Using Virtual Reality Simulation in a Rehabilitation Hospital Setting to Teach Suicide Risk Assessment

PROVIDENCE UNITY HEALTH TORONTO

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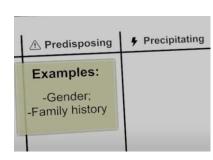


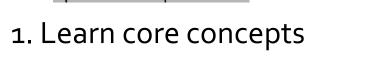
PURPOSE AND REVELANCE:

- Suicidal ideation has increased among patients in rehabilitation hospitals, who often face complex medical issues, social isolation, and functional losses. [1-4]
- Health disciplines clinicians (HDCs) spend considerable time with these patients, and thus are well-positioned to recognize early signs of suicidality.
- However, many HDCs lack formal training or experience in suicide risk assessments (SRAs). [4,5]
- Virtual Reality (VR) simulation has shown promise for enhancing training of medical professionals, and may also support HDCs by boosting confidence and skill in performing SRAs. [6]
- This initiative aimed to evaluate the impact of VR SRA training on the self-reported confidence and self-reported competence of HDCs in a rehabilitation hospital setting.

METHODS:

- Our team delivered an on-site VR SRA simulation training to HDCs (n=41), including Physiotherapists, Occupational Therapists, Rehab Assistants, Social Workers, Therapeutic Recreationists, Speech Language Pathologists, and students/clinical externs in a rehab setting.
- Sessions included a pre-training survey, prebrief, VR SRA gamified simulation (via immersive VR headset or desktop applications), debrief, and post-training survey.
- The surveys assessed:
 - (A) changes in confidence and knowledge pre- and post-training,
 - (B) responses to the immersive VR experience using the Simulator Sickness Questionnaire (SSQ) [7],
 - (C) engagement with the User Engagement Scale Short Form [8],
 - (D) overall training experience.







2.Perform interactive assessment



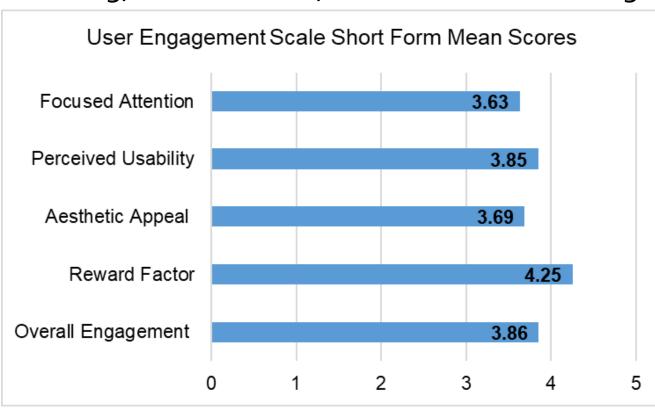
3. Review with mentor

RESULTS:

• The Wilcoxon Signed Ranks Test showed statistically significant gains in confidence among HDCs, with median post-training scores improving across all predefined learning objectives (p<0.01).

Learning Objective	Mean Pre (SD)	Mean Post (SD)	Ranks	Z	Sig.
Building a therapeutic alliance with the patient	3.93 (0.82)	4.34 (0.66)	Negative-2 Positive-15 Tie-24	-3.13	.002
Identifying risk factors by conducting a suicide risk assessment	2.59 (1.00)	3.85 (0.76)	Negative-o Positive-34 Tie-7	-5.22	.000
Identifying protective factors by conducting a suicide risk assessment	2.29 (1.08)	3.88 (0.78)	Negative-o Positive-36 Tie-5	-5.32	.000
Identifying which risk/protective factors are modifiable in the patient's life	2.32 (0.88)	3.73 (0.84)	Negative-o Positive-35 Tie-6	-5.28	.000
Transmitting this information back to your team/MD	3.05 (1.18)	4.05 (0.67)	Negative-3 Positive-25 Tie-13	-4.27	.000

• Engagement ratings were generally high, particularly for the "reward" factor (worthwhile, rewarding, interest level), which scored an average of 4.25 out of 5.



- 98% of participants expressed an intention to incorporate insights from the training into their practice.
- Most participants reported no or minimal symptoms of simulator sickness (91.89%).

KEYTAKEAWAYS:

- These findings highlight the value of implementing VR SRA training in rehabilitation hospitals, with the potential to better equip HDCs to address the growing challenges of suicide risk and mental health concerns.
- There is opportunity for a broader group of HDCs to support a substantial volume of patients in these settings who do not have access to, or who may choose not to engage with, traditional mental health professional services.

CONCLUSIONS AND NEXT STEPS:

- Results indicate that VR SRA training significantly enhanced HDCs' self-reported confidence and knowledge from baseline levels.
- HDCs rated the training as an engaging and rewarding experience, with most intending to apply learnings in their daily work.
- Next steps include:
- rolling out VR SRA training to varied clinical sites to HDCs within, and outside of, traditional mental health professional roles
- > offering VR SRA training in onboarding education in rehab sites
- > evaluating the impact of this innovative training on patient safety outcomes, and on access to mental health supports

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