

Use of virtual reality in medical obstetrical education; a quasi-experimental design

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Abstract

Objective: Video-based teaching has been part of medical education for some time. We investigated if an additional 3D video to the curriculum leads to an improvement of long-term recall of knowledge regarding situation, procedure and organisation. **Design** quasi-experimental design **Setting:** Sequential gynaecology residency teaching groups had or had no access to a VR-video of a gentle caesarean section (CS). **Sample:** 41 medical students participated in the VR group and 48 in the conventional study group. **Methods:** After 6 weeks of residency, knowledge was assessed with an open and multiple choice questionnaire. **Main outcome measures:** General obstetric and specific CS related knowledge and happiness with the use of VR glasses **Results:** 3D video did not result in a difference in either specific or general knowledge retention between the VR group and the conventional study group. However 83.4% of the VR-group reported that more videos should be used in future to prepare for surgical procedures. In the VR group 56.7% reported side effects like nausea or dizziness. After adjustment for the number of attended CSs, students in the VR group stated less often ($p=0.04$) that they would have liked to attend more real-life CSs as compared to the conventional study group. **Conclusion:** Even though the use of VR did not increase knowledge, it did provide a partial alternative for attending a real CS. In case only few possibilities to attend a CS are available, VR might provide an alternative. **Funding:** Spaarne Gasthuis innovation fund

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