

Research aims to utilize 'symptom' of autism to improve reading comprehension

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Boy reading soccer book

Children with Autism Spectrum Disorder often show an unwavering focus on a specific interest, a phenomenon known as having a "perseverative interest."

Early research conducted by Michael Solis, an assistant professor of [special education](#) at the University of Virginia's Curry School of Education, finds that embedding the perseverative interest of a child with ASD into reading used during instruction may increase the child's [reading comprehension](#).

Solis and colleague Farah El Zein, an assistant professor at Cleveland State University, designed an intervention that embeds a child's perseverative interest within a particular story; for example, if the child is focused on cars, they included multiple references to cars within a text. They then tested whether or not the child's comprehension of the text was improved.

Preliminary findings of three single-case design

studies show that embedding readings of perseverative interests improves engagement during reading instruction and leads to an improvement in performance on curriculum-based measurements of reading comprehension.

"There is an increasingly large body of research on improving behavior and social performance in [children](#) with ASD," Solis said. "However, we are just beginning to make inroads in research on the academic performance of these children."

Solis began his work in the area of improving reading comprehension in children with autism with a review of 30 years of research in the area. What he found was remarkable.

"In 30 years, only 12 studies have been conducted on improving reading comprehension in children with ASD, and many of those lacked a high level of scholarly rigor," Solis said.

The number of children diagnosed with ASD is skyrocketing. [According to the Center for Disease Control](#), in a span of only two years, numbers have moved from one in 88 to one in 68 children being identified as being "on the spectrum."

"Reading comprehension is critical to academic success, enabling attendance in college and meaningful employment," Solis said.

The current standard for teaching reading comprehension to children with ASD is to utilize strategies designed for children with a wide variety of disabilities. Solis, an expert in reading interventions for a variety of populations with special needs, said a 2013 study showed those strategies resulted in the growth in reading skills over time for students in various disability categories, but were not as effective for children with ASD.

"We really need to close that gap," Solis said.

"Conventional reading interventions used in special education classrooms are not bringing the results with children of autism as they are with others."

In their most recent study, recently accepted for publication in the journal *Focus on Autism and Other Developmental Disabilities*, Solis, El Zein and colleagues test the inclusion of a child's perseverative interest in the context of "Positive Behavior Support," a technique used by teachers and parents aimed at decreasing negative behavior and increasing the positive.

The researchers compared a typical approach to teaching students how to develop questions about text with an approach that embeds techniques of positive behavior support, including text focused on the unique interests of the child.

"Our typical approach focused only on teaching students how to write questions about the text they just read," Solis said. "With our enhanced instruction, we included illustrations, systematic explicit instructions, positive reinforcement and rewards through the interest-based readings."

A second study included in the journal article focused more specifically on pronouns, often a stumbling block to reading [comprehension](#) for children with autism.

"Children with ASD tend to have difficulty connecting pronouns to their inferred character," Solis said.

Their second study compared typical instruction on understanding inferences associated with pronouns to an approach that utilized the same techniques of positive behavior support and the use of the child's perseverative interest.

The findings for both studies indicated better performance in reading outcomes and improved levels of engagement during instruction.

"This is good news because we have preliminary data that shows promise in techniques that can improve both reading performance and engagement in reading," Solis said.

With these early findings, the researchers are now taking steps to replicate use of the ASD-specific reading intervention using larger samples of student participants and other rigorous procedures to further investigate the effectiveness of the approach.

Provided by University of Virginia

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