

Effects of Equine Assisted Activities on Autism Spectrum Disorder

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Purpose:

Does 12 weeks of Equine Assisted therapies (EAA) positively affect the quality of life of children with Autism Spectrum Disorder (ASD)?

Design/Methods:

25 children were self-selected to be in either the EAA treatment group (13) or the social circle control group (12). The EAA mean age group was 7.5 years old and had 4 females and 9 males, while the social circle group had a mean age of 9.8 years old and had 12 males and 1 female. 10 children met all the data analysis criteria for the EAA group and 8 children met all the criteria for the social circles group. The assessments used were the Pediatric Quality of Life 4.0 generic Core Scales (PESQL) and the Child Health Questionnaire (CHQ) which both have high reliability and validity. The assessments were completed at baseline and at 3, 6, 9, and 12 weeks. Each session was approximately 1 hour in length and was either a private or semi-private (with only 1 other child present) session. The treatment for the children in the EAA group consisted of safety lessons, grooming lessons, and riding activities (walking the horse, holding reins, guiding the horse around). The main emphasis was on improving riding horsemanship skills and improving behavioral skills. The treatment for the children in the social circle group consisted of groups of no more than 4 children led by 2 graduate psychology students who completed weekly activities based on 3 social skill goals given by the parents. These goals included: "improving manners, keeping eye contact, making friends, being a friend, taking turns, showing empathy, and sympathy." Activities the children participated in were card games, board games, and sensory input activities (wearing weighted vest, tactile toys, and balancing boards). The children were also given visual schedules to look at so they knew what the plan for each week was and timers were set for each activity.

Results:

The control group saw an increase in scores on 6 of the 10 subcategories on the CHQ (role/social limitations-physical, role/social emotional/behavioral, parent impact-emotional, self-esteem, mental health, and behavior) along with an increase in the psychosocial summary score. The intervention group also had an increase in 6 of the 10 subcategories on the CHQ (physical functioning, general health perception, parental impact-time, self-esteem mental health, and behavior) along with an increase in physical and psychosocial summary scores. Two variables from the CHQ results were significantly higher in the intervention group than control group: physical functioning ($p=0.009$) and physical health summary score ($p=0.024$). The PedsQL scores increased significantly for the intervention group at 6 weeks for physical functioning (change from baseline=13.60, $p=0.04$) emotional functioning (change from baseline=14.5, $p=0.4$), social functioning (change from baseline=22.50, $p=0.03$), physical summary score (change from baseline=13.60, $p=0.04$), and psychosocial summary score (change from baseline=13.0, $p=0.03$).

Conclusion:

Both the EAA group and the social circle group saw an increase in self-esteem, general behavior, and quality of life. Although both groups saw an improvement, the children in the EAA group had greater improvement in general behavior, social functioning emotional function, and physical functioning at 6 weeks. This is similar to another study which showed that EAA was maximally effective at 5 weeks and then decreased thereafter. There is no one optimal treatment for children with ASD but this study shows that EAA is one viable treatment which can be very beneficial for some children with ASD in increasing their social, emotional, and physical functioning.

Strengths:

Both the CHQ and the PedsQL assessments have relatively high reliability and validity. The EAA group followed PATH international guidelines.

Limitations:

The study is limited to a small sample size and the data was based off of parental evaluations, which could be biased. The groups were also self-selected instead of randomly assigned which makes the results less reliable.

Practical Application:

If a child with ASD needs to improve on social, emotional, and physical function, then he or she might benefit from participating in EAA. EAA should be attempted before participating in social circles because EAA is shown to be more effective. If the child isn't showing much improvement in EAA, then the parents and therapists may consider participating in social circles because it has also shown to be effective at increasing social function and may be a better fit for the child. If a child does participate in EAA, it would be best if they only participated for 5-7 weeks because after this period of time, the child may no longer maintain interest in the activity because the novelty will have dissipated. Because of this decrease in social function after 5-7 weeks of EAA, it is of concern as to how long the increase in social, emotional, and physical function last after EAA has been completed. Future research should look at the long term effects of both EAA and the social circles groups for children with ASD.