

**EFFECTIVENESS OF VIRTUAL REALITY TECHNOLOGY APPLICATION IN MEDICAL EDUCATION: A REVIEW OF EVIDENCES**Zahra Karbasi¹, Shahabeddin Abhari², Sharareh R. Niakan Kalhori*³, Sadrieh Hajesmaeel Gohari⁴

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ABSTRACT

Introduction: Medical education is a dynamic process, which is constantly developing. Learning and medical education due to the limitations of traditional training methods is a difficult task. The use of new techniques in medical education will help students to improve their performance and skills without becoming worried about negative consequences for patients. Virtual reality (VR) is a promising technology that provides a learning environment with simulation of critical situations for medical students. Through using virtual simulation, students learn how to react in high-risk situations, where human lives are in danger. The aim of this review was to evaluate the effect of virtual simulation training for medical students.

Methods: This article was a reviewed study conducted in December 2016. Databases such as PubMed and Web of Science were searched to find all related articles with using keywords: “medical education” and “virtual reality.” Further, a manual search was performed between published references.

Results: A review of previous studies revealed that first- to fifth-year medical students used virtual reality as an educational tool. The results showed that virtual reality technology is used to train medical students in various fields such as anatomy, diagnostic otoscopy, mastoidectomy, legal medicine, laparoscopic skills, and arthroscopy. The majority of technologies that have been used to teach medical students were based on virtual reality simulation and augmented reality. All of the articles revealed that using virtual reality technology can improve the diagnostic performance of the medical students during encounters with different situations and enhance their practical skills.

Conclusion: The results showed that virtual reality has a positive impact on learning and improving the process of medical education. It allows students to interact with simulated models and experience anatomy of virtual patients. Therefore, the findings of this study can be used to create effective training methods using virtual reality.

KEYWORDS: Education, Virtual reality, Medical student, Medical education

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