



Pre-briefing Techniques that Promote Psychological Safety and Clinical Reasoning in Nursing Students

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ABSTRACT

BACKGROUND AND OBJECTIVES

A review of research of simulation-based learning (SBL) in nursing education highlights a relationship between the prebriefing approach taken and the psychological safety of the learners. In a qualitative study by Kang and Min (2019), the main emotional themes that affect nursing students' overall psychological safety are: feeling uneasy, anxiety about mistakes being exposed, fear about damaging teamwork, and fear of evaluation. Park and Jung-Hee (2021), found that an increased awareness among educators of triggers for psychological risk in designing and evaluating skills scenarios yielded greater psychological safety. In this study, the research team aimed to determine to what extent there are differences in the experience of psychological safety between the type of pre-briefing techniques (Traditional, guided concept mapping, and guided mental rehearsal/practice using virtual reality) and the impact in carrying out clinical reasoning and judgement.

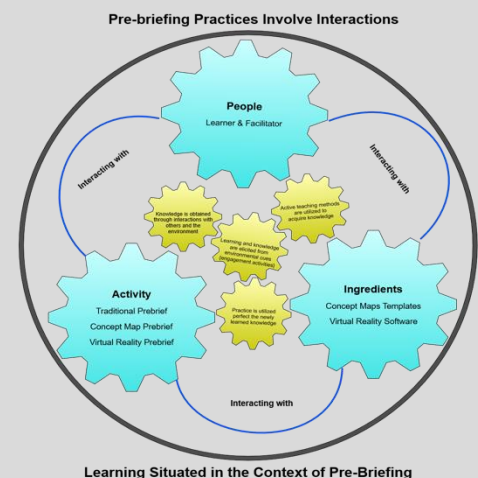
METHODS

A homogeneous group of nursing students (n=38) were randomly assigned to one of three distinct pre-briefing groups. Group 1 received a traditional verbal pre-brief with information about the patient case scenario, equipment in the room, and learning objectives. Group 2 received a Concept Map tool to create connections between the patient case scenario, the equipment and medications for the patient case, and learning objectives. Group 3 received VR equipment to engage in the virtual reality care of a patient within a hospital room. Each pre-briefing session lasted 20 minutes. Participants completed a survey on Psychological Safety following their pre-briefing session. After that, participants completed a 20 minute simulation skills scenario to assess their ability to carry out clinical reasoning and judgment using Lasater's clinical judgement rubric.

RESULTS

Out of 50 participants, 38 participated for a response rate of 76 percent. Why other students didn't participate is unknown. A Pearson correlation analysis showed a significant positive correlation between participants feeling psychologically safe and their ability to make clinical judgements during a simulated skills scenario. This suggests that as participants' feelings of psychological safety during their prebriefing experience increase, their abilities to carry out clinical reasoning and judgement tend to increase. Also, a multivariate analysis of variance (MANOVA) was conducted suggesting the linear combination of scores from Feeling Psychologically Safe and Lasater's Clinical Judgement was significantly different among the levels in the three prebriefing groups. This study supports the replacement of traditional prebriefing with concept mapping and virtual reality. The use of virtual reality in prebriefing is an ideal technique to support the feeling of psychological safety and to improve clinical reasoning in nursing students.

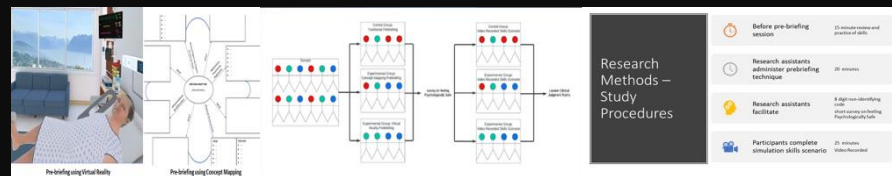
SITUATED LEARNING THEORY



METHODS

Participants

Sample of 38 Practical Nursing Students	Current Niagara College Students Simulation skills scenario matched to students' academic level and scope of clinical skills Enrolled in / completed CLIN1215 & CLIN1315 Limited clinical experience
1 External Assessor	Reviewed video recordings Assigned Lasater Rubric scores with no contact with participants or knowledge of which modality used for each recording
4 Research Assistants	Facilitated pre-briefing scenarios & Hi-Fi simulations Collected data & engaged in administrative duties Communicated with participants Assisted with data analysis
Lead Researcher	Assisted with data analysis Research Design Delegating & leading research assistants



- Currently used in nursing program
- Open communication
- Participant able to ask questions to RA
- Participants work through concept map
- Freedom to complete map
- RA assists completion
- Participants completed short oculus tutorial
- UbiSim Software
- RA guide participant through virtual scenario through casted display

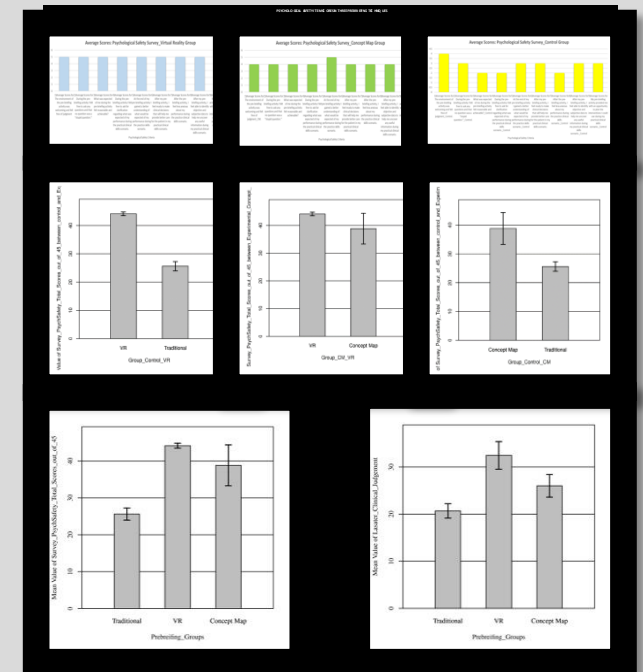
RESULTS

Psychological Safety:

- Virtual Reality and Concept Mapping showed to support psychological safety consistently
- Virtual Reality had the highest consistent rated scores out of the 3 prebriefing techniques
- Traditional pre-briefing showed inconsistent psychological safety scores indicating it may not suit learning needs universally

Clinical Reasoning

- Virtual Reality contributed to greatest scores on the Lasater Clinical Judgement rubric for clinical reasoning
- Concept Mapping was second, followed by Traditional prebriefing
- Pearson correlation showed a significant positive correlation between dependent variables
- Multivariate analysis of variance linear combination of scores on dependent variables was significantly different among the levels in the three prebriefing groups



CONCLUSIONS & NEXT STEPS

- Concept mapping and immersive reality helped create psychological safety
- Interaction between People, Activity, and Ingredients promoted active learning and critical thinking
- Pearson correlation showed as feelings of psychological safety increases, the ability to carry out clinical reasoning and judgement also increases
- Implications for further studies with larger sample size
- Virtual Reality is an ideal technique in prebriefing to include in future curriculum to help improve nursing education, students' feelings of psychological safety, and clinical reasoning



References

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