Virtual Reality as an Antecedent Intervention for High School Students with Autism
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Although virtual reality (VR) was originally developed to build more immersive environments for video games, in recent years, it has been used therapeutically to reduce stress in individuals who are prone to severe anxiety (Opris, Pintea, García‐Palacios, Botella, Stefan, David, 2012). In terms of its application as an intervention strategy for individuals with Autism Spectrum Disorder (ASD), VR has shown promising results as a substitute for imaginal experiences in social cognition training (Kandalaft, Didehbani, et al. 2012), travel training, and environment intervention (Bernardes, Barros, Simoes, Castelo-Branco, 2015).

Applied behavioral analysis (ABA), the standard therapy used to treat ASD individuals, attempts to address general fears and anxieties through graduated exposure. When visiting a new place, the first phase of graduated exposure may be "imaginal desensitization; however, individuals with ASD have difficulties with imagination" (Maskey, Rodgers, McConachie, Parr, 2014). This is often a debilitating limitation as it fortifies the barrier between individuals with autism and the resources established for their aid and comfort. In a school setting, this might mean that a student with ASD is emotionally unable to visit a special education office, a school library, or a new classroom.

A study conducted by Newcastle University in England attempted to address this issue through the use of virtual reality environments (VRE). In this study, VRE primed students for intimidating experiences that they could not easily imagine, such as going shopping (Maskey, et al. 2014). Following 5 VRE exposure sessions lasting between 20-30 minutes each, individuals with ASD showed significant improvement when asked about their target fear, while a select number of participants felt they had overcome their fear completely.

Similarly, this randomized control trial will use 360 video and VR technology to simulate the experience of visiting a new and unfamiliar location, allowing students with autism to develop a level of comfort and familiarity before they attempt to visit in real life. In this way, VR could be used as an antecedent intervention, reducing feelings of anxiety and panic that typically prevent individuals with ASD from accessing necessary assistance in a school setting, and more generally, in daily life.

References:

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