VIRTUAL REALITY IN ANESTHESIA

Research Article Summary

Simonetti V, Tomietto M, Comparcini D, Vankova N, Marcelli S, Cicolini G. **Effectiveness of virtual reality in the management of paediatric anxiety during the peri-operative period: A systematic review and meta-analysis**. International Journal of Nursing Studies. 2022 Jan 1;125:104115.

Key Takeaway

Virtual reality (VR) is **effective** for reducing anxiety in children undergoing elective surgery under general anesthesia (GA).

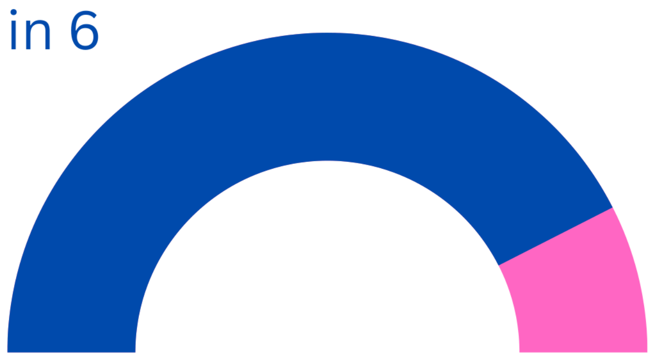
Methods

- Systematic review and meta-analysis of randomized controlled trials (RCTs) comparing VR vs standard of care (SOC).
- Primary outcome: Anxiety levels assessed by the Modified Yale Preoperative Anxiety Scale (mYPAS)
- Secondary outcomes: Pain, Induction compliance assessed with Induction Compliance Checklist (ICC), Behavioral disturbances, Emergence delirium

Results

- Seven studies were included in the systematic review, six of which were included in the meta-analysis.

VR **OR tour** in 6 studies



VR **distraction game during induction** in 1 study [1]

Anxiety

VR reduced anxiety compared to SOC (PL=-0.341, [95%CI]: = -0.620 to -0.107).

Induction compliance

The results were mixed concerning the effectiveness of VR for improving compliance compared to SOC. VR improved compliance in 2 studies at the same institution (p<0.01, 0=0.038) [3, 4], but not in 2 other studies [1, 5] including the study that employed VR during induction.

Pain

VR did not reduce pain post-operatively and 2 weeks after surgery compared to SOC (Revised Faces Pain Scale p=0.699 at post-op, p=0.454 at 2 weeks) [2].

Emergence delirium

There was no difference in emergence delirium in VR group compared to SOC [2, 6].

Behavioral disturbances

There was no difference in postoperative behavioral disturbances with VR compared to SOC except in one study (Procedural Behavioral Rating Scale p = 0.010) [2].

References

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