

## ANIMAL-ASSISTED THERAPY – A NEW TREND IN THE TREATMENT OF CHILDREN AND ADULTS

Ivan Dimitrijević

*Institute of Psychiatry, Clinical Centre Serbia, Belgrade, Serbia*

### SUMMARY

*Animal-assisted therapy is a familiar method of treatment in the rehabilitation of many illnesses and conditions, but is still not applied sufficiently in our milieu. This paper gives an overview of the available literature and some of the research which demonstrates that the interaction between the patient, animal and therapist provides a context which improves communication, elevates self-confidence, reduces the symptoms of diseases, and improves the quality of life. The dog, cat, horse, birds and toy animals are most often used in therapy. Short-term contacts with animals are used, as well as long term keeping of animals, which are looked after by patients following a particular methodology. The therapy is used in the treatment of psychiatric patients afflicted with depression, schizophrenia, phobias and addiction problems. Loneliness is easier to endure in the company of animals. It is also applied in cardiovascular diseases, dementia, Alzheimer's disease, child cerebral paralysis, rheumatoid arthritis, AIDS, and other diseases. Research shows a more rapid reduction of symptoms of many diseases when animals are included in the therapeutic process.*

**Key words:** *treatment - quality of life – animals - birds*

\* \* \* \* \*

### INTRODUCTION

Animal-assisted therapy (AAT) is a familiar method of treatment and rehabilitation in many diseases and conditions, whereby the animal becomes an important “behavioral facilitator”, causing positive modifications in the behavior and health of the patient. Numerous authors point to its importance, and in particular that the positive feedback between the patient, the animal, and the therapist reduces many symptoms, and improves the quality of life (Yeh 2005).

Animal-assisted therapy in a natural environment brings about the encounter between a patient and an animal, which elevates the motivation and strength of the individual. The therapist-animal-patient triad establishes such mechanisms which significantly increase the level of communication. The patient learns to experience himself in relation to others, and to better perceive truth and reality. A significant methodological question in the use of animals for therapeutic purposes is how many behavioral characteristics of animals can be useful in the convalescence from various pathologies. Positive psychological and

psychosocial benefits have been linked to the presence of companion animals. For example, reduction in blood pressure, heart rates, and stress levels, as well as increases in emotional well-being and social interaction are benefits from the human-animal bond (Jorgenson 1997).

Animal-assisted therapy has gained widespread support and application over the past few decades (Connor 2000). The therapy involves special training of the animals for work with patients. The Delta Society defines animal-assisted therapy as a targeted intervention in which an animal complying with specific criteria represents an integral part of the therapeutic process. Animal-assisted therapy has physical, mental, educational and motivational effects on the participants. From the physical point of view, the therapy improves the fine motoric abilities, the use of the wheelchair, and the maintenance of equilibrium when standing. In the mental health area, it improves attention, concentration, and self-esteem, reduces anxiety and loneliness, improves verbal interaction, and develops recreation and leisure abilities. Educationally, it improves vocabulary, as well as long- and short-term memory. Motivatio-

nally, the presence of an animal increases the desire for joining in group and social activities, and improves interaction with others. It is applied both in groups and individually (Zasloff 1994).

The application of the therapy varies in duration, from a long-term process in which the patients adopt the animal, to short-term interactions between patients and a trained animal in structured activities. The therapy is characteristically interdisciplinary, and a multitude of professionals may take part: veterinarians, physicians, psychologists, psychiatrists, neurologists, nursing staff, physiotherapists, animal trainers, and others, along with continuous education which follows the therapeutic process. The approach is based on the concept of well-being of people and animals alike, and offers an alternative understanding of human health. (Nathans-Barel 2005, Oakley 2006).

## **ANIMALS MOST OFTEN USED IN THERAPY**

The use of various animals is not uncommon in animal-assisted therapy: dogs, cats birds, horses, dolphins, rabbits, lizards, and other small animals.

Dogs are the most frequently used animals because of their training and sociability skills. Patients and animals participating in these programs require special care in order to avoid transmission of infectious diseases associated with pets, hypersensitivity and accidents during their visits. Implementation of animal-assisted therapy in care centers requires a permanent revision of suggested guidelines and program objectives (Jofre 2005).

In some hospitals in Ontario canine-visitations are enabled for patients afflicted with chronic diseases, including the participation of medical staff, animal owners and veterinarians (Lefebvre 2006). Dogs and owners are familiarized with hospital rules, which require mandatory documentation on the dogs in terms of vaccinations, and the control of behavior and temperament. Trainers received advice and instruction on how to conduct a therapy group (Barker 1998).

Cats are often used for therapeutic purposes, as are birds. Some authors discovered that group meetings held in premises with caged birds have better patient attendance, more involved participation, and better results compared to the appropriate control group who stayed in premises without birds (Barker 1998). Some authors

describe the use of toy animal with satisfactory results (Lefebvre 2006).

Horse-assisted therapy originated in Europe in the 60's in countries with a long equestrian tradition, and appeared in Italy in the 70's of the 20th century. In 1982 the terms "ippotherapie" (horse therapy), "equestre educazione" (reeducation through horse riding) and "disabili sport" (disability sport) are used in the International Convention on therapeutic horse riding. It is considered that during horse riding the rider experiences a specific interaction with the animal with which he shares a relationship and space. A communication is thereby established, resulting in gratification and motivation, which in turn alleviates pathologies. In horse-assisted therapy observations are made on the effects on the neuromuscular system of the patient caused by the mechanical influence of the horse walk. Specific to the horse therapy is that the patient continuously receives impulses from the horse walk, which lead to a relaxed perception of the body, equilibrium, and coordination of movement. This is particularly significant in motoric deficiencies caused by hereditary lesions, such as cerebral paralysis in children. The very process of fitting the horse with saddle and harness, and acceleration in riding, improve the coordination of arms and shoulders, and sharpen the perception of one's body and one's self, which leads to improved strengthening of independence and resolve. All of this leads to better communication in the family, and improved work skills and quality of life (Yeh 2005).

In the presence of a horse, there are other influences on the patient, such as visual, auditory, olfactory, and tactile. The warmth of the horse and the touch during grooming act positively on the patient. A round therapy field, 20 meters in diameter, is recommended in horse-therapy where the patient, the therapist and the horse are in uninterrupted interaction. Such therapeutic meetings are practiced 2 to 3 times per week (Yeh 2005).

## **APPLICATION OF ANIMAL-ASSISTED THERAPY WITH CHILDREN AND THE ELDERLY**

Numerous studies investigated the influence of animals, and pets in particular, in the therapy of many mental disorders. Katcher, of the University of Pennsylvania, who pioneered animal-assisted therapy, cites multiple benefits for patients who

keep animals (Barker 2003). Many patients with mental disorders experience social and emotional benefits from keeping animals. In such cases the physician should determine if the patient owns an animal, and how he behaves with it. If he does not, and after professional evaluation, in particular with introverted patients, recommendation should be made to introduce an animal into the therapy program. Patients with weak communication skills can advance significantly if they talk to others in the presence of an animal.

One study investigated the influence of animals on the change of anxiety in some psychiatric entities. The study included 313 adult psychiatric patients (174 women and 139 men) aged 37±12 years old. The patients were divided into four categories, following the primary diagnosis: mood disorders (52 patients, 49.2%), psychotic reactions, including schizophrenia, schizoaffective changes and other psychotic changes (80 patients, 25.6%), psychoactive substance abuse (52 patients, 16.6%), and other disorders including anxiety, cognitive, personal and somatic disorders (27 patients, 8.6%). The patients were directed to therapeutic recreation immediately upon the stabilization of the condition, when they are able to participate in group activities, mostly 24 to 72 hours after coming to the hospital (Barker 1998). The change in anxiety was monitored in these patients in two situations: one animal-assisted therapy group, and one recreational therapy group as the control group. The animal-assisted group lasted 30 minutes at most in group interaction with dogs and their owners. During the session, which took place once a week, the owners spoke generally about dogs and encouraged discussion about the patients' pets, while the dog moved freely through the room coming into contact with patients, or obediently following commands (Barker 1998).

Among patients participating in the recreational therapy without animals it was noted that only patients with mood disorders significantly reduced their anxiety levels, while the participation of animals reduced anxiety in patients with mood disorders, psychotic and other disorders. This shows that animal-assisted therapy reduces anxiety in a wider psychiatric pathology compared to recreational therapy without the participation of animals. No significant difference in reduced anxiety was recorded only with patients with disorders attributed to the abuse of substances,

whether they were in the recreational therapy, or in the animal-assisted therapy groups. The reason is probably the small size of the sample, and the association of anxiety with psychic abstinent symptoms, which are difficult to change in just a single weekly session of recreational or animal-assisted therapy (Barker 1998).

The reduction of anxiety in patients with psychotic disorders was double, especially after animal-assisted therapy. This shows that animal-assisted therapy can offer patients with psychotic disorders interaction which involves less demand compared to traditional therapies. Some authors consider that the reason for such a phenomenon is that therapy with dogs enables the patient to experience a feeling of safety and comfort, which we do not encounter in other therapy procedures. A dog may provide protection from situations which lead to anxiety.

Several control clinical studies have been published which studied the human-animal relationship. In some studies, depressive patients improved social relationships and reduced depression symptoms when animals were included in the therapy program. Children with hyperactive attention disorder and behavioral disorders reduced aggression and focused their attention. Autistic patients and patients with developmental disorders to a large extent socialized and focused their attention. Patients with Alzheimer's disease improved attention and reduced aggression and rage (Barker 2003).

Some studies related to the reduction of fear, anxiety and depression in psychiatric patients show that animal-assisted therapy applied daily for the duration of 15 minutes can lead to significant improvements (Barker 2003).

In researching childhood autism, Mazzone recorded in 2002 that after five to six horse-assisted therapies monthly, there is improvement, resulting in the reduction by five points of the score on the Childhood Autism Rating Scales (Yeh 2005).

Animals are also used in the treatment of children with special needs. Interaction with a dog and other furry animals has a very positive effect on their quality of life. Interaction with pets can sometimes improve the convalescence after serious diseases. In the presence of animals children change their behavior, develop a feeling of responsibility and increase the ability of the child to participate in the treatment process.

Children often strongly believe animals and accomplish a significant level of intimacy with them. This special liaison results in the animals assuming the role of cotherapist. Experiences in this area were described by the occupational therapy staff at St. Mary's Hospital for Children, who embarked on a pilot program in December 1998, which involved the use of a dog once a month within a small group of children, the number of dogs later to be increased to several per session. During these sessions each child worked in its wheel-chair individually with its therapist, or several children formed a circle in which the dog interacted with the children. In some patients with traumatic brain damage with a pronounced weakness of an arm, the therapist set the child the task of using that arm to touch, feed, and comb the dog. Children thus become very motivated to participate in the treatment, as a result of which the goals of the treatment are achieved faster and easier.

Besides studies, clinical experiences show that many patients with dissociative disorders and agoraphobia, who were advised to keep animals, experience a reduction in fear, distress and social isolation, and patients in the presence of animals become happier, more communicative, expressive and calmer (Lipton 2001).

Several decades earlier, Searles and Levison attributed favorable effects in a schizophrenic patient to a dog which lived with him, claiming that care and the human-dog relationship brought the patient back to reality. Chronic institutionalized psychiatric patients who used dogs in treatment were less depressed compared with the appropriate control group (Barker 1998). Some studies describe the significance of this therapeutic procedure with elderly patients with schizophrenia. They were subjected to treatment for four weeks. The treatment with the use of dogs and cats looked after by the patients increased mobility, interpersonal contacts, and communication and strengthened daily activities, including personal hygiene and independent self care (Bara 2001).

A hypothesis was tested, of introducing animals into the therapy of schizophrenic patients, with the aim of improving anhedonia. A dog was included in the psychosocial treatment as an active member, with a comparative group without a dog. The group working with the dog significantly improved its hedonistic tone compared with the control group. Also, better use of spare time and

improved motivation were noted. This therapy can in many ways contribute to psychosocial rehabilitation and the quality of life of patients with chronic schizophrenia (Miller 2000).

Arnold described the introduction of a dog into the therapy of dissociative disorders, making use of the calming effect of the dog to facilitate communication and interaction between the patient and the therapist. Some authors point out that an animal may serve as a link in psychotherapy, enabling easier entry into sensitive content. Patients who were withdrawn and insensitive reacted with a smile and started communicating in therapy with dogs (Barker 1998).

Loneliness arises as a response to an inability to adapt to the environment, and an inability to take responsibility in a given environment (Calvert 1989). This phenomenon was observed in a certain sample, and it was concluded that the possession of animals over longer periods of time can significantly reduce the feeling of loneliness (Banks 2002).

The relationship and link between loneliness and keeping animals have been studied among women. It was noted that women who live alone, without pets, are much lonelier than those living with animals. There was no difference between women who kept dogs or cats. It was noted that women who keep pets have less feeling of loneliness, by compensating this way (Richeson 2003). Keeping cats reduces the feeling of loneliness in elderly women living in old people's homes. Loneliness leads to loss of social interaction, and animals, i.e. cats can substitute for some interaction (Mahalski 1988). Research has shown that people who have animals find it easier to bear stressful life situations and loneliness, experience less depression, function better in daily activities, and improve social functioning. Animals involved in treatment programs reduce the intake of psychotropic medication, and in this way cut the costs of health care (Geisler 2004).

A study looking into the life quality and loneliness of the elderly shows that after 20 months of sessions in which toy animals were included there was statistically significant improvement of speech, emotionality and satisfaction with life.

Some studies give insight into cases with rheumatoid arthritis, cervical osteoporosis, and cerebral apoplexy, in which therapy with toy animals within psycho-social treatment contributed to improvement (Lefebvre 2006). The application

of therapeutic recreation combined with animal-assisted therapy in elderly patients with dementia every day for three weeks shows a statistically significant reduction of agitation, and improvement of social communication, compared to the control group (Natoli 1997).

Studies which tracked animal-assisted therapy in senile dementia of the Alzheimer and vascular types, in a day-care center, in two sessions per week within a period of six months, show improvement of mental functions and better functionality during the day (Kanamori 2002).

In one study, patients who had symptoms of aphasia following brain insult in the left hemisphere were entered into animal-assisted therapy after completing traditional therapy. Questionnaires evaluating satisfaction with therapeutic procedures show that patients who completed animal-assisted therapy were more motivated, enjoyed the sessions, and said that the atmosphere during the sessions was more lively and less stressful, compared to the traditional therapy (Macauley 2006).

A study conducted in 1980 declared that patients who suffered myocardial infarction lived longer if they owned a pet, compared to those who did not. An Austrian study on a sample of 5.741 persons shows that those who kept animals had lower blood pressure and level of triglycerides in the blood, compared to those who did not. Numerous authors point out that the company of an animal can reduce stress and anxiety, which are among the main factors of risk in the onset of cardiovascular diseases. Some authors found that people who kept animals had lower blood pressure during various stressful situations (Barker 1998).

A study on 60 male patients afflicted with AIDS, who were provided with animal-assisted therapy, shows that this form of therapy provides support to these very ill patients, reduces loneliness, occupies the mind, and in doing so improves relationships with family and friends (Castelli 2001).

A study conducted in the USA, which tracked the effect of animal-assisted therapy with patients before surgery shows a reduction of blood pressure, cholesterol, and anxiety, and improvement of the overall condition. Trained animals reduce stress in these patients, motivate them to think and behave positively, and reduce the need to apply pain relieving medication (Mazzone 2003).

Animal-assisted therapy brings great benefits for chronic patients with lengthy hospital treatment. The bond between animals and patients eases the adaptation of the patients to the new, stressful hospital environment, helps in the reduction of anxiety, stress, pain and blood pressure, and improves mobility and muscle strength (Jofre 2005).

Animal owners have the capability to improve health. The animal can be a stimulant of exercise which reduces anxiety and focuses attention on outside events. Animals represent a source of physical contact and consolation, reduce loneliness and depression, and promote healthy life styles (Jennings 2007).

## REFERENCES

1. Banks MR & Banks WA: *The effects of animal-assisted therapy on loneliness in an elderly population in long-term care facilities. J Gerontol A Biol Sci Med Sci* 2002; 57:419-21.
2. Bara Y, Savorai O, Mavashev S & Beni A: *Animal-assisted therapy for elderly schizophrenic patients: a one-year controlled trial. Am J Geriatr Psychiatry* 2001; 9:439-42.
3. Barker BS & Dawson SK: *The Effects of Animal-Assisted Therapy on Anxiety Ratings of Hospitalized Psychiatric Patients. Psychiatry Serv* 1998; 49:797-801.
4. Barker SB, Pandurangi AK & Best AM: *Effects of animal-assisted therapy on patients' anxiety, fear, and depression before ECT. J ECT* 2003; 19:38-44.
5. Calvert MM: *Human-pet interaction and loneliness: a test of concepts from Roy's adaptation model. Nurs Sci Q* 1989; 2:194-202.
6. Castelli P, Hart LA & Zasloff RL: *Companion cats and the social support systems of men with AIDS. Psychol Rep* 2001; 89:177-87.
7. Connor K & Miller J: *Animal-assisted therapy: an in-depth look. Dimens Crit Care Nurs* 2000; 19:20-6.
8. Geisler AM: *Companion animals in palliative care: stories from the bedside. Am J Hosp Palliat Care* 2004; 21:285-8.
9. Jennings LB: *Potential benefits of pet ownership in health promotion. J Holist Nurs* 1997; 15:358-72.
10. Jorgenson J: *Therapeutic use of companion animals in health care. Image J Nurs Sch* 1997; 29:249-54.
11. Jofre ML: *Animal-assisted therapy in health care facilities. Rev Chilena Infectol* 2005; 22:257-63.
12. Kanamori M, Suzuki M & Tanaka M: *Maintenance and improvement of quality of life among elderly patients using a pet-type robot. Nippon Ronen Igakkai Zasshi* 2002; 39:214-8.

13. Lefebvre LS, Waltner-Toews D, Peregrine A, Reid-Smith R, Hodge L & Weese SJ: Characteristics of Programs Involving Canine Visitation of Hospitalized People in Ontario. *Identifiers Infection Control and Hospital Epidemiology* 2006; 27:754–8.
14. Lipton L: Some Patients Petting Their Way To Improved Mental Health. *American Psychiatric Association, Psychiatric News* 2001; 36.
15. Macauley BL: Animal-assisted therapy for persons with aphasia: A pilot study. *J Rehabil Res Dev* 2006; 43:357-66.
16. Mahalski PA, Jones R & Maxwell GM: The value of cat ownership to elderly women living alone. *Int J Aging Hum Dev* 1988; 27:249-60.
17. Mazzone L & Morales G: Horses as behavioral facilitators in patients with pervasive developmental disorders (PDS) *Revista de Neurology* 2003; 36:590.
18. Miller J & Ingram L: Preoperative nursing and animal-assisted therapy. *AORN J* 2000; 72:477-83.
19. Nathans-Barel I, Feldman P, Berger B, Modai I & Silver H: Animal-assisted therapy ameliorates anhedonia in schizophrenia patients. A controlled pilot study. *Psychother Psychosom* 2005; 74:31-5.
20. Natoli E: Activities and therapy mediated by animals (pet-therapy): international picture and state of the art in Italy. *Ann Ist Super Sanita* 1997; 33:267-72.
21. Oakley D & Bardin G: The Potential Benefits of Animal Assisted Therapy for Children With Special Needs, 2006. [http://www.kidneeds.com/diagnostic\\_categories/articles/animalassistedtherapy.htm](http://www.kidneeds.com/diagnostic_categories/articles/animalassistedtherapy.htm)
22. Richeson NE: Effects of animal-assisted therapy on agitated behaviors and social interactions of older adults with dementia. *Am J Alzheimers Dis Other Demen* 2003; 18:353-8.
23. Yeh ML: Lassie's magic: animal-assisted therapy in Taiwan. *Hu Li Za Zhi* 2005; 52:23-30.
24. Zasloff R. & Kidd AH: Loneliness and pet ownership among single women. *Psychol Rep* 1994; 75:747-52.

*Correspondence:*

Ivan Dimitrijević, MD, PhD, Assoc. Prof. of Psychiatry  
Institute of Psychiatry, Clinical Center of Serbia  
Pasterova 2, 11000 Belgrade, Serbia  
E-mail: dr.ivan54@yahoo.com