

Beneficial Use and Potential Effectiveness of Physical Activity in Managing Autism Spectrum Disorder

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Abstract

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterized by poor social and communication skills. Therapeutic interventions are behavioral and educational-normally delivered as structured programs. Several well-established programs exist and most of them do not incorporate physical activity and exercise as core elements. Deficiencies in motor skills are associated with ASD and physical activity has been shown to reduce maladaptive behaviors with autistics. However, the notion of exercise being employed to manage autism is controversial. Meta-analysis and systematic reviews have concluded that physical activity has positive effects on social skills and behavior in young children and adolescents with autism. Activities such as martial arts have been singled out as being particularly beneficial. Established programs such as TEACCH have been successfully modified, as research trials, to be more physical activity-based and have shown positive results. Studies have also reinforced the importance of the role of parental involvement in delivering programs based on physical activity. There is a paucity of research evidence about the long-term effects of physical activity-based interventions. There is also disparity over the detailed nature of the activities and exercises that compose an effective program. Each person with autism has a highly individualized set of symptoms and characteristics for which highly individualized programs are warranted. This is especially true for physical activity programs.

Keywords: autism; autism spectral disorder (ASD); autism spectrum-disorder; children with ASD; early intervention; neurodevelopment; parental involvement; physical activity.