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The Effects of Equine-Assisted Interventions on Children with Autism: A Systematic Review

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Introduction

There is potential that Equine-Assisted Interventions (EAI) could be used as an effective intervention for children with autism spectrum disorder (ASD) to help decrease autistic severity by improving social skills, motor skills, stress, and communication skills. The purpose of this study was to determine if children aged 3 to 16 years of age who participate in EAI show improvements in autistic behavior compared to those without EAI.

Methods

- PubMed and CINAHL databases
- Keywords “equine-assisted therapy”, “adolescent OR child”, and “autism spectrum disorder OR autistic disorder”
- Participants had to be children or adolescents (3 to 16 years of age) with a diagnosis of autism
- The intervention had to include EAI, which is defined as all equine-assisted activities and all equine-assisted therapies
- At least 10 participants
- Initially 49 articles were returned, and 8 were selected (Figure 3)
- 4 randomized-controlled studies, 1 case-control study, and 3 cohort studies

Results

- Overall significant improvement in social functioning, social skills, motor skills, attention and focus, empathy, irritability, maladaptive behavior, motivation, executive functioning, quality of life, length of gait cycle, and mood and tone towards parents.
- One study found no change in communication or social skills and another found no change in fine motor skills, social cognition, and social awareness (1, 2).
- A different study found that when children with autism took 6 week breaks from therapeutic riding, the decrease in autistic severity observed immediately following the therapy returned to baseline (3).

Public Health Implications and Recommendations

Current practice for treating autism should not change, but EAI should be more strongly considered when trying to find the most effective treatment option for children with autism. Future research could compare different types and methods of EAI.

Conclusion

- A majority of the studies found that children with autism receiving EAI decreased in autistic severity and improved in behaviors related to autism.
- Improvements in autistic behavior were not maintained when therapeutic riding was discontinued for 6 week periods of time suggesting that EAI might only be effective with continuous treatment.

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Figure 1. When the rider is unable to ride the horse alone safely, she is accompanied by one side-walker on each side to ensure she stays securely in the saddle.

Figure 2. A high-functioning autistic boy works to improve posture, coordination, and balance with EAI.

Figure 4. In this task the girls must use teamwork to weave the horse between the cones without stepping over the poles.