Researchers use Virtual Reality to Teach Street-Crossing Skills to Children with Autism

*Immersive virtual reality shows promise for autism treatment.*

WOODLAND HILLS, Calif. (PRWEB) February 04, 2020 -- A recent study conducted by researchers at the Center for Autism and Related Disorders (CARD) found an immersive virtual reality training environment to be effective in teaching street-crossing skills to children with autism spectrum disorder (ASD). Due to the symptoms associated with ASD, diagnosed individuals often face an increased risk of injury. Therefore, it is important to target safety skills in ASD treatment.

There are challenges to teaching safety skills in clinical settings. Safety skills learned in contrived settings may be difficult for individuals with ASD to apply in the natural environment, which is critical for a potentially life-saving skill. While safety skills may generalize more easily if taught in the natural environment, these environments, such as a street crosswalk, may be hazardous.

“Virtual reality may offer the advantages of both contrived and natural environment training settings,” said Dennis Dixon, Ph.D., Chief Clinical Officer. “Immersive virtual reality technology can be used to create a safe and realistic environment that closely matches the natural setting.”

Study participants included three children with ASD, ages 4 to 10 years old. The immersive virtual reality environment consisted of 360-degree videos, recorded on streets in the participants’ community. The participants interacted with these videos using a head-mounted device. Behavioral teaching strategies, including prompting, reinforcement, and corrective feedback, were used to teach the participants to identify whether it was safe to cross the street in the virtual environment. Ultimately, all three participants mastered this skill in both the virtual environment and on real streets in their community.

The current study found an immersive virtual reality training environment to be effective in teaching children with ASD to identify when it is safe to cross the street. The technology used in this study may be a practical option to implement in clinical settings because it was relatively cost effective and required essentially no software development.

“This technology may be useful for targeting other skills as well,” said CJ Miyake, M.Ed., BCBA, Research Manager. “In addition to safety skills that are dangerous to teach in the natural environment, the motion-capture technology, used in this study to teach participants to look left and right for passing cars, may be valuable for teaching other skills that involve gestures.”

With proper oversight, immersive virtual reality technology appears to be a promising tool for ASD treatment. Additional research is warranted.


About Center for Autism and Related Disorders (CARD)
CARD treats individuals of all ages who are diagnosed with autism spectrum disorder (ASD) at treatment centers around the globe. CARD was founded in 1990 by leading autism expert and clinical psychologist Doreen Granpeesheh, PhD, BCBA-D. CARD treats individuals with ASD using the principles of applied behavior analysis (ABA), which is empirically proven to be the most effective method for treating individuals with ASD and recommended by the American Academy of Pediatrics and the US Surgeon General. For more information, visit www.centerforautism.com or call (818) 345-2345.
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