Integrating Virtual Reality in an Institutional Healthcare Education Research Online Conference

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BACKGROUND: In response to Covid-19, traditional online communications platforms were rapidly deployed in 2020 to ensure continued presentation of peer-reviewed scholarship and professional networking. However, a tacit feeling of teleconferencing fatigue emerged[1] and alternatives to two-dimensional interfaces were evaluated.[2] The use of virtual reality (VR) for online poster presentations was implemented at a three-day institutional healthcare education research conference to enhance social interactions and better emulate in-person presentations.[3]

The purpose of this study is to examine the impact of a virtual reality poster presentation on an institutional online conference in healthcare education research.

DESIGN: In 2021, 181 participants attended the three-day conference with a new VR poster presentation platform using 3D avatar-based Virbela software. Twenty conference participants attended the VR presentations and responded to a four-item survey with a seven-point Likert scale (7=strongly agree). Spearman correlations were analyzed with IBM® SPSS® 26.0.

A password-protected private meeting space was secured in the VR software which included phase-shifting seating configurations (roundtables, lecture seating, pair-share configurations), three digital presentation boards, and 3D-spatialized audio. The customizable avatars had built-in functions for interacting with the presentation boards (e.g., uploading presentation files, accessing and interacting with websites, audio streaming), gesturing (e.g., waving), and using chat functions. Each speed poster presentation was three minutes in duration followed by two minutes of Q&A.

OUTCOMES: The VR session was an effective poster presentation platform (median=6.0), reduced teleconferencing fatigue (median=6.0), and was more engaging than Zoom (median=6.0). Satisfaction was significantly correlated ($p < 0.050$) with effectiveness ($r=0.5$) and reducing fatigue ($r=0.7$).

STRENGTHS AND LIMITATIONS: The VR presentations were executed with no logistical problems and generated effective discussion, but with only 11% of all conference participants. One-on-one conversations were easier to have than in Zoom.

FEASIBILITY AND TRANSFERABILITY FOR ADOPTION: The VR platform required 10 hours of configuration and testing by conference organizers, but individual presenter accounts required 20 minutes.

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