# Virtual reality in child-oriented physical rehabilitation


## Abstract

Virtual Reality (VR) is under study in healthcare as a potential aid for rehabilitating hospitalized children. Investigations into VR's immersive qualities suggest possible improvements in patient engagement and physical recovery, with additional practical benefits for healthcare providers. Yet, the need for tailored software and hardware solutions, as well as safety considerations, present notable challenges. The insights gathered point towards a cautious yet optimistic future for VR in pediatric rehabilitation, pending further study and innovation.


## Goal

The goal of this paper is to explore the effectiveness of virtual reality as a medium to aid in the physical rehabilitation of hospitalized children.

It explores the perspectives of the child, the doctor and explores long time use of VR and addresses its safety.

## Results

- VR stands out for its immersive qualities that not only distract from pain but also enhance movement, with gamification being a key factor in improving children's willingness to participate in rehab.
- From the doctors' perspective, VR is recognized for its effectiveness and practicality in clinical practice, particularly noted for its pain-reducing capabilities.
- Little research into safety indicates a clear need for more research into VR integrations in modern healthcare.

## Methods

Trusted academic articles, reports, and conference papers were carefully examined in a desk research. The primary focus was on children's rehabilitation. The study also included a wider range of sources to cover gaps, especially regarding safety concerns. To maintain high standards, only peer-reviewed materials were used. This approach ensured a thorough and reliable analysis of the available literature.

## Conclusion

VR engages young patients and may ease their pain, making recovery more pleasant. Doctors view the medium as a useful aid to their existing plans. However, safety and a lack of in-depth research are concerns, and VR's adaptability to various rehab needs is limited. In conclusion, while VR shows potential in rehabilitation settings, more detailed studies and technological improvements are essential for its broader use.

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