ABSTRACT:

**Background and objective:** Patients admitted to the cardiac care unit experience high levels of anxiety and poor quality sleep, which affects the physical and mental health and improvement of the patients, and various therapeutic and non-pharmacological interventions are used to treat it. One of the methods that has recently been used in the field of medicine as complementary medicine is the use of virtual reality. Therefore, the aim of this study was to investigate the effect of using relaxation images based on virtual reality on anxiety and quality of sleep in patients in cardiac care unit.

**Method:** The present study was a clinical trial conducted in November in the coronary care unit of Shahid Modarres Hospital in Kashmar. The samples consisted of patients admitted to coronary care unit of Shahid Modarres Hospital in Kashmar. They were selected by using the simple random sampling method and assigned to control and test groups. The data collection instruments included a demographic questionnaire, the Spielberger State-Trait Anxiety Inventory scale and Verran and Snyder-Halpern Sleep Scale. In the intervention group, the anxiety and sleep quality were evaluated after the first night of admission, the phase of intervention was administered in the form of playing high quality videos of natural landscapes in 15-minutes interval through the virtual reality headset on the second and third night of the admission. After intervention, the patient's anxiety and sleep quality were measured again by the researcher and compared with the pre-intervention level. In the control group, all of these steps were implemented except virtual reality. Findings were analyzed by SPSS software, using descriptive and inferential statistics (Chi-square, t-test and paired t-test, and the significance level was less than 0.05).

**Results:** The results showed that the use of relaxation images based on virtual reality in the intervention group compared with the control group significantly decreased the state anxiety (P < 0.01) and trait anxiety (P < 0.01) and improved sleep quality Sleep disturbance (P < 0.01), sleep efficacy (P < 0.01) and sleep latency (P < 0.01) were significantly different in comparison with the control group.

**Conclusion:** According to the findings, the use of relaxation images based on virtual reality as an easy and uncomplicated method can be effective in reducing anxiety and improving the quality of sleep in patients in cardiac care unit.

**Keywords:** Virtual reality, Anxiety, Sleep quality, Cardiac care unit