Video instruction brings quick advances for teens with autism

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(Medical Xpress)—Difficulty with social situations hinders the relationships, schoolwork, and mental health of teens with autism. Often these students struggle with complicated interactions in high school, but scientists from UNC's Frank Porter Graham Child Development Institute (FPG) and Michigan State University now say that iPads and new video-based instruction may change all that—and save schools money.

Earlier this year, the Center for Disease Control reported that the rate of 14-17 year-olds diagnosed with autism spectrum disorders (ASD) has more than doubled over the past five years. Yet, previous research has found very few effective strategies for helping autistic adolescents develop their social skills.

Tight school budgets also add challenges. "Teaching social skills to adolescents with ASD has to be effective and practical," said Joshua Plavnick, who developed "Video-Based Group Instruction" (VGI) as a postdoctoral fellow at FPG.

"Diminishing resources for school-aged children limit the use of more commonly researched one-to-one teaching methods," confirmed Samuel L. Odom, FPG's director. "Students often have to be taught in a group."

As early as 2000, studies had shown that some people with autism were more likely to pay attention to information when an innovative technology delivered it. Before Plavnick's work, though, there were no

investigations of video modeling as an option for teaching social skills to more than one adolescent with ASD at the same time.

Plavnick, Odom, and fellow FPG scientist Kara Hume wondered if video instruction would work with four adolescents simultaneously. They recruited 13-17 year-old-students with ASD and used laptops or iPads to offer group video instruction on complex social behaviors, such as inviting a peer to join an activity or asking about the interests of others.

After the pilot study, the students' parents completed anonymous surveys to evaluate the treatment. Parents indicated high levels of satisfaction with the procedures and outcomes of VGI, and write-in comments included the story of one student who had started asking family members to play games together—a skill the teen had never before displayed at home.

Hume said that their data confirmed what parents reported. "The students demonstrated a rapid increase in the level of complex social behaviors each time VGI was used," she said. "And they sustained those social behaviors at high levels, even as the videos were used less often."

"The fast-paced and portable approach to intervention seemed to capture the students' interest," said Odom, who added that VGI's features fit well with the demands of public school settings.

Plavnick noted the cost-effectiveness of the 1-to-4 teacher-to-student ratio. "VGI is important, given the often limited resources in schools that also face increasing numbers of students being diagnosed with ASD."

Plavnick, now at Michigan State University, already has begun implementing the new strategy as part of a daily curriculum in a high school center-based program. "Using VGI regularly could promote far-reaching gains for students with ASD across many social behaviors," he

said.

Plavnick and co-authors Odom, Hume, and the 3-C Institute's Ann M. Sam recently published the results of the VGI study in Exceptional Children.

Provided by NC Research Campus

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