Beliefs and Attitude Changes Towards Virtual Reality Usefulness After Disabilities Simulation

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ABSTRACT

Virtual Reality (VR) has been utilized often as a potential recreational tool for enjoyment by generating false realities to interact with, but in regards to a potential tool to introduce understanding in cultures and empathetic responses it has seen little use. Stereotypical beliefs seem to exist that disabled people are unable to care for themselves (Burgstahler & Doe, 2004). Furthermore, individuals without disabilities may not fully understand how a person with disabilities is able to even function in daily life (McKenny, 2018). Leo and Goodwin (2016) emphasized the value of simulation exercises to change individual attitudes and perspectives towards those who live with disabilities. **PURPOSE**: The purpose of the study was to assess people's attitudes and belief changes towards the use of VR after participating in disability simulations. **METHODS**: Implemented in a class about motor movement in special populations, subjects were college students(n=44) who were administered a Likert scale pre-survey. The survey emphasized subject's beliefs around the use of VR for gaming, education, work preparation, therapy, use for individuals with disabilities, and those developing empathy towards individuals with disabilities. Subjects then participated in a VR training session, an autism emotional disturbance simulation, and a simulation of what a blind person's imagination goes through while handling sounds and touch sensations around them. A Wilcoxon Signed Rank Test was used in SPSS software to analyze the nonparametric data for two nominal variables comparing pre and post beliefs and attitudes. **RESULTS**: Overall, most questions posed to the subjects were not found to be statistically significant with the error rate used throughout the entirety of the study ($\alpha = 0.05$). However, when asked about the ability for VR simulations to create or increase empathy in the subjects towards those with disabilities there was a statistical significance ($Z = -2.02$, *p* = 0.042.) Additionally, positive trends were found in the aggregated mean scores when comparing the pre and post surveys with subjects across all variables in the survey. **CONCLUSION**: While more categories were expected to have a significant change, only empathy showed statistical significant. This result encourages the ability of VR simulations to assist in understanding and sharing comprehension with another individual who has disabilities or in a restricted perceptual motor/behavioral state. Further research on the topic may also reveal that the positive trends found in this study may have statistical significance if used in larger sample sizes.