

Tablet-based game can assess pediatric visual motor skills in autism

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A tablet-based game is feasible for assessing visual motor skills in

neurotypical children and those with autism spectrum disorder, according to a study published online Feb. 3 in *npj Digital Medicine*.

Sam Perochon, from Duke University in Durham, North Carolina, and colleagues examined the use of a bubble-popping game administered on a tablet as an assessment of visual-motor abilities in [young children](#). Participants included 233 children aged 1.5 to 10 years: 147 neurotypical and 86 diagnosed with [autism spectrum disorder](#), 32 of whom had co-occurring attention-deficit/hyperactivity disorder (autistic+ADHD). Game-based touch features were compared across autistic, autistic+ADHD, and neurotypical participants.

The researchers found that [younger children](#) with autism (aged 1.5 to 3 years) popped the bubbles at a lower rate, and their ability to touch the center of the bubble was less accurate than that of neurotypical children. In addition, their finger lingered for a longer period when they popped a bubble and there was more variability in their performance. For [older children](#) (3 to 10 years), greater motor impairment was seen in association with the presence of co-occurring ADHD, reflected by lower accuracy and more variability in performance. There were correlations seen for several motor features with fine motor and cognitive abilities.

"This simple yet informative tool has the potential of being deployed at scale to enhance detection and assessment of early autism signs and obtain objective and quantitative measures of toddler and school age children's visual motor skills," the authors write.

More information: Sam Perochon et al, A tablet-based game for the assessment of visual motor skills in autistic children, *npj Digital Medicine* (2023). [DOI: 10.1038/s41746-023-00762-6](https://doi.org/10.1038/s41746-023-00762-6)

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