

IN PRACTICE

A103

CO-DESIGNING VIRTUAL REALITY SIMULATION MODULES WITH THE D/DEAF COMMUNITY: COLLABORATIVE APPROACH TO INCLUSIVE HEALTHCARE EDUCATION

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Introduction: Following funding from the Morgan Advanced Studies Institute (MASI) a pilot study was conducted with expertise from the SUSIM Simulation and Immersive Learning Centre at Swansea University.

Healthcare professionals often lack the training and confidence to communicate effectively with d/Deaf patients, leading to miscommunication, reduced trust, and poorer health outcomes. Traditional simulation-based education (SBE) programmes rarely reflect the lived experiences of d/Deaf individuals or include British Sign Language (BSL) and deaf culture [1,2]. This project aimed to address this gap through the co-creation of immersive Virtual Reality (VR) learning modules with the d/Deaf community. The research question was: How can immersive simulation technologies be co-designed with the d/Deaf community to enhance student understanding and inclusive communication in healthcare?

Methods: Using an inclusive, values-led approach, the research team collaborated with d/Deaf community members, BSL interpreters, and healthcare students to co-design a suite of computer based and virtual reality (VR) learning packages. A series of structured workshops facilitated open dialogue about

lived experiences in healthcare, barriers to communication, and priorities for professional education. Insights from these sessions directly informed scenario design, scripting, and visual storytelling. VR content was developed using 360° video, with bilingual (BSL and English) integration and d/Deaf individuals portraying themselves within the simulations. Qualitative feedback was collected throughout the process from both community participants and students.

Results: A series of workshops from May 2024 to July 2024, revealed strong themes around disempowerment, safety, and the emotional toll of exclusion in clinical settings. These narratives shaped two pilot VR modules focused on first point-of-contact healthcare encounters. Deaf participants reported feeling valued and empowered in the co-design process. Using a mixed methods approach preliminary pilot student feedback showed increased awareness of the communication needs of d/Deaf patients, increased empathy and appreciation for learning directly through immersive, patient-led scenarios. A key outcome was the creation of a culturally respectful and pedagogically sound set of VR modules now embedded in pre-registration curricula at Swansea University [3].

Discussion: This initiative demonstrates that co-designed simulation with the Deaf community is both feasible and impactful. The approach moves beyond tokenistic inclusion to authentic collaboration, positioning lived experience as essential to the learning environment. The learner pilot highlighted the importance of cultural humility, developing simulation content that promotes thoughtful, patient centric reflection and care with VR enhancing their opportunity to experience realistic immersion.

Ethics Statement: As the submitting author, I can confirm that all relevant ethical standards of research and dissemination have been met. Additionally, I can confirm that the necessary ethical approval has been obtained, where applicable.

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SUPPORTING DOCUMENTS – TABLE 1-A103

Table 1. Data from Deaf club focus group.

Lack of healthcare staff awareness about interpreter provision	Poor communication	Stereotypes of deaf people	Impact of poor health staff Deaf awareness	Discrimination (specific acts)	Positive suggestions to improve care for Deaf patients
Wi-Fi is a big issue when using remote interpreters	Call name? reception call name, assume not present	Assuming I won't complain or answer back	Being a patient (in-patient), very lonely and isolating	Refusal to wear a clear mask. Told me to 'watch my behaviour'	Ask patient what works well for them
Assumption of not needing an interpreter without clarification or communication	I prefer to have it all written down, but their handwriting is terrible and not as detailed	Assumption – when you can talk	Lip reading is hard, when you are ill it's worse	Interpreter being asked to wait outside as too many people in the room	Male interpreter for male patients, female for female especially if treatment is sensitive
No clue about how to book interpreter	If they shout room number, then I don't know		Patients feel that staff can revert to shouting, banging, poking instead of the medical notes being clear that the patient is Deaf and seeking an interpreter	Issues of informed consent	Need a screen with name and room number and estimated wait times