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Enhancing Patient Education with Innovative 3D-Virtual Reality Pelvic Model

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Abstract

Background: Three-Dimensional Virtual Reality (3D-VR) is an innovative technology proven to increase knowledge, comprehension, and retention of complex anatomy and disease processes. It creates an interactive learning experience, stimulating cognitive and affective learning. A clinician's use of 3D-VR patient education holds great promise in promoting positive behavioral change, improving patient outcomes. Purpose: Pelvic floor disorders (PFDs) encompass an array of diagnoses that are complex in nature. The high prevalence of PFDs in women and intricate alterations in anatomical structure that accompany PFDs accentuate the need for comprehensive patient education to enhance patient knowledge. Patients can independently access on any smart device, promoting patient outcomes. The 3D-VR pelvic model is an immersive multi-platform tool. Clinicians provide guided interactive education to patients specific to their diagnoses. Patients can independently visualize on smart devices at their own pace. 3D-VR allows for cognitive and affective learning promoting motivation and behavior change. Processes/Procedures: Design: Pre/post single-group efficacy trial. Aims: To assess whether providing patient education via 3D-VR pelvic model will increase (1) knowledge and comprehension of PFDs (2) self-efficacy of performing pelvic floor exercises, (3) Quality of Life (QOL) and (4) investigate benefits and barriers to acquiring knowledge via the 3D-VR Pelvic model. Setting: An ambulatory university outpatient Urogynecology clinic. Participants: A convenience sample of 54 women diagnosed with PFDs. Methods: Repeated measures analysis of variance and dependent samples t-tests will be used to assess aims. Conclusion: Preliminary results demonstrate a positive correlation between use of 3D VR Pelvic Model and all study aims. Initial review of usability of 3D-VR patient education shows patient's technology comfort level correlates with use. Future Implications: Utilizing 3D-VR pelvic models for patient education is an innovative modality providing clinically relevant, patient-specific diagnoses. Further adaptation of the model could impact patient education encompassing a wider range of women's health diagnoses.

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