Abstract

The Effect of Virtual Reality on Anxiety in Patients undergoing Upper Gastrointestinal Endoscopy

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Background and Objective: One of the stressful and aggressive diagnostic methods in clinical settings is upper gastrointestinal endoscopy, which patients are commonly exposed to it. Anxiety caused by endoscopy can prevent to achieve the desired results. Virtual reality is a new technology that is discussed in reducing the anxiety. The purpose of this study was to determine the effect of virtual reality on anxiety in patients undergoing upper gastrointestinal endoscopy.

Methods: This study is a clinical trial, which performed on 66 patients referred to Endoscopy Department of Shahid Modarres Hospital of Kashmar in 2012. The research units were selected purposefully based on entry criteria and were randomly assigned to two intervention and control groups by the permutation block method. At first, Informed Consent Form and Demographic Information Questionnaire were completed and then, Spiel Berger’s Apparent Anxiety Questionnaire was completed. The used tool for virtual reality technology was a virtual reality headset device (Remax-RT-V63 audio-visual glasses with internal memory) that a simple film about endoscopy implementation and a HD nature film with pictures and waterfall sound was displayed for Test group before endoscopy within 15 minutes. In the control group, all of these steps were implemented except virtual reality. In order to investigate the effect of virtual reality on the level of anxiety after finishing intervention, the results of test were compared in both groups together. Data were analyzed by version 26 SPSS software and using independent T-test, paired T-test and Chi-square test. The results were considered significant at a level less than 0.05.

Findings: The results of the studies showed that 37% of the patients in the control and 53% in the intervention group were woman. The mean age of the research units was 41±12 in the intervention group and was 42±16 in the control group. The results showed that the anxiety score of the research units had not significant different before intervention. After intervention, although there was a reduction in the level of anxiety in both groups, but the level of reduction in the intervention group was significantly higher than the control group (p < 0.01).

Conclusion: The use of virtual reality reduces the anxiety of patients undergoing endoscopy, and it is recommended in application after supplementary studies.

Key words: Virtual Reality, Anxiety, Endoscopy

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