



Randomized Controlled Trial J Pediatr Oncol Nurs. 2020 Jul/Aug;37(4):265-277.

doi: 10.1177/1043454220917859.

# Feasibility, Acceptability, and Clinical Implementation of an Immersive Virtual Reality Intervention to Address Psychological Well-Being in Children and Adolescents With Cancer

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PMID: 32536320 DOI: 10.1177/1043454220917859

## Abstract

**Objective:** Virtual reality (VR), a novel and highly immersive technology, offers promise in addressing potential psychological impacts of cancer treatments and hospitalization. The primary aim of this study was to examine multiple key user perspectives on the acceptability and feasibility of an Immersive VR therapeutic intervention for use with hospitalized patients with cancer. Secondary aims were to identify issues and opportunities related to the adoption and clinical implementation of VR in pediatric oncology settings. **Method:** The study was conducted at The Royal Children's Hospital (RCH), Melbourne, Australia. Thirty multidisciplinary oncology health care professionals participated in an initial test of VR intervention usability (Stage 1). Ninety oncology inpatients (7-19 years) and their parent caregivers participated in a pilot randomized controlled study to examine the effectiveness of an Immersive VR therapeutic intervention (Stage 2). This mixed methods study reports Stages 1 and 2 quantitative and qualitative data related to VR feasibility and acceptability. **Results:** Results indicate favorable perceptions from health care professionals with respect to ease of use and usefulness of VR, and had positive intentions to use it in the future. Parent caregivers reported high acceptability of VR for their hospitalized child. Patients reported high satisfaction of the VR intervention within minimal adverse effects. Barriers and facilitators to VR use with seriously ill children and specific recommendations for content development were elicited. **Conclusion:** This study shows that there are several potential clinical uses for Immersive VR intervention, beyond medical procedural distraction, to support psychological adjustment to hospitalization and patient quality of life.

**Keywords:** hospitalization; pediatric oncology; psychological; virtual reality.

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