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THE INTEGRATION OF VR-BASED SKILL TRAINING WITHIN THE EDUCATIONAL CURRICULUM OF A MEDICAL INSTITUTION: A CASE STUDY

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Introduction: Virtual Reality (VR) offers a promising avenue for medical education, providing immersive and realistic training environments. Existing literature [1-2] suggests VR can improve aspects such as learning efficiency, knowledge retention, skill development, trainee's confidence levels, and overall patient outcomes. As VR continues to be implemented, its utilization within medical curriculums will become mainstream. However, the factors influencing the integration of VR within medical school curriculums remain unclear. This case study investigates the successful integration of VR-based skill training at a specific medical institution, aiming to identify key factors for such integration and inform broader VR adoption within medical education.

Methods: The successful integration of VR-based skill training within the medical curriculum at the Karpaga Vinayaga Institute of Medical Sciences (KIMS), India was explored. Semi-structured interviews were conducted with key stakeholders (N = 10), including medical faculty, and the university management personnel, and thematic analysis elicited key barriers and facilitators to the curriculum integration process.

Results: The analysis revealed seven key themes surrounding VR integration in the medical curriculum. Four themes emerged as challenges: aligning VR modules with the existing curriculum, logistical constraints (over two-thirds of responses), lack of faculty training and support, and selecting suitable student cohorts. Three themes emerged as facilitators: alignment of VR content with national regulatory standards, student engagement with the technology, and the perceived benefits of VR (100% of responses).

Discussion: This first-of-its-kind case study sheds light on the challenges and opportunities of integrating VR-based skill training into medical education. Notably, logistical constraints such as time limitations within a students' existing schedule was a major concern, and all participants highlighted the potential benefits of VR, which included the opportunity for separate teaching and assessment modes within VR training modules. By analysing the KIMS' success, the study informed the development of a comprehensive framework for VR integration within medical institutions, encompassing aspects such as curriculum design guidelines and faculty development programs.

Ethics statement: Authors confirm that all relevant ethical standards for research conduct and dissemination have been met. The submitting author confirms that relevant ethical approval was granted, if applicable.

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