

The Use of Virtual Reality to Provide Stress Reduction for Healthcare Workers:

An Evidence-Based Practice Project

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Abstract

Objective:

A systematic review demonstrated that immersive virtual reality (VR) can effectively reduce stress in healthcare workers, with statistically significant benefits observed in sessions as short as three minutes. However, no studies have explored the practical application of a VR intervention within a busy Intensive Care Unit (ICU) setting. This project aimed to address this gap by evaluating the integration, workflow, and barriers associated with implementing a VR intervention in a Pediatric ICU.

Methods:

The project utilized the "Nature Treks" VR application with the MetaQuest 3 headset in a 24-bed Pediatric ICU. Staff were encouraged to engage in nature-based VR sessions during shift breaks, with flexible sessions ranging from 3 to 10 minutes to accommodate busy schedules. Detailed instructions for headset operation were provided, and usage patterns were tracked to identify logistical challenges, user feedback, and workflow adjustments required for successful adoption.

Results:

Over eight weeks, 67 sessions were documented, with RNs accounting for 62.7% of users (n=42) and nightshift staff comprising 70.1% (n=47). The average session duration was 11.3 minutes (SD 4.7min), with no reports of cybersickness. Notably, 44.8% of users (n=30) reported experiencing stress before engaging in the VR intervention, indicating potential interest in using VR during high-stress moments.

Conclusion:

The VR intervention demonstrated high engagement among nightshift staff and RNs, suggesting it is a feasible and well-tolerated tool. Stress-driven usage highlights its potential for staff well-being. Further efforts are needed to increase engagement among dayshift staff and refine integration into ICU workflows.

Key Words: Virtual Reality (VR), Healthcare Workers, Stress Management, Pediatric Intensive Care Unit (PICU), Wellness Interventions, Workflow Optimization