

## 572 Virtual Reality Operative Simulation in Orthopaedic Surgical Training During Periods of Restricted Clinical Hours: Systematic Review

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**Introduction:** The public health response to the coronavirus pandemic imposed limitations upon orthopaedic surgeon's scheduled care practice, with a consequential diminution of training time for residents. A potentially viable option for maintenance of operative competency is the use of virtual reality (VR) simulation. This review looks at the effectiveness of (VR) as a pedagogical method of learning for orthopaedic trainees.

**Question:** Can VR be a viable method of learning and skill retention for orthopaedic trainees during periods of diminished operative time?

**Method:** A systematic search using Google Scholar, EMBASE and PubMed was conducted in July 2020.

**Results:** Following the PRIMSA guidelines; initial search revealed 779 studies. 35 full text articles were analysed by two reviewers with a final total of 30 articles used in this review. A thematic analysis revealed three broad categories: quality and validity of VR teaching simulations studies (n = 8); learning curves and subject performance (n = 14) and VR simulators utility in orthopaedics reviews (n = 8).

**Conclusions:** We demonstrated that VR has the capacity to help trainees maintain their technical skills, enhance their precision, and retain rudimentary competency during this pandemic. Additional improvements are necessary to ensure its safety as a training tool.