

Flipping the Script in Health Sciences: Immersive Virtual Reality for Structural Gender Awareness

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Introduction

Gender inequality remains systemic in healthcare, affecting professional careers and patient outcomes. This study evaluates the impact of VR-Balance, an immersive VR training programme designed to foster gender awareness and structural competency among health sciences students and staff.

Methodology

A sequential pedagogical model was implemented with 161 participants (undergraduate students and university staff). The intervention integrated cognitive workshops on stereotypes and workplace bias with interactive VR simulations (Oculus Quest). Learning was assessed through the Multidimensional Gender Inequality Perception Scale (MuGIPS) and post-test surveys. Simulations addressed critical scenarios, including trans healthcare discrimination and the “motherhood penalty” in academic medicine.

Results

Results indicated a 70.3% overall satisfaction rate. Participants identified “Understanding gender stereotypes and caregiving” (75.8%) and “Workplace gender discrimination” (66.4%) as the most valuable components. While baseline data showed pre-existing general awareness, the post-intervention analysis revealed a significant shift towards recognising inequality as a structural and normalised phenomenon rather than an individual issue. The VR component was specifically praised for its ability to foster “encapsulated empathy”, allowing learners to experience discriminatory dynamics directly. Differentiated data showed that while staff systematised existing knowledge, students experienced more transformative shifts in critical awareness regarding gendered barriers in their future professional environments. Technical glitches and time constraints were the only negative factors reported.

Discussion and conclusion

The VR-Balance model proved feasible and effective for modernising health sciences education. By moving from a “fixing the women” approach to a systemic understanding, it provides a replicable framework for inclusive leadership. Immersive technology effectively bridged the gap between abstract theory and emotional engagement. We recommend integrating such experiential tools into health curricula to ensure future practitioners can dismantle structural biases and provide equitable care.

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