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A Systematic Review of Animal-Assisted Therapy on Psychosocial Outcomes in People with Intellectual Disability

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ABSTRACT

The aim of the study was to review the literature on animal assisted therapy (AAT) in people with intellectual disabilities (ID) measuring psychosocial outcomes (behavioural, social, cognitive and emotional). Quantitative studies were found through a systematic search that identified studies using AAT in people with ID and measuring psychosocial outcomes (behavioural, cognitive, emotional and social). The quality of studies was assessed using a standardised tool and rated as strong, moderate or weak. Only published articles from peer-reviewed journals were included. No language or age restrictions were applied. Over half of the included studies were identified outside standard database searches (e.g. hand searching reference lists from included articles, references from AAT websites and using Google Scholar and a Grey Literature Database). Ten studies were included in the final review; two were rated as moderate quality and eight were rated as weak quality. Overall there was a positive improvement reported from studies for all psychosocial outcomes (with some cognitive, behavioural, social, emotional components reaching statistical significance $p \leq 0.01$). Despite having no age restrictions, the included studies had participants that were mainly children and adolescents, in particular favouring male participants, which may limit generalisation. More rigorous methodology is required to improve the quality of future studies including in the main multicentre randomised designs and improved reporting according to CONSORT criteria. Further research should expand to include adults with ID and specific disorders such as challenging behaviour or mental illness.

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Animal-assisted therapy (AAT) is a form of therapy which aims to provide a therapeutic intervention for humans by involving animals in their treatment. Its focus is on augmenting behavioural, social, emotional, cognitive or physical functioning and is often a structured intervention with set goals and measured outcomes with precise definitions having recently been advanced by the International Association of Human-Animal Interaction Organizations (“IAHAIO White Paper,” 2014).

The aim of this review was to carry out a systematic review of AAT on psychosocial outcomes in people with Intellectual Disabilities (ID). To our knowledge there is no published systematic review yet regarding AAT specifically for people with intellectual disability (ID).

Animal assisted therapy has been used throughout history to help people, with one of the first recorded uses of animals in a therapeutic purpose being in the York Retreat that opened in 1796 with a focus on rehabilitation for the mentally ill as opposed to the treatment in the asylums (Serpell, 2010). The use of AAT historically still relates to the rationale for AAT today that of the principle of rehabilitation and multidisciplinary approach to a person’s treatment. This is something which is especially pertinent when working with people with ID.

Studies have examined the impact of AAT and human-animal interaction on various aspects of physical health, mental health, in children with autism and in people with disabilities. One of the earliest meta-analysis investigating the effectiveness of AAT found effect sizes for changes in behavioural and medical problems to be in the moderate range, for well-being in the low to moderate range and for reducing autistic spectrum symptoms in the high range (Nimer and Lundahl, 2007). Whilst this meta-analysis attempted to group findings by age, presenting problem (medical, mental, behavioural) and participants’ functioning (normal or delayed), it did not identify participants with mental or physical disabilities. The authors noted whether participants had a “life-long disability” but this group included a mixed population of “autism, developmental delays, mental retardation or physical disabilities”. The authors considered 49 studies in their meta-analysis, but the disadvantage of such a large number is the loss of specificity of each study, particularly in being able to identity relevant effects in certain populations, such as those with intellectual disability. Furthermore, it was noted that there was considerable variance in the studies’ outcomes for individuals with disabilities compared to individuals with no disabilities; behavioural and well-being dependent variables included negative values in the confidence intervals for disabled individuals, whilst medical outcome dependent variables showed greater effect sizes for disabled individuals compared with individuals without disabilities.

A more recent meta-analysis (Virués-Ortega et al., 2012) of 21 studies examined the effects of AAT on psychological and functional status in populations with poor social functioning including elderly participants and those with depression and schizophrenia. Whilst it found moderate effects for AAT on depression, anxiety and behavioural disturbances it cautioned the interpretation of the findings due to inconsistent methodological characteristics of the included studies. The authors chose their selected populations as they represented “extensive at-risk groups for functional deterioration, low social support and social isolation” as there was evidence that individuals prone to these were likely to benefit from AAT (McNicholas and Collis, 2006). People with ID also fall into this category as they have limited social support structures (Lippold and Burns, 2009) and are at risk of social isolation (Jawaid et al., 2012). Therefore it follows that individuals with ID may also benefit from AAT interventions.

Another review examining AAT broadly across the literature was a systematic review (Matuszek, 2010) of animal-facilitated therapy in various populations and settings. This reported benefits for populations of hospitalised patients (in particular with heart failure, paediatric patients and those with pervasive developmental disorders), psychiatric patients, palliative care patients and also war veterans. There was also improvement seen when AAT was applied in various settings such as correctional facilities as well as in residential and nursing homes for the elderly. Whilst the positive effects of AAT were reported in all these populations and settings, the review suggested that further research was required specifically calling for larger sample sizes over longer periods of time with the addition of control groups and randomisation.