



Mini Review

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What are the Barriers of Participation in Physical Activity in Children and Adolescent with Autism Spectrum Disorder? Mini Review



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Abstract

Children and adolescents with autism spectrum disorders tend to participate in less physical activity compared with their the typically development peers. The purpose of this study is the review of some barriers to participation in physical activity among children and adolescents with ASD. Comprehensively understanding the barriers of participation in PA is important to overcome the barriers and is effective for implementing efficient strategies to overcome the barriers and promote participation in PA.

Keywords: Autism spectrum disorder; Physical activity; Barriers; Children

Introduction

Autism spectrum disorder (ASD) is a pervasive developmental disorder identified by deficits in social skills, communication and repetitive or restricted behavior [1]. Individuals with autism spectrum disorders show delays in motor development and deficits in motor skills and also lack of engagement in physical activities [2]. Subjective measurement of physical activity levels has shown that children and adolescents with ASD are less likely to participate in physical activity compared with their typically developing peers [3]. The study by Salar et al. [4] showed 73.8% of children and adolescent with ASD were inactive during the last 7 days and there was not different between boys and girls [4]. In return, the preferred hobbies and activities of children and adolescents with ASD are generally solitary based and have less physical activity and involve screen time [5]. The low participation of physical activity can increase risk for chronic disease and negatively affected on quality of life [1]. There is a positive association between physical activity and health. Individuals with ASD had significantly higher chance of overweight and obesity compared with their typically developing peers [5]. Due to the usefulness of physical activity to the health of children and adolescents, the consideration of physical activity participation has increased [6]. The standard recommendations suggest that children and

adolescents should participate in moderate-to-vigorous daily physical activity (MVPA) for 60 minutes or more on most days of the week. Children and adolescents with ASD are susceptible to having limited opportunity for physical activity participation and have some challenges for engaging in PA, due to their difficulty in social interactions and motor skills [7]. Reasons for not being physically active among children and adolescents with ASD are complex and depend on several factors. What are these identified barriers and how this study can contribute to our understanding of barriers?

Discussion (Synopsis of research)

Studies reported some barriers to participation in PA including reasons related to low levels of motivation, and low interest in PA [8,9], reasons related to the characteristics of ASD, such as impaired communication, limited social interaction and motor difficulties (Damme, 2015). Some researchers have commented on the importance of the role of parents as key collaborators in the promotion of physical activity for their children [10]. Stanish [9] reported that most children with ASD enjoyed participation in PA and were aware of the benefits of PA; however, they frequently expressed that they were too busy to do PA, that PA was boring and feared getting hurt. Healy, [11] found three key themes; individual challenges were comprised

of physical ability, sensory issues (like as auditory, heat and tactile sensitivity) and a fear of injury that seemed to limit the quality of children with ASD participation in physical education [11]. Lack of sufficient motor skills and deficits in social interactions may limit opportunities for participation in physical activities with peers and leading to negative experiences and reduced motivation to participate in PA for children with ASD [12]. One important factor in understanding the facilitators and barriers to PA is the influence of family members, especially parents and siblings [13], Parental support and their planning [14], because they often rely on their parents on all aspects of engagement and daily activities [13]. Parents are a crucial part of a child's immediate life and their roles across environmental contexts (e.g., role model, advocate, facilitator, and teacher) and have the most influence in child's overall development and well-being (Pfeiffer, 2017). Therefore, parents have significant role in creating participation opportunities for their children through the implementation of specific strategies and decision-making process [15].

Must et al. [16] reported parent's lack of skills to promote their child's physical activity was key barriers. Parents reported that some barriers such as lack of time, fear of injury, feeling pain, physical discomfort and boredom, lack of eye contact, Lack of understanding of rules and regulations and lack of adhere to rules, unpleasant experiences in PA participation in the past, weakness in independence and child dependence on parents, and the child needs to supervision by their parents and also they needs to adjustment and modification the environment and the lack of child knowledge about how to participation in PA and how to use sports equipment are as a key intrapersonal barriers to participation in PA [16]. In the study by [17], interpersonal barriers including the statement "parents do not have time and energy" and lack of peer partner for exercise were the most important barriers to PA participation, respectively. To counter a lack of motivation for PA, parents placed a lot of emphasis on their children with ASD perceiving the PA as important, enjoyable, interesting, useful, and easy to perform [17]. Likewise, parents reported that establishing predictability through schedules and routines and allowing their children with ASD to have choices during PA gives these children a sense of control over each situation and ultimately increase their PA participation [18]. In other studies, reported that Children and adolescents with ASD did not have someone with whom to do physical activity and lack of friends and peer's exercise partner [17,19]. in addition, rejection and exclusion by friends and peers, bullying, lack of encouragement, understanding and insufficient support from friends and peers were important barriers [17]. Also, In the part of social barriers; Ignoring the laws and rights of people with disabilities in the community, lack of media awareness about the PA of people with autism and lack of accessibility to school-based opportunities are factors related to barriers of participation in PA. lack of physical activities opportunities

reported by [5] and lack of community based physical activity programs, lack of appropriate and affordable PA opportunities and staff training and community safety reported by [19], which were identified as important factors in the part of community barriers to participation in physical activity [20,21].

Conclusion

Barriers of participation in physical activity among children and adolescents with autism spectrum disorder are complex and multifactorial. The information that described in this article may benefit for parents, physical educators and program providers who serve children with ASD. Given the potential physical, psychological, behavioral, and social benefits of PA in children and adolescents with ASD, that seems creating inclusion strategies by managers and providers of PA and adapted physical educators and encourage children and their families to participation of in community-based PA, would be a great change to promote PA. Considering multidisciplinary approaches to overcome the barriers of PA, comprehensive planning for promotion PA in the school and PE class and community and implementing in-service training for PE teachers and parents and hiring APE teachers and considering interests and needs in children with ASD for designing PA interventions for children and adolescents with ASD are some sufficiency approaches. These review underscore the consideration of community-based PA programs to meet the special requirements of this population and policies that encourage schools and other government-supported organizations for inclusion strategies.

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