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# Virtual Reality Technology in Mental Health Education

Initiative Type

Education and Training

Status

Deliver

Added

23 May 2024

Last updated

23 May 2024

URL

<https://clinicalexcellence.qld.gov.au/improvement-exchange/virtual-reality-technology-mental-health-education>

## Summary

Mental Health Education's global search for an innovative technology training provider culminated in a collaborative research study with University of Newcastle's Centre for Advanced Training Systems. The study explored the potential use of virtual reality technology in a mental health education, utilising a five-module 'Virtual Reality Emotional Awareness and Regulation' training program. A

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successful ethics application facilitated training provision, using Oculus Quest virtual reality technology. 62 mental health staff attended a one-day workshop format, repeated across six days in September 2023. The study aim was to determine the feasibility and useability of virtual reality in mental health education, exploring the capability for enhancing staff skill, knowledge, and confidence for timely and effective engagement with distressed mental health consumers. Findings reveal positive and promising results, reflected through participants comments, obtained through pre and post training survey, and in a follow-up survey 3-6 weeks post training, used to examine retention and use of information delivered during training. Staff reported virtual technology training as practical, feasible, and easy to use, providing an engaging, immersive, and safe space in which to explore their emotional state, to recognise when a stress response has been activated and to apply evidence-based strategies to return emotional control, thereby optimising more effective engagement with distressed mental health consumers. Staff reported feeling better prepared and more confident to respond to mental health consumers' needs, reflected in good recall of theoretical information immediately after training, and importantly the transfer of theory into practice three to six weeks after training. Staff and educators support the inclusion of virtual reality training format as 'business as usual' in mental health education. Mental Health Specialist Services (MHSS) Education is sourcing funding to purchase virtual technology equipment and software licence for education provision in 2024 and beyond. This pilot study collected observation and anonymous self-report data using specifically designed pre- post and follow up surveys. Key evaluation themes included end user acceptance, practical feasibility, and training impacts. Surveys were accessed using a QR code for direct data capture using Question Pro software.

#### Key dates

Aug 2022

Dec 2023

#### Implementation sites

Robina and Gold Coast University Hospitals

#### Partnerships

University of Newcastle - Centre for Advanced Training Systems

## Key Contacts

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## **Aim**

Our project aimed to:

- explore the usability and feasibility of virtual reality technology as a training format in mental health education
- determine if the five-module training program supports development of staff knowledge, skills, and confidence in relation to effective engagement with distressed consumers
- consider the viability of Virtual Reality technology as a future training option.

## **Benefits**

The five-module training program provides evidence-based theory, practical skills, and strategies to enhance awareness of stress / emotional distress, and to regulate internal stress responses (Kluge et al 2021). It was anticipated that virtual reality training would promote more effective and timely staff engagement with distressed consumers.

## **Background**

Staff reported a need for additional training to develop skills, knowledge, and confidence for effective

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and timely engagement with distressed mental health consumers. Staff's request for enhanced knowledge, skill and confidence when supporting distressed mental health consumer led to a global search for innovative training formats (Bosse, Gerritsen & de Man 2016; Moore, Ahmadpour, Brown, Poronnik & Davids 2022; Rhodes 2020). Newcastle's Centre for Advanced Training Systems was identified as a preferred partner for exploring virtual reality technology as an effective training format.

## **Solutions Implemented**

A collaborative partnership with University of Newcastle culminated in a feasibility and usability study exploring the use of virtual reality technology and the associated training program in a mental health care setting. Training was provided at Robina and Gold Coast University Hospital via a one-day training workshop, repeated on six occasions over two weeks in September 2023. The short duration of training provision arose from the restricted availability of the virtual reality equipment.

Study inclusion and exclusion criterion, and pre-requisite training requirements, were identified and conveyed to eligible staff. Training focus reinforced the fundamental concept of 'first control your own emotional state before helping others control theirs' (Mavandadi, Bieling & Marsden 2016; Price & Baker 2012). A successful ethics application permitted the collection of staff feedback on the training.

62 staff attended the workshops, which utilised Oculus Quest virtual reality headsets and controllers along with Vernier telemetry belts for respiration monitoring during specific training modules. Staff feedback on the training was sought via anonymous pre, post and follow up online surveys.

## **Evaluation and Results**

The following results have been extrapolated from the study evaluations: 61.6% of participants reported receiving previous emotional regulation training, but not routinely (53% minimal, 20% no recollection, 18% unsure). The use of emotional regulation strategies was relatively high (68%) with specific strategies used often (22%) or sometimes (46%) whilst 12% never used a specific skill. 93.3% of participants reported weekly exposure to stressful or highly challenging situations, 6.7% reported situations but not every week. Similarly, 95% reported at least weekly encounters with distressed consumers, with 5% reporting regular but not weekly occurrence. 48% of participants had not previously used virtual reality technology, whilst 5% reported regular use. 14% had reservations around familiarity with the technology and possible cybersickness symptoms (motion sickness, headache, nausea). Of the eight participants (14%) reporting cyber sickness susceptibility, only one experienced mild nausea. Of the 5 (9%) who were unsure, only 1 reported disorientation after training. 83.3% of participants reported no adverse effects during or after training. Educators felt confident setting up and using training equipment, with two reporting virtual reality technology as useful in healthcare training, whilst two remained neutral. One was unsure of the benefit, however, their attitude shifted post training reporting possible benefits to their and staff's practice.

Participants reported the technology and training program as easy to use. The general design, style and format was considered interesting, enjoyable, and appropriate, providing a cohesive flow of learning activities. The training program's impact and value was considered very high, particularly for practical skills development, improved knowledge and comprehension of stress management and de-

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escalation. These positive perceptions remained high for weeks post training, suggesting an ongoing and sustained positive training impact. Participants, both immediately after (62%) and at follow-up (54%) reported the training's interactive; immersive; realistic; private; convenient; safe; non-judgmental learning environment, as particularly beneficial. Participants repeatedly mentioned the benefit of using the evidence-based strategies in both their private and professional lives (18%). Whilst there was a reduction in recollection of psycho-educational components over time, practical skill utilisation increased, suggesting a possible reduction in the theory to practice gap. 95% of participants and Educators reported the training program as a valuable addition to existing de-escalation training. 63% of participants reported the training program as useful in its current form with only minor changes or inclusions suggested for future program use in mental health. 94% of participants reported using the training's practical skills after the workshop. 6% reported not using the skills due to a lack of opportunity or reason to do so. Interestingly, 32% reported not using specific stress management skills before training. This promising outcome reflects a behavioural change and practical uptake of stress management skills.

95% of participants reported being likely or extremely likely (30% and 65% respectively) to use skills when encountering a distressed consumer. Participants utilised emotional regulation skills largely after engaging with a distressed consumer (81%) and or during the interaction (52%). Before training, two participants could not confidently recognise stress response activation, with one unable to define grounding. After training, all three participants reported moderate confidence in these areas, reflecting an increase in both knowledge and skill which remained high at two to six weeks post training. Comparing pre and post training responses, participants reported a significant increase in confidence for all strategies and skills delivered in training. Importantly, participants reported a significant increase in this confidence two to six weeks post training completion, potentially influencing effective management of challenging events and provision of support to distressed consumers. Participants and Educators considered the training program as valuable, purporting that all staff would be likely to benefit from training at regular intervals. Interestingly, access to virtual reality technology equipment was considered the greatest challenge to future training.