

Title: Virtual Reality for Speech-Language Pathology: Developing Sustainable Practices

Abstract:

Virtual reality (VR) technology in healthcare has become an important tool for clinical training, assessment, and intervention in higher education and healthcare delivery models. While VR applications have been studied in various healthcare fields with numerous clinical populations, questions remain regarding protocol design, implementation, and standards of practice, both within and across healthcare fields. Specifically, the use of VR in Speech-Language Pathology (SLP) offers opportunities to advance the evidence base for VR applications.

SLPs treat individuals with communication disorders, including but not limited to: language, cognitive, speech, and/or swallowing impairments. Accordingly, the current project aims to advance patient recovery and SLP student training using a series of customized therapeutic sessions. The ability to flexibly individualize treatment programs according to patient progress is a necessary, but challenging skill to acquire for students. To address this issue, a high-fidelity simulation using VR offers an elegant solution to the problem. The VR environment allows SLP students to engage in clinical problem-solving scenarios and gain experience generating nuanced solutions for varied clinical populations. Currently, there are no standard protocols for VR-based training or clinical implementation in the field of Speech-Language Pathology.

This presentation will discuss project initiatives and future implications for SLP training and clinical practice. An interdisciplinary team is developing multiple treatment scenarios to study potential educational and clinical outcomes of the VR based SLP rehabilitation. Findings will inform the future development of VR training protocols for SLP students and clinicians. In doing so, sustainable education and healthcare practices may be advanced in the field of Speech-Language Pathology, particularly for students and patients that live in rural areas. Additional benefits include offering safe environments and means of connection for vulnerable students, patients, and caregivers that may not wish to travel to medical settings due to covid-19 related health concerns.

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