



## The study of the effect of guided imagery on pain, anxiety and some other hemodynamic factors in patients undergoing coronary angiography



Samira Foji <sup>a,\*</sup>, Moosa ALReza Tadayonfar <sup>b</sup>, Mohaddeseh Mohsenpour <sup>c</sup>,  
Mhammad Hasan Rakhshani <sup>d</sup>

<sup>a</sup> Student Research Committee, Sabzevar University of Medical Sciences, Sabzevar, Iran

<sup>b</sup> Department of Nursing, School of Nursing and Midwifery, Sabzevar University of Medical Sciences, Sabzevar, Iran

<sup>c</sup> University of Social Welfare and Rehabilitation Sciences, Tehran, Iran

<sup>d</sup> Sabzevar University of Medical Sciences, Sabzevar, Iran

### A B S T R A C T

#### Keywords:

Guided imagery  
Anxiety  
Pain  
Hemodynamic parameters  
Angiography

One of the most frequently used methods for the diagnosis and treatment of heart diseases is cardiac catheterization which increases the anxiety level in patients before surgery. In this random clinical study, 62 people undergoing coronary angiography were randomly assigned to experimental and control groups. The necessary data were collected through a hemodynamic variable sheet, the STAI anxiety questionnaire and a pain scale. The experimental group subjects were asked to listen to a Guided Imagery CD for 18 min. The mean level of anxiety for the Guided Imagery group after the intervention decreased significantly. The comparison of the means of hemodynamic parameters before and after the intervention showed a small decrease after the intervention, but this reduction was not statistically significant. Moreover, the means of pain as measured by pain scale showed that the control group had slower level of pain but, again, this difference was not statistically significant.

© 2015 Elsevier Ltd. All rights reserved.

### 1. Introduction

The death rate among patients suffering from cardio-vascular diseases including coronary heart diseases has decreased since 40 years ago [1].

Cardiac Catheterization is an invasive diagnosis procedure providing vital information on the valve disease of the heart and the functioning of the heart ventricles. It is also used to measure the internal pressure of the heart, the oxygen level in different parts of the heart and the output level of the heart. In this method, fluoroscopy liquid is injected into the coronary arteries so that heart cavities and heart walls can be observed [2].

Every year, around 2 million Americans undergo catheterization, and this number is increasing due to the reliability and accuracy of the diagnosis of coronary diseases by this method [3]. Although it is one of the most accredited and reliable methods in

the diagnosis of cardio-vascular diseases, catheterization can produce anxiety and panic in patients [4].

Anxiety is an undesirable state of nervousness and distress caused by the fear of disease, hospitalization, anesthesia or surgery in patients [5]. The factors usually responsible for the increased level of anxiety in patients undergoing angiography are: one's previous surgeries, pain, unfamiliar environment and fear of angiography [6].

When one experiences anxiety, the level of Catecholamine, Adrenocorticotrophic hormone (ACTH), Prolactin, Cortisol and Prostaglandins in his or her blood increases. In addition, anxiety has some adverse effects on patient's physiological reactions including breathing, heart beats, the consumption of myocardial oxygen in the body, the concentration of adrenaline and noradrenalin in the plasma, the heart output, and the blood pressure, all of which can put the patient in danger in the operating room [7].

The major purpose of the pre-operation treatment phase is for the nurses to maximize the physiological and mental well-being of the patient and to help him to adapt himself to the operation condition and the resulting anxiety and nervousness [8].

\* Corresponding author. School of Nursing and Midwifery, Next to the Police Station to Shahroud Road, Sabzevar, Iran. Tel.: +98 5712654874.

E-mail address: [samirafoji@yahoo.com](mailto:samirafoji@yahoo.com) (S. Foji).

The methods and techniques to control the panic and anxiety before operation (surgery) include medical and non-pharmacologic ones. One of the medical methods is the prescription and use of Benzodiazepine. However, because of the temporary effect of this medication and its side-effects, the use and application of non-pharmacologic methods has been increasingly used. Many research studies have been done on these methods. One of the methods to control pain and anxiety is the application of complementary medicine [9].

Guided Imagery, as a mind-body technique, is based on the fact that the mind and the body are interrelated and hence can have interaction to produce health and to control illness. In guided imagery, the same section of the brain activated while one experiences a real event is activated. In other words, the patient is helped to develop in his mind the desirable image he likes to experience so that he can feel, see, hear, and smell that event like reality.

Guided imagery is a technique in complementary medicine which patients can learn through audio books and ordinary books or by an instructor in order to use it to control his panic, anxiety and mental distress [10].

In this technique, the patient is instructed to breathe deeply abdominal and diaphragmatic, and then, to relax his muscles while imagining he is in a beautiful jungle or at seaside and trying to hear the sounds around and to smell the smells usually found there [11]. Recent research studies show that concentrating on a mental image and thinking positively can have a positive effect on one's mood [12].

In their study, Antel et al. (2004), in their pilot study on the treatment of patients undergoing joint transplant surgery, showed that guided imagery could be used to lower pain, anxiety, and painkiller consumption, and to shorten the length of hospitalization [13].

With the same token, Gonzales et al. (2010) reported that guided imagery reduced anxiety level and pain of their patients in the second hour after the surgery, however, it did not have any significant influence on pain in the first hour after surgery, either did it have any effect on subjects' satisfaction, the amount of painkillers taken and the length of their stay at the hospital [14]. Because anxiety commonly faced before surgery has many adverse effects on patients, and because guided imagery is readily accepted by patients because it is not an invasive method, the present study aimed at studying the possible effect of guided imagery on the reduction of pain and anxiety, and its possible effect on other hemodynamic features (symptoms) of patients before going under angiography.

## 2. Material and methods

This study was a randomized clinical trial on 62 subjects going under angiography, classified into two experimental and control groups of 31 subjects. The subjects participating in the study were randomly selected from a population of patients staying at CCU and Heart Ward at Vasei Hospital of Sabzevar affiliated to the Medical University of Sabzevar. The subject needed to go under Angiography for their treatment in 2013.

The subjects were first selected based on availability and purpose of the study. However, having been selected, they were then randomly by permuted-block randomization assigned to the experimental and control groups. The followings were inclusion criteria in the selection of the subjects: the subjects should be in 35–69 age range, they needed to be literate, they should not be suffering vision and hearing disorders, they had to go under coronary angiography, they should not be addicted to drugs, alcohol, they needed to go under angiography for the first time. The exclusion

criteria were the followings. Those not satisfied with the treatment, those needed to take painkillers.

The subjects were required to fill out the following four questionnaires.

1. Demographic and identification questionnaire.
2. Spielberger state-trait anxiety questionnaire before and after Intervention i.e., listening to music before the patients 'going under angiography. It is a standard, reliable and valid questionnaire commonly used in studies on anxiety [14,15,16].
3. Pain Scale the validity of which is confirmed by Jensen and Carole [17]. Its reliability is estimated to 0.78 and 0.83 by Farar and Good respectively [18,19].
4. Hemodynamics Check List recording information related to systole and diastole blood pressures, pulse and respiration rate was administered three times in the morning of the angiography day, before intervention and after intervention.

The anxiety level of the experimental group was measured before and after the Intervention. More specifically, having filled out the questionnaire once, the subjects were put in a relaxing quiet environment reducing and eliminating environmental stimuli (dim illumination, and noisy coming and going of other patients and doctors) while listening to audio input creating a guided mental image for them for 18 min through headphones. Then, Spielberger questionnaire was administered once more to measure their anxiety. The control group received no intervention; their anxiety level was measured before the start of the study and after Intervention, simultaneously with the experimental group.

The level of the pain experienced by the subjects in both groups was measured after the angiography procedure through Pain Scale.

Moreover, the hemodynamics symptoms of the subjects in both groups were determined three times: twice before the intervention, once in the morning of the angiography procedure day and once 1 h before the Intervention, and the third time after the Intervention.

In this study, knowing that the procedure is harmless for the subjects, the researcher selected the subjects the morning of the angiography. Having explained the procedure to them, she obtained their consent to take part in the study. Moreover, they were told that they can quit the study at any time in their volition and the proposal for the present study was introduced in the committee for Ethical Issues at the Medical University at Sabzevar and was confirmed and registered with this code number medsab.Rec.92.11 and at IRCT with this code number IRCT2014010916148N1.

## 3. Results

The 62 subjects participating in this study had an average age of  $57.06 \pm 8.9$  years old, ranging from 35.15 to 69.12. From among the participants, 25 (40.3%) were females and the remaining 37 (59.7%) were males. As to their marital status, 48 were married while 14 were divorced or widowed. 29 did not hold a diploma, 21 ones had a diploma and associate degree while 12 had university degrees (Bachelor and Master).

The results of Chi square analysis showed that there were no statistical significant differences between the subjects in experimental and control groups at 0.05 level in terms of sex, age, marital status, education, life place, job and insurance (Table 1).

A t-test revealed that the differences between the levels of all three forms of anxieties for the control group before and after the intervention were not statistically significant at  $p < 0.05$  level (Table 2).

Download English Version:

<https://daneshyari.com/en/article/2628743>

Download Persian Version:

<https://daneshyari.com/article/2628743>

[Daneshyari.com](https://daneshyari.com)