

## Comparison of Sedentary Behavior and Physical Activity between Children with Autism Spectrum Disorder and the Controls

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**Abstract :** Background: A growing body of research has suggested that physical activities (PA) have important implications for improving the performance of ASD children. They revealed that the physiological, cognitive, psychological, and behavioral functioning had improved after performing some physical activities. Methods: We compared the sedentary behavior and physical activities between children with autism spectrum disorder (n=21) and age-matched control group (n=30), using the ActiGraph GT3X+ for the assessments. Results: Our results revealed that the total time spent in sedentary activity and the total sedentary activity counts were highly significant in the control group compared to the ASD group ( $p < 0.001$ ,  $p=0.001$ , respectively). ASD spent a significantly longer time than the controls engaging on vigorous physical activity (VPA) ( $p=0.017$ ). The results also indicated that there were no significant differences between both groups for the total counts and time spent in light physical activity (LPA) and moderate physical activity (MPA). Conclusion: The finding highlights the importance of physical activity intervention for ASD children, using accurate and precise measurement tools to record all activities.

**Keywords :** Autism spectrum disorders, motor skills, physical activity, ActiGraph GT3X+, moderate-to vigorous-intensity physical activity

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