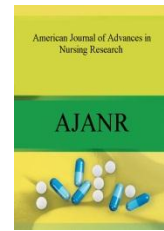




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EFFECT OF PREOPERATIVE TEACHING ON ANXIETY AMONG CARDIAC SURGICAL PATIENTS

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ABSTRACT

Preoperational anxiety is a universal reaction experienced by patients who are admitted to the hospital for surgery. No matter how major or minor an operation is, it tends to a degree of anxiety to every patient. We sought to investigate the effect of preoperative teaching in reducing preoperative anxiety among cardiac surgical patients. A total of 60 cardiac surgical patients were selected and underwent quasi experimental study (one group pre test and post test design). Pre test was conducted by using State Trait Anxiety inventory followed by preoperative teaching on the reduction of anxiety levels on the first day to the patients. On 7th day postoperatively post test was conducted to the patients by using same questionnaire. Data was analyzed by using 't' test, chi square and one way ANOVA. The results indicate that majority was females (68.3%), between the age group of 41-50 years (45%) and mostly belongs to semi urban areas (53.3%) and the obtained pre and post mean scores of the patients were 62.43 ± 4.47 and 27.12 ± 3.88 and the 't' value obtained was 51.55 ($p < 0.01$) which indicates that there is significant difference between pre and post anxiety levels after preoperative teaching. Preoperative teaching was effective in reducing anxiety levels of the patients undergoing cardiac surgery and the patients can follow the relieving measures like meditation, yoga, regular exercises, eating healthy diet and having enough sleep in their daily life to recover soon and to improve their quality of life.

INTRODUCTION

Pre operative anxiety is a challenging concept in the preoperative care of patients. Most patients awaiting elective surgery experience anxiety and it is widely accepted as an expected response [1]. The level of anxiety of each person is due to various factors, such as age, gender and level of education, the expenses on the medical treatment and the part of the body where the operation has to be performed [2]. Preoperational anxiety is a universal reaction experienced by patients who are admitted to the hospital for surgery.

Just the initial idea of having surgical procedures can bring about very high levels of anxiety in patients. Anxiety is described as an unpleasant state of uneasiness or tension, which may be associated with abnormal hemodynamic as a consequence of sympathetic, parasympathetic, and endocrine stimulation [3].

And every patient has right to know what to expect and how to participate effectively during the surgery. Preoperative teaching increases patient satisfaction and can reduce postoperative vomiting, pain, fear, anxiety and stress. It can also decrease complications like the duration of hospitalization and the recovery time following discharge [4]. Many studies have demonstrated a positive effect of written information provided preoperatively and have shown surgical patient's

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Research Article



better understanding of their condition and treatment [5]. It has been observed that written information helps patient recall and that patients find written information easier to discuss with family and friends. Of the varying approaches to alleviation of preoperative anxiety, one of the most commonly used methods of psychological preparation is provision of both procedural and behavioural information [6].

METHODOLOGY

Ethical clearance was obtained from institutional ethical committee.

Research Design: Research design adopted for the present study was quasi experimental (one group pre test and post test design).

Sample and Sample size: A total of 60 patients undergoing cardiac surgery were selected as the sample after reviewing the operative list and the patient's records.

Sampling Technique: Non probability purposive sampling technique was adopted based on inclusion criteria.

Description of the tool: The tool consists of two sections:

Section-I: Consists of questions to collect demographic data

Section-II: Consists of questions to assess the anxiety levels by using state trait anxiety inventory.

The same questionnaire was used to assess the anxiety levels for both pre and posttest.

Scoring Key:

The questionnaire consists of 10 positive statements and 10 negative statements. For positive statements: Not at all = 4, Somewhat = 3, Moderately so = 2, Very so much = 1 and for negative statements: Not at all = 1, Somewhat = 2, Moderately so = 3, Very so much = 4 and the anxiety levels among patients undergoing cardiac surgery were divided into 3 categories

25-50% = mild anxiety.

51-75% = moderate anxiety.

76-100% = severe anxiety.

Main Study

After obtaining formal permission from head of the department of cardiothoracic and vascular surgery and written informed consent from the patients, pre test was conducted by using state trait anxiety inventory on the first day. After that a preoperative teaching on reduction of anxiety levels and an information booklet was given to the patients to reinforce what had been taught. Post test was conducted after seven days post operatively and anxiety levels were assessed by using same questionnaire. Patients who were posted for cardiac surgery mainly coronary artery bypass graft, atrial septal defect,

ventricular septal defect, mitral valve replacement or double valve replacement between the age group 20-60yrs of age were included and patients who were posted for emergency surgery of mitral valve replacement, popliteal bypass grafting, thoracic surgeries like lobectomy, bronchoscopy, removal of tumors and who are critically ill, on ventilator support are excluded in the study [7].

Statistical analysis

Data were analyzed by using the SPSS software of version 20 (IBM, US). Descriptive data were presented as frequency, percentage and mean \pm standard deviation. Paired 't' test was used for comparing pre and post operative anxiety levels. Chi-square was used to associate the pre anxiety levels with selected demographic variables. One way ANOVA was used to compare the mean variance among demographic variables with level of anxiety. All statistical tests were two-tailed; p values of 0.05, 0.01 or less were used to define statistical significance.

RESULTS

In our study, majority were females (68.3%) and belongs to Hindu religion(88.3%) between age group 41-50 years(45%). 91.7% were married, and belongs to nuclear family(85%), with monthly income of Rs.6,001-9,000(26.7%). Most of the people were not having the family history of cardiac problems (55%) and were residing at semi urban areas (53.3%), among them 30% were illiterates. The patients were suffering with the disease since 1-2 years (35%), among them 50% undergone mitral valve or double valve replacement, without any associated comorbid diseases (56.7%) and not having previous surgical history (96.7%).

The anxiety levels assessed were categorized into mild, moderate and severe (Table 1). The pretest mean scores were 62.43 ± 4.47 had decreased to mean score of 27.12 ± 3.88 in post test and the 't' value obtained was 51.55 ($p < 0.01$) which indicates that preoperative teaching was effective in reducing anxiety levels of the patients undergoing cardiac surgery.

The association of demographic variables with the levels of anxiety among patients revealed age was significant at $p < 0.01$, gender and previous surgical history was significant at $p < 0.05$. In post test the findings revealed that age, gender and educational status were significant at $p < 0.01$.

The comparison of mean variance among the demographic variables with the level of anxiety among patients revealed that gender and educational status were significant at $p < 0.01$, family history and previous surgical history were significant at $p < 0.05$.



Table 1. Comparison of results

	Mild Anxiety		Moderate Anxiety		Severe Anxiety		Mean \pm Standard Deviation	't' Value	'p' Value
	F	%	F	%	f	%			
Pretest	08	13.3	25	41.7	27	45	62.43 \pm 4.47	51.55	0.00**
Post test	38	63.3	16	26.6	6	10.1	27.12 \pm 3.88		

**p<0.01

DISCUSSION

After obtaining permission from the HOD of cardiothoracic and vascular surgery, a quasi experimental study was conducted. The subjects were selected after reviewing the operative list and the patient's records. Pre test was conducted on first day followed by preoperative teaching on reduction of anxiety levels. Post test was conducted on seventh day postoperatively. The results showed that majority was having severe anxiety levels (45%) and after the intervention the anxiety levels were decreased and majority was having mild anxiety levels (63.3%). The 't' value obtained was 51.55 which shows statistical significance at p<0.01 level. Thus the results indicate that there is significant difference between pre and post anxiety levels after preoperative teaching.

This study was supported by numerous studies like Ping. Guo, East Linda, Arthur [7] conducted a study on pre operative education intervention to reduce anxiety and improve recovery among Chinese cardiac patients. The results showed that participants who received preoperative education experienced a greater decrease in anxiety score and a greater decrease in depression score compared with that of control group.

Another study shows that 76% of patients had mild anxiety and there was no significant difference between the anxiety levels of patients undergoing surgery under general vs. spinal anesthesia and patient undergoing surgical procedure is a psychological and physical discomfort arising from the sense of immediate danger. For this attention should be focused to reduce anxiety through adequate hospital care that includes appropriate psychological and/or pharmacological preparation of the patient [8].

Preoperative multimedia information on anxiety in patients undergoing with regional anaesthesia in Nottingham shows that women had higher baseline anxiety than men and the patients in the experimental group were less anxious before operation than those in the control group [9]. And another similar study shows effectiveness of preoperative education in reducing anxiety in surgical patients, conducted by Diez Alvarez et al [10].

Anderson, Erling A, (2012) [11], conducted a study on preoperative preparation for cardiac surgery facilities

recovery, reduces psychological distress and reduces the incidence of acute postoperative hypertension. Regression analysis indicated that preoperative information reduced anxiety by increasing feelings of control. Postoperatively, both experimental groups (a) reported less emotional distress, (b) were judged by nurses as making better physical and psychological recoveries and (c) had a 32.5% lower incidence of postoperative hypertension.

Walter Norris and W.L.M Baird, (2010) [12], conducted a study with an aim to know the incidence and aetiology of preoperative anxiety among patients undergoing surgery which showed that preoperative anxiety was significantly higher in females than males and the cause for preoperative anxiety was found to be the outcome of the surgery. L.Ebirim & M.Tobin, (2010) [13] conducted a pilot study on Factors responsible for preoperative anxiety in elective surgical patients at a university of Port Harcourt teaching hospital which showed that 90% were anxious in preoperative period. Possibility of postponement of surgery was responsible for 87% of preoperative anxiety. Females were more anxious than males and previous surgical experience was associated with significantly lower levels of preoperative anxiety.

CONCLUSION

The results of the study indicated that preoperative teaching was effective in reducing anxiety levels of the patients undergoing cardiac surgery thus leading to early ambulation, improves wound healing, early recovery and the patients can follow the relieving measures like meditation, yoga, regular exercises, eating healthy diet and having enough sleep in their daily life to recover soon and to improve their quality of life.

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