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THE POSITIVE EFFECTS OF EQUINE ASSISTED ACTIVITIES AND THERAPIES IN CHILDREN WITH AUTISM SPECTRUM DISORDERS

Equine assisted activities and therapies (EAAT) have emerged as a new method of treatment for children diagnosed with ASD in recent years (Bass, Duchowny, & Llabre, 2009; Lanning et al., 2014). In fact, animals have been used to increase socialization among patients in mental institutions since as early as the eighteenth century and such therapeutic activities have been referred to as animal assisted intervention (AAI) (Serpell, 2006). Researchers have observed positive treatment outcomes of utilizing AAI in a number of clinical populations, specifically with children who have conduct disorder and attention-deficit hyperactivity disorder as well as schizophrenia (Katcher & Wilkins, 1998; Barak, Savorai, Mavashev, & Beni, 2001).

AAI has also been applied to children diagnosed with autism spectrum disorder (ASD) and its beneficial effects for those children have been observed such as increase in social engagement (Esposito et al., 2011). The positive results of such therapies can be related to human animal interaction theory which posits that many people seek contact with animals due to their calming nature and ability to act as a non-judgmental source of support and facilitator of social interaction (Dingman, 2008; Kruger, Serpell, 2010). Children diagnosed with ASD have more difficulties especially in social areas. Thus, interaction with animals such as equines is considered to inevitably increase social functioning of children diagnosed with ASD. As such, in O'Haire's extensive review of literature improvements were reported for multiple impaired areas of functioning in ASD, such as increasing social interaction and communication and decreasing problem behaviors, autistic severity, and stress (O'Haire, 2013).

The intervention forms of EAAT are equine assisted activities (EAA) and equine assisted therapies (EAT). EAA include therapeutic horseback riding (THR), vaulting, carriage driving and other non-riding activities with the animals; EAT interventions include therapies such as equine assisted psychotherapy and hippo therapy including a physical, occupational or speech therapy treatment utilizing equine movement. Hippotherapy has been shown to help in multiple areas of deficits such as motor deficiencies, speech deficiencies, and sensory processing dysfunctions.



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Mechanism of action of hippotherapy can be divided into four main groups. The first one is core connection. As we know, during daily living performance, balance, lying supine, and walking, postural control, and core connection are very important. Besides, one of the many beneficial effects of hippotherapy is its favorable effect on postural control, and core body connection. During hippotherapy sessions, during horse riding direct contact with patient's pelvis, and spine is ensured. Movements of the horse provide sensory input, and induce motor responses in pelvis, and trunk. Other mechanisms of action of hippotherapy can be enumerated as sensory connection, communication connection, and neuro-connection (Koca & Ataseven, 2015).

Recent studies suggest that children with ASD who participated in EAA experienced significant increases in social interaction, improved sensory processing and decreased severity of symptoms associated with ASD (Ward, Whalon, Stiles, & Smith, 2011; Ward et al., 2013). In Bass et al., children with ASD who participated in a 12-week therapeutic riding program experienced improved social functioning (Bass, Duchowny, & Llabre, 2009). Therapeutic riding programs have also been responsible for increases in sensory seeking behaviors, social motivation, and focus on tasks. Similar results were reported in Gabriels et al.'s study which consisted of 10 weeks of therapeutic riding programs and children with ASD who participated in that study had better self-regulation behaviors following the program (Gabriels et al., 2012). Rothe et al. (2005) found that child-horse interaction causes increases in socialization and self-esteem. Furthermore, equine assisted therapy was also found to be beneficial for behavioral and mental health problems among children with ASD (Schultz et al., 2007). Interventions for children may also benefit parents and family functioning.

Regarding the scientific researches results stated above, we believe that equine assisted activities and therapies (being on the horse or near the horse) is a method to help children with ASD (and also many different patient groups) to improve their quality of life in many ways. Thus, special attention needs to be given to this activities and therapies. Through the Erasmus + project with the title of "Horses teach me how to find my way", we try to develop the best practices and new strategies, organize activities and seminars for the dissemination of the knowledge, create a network of therapeutic centers that will work with the new updated strategy, implement the first step to accredit EAT in some countries in this field.



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