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The Effect of Training Booklet on anxiety level of the patient's candidate for coronary artery bypass graft surgery (CABG)

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ABSTRACT

Patients undergoing open heart surgery due to various reasons become depressed and anxious. In this study, therefore, we attempted investigate the impact of training on the anxiety level of the patients candidate for coronary artery bypass graft surgery (CABG). This is a quasi-experimental study. The samples were 70 patients admitted to coronary artery bypass surgery in Yazd Afshar Hospital. The patients were randomly divided into two equal groups experimental and control. Experimental group were patients trained before surgery by using the training booklet, but the control group only received usual training. Data collection consisted of two parts; demographic information and Anxiety Inventory Spielberg questionnaire for determining the anxiety level. The results obtained by using the statistical software SPSS and descriptive statistics, comparison of means, paired t-test, and ANOVA, were analyzed. The mean age of the samples was 54.47 ± 10.26 years. On admission the mean anxiety score for the control group was 34.62 ± 5.31 and for the experimental group 37.97 ± 7.39 . However after training, in the experimental group, the anxiety means score was 25.91 ± 6.65 whereas in the control group was 33.71 ± 5.07 . Anxiety level in the experimental group compared with control group before training significantly reduced. (P-Value=0.04) No relationship was found between the patients' educational level, sex, and the mean score on anxiety score between the two groups before and after training. Based on the findings of this research, it can be concluded that training by "training books" before open heart surgery can be a solution to reduce the patient anxiety. It is recommended, therefore, that nurses make use of this method alongside other interventions to provide comfort to patients.

Key words: Education, Anxiety, Coronary Artery Bypass Graft Surgery (CABG)

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1. INTRODUCTION

Coronary artery disease is one of the main causes of mortality and morbidity in developed countries (1). Currently, one of the most common treatments for this disease is coronary artery bypass graft (CABG), which increases life expectancy in these patients (2). In Iran, heart coronary artery bypass graft surgeries form more than 50 to 60 percent of all heart surgeries (3). This surgery, however, is associated with high anxiety for patients. The incidence of anxiety among the adults before surgery has been reported to be 80 to 11 percent. Researches have

shown an increase of anxiety throughout the process of operation (4-7). Also, anxiety has been reported more frequently in women than in men (8-10). Research has also shown that factors such as fear of the unknown, death, disability, discomfort and its possible consequences, and the necessity to perform this surgery on the one hand, and force to accept the surgery on the other hand, are some the reasons for patients' anxiety (3). Another factor resulting in anxiety in these patients is lack of psychological readiness of the patients. Due to the nature of the nursing profession and being in direct contact with patients during the disease process, nurses should help the patient manage

their anxiety because high and constant anxiety will cause inappropriate consequences for patients (11). Patients, who are more anxious before surgery, may experience more pain after surgery (12). They may also experience lower quality of life, (13) and the likelihood of their re-hospitalization (13, 14). One of the most essential nursing cares is therefore controlling and preparing the patient both physically and socio-psychologically. In terms of mental preparation the most important thing are training the patients. There are several methods for training patient including training programs, computer training, training set, group discussions, lectures, question, show, exercises, simulations, and role playing. According to existing conditions, patients' characteristics, time and content of training, nurses should use the best and most effective way to teach the patients. Patient candidates for open heart surgery are often concerned about the postoperative incidents and consequences and are also concerned to get information on different aspects of the disease and the treatment including surgery, intensive care unit, diet, activity, return to work, drugs, etc. During this training, the researcher must give patients the opportunity to question and discuss matters of their concern and give them any necessary information, if needed. In this study, therefore, the researcher has tried to fix the problem by preparing a training booklet and providing related information. The present study thereby aimed to determine the effect of a training booklet (Booklet) on anxiety of the patients who are candidate for (CABG) which was performed in 2012-2013 in Yazd Afshar Hospital.

2. MATERIALS AND METHODS

This is a quasi-experimental study. Seventy patients were candidate for CABG surgery who was admitted to Yazd Afshar Hospital. The following criteria were considered important for inclusion of the patients into the study: 1) no history of open heart surgery, 2) no history of mental illness, 3) awareness of the setting, and 4) proficiency in Persian. Those patients were randomly assigned into two equal groups: experimental and control. The patients in the experimental group were those who were trained by training booklet before the surgery but control group were patients who received routine trainings in the hospital. This training was performed by only one individual and with the same procedure for the experimental group. The contents of the training booklet were about the following, causes and treatment of coronary artery disease, heart surgery, information about admission time, routine nursing care, time of getting conscious after surgery, postoperative patient's condition, and self-care during hospitalization, self-care and observing recommendation after surgery, rehabilitation methods, and way of how to start doing other activities. The data gathering instrument was a questionnaire consisting of two parts: demographic information (age, sex, marital status, and education level)

as well as the Spiel Berger Anxiety Inventory which was used to determine the patients' anxiety level. Reliability and validity of the instrument have been verified in Iran. Mahram has calculated the reliability of the questionnaire in 1994. The Cronbach Alpha coefficient for the reliability was (0.9452) (15, 16). Scoring Spiel Berger anxiety inventory was according to Likert scale and ranged from 1-4. The scores were ranged from 20 to 80: low anxiety score were between 20-24, moderate anxiety scores were 43-64, and severe anxiety scores between 65-80. In this study the mean scores of the patients on anxiety patients were considered. The study was conducted in three phases. In the beginning stage of the admission, and after determining the level of anxiety of the participants, the experimental group was taught by the training booklet. Then in the second stage, and the night before surgery, Spiel Berger anxiety questionnaire was given to both groups. In the third stage, and after the surgery, when the hemodynamic status of patients and their level of consciousness were stabilized, anxiety levels in both groups were measured again. The results obtained were analyzed by using SPSS version 15 and applying the following tests: descriptive statistical tests, comparison of means, Leuven, paired t-test, and ANOVA.

3. RESULTS AND DISCUSSION

The results of the study revealed that 72.9% of the cases were male and 98.6% were married. Moreover, more than half of participants (57.1%) enjoyed just elementary education level. Distribution of sample age was from 30 to 75 years and their mean age was 54.47 ± 10.26 . Before conducting the study we were assured of the balance between the groups in terms of their variable through Levene's test and some other related tests. The results of the Levene's test and ANOVA indicated the homogeneity of the variance related to anxiety were not statistically different before and after the training. Therefore, the fact that the groups must become homogeneous has also been taken into consideration. On admission the mean anxiety score for the control group was 34.62 ± 5.31 and for the experimental group 37.97 ± 7.19 . These two groups showed no significant statistical difference (P-Value= 0.075). The levels of anxiety, however, were measured in the night before the surgery and after training only to experimental group. In the experimental group, the anxiety means score was 25.91 ± 6.65 whereas in the control group was 33.71 ± 5.07 . Anxiety level in the experimental group compared with control group before training significantly reduced. (P-Value=0.04). Finally, after surgery and stabilization of patients, the level of anxiety of two groups measured. The mean anxiety score for the control group was 27.60 ± 5.07 and for control group was 28.14 ± 4.05 that no significant differences were found (P-Value=0.138) (Table 1).

Table 1. The mean \pm SD anxiety score of patients before and after training

	Groups	Mean	SD
Admission	control	34.62	5.31
	experimental	37.97	7.19
Before surgery	control	33.71	5.07
	experimental	25.91	6.65
After surgery	control	28.14	4.05
	experimental	27.60	5.07

In analysis of data by using ANOVA test there was not found any relation between the educational level and the mean of anxiety score of two groups before and after training (before training P-Value= 0.415 and after training P-Value= 0.619). Also, there was no statistical significant relationship between sex and anxiety (P-Value= 0.214). Finally, to assess the effect of education on the patient anxiety before and after training paired t-test was used and it showed significantly that training was effective on decreasing the patient anxiety before and after open heart surgery (P-Value=0.000). The results of the study showed that the patients' mean of anxiety score before and after training had a statistical significant difference. Similar studies, however, indicated some differences. In a study with the aim of determining the effect of training films on the anxiety of patients undergoing angiography Ruffinengo stated that this approach significantly reduces patient anxiety and increases their satisfaction level, especially in the cardiovascular wards (17). In a study conducted by Higgins et al (2001), the researchers mentioned two major problems of these patients as chest pain and anxiety of the unknown and showed that after gathering information from medical staffs in relation to angiography, the patients' anxiety significantly reduced (18). Likewise, to determine the effect of training on anxiety of patients undergoing cardiac surgery Nelson (year) stated that the level of anxiety reduced in 86% of the patients after training (19). In his study on 120 patients candidate for coronary artery bypass Moumeni indicated that the overt and covert anxiety of the patients reduced after training-by-training booklet and films in comparison with that of before giving the booklet (20). The results of several studies examined were not consistent with the current study. In a study entitled "Preoperative training for patients undergoing open heart surgery: a source of anxiety", which was performed in Beirut by Deyirmenjian indicated that the results between experimental and control groups in the terms of anxiety after the surgery were significantly different (P=0.08) (21). Moreover, in a study by Celik and Asilioglu in Turkey with the aim of preoperative training on anxiety of the patients undergoing open heart surgery was performed the findings did not show significant differences between control and experimental groups' anxiety scores. Nevertheless, the researches finally stated that the use of training booklet is an effective tool for communication and training the patients and their family

hood to care for themselves and cope with the anxiety (22). Because the nurses have a key role in assessing and relieving patients' anxiety and spend more time with patients, health care personnel they should exercise more attention to the problem of anxiety. According to the results of this study, Therefore, and the nature of the disease and open heart surgery that is an important factor in causing stress and anxiety in patients, using training booklets and patient-centered training are recommended to nurses, and other medical staff. In general we can say that the training program will not only reduce patient's anxiety but also reduce the need for sedatives in these patients. It is also proposed that for the contradictions existing in studies which were cited to them and in order to generalize the findings, we suggest further studies with larger samples.

4. CONCLUSION

Finally, it should be said the small sample size in this study makes generalization of the results difficult. Therefore, caution is needed in this case.

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AUTHORS CONTRIBUTION

This work was carried out in collaboration among all authors.

CONFLICT OF INTEREST

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