

Abstract

The prevalence of acute pain among hospitalized patients is estimated to range from 37.7% to 84% and less than half of patients experiencing pain in acute care settings report adequate pain relief and control.

Virtual Reality (VR) has shown to be an effective adjunctive intervention to reduce the perceived pain for acute, procedural, and experimental pain in adult and pediatric populations by distracting from painful stimuli.

There are a limited number of studies that have evaluated the practicality and qualitative experiences of patients using VR in an acute hospital setting. The current setting will examine nurses and nursing assistants (NAs) perceptions regarding the implementation of VR in an acute care setting.

Aims and Purpose

- Determine provider's perceptions towards adopting the use of the novel and hospital-based Therapeutic Virtual Reality pain management tool in an adult care unit.
- Utilize Therapeutic VR as an alternative to pharmacologic intervention for the treatment of acute and chronic pain.
- Investigate, develop, and address the strategies of implementation for Therapeutic VR as a pain management tool in patient care.
- Determine the feasibility of implementation before pursuing a more extensive, long-term evaluation of a hospital-based VR intervention on inpatient outcomes and resource utilization.
- Evaluate the effects of a hospital-based VR pain management intervention on pain relief, functional pain, patient satisfaction, pain medication usage, resource utilization, anxiety/distress, and treatment acceptability.



In-App Shots



Methodology

The project involves four phases for implementation:

- 1) **Development;**
- 2) **Education and Feedback;**
- 3) **Implementation;** and
- 4) **Evaluation.**

Development

- The first phase focused on selection of technology, creation of policy, and documentation of known research regarding the use of VR in the healthcare field.

Education and Feedback

- In this second phase, nurses and NAs completed a pre-implementation questionnaire to assess determinants that may affect implementation on the unit.
- Additionally, semi-structured interviews were conducted with nurses and NAs to identify barriers and facilitators regarding the implementation of therapeutic VR.
- Nurses and NAs received online and in-person training in the use of therapeutic VR for pain management.

Implementation

- The third and current phase of this project consists of a staggered implementation of therapeutic VR across three units.
- Upon the completion of the staggered implementation, therapeutic VR will be implemented hospital-wide.

Evaluation

- Implementation of therapeutic VR will be evaluated for the three units.
- A post-implementation questionnaire will be administered to nurses and NAs.

Results

Pre-Implementation Questionnaire

- A total of 32 nurses and NAs attempted the questionnaire. Note: 28 of these were completed.
- The majority of participants were nurses (71%), females (93%), white (69%) and had more than 10 years of experience in the field (54%).
- The level of education for nurse participants is as follows; LPN & RN - 50%, BSN - 35%, MSN & PhD - 30%.
- Analysis is still ongoing.
- A pre- and post-implementation comparison analysis will be conducted in the future.

Semi-structured Interviews

- Recorded interviews have been transcribed and a coding scheme is under development.
- Initial categories include:
 - “Current Non-pharmacological Interventions”
 - “Barriers to Current Non-pharm interventions”
 - “Perceived Effectiveness of Non-pharm Interventions”
 - “Nurses attitudes/behaviors towards pharmacological interventions”
 - “Patient Population Compatibility”
 - “Alternative Use of VR”
- Analysis is ongoing.

Discussion

At the completion of this study, we will address the development and evaluation of the use of VR as an intervention for pain management in an acute care hospital setting. Therapeutic VR is a promising new intervention for pain management in hospitalized patients as it promises a safe and effective alternative to other interventions.

The long-term goal of therapeutic VR is to provide an adjunctive or alternative treatment for pain in a hospital setting. A future goal in this project is to conduct a pilot study examining patient outcomes and provider use of therapeutic VR to address pain related concerns among patients in an acute care hospital setting.

References

References are available upon request to jreiche@coe.edu