

# Ms. Man-Tsung Huang Memorial Research Paper

## Award Presentation Abstract

**Presenter :** Jin, Y. R.

**Title:** Efficacy of Motor Interventions on Functional Performance Among Preschool Children With Autism Spectrum Disorder: A Pilot Randomized Controlled Trial.

**Time :** 2024/12/8(Sun.) 09:40~10:00

**Room :** Conference Hall A

Citation of the article :

Jin, Y. R., Sung, Y. S., Koh, C. L., Chu, S. Y., Yang, H. C., & Lin, L. Y. (2023). Efficacy of Motor Interventions on Functional Performance Among Preschool Children With Autism Spectrum Disorder: A Pilot Randomized Controlled Trial. *American journal of occupational therapy*, 77(6), 7706205020. <https://doi.org/10.5014/ajot.2023.050283>

**Importance:** Motor ability plays an important role in overall developmental profiles. Preschool children with autism spectrum disorder (ASD) are at risk of motor skills deficits and delays. However, evidence of the efficacy of different motor interventions for the identification of optimal treatment types is lacking, especially for preschool children with ASD.

**Objective:** To examine the efficacy of the Motor Skill Occupational Therapy Intervention ON ASD (MOTION-ASD) and Cognitive Orientation Exercise (CO-EXC) programs to improve motor skills performance, self-care performance, and adaptive behaviors among preschool children with ASD.

**Design:** Randomized controlled trial, two-group, triple-blinded, repeated-measures design Setting: University laboratory.

**Participants:** Thirteen preschool children with ASD (M age = 4.91 yr).

**Outcomes and measures:** The Bruininks-Oseretsky Test of Motor Proficiency-Second Edition, Brief Form, Assessment of Motor and Process Skills, and Vineland Adaptive Behavior Scales-Third Edition.

**Results:** Children in the MOTION-ASD group showed significantly greater improvements in manual coordination and overall gross and fine manual skills than those in the CO-EXC group immediately after the intervention. Significant improvements in fine manual control, body coordination, overall motor skills, and self-care performance were made throughout both interventions and were retained at the posttest and the 4-wk follow-up.

**Conclusions and relevance:** These findings provide supporting evidence that motor skills interventions involving fundamental skills and cognitive training may be a viable therapeutic option for treating children with ASD. The results also suggest that practitioners may consider providing structured and strategic motor skills interventions for preschool children with ASD. What This Article Adds: This study's rigorous tests of motor skills interventions support ways to manage motor difficulties in children with autism spectrum disorder (ASD). An intervention based on motor learning theory could benefit preschool children with ASD, especially in terms of manual coordination ability and overall gross and fine motor skills.