A systematic review on the efficacy of animal-assisted therapy (AAT) as an intervention in autism spectrum disorder (ASD)

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ABSTRACT

Introduction: Autism spectrum disorder (ASD) affects social communication, behaviour, and emotional regulation. Animal-Assisted Therapy (AAT) has emerged as a complementary intervention, but evidence of its effectiveness remains limited and inconsistent. This review aims to systematically review the implementation and outcomes of AAT in individuals with ASD, focusing on demographic factors, types of animals used, and therapeutic impacts on social, emotional, and communication skills. **Materials and Methods:** Following PRISMA guidelines, a literature search was conducted across PubMed, Scopus, and EBSCOhost for studies published between 2019 and 2024. Medical subject headings (MeSH) terms such as "animal-assisted therapy" and "autism spectrum disorder" were used as keywords in all fields. Studies included were participants diagnosed with ASD, articles published in English between 2019 and 2024, and comprised of various study designs, including randomized controlled trials and qualitative studies. **Results:** A total of 15 studies were retrieved, with six studies met the inclusion criteria involving 127 participants. The Joanna Briggs Institute appraisal tools were used to critically appraise the studies. Study quality varied, and common limitations included small sample sizes and inconsistent outcome measures. Most participants were male and from urban areas, and their ages ranged from early childhood to adulthood. The results indicated that AAT, primarily using dogs and horses, was associated with improvements in social behaviour, communication, and emotional regulation. Additionally, AAT contributed to anxiety and aggression. **Conclusion:** AAT shows promise as a supportive intervention for individuals with ASD. However, this review highlights limitations such as small sizes, gender imbalances and the need for more standardised outcome measures. Wider implementation, especially in Southeast Asia, requires cultural adaptation and further research with larger, more diverse populations.

Keywords: Animal-assisted therapy; animal-facilitated therapy; pet-assisted therapy; autism spectrum disorder; autistic spectrum disorder