth meeting. Know the joy: join Lola's birthday*

We gave the children modeling clay and asked them to make a gift to give to Lola, in occasion of its birthday; after their work, each child gave to the dog his/her gift (a flower, a heart, a cake, a balloon) and shared with others the reasons for his/her choice.

During the group talk, we discussed together about how this game was useful to express creativity and share a joyful moment, such as the delivery of a gift and how this could make happy a dog or a child.

#### 3.4.5. *Fifth meeting. Know fear and sadness: a fairy tale*

We told the children, with the help of cartoons, the story of *One hundred and one dalmatians* (Smith, 1956). During the story, narrator emphasized emotions of sadness and fear, showing photos of Lola with the expressions of fear and sadness and asking to the children to recognize them.

During the group talk, we discussed together about feelings of sorrow and fear, and helped children to recognize them in different moments of the story.

#### 3.4.6. *Sixth meeting. Know the surprise: the trip to the donkeys*

We conducted all the children to the Federico II Experimental Center for Poultry and Rabbit, where they met the three co-therapists donkeys, Carmela, Tango e ForzaNapoli. To allow them to experience a surprise through the relationship with animals, we not anticipated them the content of the meeting. Therefore, accompanied by Lola too, children surprisingly contacted donkeys and, after an initial excitement, were invited to interact with them: so, they gave them food, brushed them or simply stroked them.

During the group talk, we discussed together about feelings of surprise; children said as that was the first time they met a farm animal and that they were impressed by the patience of the donkeys, because they accepted firmly all their enthusiastic plays. Afterwards, we gave children crayons paper and they made a drawing about this experience.

#### 4. Considerations

In our work, we observed how children had a new educational opportunity in the school context: thanks to the presence of trained health operators and co-therapists animals, activities has been carried out with good will and interest. Despite the absence of a control group and a pre-post intervention measurement, in our experience we observed the use potential of the proposed setting of AAE, through which involved animals was recognized as active agents and participants. They, in facts, can relate to other individuals (humans or animals) exclusively on emotional levels and, opportunely accompanied by trained operators, this can help them to understand and use their emotions, allowing them to contact and understand positions and points of view different than their own, or encouraging new social and relational opening.

With the help of operators, children could contact emotional aspects elicited by the interaction with dogs and donkeys, learning to reduce the states of concern and to mitigate those expressed in the first moments of excitement. Furthermore, the interaction in group facilitated the maintaining of attention and the comparison of children with animals, adults and mates, promoting cooperation in the activities. It also helped them in contacting and understanding positions and points of view other than their own, encouraging new social and relational opening.

#### 5. Conclusions

As criteria for an AAE experience within an educational context, we believe that the interdisciplinary team proposed (a Psychologist and a Zootherapist Veterinarian with a training in HAI) has been useful for the development of our intervention within an educational context (Menna, Santaniello, Gerardi, Di Maggio, & Milan, 2016; Menna et al., 2012; Fine, 2011; Tissen et al., 2007; Anderson & Olson, 2006). We think that their skills and competences could allow the relationship of children with animals and they, as emotional catalysts, could facilitate children to promoting cooperation in their social activities.

We also consider functional the combination of these two kinds of animals: in fact, the playful nature of the dog and the tame behavior of the donkeys ensured the structuring of a collaborative climate and trust towards operators and children (Menna, 2016).

The group setting, marked on a playful approach, helped children to recognize and understand primary emotions in themselves, companions and animals, contributing to develop, in them, new knowledges and skills concerning their relational world (Margherita, 2009).

Although the described experience allowed us a deepening of methodological criteria for AAE programs, additional studies employing randomized controlled trials are needed to further attest to the positive effects of Federico II Model (Menna, 2016; Menna et al., 2016). Study limitations are related to a lack of measurement, before and after intervention, of psychological constructs as relational skills and emotional awareness in children. This lack can be the basis for future action researches design studies.

#### Disclosure of interest

The authors declare that they have no competing interest.

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