

The effect of virtual reality on pain and anxiety management during outpatient hysteroscopy: A systematic review and meta-analysis of randomized controlled trials

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Abstract:

Objective: To evaluate the effectiveness of virtual reality (VR) intervention for pain and anxiety relief during outpatient hysteroscopy.

Methods: Various databases were searched for available clinical trials from inception until June 2023. We selected randomized controlled trials (RCTs) that compared virtual reality intervention versus standard care among women undergoing outpatient hysteroscopy. We used Revman software to perform our meta-analysis. The primary outcome was the pain score during the procedure. The secondary outcomes were anxiety during the procedure and pain post-procedure. The Visual Analog Scale (VAS) was used to assess pain and anxiety.

Results: Six RCTs were retrieved, involving a total of 457 patients. Virtual reality was associated with a significant reduction in pain score during the procedure in comparison with the control group (MD = -1.43, 95% CI [-1.69, -1.16], $p < 0.001$). In addition, there was a significant decrease in anxiety during the procedure among the virtual reality group compared to the control group ($p = 0.01$). The pain score post-procedure significantly decreased within the virtual reality group (MD = -1.52, 95% CI [-1.78, -1.26], $p < 0.001$).

Conclusions: Virtual reality technology is a simple, feasible, and effective intervention for reducing pain and anxiety during outpatient hysteroscopy. More trials are required to confirm our findings.

Keywords: Virtual reality; Hysteroscopy; VR; Pain; Anxiety.