

## **The impact of exercise intervention on children's task engagement**

Qin Y. Latchman, York College

Suzanna R. Dillon, Texas Woman's University

Task engagement (TE) in children's learning and consequent behaviors is vital in promoting successful academic and school outcomes. Children with autism spectrum disorder (ASD) have demonstrated challenges in TE in daily and educational activities. Researchers and practitioners have explored many practices to increase TE in children with ASD. Antecedent-based interventions and exercise have been proven as evidence-based practices to improve attending behaviors in individuals with ASD. The purpose of this study was to explore the effectiveness of using exercise, as an antecedent-based intervention, with children with ASD to increase TE. Drums Alive® (DA) program, an exercise program that combines fundamental movement skills, music, and rhythm, was implemented as the antecedent-based intervention in the current study. An 8-week single-subject withdrawal research design (A1-B1-A2-B2) study was conducted with five males, aged four to six years, with a confirmed ASD diagnosis. The A1 and A2 phases had no interventions and consisted of six to eight 15-minute TE data collection sessions. In the data collection sessions, each participant was instructed to engage in three individually structured activities (e.g., Legos, Jenga, hopscotch, etc.). In the B1 and B2 phases, participants completed a 15-minute individual DA intervention, followed by the same structured data collection activities used in the A1 and A2 phases. All data were coded using a 10-second partial interval method, and the final data were analyzed through visual inspection. For all five participants, the TE percentages were higher in the two intervention phases than in the baseline and intervention withdrawal phases. While limited, there appears to be support for the use of DA intervention to increase TE for children with ASD. However, further research with more participants and a more extended intervention period is needed to confirm the impact of the DA program.