

IQ scores fail to predict academic performance in children with autism

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New data show that many children with autism spectrum disorders have greater academic abilities than previously thought. In a study by researchers at the University of Washington, 90 percent of high-functioning children with autism spectrum disorders showed a discrepancy between their IQ score and their performance on reading, spelling and math tests.

"[Academic achievement](#) is a potential source of self-worth and source of feeling of mastery that people may not have realized is available to children with autism," said Annette Estes, research assistant professor at the UW's Autism Center.

Improved autism diagnosis and early behavioral interventions have led to more and more children being ranked in the high-functioning range, with average to above average IQs. Up to 70 percent of [autistic children](#) are considered high-functioning, though they have significant social communication challenges.

With early interventions that improve social skills and curb problem behaviors, more high-functioning children with autism are able to learn in regular education classrooms. In Estes' study, most of the participants – 22 of 30 – were in regular education classrooms. The study was published online Nov. 2 in the *Journal of Autism and Developmental Disorders*.

Little is known about how these children actually perform in regular

classrooms, which has implications for how to assign support services. Since IQ scores in the general population reliably predict academic performance – as measured by standardized tests for word reading, spelling and basic number skills – Estes and her colleagues thought the same would be true in their sample of 30 high-functioning 9 year olds with autism spectrum disorders.

"What we found was astounding: 27 out of the 30 children – that's 90 percent – had discrepancies between their IQ score and scores on at least one of the academic achievement tests," Estes said. "Some scored higher and some scored lower than what their [IQ score](#) would predict."

To the researchers' surprise, 18 of the 30 children tested higher than predicted on at least one of the academic tests. This was especially true for spelling and word reading. Across the three academic tests, 18 of the 30 children scored lower than what their IQs would predict, suggesting a learning disability.

Estes and her co-authors also found a link between social skills and academic ability in school. Specifically, children who had higher social skills at age 6, including introducing themselves to others and a willingness to compromise and cooperate, had better word reading skills at age 9. The children have participated in this study since they were 3 or 4 years old, when they were diagnosed with autism spectrum disorders by the staff at the UW's Autism Center.

The study did not look at the students' performance in school, a next step for the researchers. "We need to know if children with [autism spectrum disorders](#) who have these higher-than-expected scores are able to demonstrate their abilities in the classroom in terms of grades and other measures of success," Estes said. "This could influence placement in classes that adequately challenge them."

The children who scored below their predicted level may be struggling in certain subjects. "We want to get them the assistance they need to reach their potentials," Estes said.

Provided by University of Washington

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