A STUDY TO ASSESS THE EFFECTIVENESS OF PRE-OPERATIVE TEACHING ON THE ANXIETY LEVEL OF PATIENTS UNDERGOING CABG AT SCTIMST TVM

PROJECT REPORT

Ms.RANI.R.NATH

SREE CHITRA TIRUNAL INSTITUTE FOR MEDICAL SCIENCES AND TECHNOLOGY

OCTOBER 2006

Certificate

Certified that this is a bonafide work of ***Rani.R.Nath*** *at the Sree Chitra Tirunal institute for Medical Sciences and Technology.*

Submitted in partial fulfillment of requirement in Diploma in Cardiovascular and Thoracic Nursing from the Sree Chitra Tirunal Institute For Medical Sciences And Technology.

Saramma. P. P.
1/12/2006

Mrs. Saramma.P.P (MN)
Lecturer In Nursing
SCTIMST

Trivandrum-11
October 2006

ACKNOWLEDGEMENT

This study has been undertaken and completed under the inspiring guidance of Mrs.Saramma.P.P, (MN), Lecturer in Nursing Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. The investigator expresses sincere gratitude for her enlightening and sustained guidance.

With profound sentiments and gratitude the investigator acknowledges the encouragement and help received from the following person for the successful completion of this study.

The investigator takes this opportunity to express the sincere thanks to Dr.Jayakumar HOD of Cardio-Vascular and Thoracic Surgery, SCTIMST, TVM.

Then the investigator also takes this opportunity to express sincere thanks to Dr.A.V.George (MA,BEd.,PhD) Registrar, SCTIMST, TVM.

The investigator also takes this opportunity to express the sincere thanks to Mrs.Sudamani Amma MSc (N) PGDHRM Deputy Nursing Supt of SCTIMST, TVM.

Then investigator also take this opportunity to express the sincere thanks to Dr.K.Radakrishnan (MD,DM,FAMS,) DEAN SCTIMST, TVM.

The investigator take this opportunity to express the special thanks to Mrs.Saraswathi Amma. C, (ward sister) Cardiac Surgery ward SCTIMST, TVM. The investigator is thankful to all the staff of cardiac surgery ward at SCTIMST.

The investigator record special thanks to library staff of SCTIMST for granting permission to utilize the library facility.

The investigator like to express thanks to all friends who helped directly or indirectly throughout this project.

The investigator wishes to express heartful thanks to parents and near ones for their prayer, encouragement and help throughtout this procedure.

The investigator also takes this opportunity to express the special thanks to her mentor Ms Resmi P.I and all seniors who helped directly or indirectly throughout this project.

The investigator also take this opportunity to express the sincere gratitude to all patients who co-operated during the time of data collection.

❖ ❖ ❖ ❖ ❖ ❖ ❖

TABLES OF CONTENT

CONTENT

Chapter - IV

Analysis and interpratation of data

Chapter - V

Summary, Conclusion and recommendation

BIBLIOGRAPHY

❖ ❖ ❖ ❖ ❖ ❖ ❖

LIST OF TABLES

LIST OF FIGURES

Chapter - 1

INTRODUCTION

Background

Anxiety is a state of uneasiness and apprehension, as about uncertainties. In human life, people will experience some anxiety as they face life threatening situations. Anxiety is not just a feeling of uneasiness but a serious problem that increases physical health problems and risk of depression. Surgery is a challenging situation in the life of patient and relatives. Surgery often increases stress about what happens during operation. Almost all of them have fear about surgery but most of them will not express it. If the pre-operative anxiety is not relieved, the patient can develop post-operative complications easily.

Coronary surgery moved in to modern era in 1950's. CABG is useful in patients with asymptomatic ischemia or mild angina who have three-vessel disease (AHA Guidelines for CABG). Surgery to improve blood flow in patients with moderate to severe levels of blood flow restriction to the heart reduces the risk of cardiac death more than medication alone (Dallas, 2003). CABG surgery is among the most common operations performed in the world and accounts for more resources expended in the cardiovascular medicine than any other single procedure. The emotions of patients in the process of undergoing coronary artery bypass graft surgery have an influence on the rate of mortality (Uys 1993)

SCTIMST is one of the major center in India where CABG is done successfully. Two hundred and eleven patients underwent CABG in last 6 months (January to June 2006). Left main coronary artery disease (LMCA) is still a widely accepted indication for coronary artery bypass surgery.

Need and significance of the study

Patients who are admitted for CABG are found to be more anxious about the outcome of surgery. They also feared about the complications. The patient's anxiety level is an indication of post-operative problems. Pre-operative anxiety increases the chance of post-operative pain, post-operative analgesic consumption, and also hospital stay and recovery. In this situation pre-operative teaching plays an important role in relieving anxiety and reducing anxiety related complications.

Nurses have a major role for reducing pre and post operative anxiety. Many studies proved that pre-operative teaching by the nurses helps to reduce post-operative anxiety of the patient. Hence the investigator felt the need to conduct study about the effectiveness of pre-operative teaching on the anxiety level of patients before and after CABG.

Statement of the problem

A study to assess the effectiveness of pre-operative teaching on the anxiety level of patients undergoing CABG surgery.

Definition of terms

Pre-operative teaching: - An interactive process of providing information and explanation about surgical processes, expected patient behavior and anticipated sensations and providing appropriate reassurance and therapeutic listening to patients who are about to undergo surgery.

In the study, pre-operative teaching means planned health education about CABG surgery, expected patient hahaviour and anticipated sensation and providing appropriate reassurance and therapeutic listening to patients who are about to undergo surgery using a health education pamphlet.

CABG surgery :- is a type of heart surgery that reroutes or ''bypasses'', blood around clogged coronary arteries to relieve chest pain and reduce the risk of heart attack.

Anxiety

Anxiety assessment by using speilberger's state-trait anxiety inventory (STAI) Malayalam version.

Objectives

1. to assess pre-operative anxiety of patients undergoing CABG surgery.
2. to assess the effect of preoperative teaching on the anxiety level of patients under going CABG Surgery

Delimitations

The study is delimited to

1. limited sample size of 20 patients.
2. samples include patients undergone CABG surgery from one institution only (SCTIMST)

Summary

This chapter has included the background of the study, need for the study, statement of the problem, objectives of the study, definition of terms, and delimitation.

CHAPTER II

REVIEW OF LITERATURE

Review of literature is an important aspect of any research project from beginning to end. It gives character insight into the problem and helps in selecting methodology, developing tool, and also analyzing data. With these in view, an intensive review of literature has been done.

The review of literature relevant to this study is arranged in the following situations.

a) Studies on the effect of pre-operative teaching on anxiety level of patients scheduled for CABG surgery.

b) Studies for reducing anxiety by pre-operative education.

Ku SL (2002) conducted a study to assess the effects of phase I cardiac rehabilitation intervention on anxiety of patients hospitalized for coronary artery bypass graft (CABG) surgery in the Veterans General Hospital Taipei, Taiwan, Republic of China. 70 patients were randomly assigned to (1) the phase I cardiac rehabilitation intervention (experimental) group and (2) the nonintervention (comparison) group. Ultimately, 60 subjects were included in the data analyses. Psychological status was evaluated by the state of anxiety scores on the State-Trait Anxiety Inventory. Anxiety scores were measured 3 times: (1) after admission, before the patient underwent CABG surgery; (2) the day before the patient underwent CABG surgery; and (3) the day of

discharge from the hospital. Individual instruction in progressive exercises and daily activities according to the phase I cardiac rehabilitation program (Chinese manual) were used during hospitalization. Data analysis was performed with use of generalized estimating equations (GEE) to assess the between- and within-group variations. The mean anxiety for all subjects before undergoing CABG surgery was 42.6. The mean anxiety on the day before undergoing CABG surgery was 33.7 in the experimental group and 49.8 in the comparison group; there were statistical differences, with a $P < .05$ level of significance between these 2 groups. The mean anxiety on the day of discharge in the experimental group was 28.6 and in the comparison group was 38.4; there were statistical differences, with a $P < .05$ level of significance between these 2 groups. These results have been supported by similar studies. This finding suggests that application of phase I cardiac rehabilitation intervention can reduce the anxiety level during hospitalization of patients undergoing CABG surgery.

Bergmann P (2001) conducted a study whether preoperative extensive oral information in combination with more personal attention by the surgeon is associated with any effect on patients' perioperative stress, anxiety, and well-being. Sixty patients awaiting open-heart surgery were divided into two groups. Group I consisted of 30 patients who received routine medical information through an informative pamphlet. In Group II ($n = 30$ patients), additional, extensive oral medical information and more personal attention by the surgeon was provided before surgery. Salivary cortisol, plasma cortisol, state anxiety, and patients' well-being were measured perioperatively. Extensive preoperative oral information in combination with more personal attention by the physician did not have any significant influence on the perioperative psychoendocrinologic course of stress. During transport to the operating room, salivary cortisol increased significantly ($P < 0.001$) in both groups (ranges are 95% confidence intervals) (Group I, 23.2 nmol/L [17.1-31.5]; Group II, 14.6 nmol/L [9.9-21.3]) versus the first day in the hospital (Group I, 8.4 nmol/L [6.2-11.4]; Group II, 6.7 nmol/L [5.3-8.6]). After the induction of anesthesia, plasma cortisol decreased significantly ($P < 0.001$) in both groups (Group I, 170.1 nmol/L [143.6-201.4]; Group II, 172.0 nmol/L [142.2-208.1]) versus preoperative levels. After surgery,

well-being decreased (P = 0.003) in all patients, and patients' state anxiety was reduced (P = 0.001) after surgery. Their data demonstrate a lack of effect of extensive oral medical information that was presented as part of clinical routine on the perioperative psychoendocrinologic course of stress. High levels of stress during transport to the operating room were detected. The quantity of stress during transport to the operating room and the perioperative psychoendocrinologic course of stress in combination with two different methods of preoperative medical information are described in 60 consecutive patients awaiting cardiac surgery.

Uys H H (1993) conducted study is to determine whether the life-style functioning of the patients could be improved by means of a pre-operative rehabilitative educational programme introduced by the professional nurse. A conceptual framework of reference was compiled after completion of the literature review. This served as the preliminary structure of the pre-operative educational programme. The programme consists of three components, viz. an educational booklet, an educational evaluating model and the educationist. A quasi-experimental study was performed on 4 groups (2 experimental groups and 2 control groups) to determine the effect of the structured pre-operative educational programme on the following three factors: satisfaction with self, others and life; safe-guarding hope and anticipation of a future. An analysis of the data indicated a significant difference between the groups that followed the programme and the groups that did not follow the programme. The primary recommendation of the study was that all patients in the process of undergoing coronary artery bypass graft surgery should follow a pre-operative educational programme. This programme had a positive influence on the life-style functioning of the patient and will thus promote the process of rehabiltation.

Fitzsimons D (2003) conducted a study to describe the nature and intensity of anxiety felt by patients awaiting coronary artery bypass surgery. A prospective, cross-sectional study design was used, with a qualitative interview and State Trait Anxiety Inventory. Study took place in 2 large tertiary referral hospitals in Northern Ireland. Seventy patients were randomly selected within 4 weeks of their referral for cardiac surgery. Participants in this study cited 5 main sources of anxiety: chest pain, uncertainty, fear of the operation, physical incapacity, and

dissatisfaction with the care offered to them. The State Trait Anxiety Inventory scores of this sample were high at all stages of data collection. There was a statistically significant relationship (P<or=.01) between increasing angina and state and trait anxiety. This study identified the major sources of anxiety described by this sample. In doing so it might facilitate greater understanding of the needs of these patients and assist in the development of specific interventions to help alleviate this problem.

Salameh P (Pubmed 2006) conducted a study to assess the impact of preoperative patient education on anxiety and recovery of the Lebanese patients undergoing open-heart surgery. This quasi-experimental study was conducted at a large hospital in Beirut, which is a university hospital. All patients who were admitted to the cardiac surgery unit and who met the inclusion criteria were randomly assigned to as experimental or a control group. The patients in the experimental group (n = 57) received a special educational session on their admission day and had a tour of the cardiac surgery unit. The control group (n = 53) followed the routine hospital protocol, which encompassed almost no preoperative education or a tour. Anxiety was assessed using the Beck Anxiety Inventory while recovery was measured by physiological outcomes, days of hospital stay, and presence of complications. A Multivariate Analysis of Covariance (MANCOVA) was performed with adjustment for potential confounding variables. Borderline statistical significance was noted for the experimental group in terms of preoperative and postoperative anxiety. The experimental group had a shorter time from awakening to extubation. Unlike most studies published previously, which noted the benefits of preoperative patient education, this study with the Lebanese clients, failed to support earlier findings. The results suggested that patient education should not be initiated before assessing the patient's cultural and social background.

Celik S S (Pubmed 2004) conducted an experimental study to evaluate the effect of preoperative teaching method on anxiety levels of the patients. This study consisted of 100 patients having open cardiac surgery. Of 100 patients 50 were placed in the intervention group while the remaining 50 were in the control group. The patients in the intervention group were

given a planned teaching according to the patient education booklet. Patients in the control group were informed about pre- and postoperative routines by a nurse by the purpose of comparing anxiety levels of the patients in the intervention and control groups. The anxiety level of the patients in control and intervention groups was measured on the 3rd day after the operation by using the Self-Evaluation Questionnaire for State and Trait Anxiety Inventory. The mean postoperative state and trait anxiety score in the control group was slightly higher than the mean of the patients in the intervention group. There was no statistically significant difference in the state and trait anxiety scores between the groups, and the patients in the intervention group had lower scores than the patients in the control group. In addition, all patients in the intervention group stated that they were satisfied with the preoperative teaching given by the researcher.

Koivula M (Pubmed 2002) conducted a study to ascertain social support resources available for patients awaiting coronary artery bypass grafting (CABG) and the effect of social support on their fear and anxiety. A postal questionnaire was sent to 270 patients awaiting CABG in one hospital, 207 of whom responded. Norbeck's Social Support Questionnaire (NSSQ) was used. The quality of basic cardiac information (QBCI) and the social support wanted (WSS) by patients were measured with an instrument developed for this study. Fear was measured with the Bypass Grafting Fear Scale (BGFS) developed for this study. Anxiety was measured with Spielberger's State-Trait Anxiety Inventory (STAI). The results were analyzed using frequency and percentage distributions, cross-tabulation, non-parametric tests and logistic regression. Heart patients' spouses provided the most emotional and tangible aid. Low emotional support from the social network was associated with high anxiety. Half the patients rated the quality of basic information as good or excellent. Those who perceived the quality of information to be excellent experienced mild fear. Those who displayed high fear wanted informational support from nurses more often than patients with lower fear. The authors concluded that the fear and anxiety of patients awaiting CABG are connected with their social support resources.

Koivula M (Pubmed 2001) conducted a study to identify the prevalence of fear and anxiety in patients awaiting coronary artery bypass grafting and the factors associated with

high fear and high anxiety. The survey included 240 patients placed on the waiting list for coronary artery bypass grafting at one hospital. Two hundred and seven patients completed the questionnaire. The Bypass Grafting Fear Scale, the State-Trait Anxiety Inventory, and the Hospital Anxiety and Depression Scale were used. Half of the patients experienced low fear and anxiety. Twenty-five percent had high fear, but only 5% had high anxiety. Patients who felt high fear were mainly women, had no vocational education, were on sick leave, were depressed, had a tendency towards anxiety, and had a short wait for operation. Patients who displayed medium or high anxiety were mostly under 55 years of age and had depression, but only low or no pain. The results facilitate better identification of predictors of high fear and anxiety as well as direct support and information for those patients.

Bondy L R (pubmed 1999) conducted a study to evaluate the effects that materials mailed to the home relating to anesthetic-focused patient education may have on preoperative patient anxiety. Patients scheduled for a total hip arthroplasty or for a total knee arthroplasty were screened via telephone for inclusion in a prospective, randomized study. Patients were asked about their access to a video cassette recorder/player (VCR) and their limitations regarding hearing or vision. Subjects were randomly assigned to either the intervention group and received two pamphlets and a video describing general and regional anesthesia or to the usual care group. All subjects were mailed a preoperative demographic questionnaire and a State Trait Anxiety Inventory (STAI), as developed by CD Spielberger. Questionnaires were completed at least 96 hours prior to admission and again preoperative on the day of surgery. Of 236 patients screened, 26 had no access to a VCR, 6 were hearing or visually impaired, and 4 declined participation. Of 200 subjects randomized, 134 completed both sets of questionnaires and thus form the basis of this report. A statistically significant difference between the subjects who received the video and pamphlets and the usual care subjects was detected with respect to change in STAI-assessed anxiety from baseline to immediately prior to surgery ($P = .035$). The intervention subjects experienced a smaller mean increase in anxiety. Forty-nine percent of the usual care subjects expressed interest in having additional information. Increase in preoperative anxiety was

diminished when additional anesthesia information in printed and video format was made available. Useful information could be provided to patients to view or read prior to surgery.

Kindler CH (Pubmed 2006) conducted a study to compare different methods for measuring preoperative anxiety to identify certain patient characteristics that predispose to high anxiety, and to describe the quantity and quality of anxiety that patients experience preoperatively. Seven hundred thirty-four patients participated in the study. We assessed aspects of anxiety by means of visual analog scales (VAS) and the State Anxiety Score of the Spielberger State-Trait Anxiety Inventory (STAI). The mean STAI anxiety score was 39 +/- 1 (n = 486) and the mean VAS for fear of anesthesia was 29 +/- 1 (n = 539). Patients feared surgery significantly more than anesthesia ($P < 0.001$). The VAS measuring fear of anesthesia correlated well with the STAI score ($r = 0.55$; $P < 0.01$). Young patients, female patients, and patients with no previous anesthetic experience or a previous negative anesthetic experience had higher anxiety scores. Patients worried most about the waiting period preceding surgery and were least concerned about possible awareness intraoperatively. Factor analysis of various anxiety items showed three distinct dimensions of fear: 1) the fear of the unknown 2) the fear of feeling ill, and 3) the fear for one's life. Among these dimensions, fear of the unknown correlated highest with the anxiety measuring techniques STAI and VAS. The simple VAS proved to be a useful and valid measure of preoperative anxiety. The study of qualitative aspects of anxiety revealed three distinct dimensions of preoperative fear: fear of the unknown, fear of feeling ill, and fear for one's life. Groups of patients with a higher degree of preoperative anxiety and their specific anesthetic concerns could be identified using the visual analog scale.

CHAPTER III

METHODOLOGY

Introduction

The methodology can properly refer to the theoretical analysis of the methods appropriate to a field of study or to the body of methods and principles of particular to a branch of knowledge.

Research approach

To accomplish the objectives of the study the investigator used descriptive approach. The approach is made quantitative by using Speilberger's state-trait anxiety inventory. The aim of the study to assess the effectiveness of pre-operative teaching on anxiety level of patients before and after CABG surgery.

Research design

Research design is the conceptual structure within which the research is conducted. It facilitates the smooth sailing of various research operations and there by making research as efficient as possible yielding maximum information with minimal expenditure of effort, time and money. The research design selected for the presence study was before and after design.

Setting

The study was conducted in the cardio-thoracic ward at SCTIMST, TVM. Cardio - Thoracic ward is divided into Male ward, Female ward & Intermediate Intensive Care unit (IMICU). Capacity of the ward in 35 beds. Pre and post operative patients are admitted in the Cardio - Thoracic ward. It is located at the 5th floor of Surgical Block. Common cases admitted in this ward are operated cases of Valve Replacement, CABG, ASD closure, Pneumonectomy, Lobectomy and Aneurysm repair. The rationale for selecting SCTIMST for the study was the investigators familiarity with this institution. Cardio-Thoracic Surgery ward is located at 5th floor of Surgical Block

Population

The population taken for the study was the patients who had undergone CABG surgery at SCTIMST, TVM. Data collected from September 2006 to October 2006,who admitted for CABG surgery.

Samples and sampling technique

Sample is a subset of unit that composes the group. In the present study total 20 patients who had undergone CABG surgery was selected as samples.

Sample technique refers to the process of selecting a portion of population to represent entire population.

Random sampling technique used for the present study.

Inclusion criteria :- Both male and female patients who had undergone CABG surgery.

:- Patients who all are willing for the study

:- Conscious, oriented co-operative patient

Exclusion criteria :- Patients who are not willing for the study

Development of data collection tool

Data collection tool refers to the instrument, which was constructed to obtain relevant data. In this study the investigator used the structured Speilberger's state-trait anxiety inventory for assessing pre-operative and to assess post-operative anxiety. The tool consists of 36 questions.

Description of tool

The tool used in the present study consisted of three section

Part I :- for obtaining personal data & general information

Part II :- for obtaining state-trait anxiety score before surgery.

Part III:- for obtaining state-trait anxiety score after surgery

Testing of the tool

Part I of the tool contained items for obtaining information about background variable like age, sex, academic stream, marital status, monthly income, etc.

Part II & III :- STATE-TRAIT ANXIETY INVENTORY (STAI) is a popular instrument for measuring anxiety. It is written at a sixth grade reading level and can be completed in approximately 10-20mts. This questionnaire consists of 36 items self reporting scale assesses the feeling of apprehension, tension, nervousness, and worry in terms of how respondents feel ''right now". For the 18 questions on this scale possible responses are not at all, some what, moderately so, very much so, the trait anxiety reflects how people feel generally all the time. It includes statement such as I am a steady person or I am nervous. Possible answers for these 18 items are almost never sometimes, often and almost always.

Data collection

For data collection formal permission was obtained from the authorities. Period of data collection from September 2006 to October 2006. The purpose of the study and the confidentiality of their responses were assured. The patients were made to sit comfortably and inter

viewed with the structured tool. The day before surgery assessed and proper teaching given for Experimental group. No special Health Education given for Control group. Before discharge (one day before discharge) post-operative anxiety assessed for both Experimental and Control group. The anxiety scored by using Speilberger's state-anxiety inventory. The time taken for the completion for the entire procedure was 10 to 20mts.

Plan of analysis

The data obtained from the STAI the investigator decided to analysis the data in terms of frequency and percentages and to present them in the form of tables, bar diagrams etc.

Summary

This chapter presented the research approach used for, the study design, setting of the study and samples and sampling technique, population and development of data collection tool, data collection procedure and plan for data analysis.

CHAPTER - IV

ANALYSIS AND INTERPRETATION OF DATA

Introduction

This chapter presents the analaysis and interpretation of data collected from 20 patients at SCTIMST, TVM.

Analysis is a process of organizing and synthesizing data in such a way that project questions can be answered. The overall aim of analysis is to organize, provide structure, and to elicit meaning from collected data.

Interpretation refers to the process of making sense of the results and of examining the implication of the finding within a broder content.

The finding of the study were arranged and analyzed under the following sections.

Sections A:- Distribution of subjects according to the demographic variable.

Section B:- (1) Distribution of data according to the pre-operative STAI score.

(2) Distribution of data according to the post operative STAI score.

Section C:- (1) Distribution of data according to pre & post operative STAIscore of Experimental group.

(2) Distribution of data according to pre & post operative STAI score of control group.

Section D:- Distribution of data according to pre & post operative STAI score of both Experimental & Control group.

Section - A

TABLE I

Distribution of sample according to the demographic variables

Distribution of sample according to age group

No	Age	Frequency	Percentage
1	45 - 49	6	30%
2	50 - 54	4	20%
3	55 - 59	6	30%
4	60 - 64	2	10%
5	65 - 69	2	10%
Total		20	100%

Total data presented on the table - 1 shows that 30% of objects belongs to the age group of <50, 20% of objects belonging to the age of<55, 30% of objects belongs to the age group <60, 10% of objects belongs to <65 and 10% of objects belongs to <70.

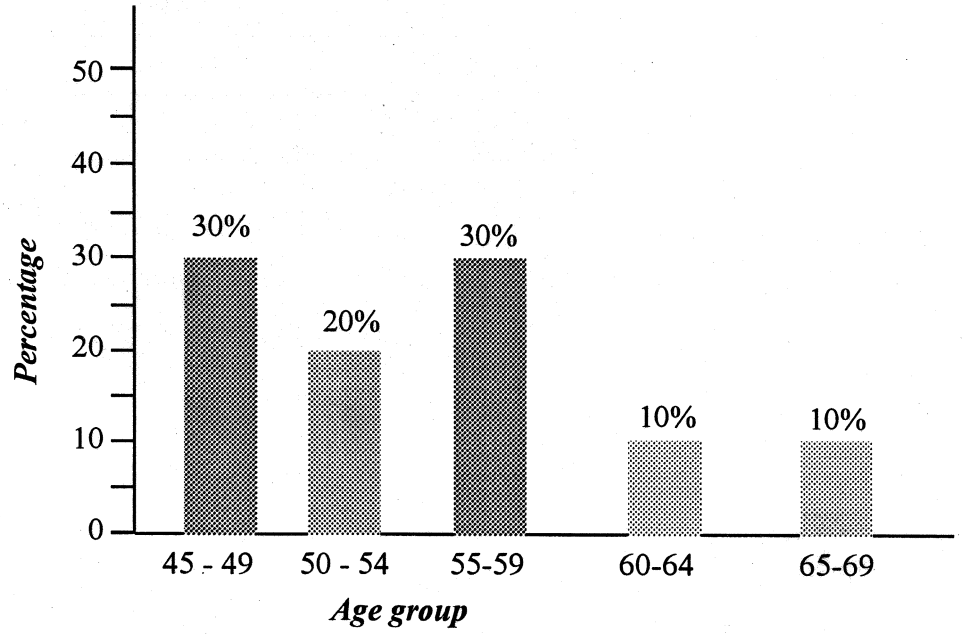

Fig - 1

Section - A

TABLE II

Distribution of sample according to sex

No	Sex	Frequency	Percentage
1	Male	16	80%
2	Female	4	20%
Total		20	100%

Data presented on the table 11 shows that 80% of objects belongs to Male group and 20% of objects belongs to Female group

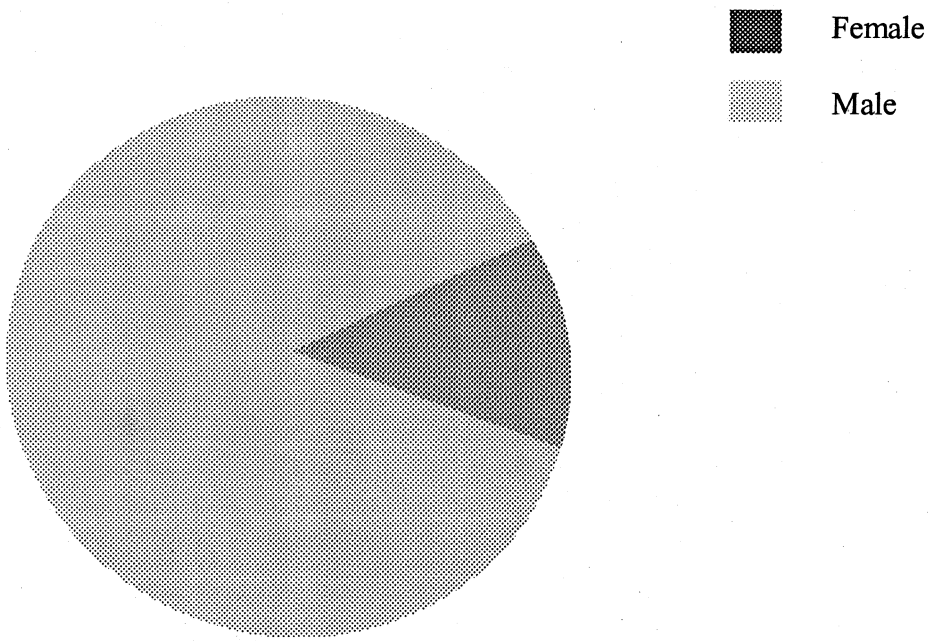

Fig - 2

Section - B

TABLE III

Distribution of data according to the pre-operative STAI Score.

Group	Average of Preoperative state anxiety score	Average of Preoperative Trait Anxiety score
Experimental No. 10	49.5	46
Control No. 10	47.5	45.1

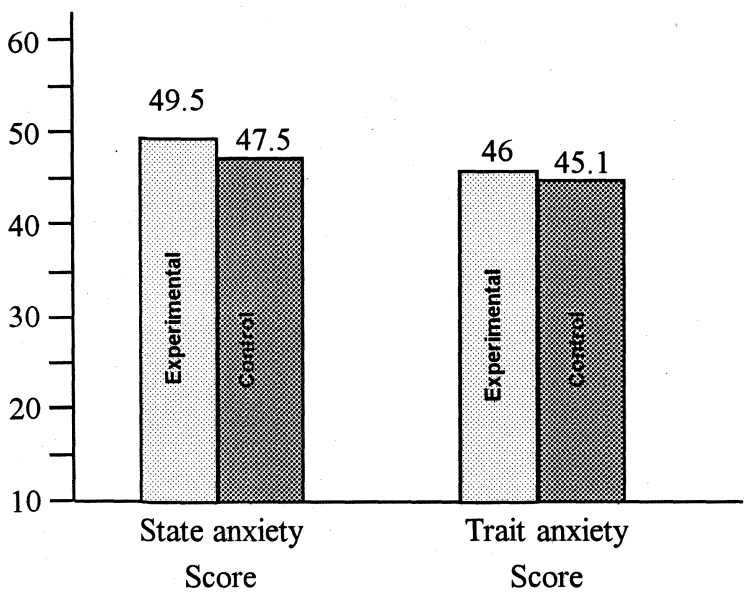

Fig - 3

Data presented in the table 3 shows that the pre-operative STAI Score of the experimental group is more than that of the control group.

TABLE IV

Distribution of data according to the post operative STAI score

Group	Average of Preoperative state anxiety score	Average of Preoperative Trait Anxiety score
Experimental No. 10	41.3	44.1
Control No. 10	45.2	45.5

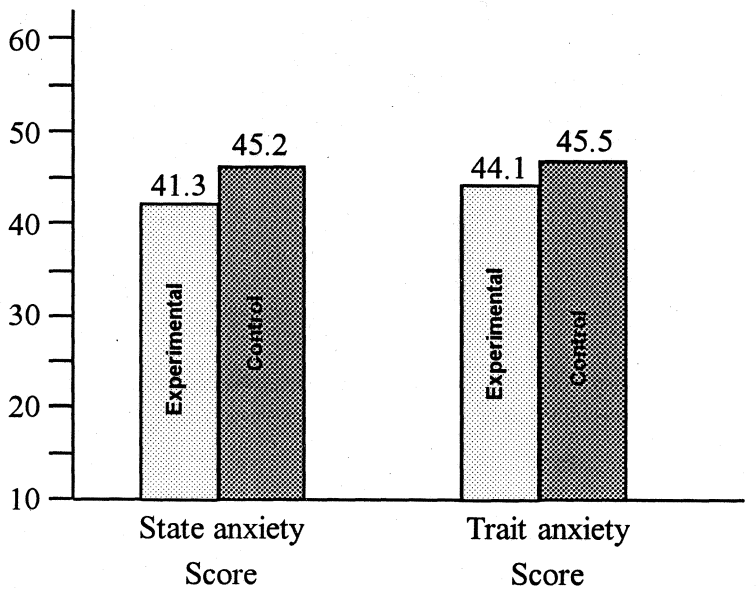

Fig - 4

Data presented in the table 4 shows that the post-operative state anxity score is decreased after health education. Ther is not much change in the trait anxiety score.

TABLE V

Distribution of data according to pre of post-operative STAI score of Experimental Group.

Control Group	Average of Pre & Post operative state anxiety	Average of Pre & Post operative Trait Anxiety score
Pre-Operative	49.5	46
Post Operative	41.3	44.1

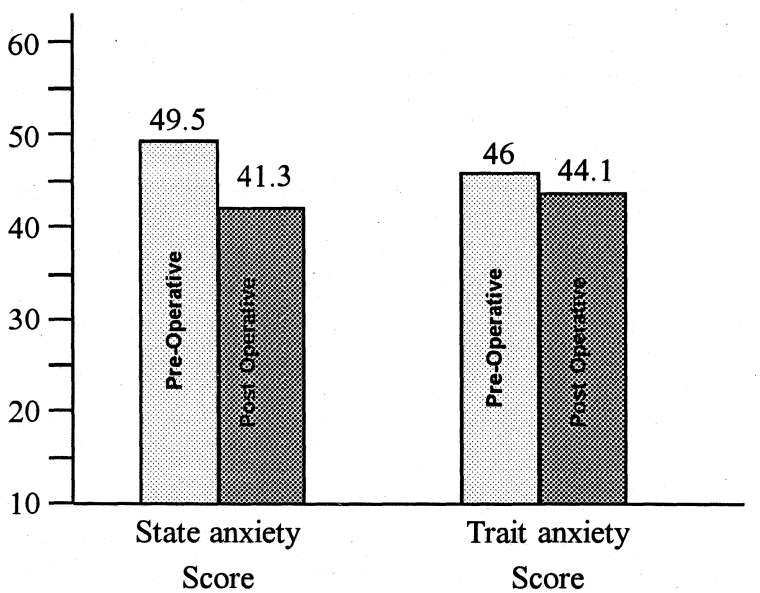

Fig - 5

Section - C

TABLE VI

Distribution of data according to pre of post-operative STAI score of Control Group.

Control Group	Average of Pre & Post operative state anxiety score	Average of Pre & Post operative Trait Anxiety score
Pre-Operative	47.5	45.1
Post Operative	45.2	45.5

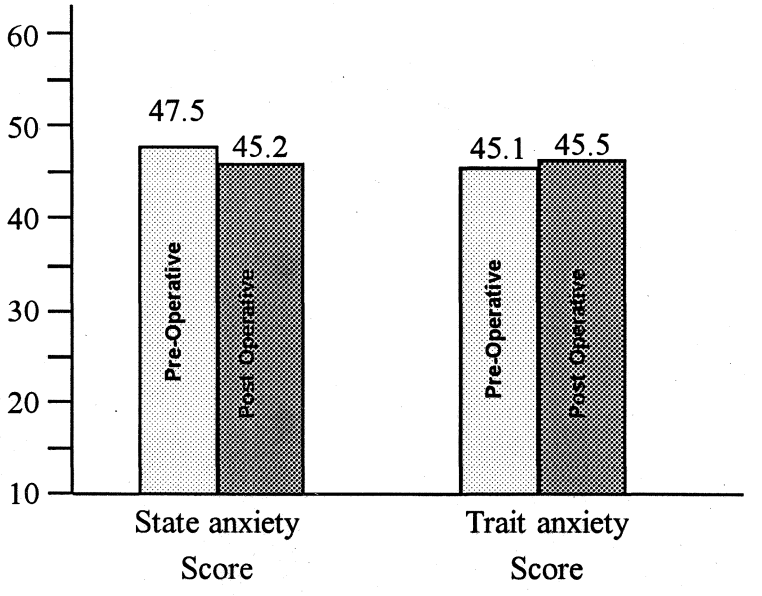

Fig - 6

Section - D

TABLE VII

Distribution of Data according to Pre & Post operative STAI score of both Experimental & Control Group

Group	Average of Preoperative State anxiety score	Average of Preoperative State Anxiety Score	Average of Pre Operative Trait Anxiety Score	Average of Post Operative Trait Anxiety Score
Experimental	49.5	41.3	46	44.1
Control	47.5	45.2	45.1	45.5

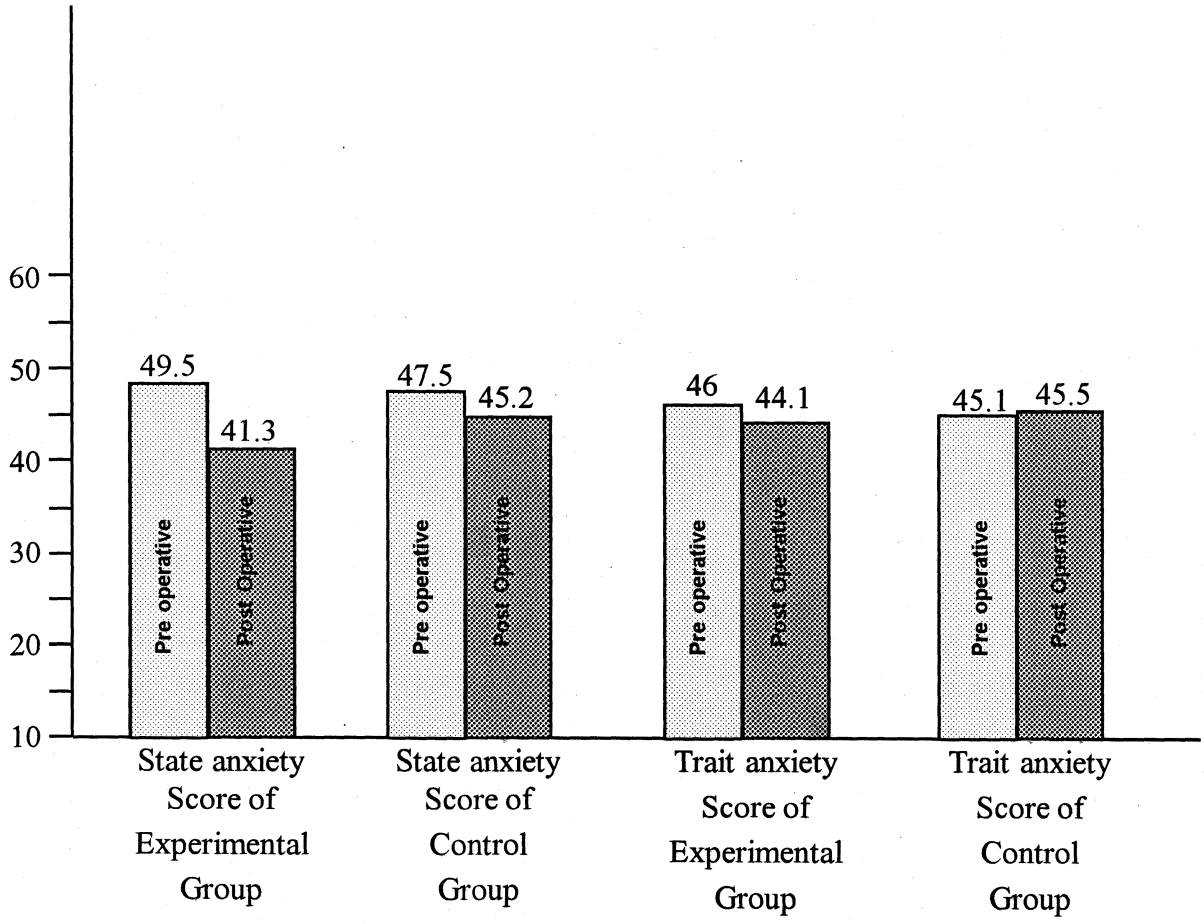

Fig - 7

Summary

This chapter deals with analysis and Interpretation of data collected from 20 patients. Descriptive statistics were used for the analysis. Bar and Pie diagrams were used to illustrate the findings of the study.

CHAPTER V

SUMMARY, CONCLUSION, LIMITATION AND RECOMMENDATION

Introduction

A brief account of the study is given in this chapter which cover objectives, findings of the study and possible application of the result. Recommendations for future research and suggestions for improving the presents study are also presented.

Summary

The study was conducted with the objective to assess pre-operative anxiety before health teaching and to assess post-operative anxiety. The structured state-trait anxiety inventory was used for collecting data from 20 samples.

A review of related literature helps the investigator to get a clear concept about the project topic undertaken, as well as to develop tools, methodology of the study and decide the plan for data analysis.

The research approach adopted for the study was descriptive approach. The study was conducted at Cardio-Thoracic surgery ward of

SCTIMST, TVM. Random sampling technique was used to obtain samples.

Tools used for data collection was structured Speilberger's state-trait anxiety inventory score consisting of demographic data, state anxiety score and trait anxiety score. State anxiety scale consists of 18 questions.

The pilot study was conducted among 6 samples. The data collection was done and it was analyzed and interpreted.

Objectives of the study

1. To assess pre-operative anxiety of patients undergoing CABG surgery.
2. To assess the effect of pre-operative teaching on the anxiety level of patients undergoing CABG Surgery.

Limitation

1. The sample size limit to 20 patients
2. Random sampling technique is used
3. Sample includes CABG surgery patients from one institute only (SCTIMST, TVM).

Findings of the study

The trait anxiety score which refer to stable personality factors reflecting the general level of fearfulness did not change significantly after surgery for both experimental and control group. In contrast the state anxiety score which refers to transient anxiety that varies according to the situation, decreased significantly after the pre-operative teaching . Only the pre-operative high state anxiety score among multiple variables were associated with the significant decrease in state anxiety after surgery. The statistical significants was not tested due to the small sample size.

Implications of the study: - The study results showed that pre-operative state anxiety score decreased postoperatively. But the trait anxiety score did not change. A structured pre-operative health teaching help the patient to reduce the anxiety and to avoid anxiety related complication. So for reducing anxiety related complications structured pre-operative teaching is necessary.

Recommendations for future study

Keeping in mind the findings & limitations of the study, the following recommendations were made for future research.

- Similar study would be repeated by increasing the sample size.
- An evaluation study to assess the effectiveness of pre-operative teaching on anxiety level of patients before and after open-heart surgery can be done.

Conclusion

Based on the findings of the study, the following conclusions were drawn.

- The anxiety of the patients with CABG surgery is significantly decreased after surgery for both group.
- High pre-operative state anxiety score is decreased after surgery for both group.
- No patient exhibited a post-operative increase in state anxiety score.
- The trait anxiety score did not change post-operatively.

BIBLIOGRAPHY

Books

1. Polit, Denise F and Bernadetle P, Hungler ''Nursing Research Principles and Methods, Philadelphia JB Lippincott company 2001.
2. Stommel Wills "Clinical Research" Philadephia, Lippincott compony, 2004.
3. Haber, LoBiondo-Wood "Nursing Research" St.Louis, Mosby,5th-edition, 2002.
4. Burns, Grone " Understanding Nursing Research" Saunders, 2003.

Journals

- Ku SL "Effects of phase I cardiac rehabilitation on anxiety of patients hospitalized for coronary artery bypass graft in Taiwan", Heart Lung, the Journal of Critical care, 2002, Mar - Apr, 31 (2), 133 - 40. Availble from http://www.ncbi.nlm.nih.gov/entrez/query.fcgi (accessed on 02-09-2006)
- Bergman P "The influence of medical information on the perioperative course of stress in cardiac patient", Anesthesia and Analgesia , 2001, Nov,93 (5), 1093-9. Available from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 25-08-2006).
- Uys HH "The effect of pre operative teaching on the emotional attitude of patients undergoing coronary bypass surgery", Curationis, 1993,April, 16 (1), 2-10. Available from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 26-08-2006).
- Fitzsimons D " Patient anxiety while on awaiting list for coronary artery bypass surgery: a qualitative and quantitative analysis", Heart and Lung, the Journal of Cricial Care, 2003, Jan -Feb, 32 (1), 23-31. Available from http://www.ncbi.nlm.nih.gov/entrez/fcgi (accessed on 21-08-2006).
- Salameh P "Preoperative patient education for open heart patients: a source of anxiety?", Patient Education and Counseling, 2006, July, 62 (1), 111-117. Available from http://www.ncbi.nlm.nih.gov/entrez/query. fcgi (accessed on 22-08-2006).
- Celik SS " The effect of preoperative education on anxiety of open cardiac surgery patients", Patient Education and Counciling, 2004, April, 53(1), 65-70. Available from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 21-08-2006)

- Koivula M "Social support and its relation to fear and anxiety in patients awaiting coronary artery bypass grafting", Journal of Clinical Nursing, 2002, sep,11 (5), 622-633. Available from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 19-08-2006)
- Koivula M "Fear and Anxiety in patients awaiting coronary artery bypass grafting", Heart and Lung , the Journal of Critical Care, 2001, Jul-Aug, 30 (4), 302-311. Availabile from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 19-08-2006)
- Bondy LR "The effect of anesthestic patient education on preoperative patient anxiety", Regional Anesthesia and Pain Medicine, 1999, Mar-Apr, 24 (2), 158-164. Available from http://www.ncbi.nlm.nih gov/entrez/query (accessed on 02-09-2006)
- Kindler "The visual analog scale allows effective measurment of preoperative anxiety and detection of patients anesthestic concerns", Anesthesia and Analgesia, 2000,March,90(3), 706-712. Available from http://www.ncbi.nlm.nih.gov/entrez/query (accessed on 02-09-2006)

APPENDIX

1. Adoption and transalation of Spielberger's state-trait anxiety inventory.
2. Health Education

സമ്മതപത്രം

രോഗിയുടെ അസുഖവുമായി ബന്ധപ്പെടുത്തിയും, ഓപ്പറേഷന് മുൻപും പിൻപു മുള്ള മാനസിക അവസ്ഥ പരിശോധിക്കുന്നതിനായും അതിലെ പോരായ്മകൾ എന്നെ പറഞ്ഞു മനസ്സിലാക്കി തരുന്നതിനും ഞാൻ പൂർണ്ണമായും സമ്മതിക്കുന്നു. ഇത് ഒരു പഠി ത്തത്തിന്റെ ഭാഗമായാണ്. ഈ പഠനത്തിന് വേണ്ടി ഞാൻ സഹകരിച്ചുകൊള്ളാമെന്ന് സമ്മ തിക്കുന്നു.

എന്ന്

രോഗിയുടെ ഒപ്പ്

തീയതി

THE STATE TRAIT ANXIETY INVENTORY (ADOPTION AND TRANSLATION OF SPEILBERGER'S STATE TRAIT ANXIETY INVENTORY)

നിർദ്ദേശങ്ങൾ

താഴെകൊടുത്തിരിക്കുന്ന കാര്യങ്ങൾ ഇപ്പോൾ നിങ്ങൾക്ക് എത്രമാത്രം അനുഭവപ്പെടുന്നുണ്ടെന്ന് ഓരോ ചോദ്യത്തിനും ഉചിതമായ ഉത്തരത്തിനു നേരേ Xഅടയാളത്തിലൂടെ രേഖപ്പെടുത്തുക. മനോഭാവങ്ങളിലും താല്പര്യങ്ങളിലും ഓരോ വ്യക്തിയും വ്യത്യസ്ഥനായിരിക്കുന്നു എന്നതിനാൽ ശരിയോ തെറ്റോ ആയ ഉത്തരങ്ങളില്ല. ഓരോ ചോദ്യത്തിനും നാല് സാദ്ധ്യതകൾ ഉത്തരങ്ങളായി കൊടുത്തിട്ടുണ്ട്. അവയിൽ നിങ്ങൾക്ക് യോജിക്കുന്നത് ഏതാണെന്ന് X അടയാളപ്പെടുത്തി സൂചിപ്പിക്കുക.

ഇത് സമയപരിധിയില്ലാത്ത ഒരു ടെസ്റ്റ് ആണെങ്കിലും കഴിയുന്നതും വേഗത്തിൽ ചെയ്തുതീർക്കുവാൻ ശ്രമിക്കണം. ചോദ്യങ്ങളെക്കുറിച്ച് ചിന്തിച്ച് കൂടുതൽ സമയം കളയാതെ ഓരോ ചോദ്യവും വായിക്കുമ്പോൾ തോന്നുന്ന ആദ്യത്തെ പ്രതികരണം രേഖപ്പെടുത്തുക. എല്ലാ ചോദ്യങ്ങൾക്കും ഉത്തരം എഴുതുവാൻ പ്രത്യേകം ശ്രദ്ധിക്കുക. നിങ്ങളുടെ ഉത്തരങ്ങൾ പരമരഹസ്യമായി സൂക്ഷിക്കുന്നതാണ്.

ഈ ചോദ്യാവലിയിൽ നിങ്ങളുടെ പേര് നൽകണമെന്നില്ല. എന്നാൽ ഗവേഷണത്തിന് താഴെ പറയുന്ന വിവരങ്ങൾ നൽകുക.

വയസ്സ്.....

സ്ത്രീ/പുരുഷൻ.....

വിദ്യാഭ്യാസ യോഗ്യത.....

കുടുംബാംഗങ്ങളുടെ എണ്ണം.....

വിവാഹിത(ൻ)/അവിവാഹിത(ൻ).....

പ്രതിമാസ കുടുംബവരുമാനം.....

നമ്പർ	പ്രസ്താവന	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും എ	ല്ല	ാ
യ്പ്പോഴും						
1.	എനിക്ക് ശാന്തത അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
2.	എനിക്ക് സുരക്ഷിതത്വം തോന്നുന്നുണ്ട്	1	2	3	4	
3.	എനിക്ക് മനോസമ്മർദ്ദം ഉണ്ടാകാറുണ്ട്	1	2	3	4	
4.	എനിക്ക് ആശ്വാസം തോന്നുന്നുണ്ട്	1	2	3	4	
5.	എനിക്ക് അസ്വസ്ഥത അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
6.	വന്നുചേരാവുന്ന നിർഭാഗ്യങ്ങളെക്കുറിച്ചുള്ള ആകുലചിന്ത എനിക്കിപ്പോൾ തോന്നുന്നുണ്ട്	1	2	3	4	
7.	എനിക്ക് വിശ്രമം ലഭിച്ചതായി അനുഭവപ്പെടുന്നുണ്ട്.	1	2	3	4	
8.	എനിക്ക് ഉത്കണ്ഠ അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
9.	എനിക്ക് സുഖം തോന്നുന്നുണ്ട്	1	2	3	4	
10.	എനിക്ക് ആത്മവിശ്വാസം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
11.	എനിക്ക് അധൈര്യം തോന്നുന്നുണ്ട്	1	2	3	4	
12.	എനിക്ക് പിരിമുറുക്കം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
13.	എനിക്ക് വിശ്രമം അനുഭവപ്പെടുന്നുണ്ട്	1	2	3	4	
14.	എനിക്ക് സംതൃപ്തി തോന്നുന്നുണ്ട്	1	2	3	4	
15.	എനിക്ക് നിരാശ തോന്നുന്നുണ്ട്	1	2	3	4	
16.	ഞാൻ പെട്ടെന്ന് വികാരക്ഷോഭത്തിന് അടിമപ്പെടുന്നുണ്ട്	1	2	3	4	
17.	എനിക്ക് ആനന്ദം തോന്നുന്നുണ്ട്	1	2	3	4	
18.	എനിക്ക് പ്രസന്നത തോന്നുന്നുണ്ട്	1	2	3	4	

നിർദ്ദേശങ്ങൾ

ദൈനംദിന ജീവിതത്തിൽ അനുഭവപ്പെടാറുള്ള ചില കാര്യങ്ങൾ താഴെക്കൊടുത്തിരിക്കുന്നു. അസാധാരണയായി നിങ്ങൾക്ക് എത്രത്തോളം അനുഭവപ്പെടുന്നുവെന്നത് ഉചിതമായതിനുനേരെ Xഅടയാളത്തിലൂടെ രേഖപ്പെടുത്തുക.

നമ്പർ	പ്രസ്താവന	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പ്പോഴും
19.	എനിക്ക് മനസുഖം തോന്നാറുണ്ട്	1	2	3	4
20.	എനിക്ക് പെട്ടെന്ന് ക്ഷീണം തോന്നാറുണ്ട്.	1	2	3	4
21.	എനിക്ക് കരണയണമെന്ന് തോന്നാറുണ്ട്	1	2	3	4
22.	മറ്റുള്ളവരെപ്പോലെ സന്തോഷിച്ചിരിക്കാനുള്ള ആഗ്രഹം എനിക്കുണ്ട്	1	2	3	4
23.	പെട്ടെന്ന് തീരുമാനങ്ങൾ എടുക്കുവാൻ സാധിക്കാത്തതുമൂലം പല നഷ്ടങ്ങളും എനിക്കുണ്ടാകാറുണ്ട്.	1	2	3	4
24.	എനിക്ക് വിശ്രമം അനുഭവപ്പെടാറുണ്ട്	1	2	3	4
25.	എനിക്ക് സ്വസ്ഥതയും ശാന്തതയും അനുഭവപ്പെടാറുണ്ട്	1	2	3	4
26.	എനിക്ക് വിഷമതകൾ വർദ്ധിക്കുകയും അവയെ തരണം ചെയ്യുവാൻ കഴിയാതെയും വരാറുണ്ട്	1	2	3	4
27.	നിസ്സാരകാര്യങ്ങളെക്കുറിച്ച് ഞാൻ ചിന്താകുലനാകാറുണ്ട്	1	2	3	4
28.	എനിക്ക് സന്തോഷമുണ്ട്	1	2	3	4
29.	സാധാരണ കാര്യങ്ങൾ കഠിനമായിട്ടെടുക്കുന്ന പ്രവണത എനിക്കുണ്ട്	1	2	3	4
30.	എനിക്ക് സുരക്ഷിതത്വം തോന്നാറുണ്ട്	1	2	3	4
31.	എനിക്ക് നിരാശ ഉണ്ടാകാറുണ്ട്	1	2	3	4
32.	എനിക്ക് സംതൃപ്തി തോന്നാറുണ്ട്	1	2	3	4
33.	അപ്രധാനമായ ചില ചിന്തകൾ എന്നെ വിഷമിപ്പിക്കാറുണ്ട്	1	2	3	4
34.	ജീവിതനൈരാശ്യങ്ങൾ ഗൗരവപൂർവ്വ-മെടുക്കുകയും മനസ്സിൽ നിന്ന് അവയെ മാറ്റുവാൻ കഴിയാറില്ല	1	2	3	4
35.	സ്ഥിരചിത്തയുള്ള വ്യക്തിയാണു ഞാൻ	1	2	3	4
36.	അടുത്തുകാലത്തു എന്റെ സംരഭങ്ങളെ കുറിച്ചും താല്പര്യങ്ങളെക്കുറിച്ചും ആലോചിക്കുമ്പോൾ എനിക്കു മനോ സമ്മർദ്ദമുണ്ടാകുന്നു.	1	2	3	4

N.B: എല്ലാ ചോദ്യത്തിനും ഉത്തരം എഴുതിയിട്ടുണ്ടോ എന്ന് ഒരിക്കൽക്കൂടി പരിശോധിക്കുക.

Speilberger's State - Trait Anxiety Invetory

Score of State Anxiety

Sl.No.	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പോഴും
1.	4	3	2	1
2.	4	3	2	1
3.	1	2	3	4
4.	4	3	2	1
5.	1	2	3	4
6.	1	2	3	4
7.	4	3	2	1
8.	1	2	3	4
9.	4	3	2	1
10.	4	3	2	1
11.	1	2	3	4
12.	1	2	3	4
13.	4	3	2	1
14.	4	3	2	1
15.	1	2	3	4
16.	1	2	3	4
17.	4	3	2	1
18.	4	3	2	1

Score of Trait Anxiety

Sl.No.	ഒരിക്കലുമില്ല	വല്ലപ്പോഴും	മിക്കവാറും	എല്ലായ്പോഴും
19.	4	3	2	1
20.	1	2	3	4
21.	1	2	3	4
22.	1	2	3	4
23.	1	2	3	4
24.	4	3	2	1
25.	4	3	2	1
26.	1	2	3	4
27.	1	2	3	4
28.	4	3	2	1
29.	1	2	3	4
30.	4	3	2	1
31.	1	2	3	4
32.	4	3	2	1
33.	1	2	3	4
34.	1	2	3	4
35.	4	3	2	1
36.	1	2	3	4

Health Education

As you prepare for open-heart surgery, it is natural to feel anxious and concerned about the procedure and equipment that will be used. Learning about them will help you to understand their purpose. The following information guides you through the experience of open-heart surgery and explains the common sensations associated with it.

Day before surgery: -

Usually the day before surgery you will be admitted in the ward. The staff nurse will give you orientation of the ward. Then your body will be shaved and clean with betadine solution. The nurse and helpers in the ward will help you to do al these. You have to take a light diet in the night. You will not be able to eat or drink anything after midnight the evening before surgery.

On the day of surgery:-

In the morning again you have to take bath with betadine solution. This will help you to reduce infection. Antibiotic test dose will be given in the morning. If you have any redness or itching around the site of injection you have to inform the staff nurse. The staff nurse and your relatives will be with you until you are shifted to operation theatre.

In the operation theatre: -

The anesthetist will introduce a cannula in your hand and will give you some injections. This will help you to sleep well. After the surgery, you will be shifted to CSICU. It's a place with special equipment and highly trained nurses and doctors.

In the CSICU :-

When you are awakened you will be in cardiac surgery ICU. You will be in connected to machines so that nurses can check your heart rate, blood pressure, breathing and other vital signs. You may have a tube in your mouth to help you breathe and you can't talk with it, but nurses will help you to communicate. The breathing tubes will stay in until you can breathe on your own. It will take few hours. When the breathing tube is removed, you will be given oral fluids after 4- 5 hours. The nurse will allow seeing one of your relative.

The physiotherapist and nurses will give you chest physiotherapy to expel the sputum. They will teach you, how to use incentive spirometry. You have to raise three balls, this will help to expand your lungs. There will be tubes to drain fluids and urine. After 1 or 2 days those tubes will be removed. You will be shifted to wards with in 3-4 days after the surgery. The duty doctor will explain about your health to the relative's daily.

CABG-ക്ക് മുൻപ് രോഗികൾ അറിയേണ്ട കാര്യങ്ങൾ.

എല്ലാ രോഗികൾക്കും ശാസ്ത്രക്രിയയെന്നു കേൾക്കുമ്പോൾ അലട്ടുന്ന കാര്യമാണ് പേടിയും ആശങ്കയും. ശസ്ത്രക്രിയയയുടെ ആവശ്യങ്ങൾ യഥാക്രമത്തിൽ പറഞ്ഞുകൊടുത്താൽ ഒരു പരിധിവരെ പേടിയും ആശങ്കയും കുറയ്ക്കാൻ സഹായിക്കും താഴെ പറയുന്ന കാര്യങ്ങൾ നിങ്ങളുടെ ഉൽകണ്ഠ കുറയ്ക്കാൻ സഹായിക്കും.

ശസ്ത്രക്രിയയ്ക്ക് മുൻപുള്ള ദിവസം.

സാധാരണയായി ശസ്ത്രക്രിയയ്ക്ക് ഒരു ദിവസം മുൻപ് അഡ്മിറ്റ് ചെയ്യും. വാർഡിലുള്ള നേഴ്സ് നിങ്ങൾക്ക് ആശുപത്രി നിയമങ്ങളെപ്പറ്റി പറഞ്ഞു തരും. ശാസ്ത്രക്രിയ ചെയ്യുന്ന ഭാഗത്തെ രോമം നീക്കം ചെയ്യുകയും Betadine ഉപയോഗിച്ച് വൃത്തിയാക്കുകയും ചെയ്യും. ഇതിനായി നിങ്ങളെ നേഴ്സും സഹായിയും സഹായിക്കും. രാത്രി ഭക്ഷണത്തിനു ശേഷം വേറെ ഭക്ഷണങ്ങളോ വെള്ളമോ കഴിക്കാൻ പാടില്ല.

ശസ്ത്രക്രിയയുടെ ദിവസം

രാവിലെ Betadine ഉപയോഗിച്ച് വിണ്ടും കുളിക്കുക. ഇത് അണുബാധ തടയാൻ സഹായിക്കും. അതിനുശേഷം Antibiotic-ന്റെ test dose injection നിങ്ങളുടെ കൈയ്യിൽ നൽകും. Injection വച്ച സ്ഥലത്ത് ചൊറിച്ചിലോ തടിപ്പോ ഉണ്ടെങ്കിൽ നേഴ്സിനോട് പറയുക. നിങ്ങളെ ഓപ്പറേഷൻ തീയറ്ററിലേക്ക് മാറ്റുന്നതുവരെ ബന്ധുക്കളും നേഴ്സും നിങ്ങളുടെ കൂടെ ഉണ്ടാവും.

ഓപ്പറേഷൻ തീയേറ്ററിൽ

മയക്കുന്ന ഡോക്ടർ നിങ്ങളുടെ കൈയ്യിൽ Cannula ഇടുകയും ചില മരുന്നുകളും തരും. ഇത് നിങ്ങളെ നന്നായി ഉറങ്ങാൻ സഹായിക്കും. ശസ്ത്രക്രിയയ്ക്ക് ശേഷം നിങ്ങളെ CSISCU ലേക്ക് മാറ്റും. അവിടെ നല്ല സംവിധാനങ്ങളും പ്രത്യേക പരിശീലനം ലഭിച്ച ഡോക്ടർമാരും നേഴ്സുമാരും ഉണ്ടാവും.

CSICU ൽ

ഉണരുമ്പോൾ നിങ്ങൾ CSICU ൽ ആയിരിക്കും. നിങ്ങളുടെ ഹൃദയമിടിപ്പ് B.P., Breathin, V/s എന്നിവ അറിയുവാനായി പല ഉപകരണങ്ങളും നിങ്ങളുടെ മേൽ ഘടിപ്പചിച്ചിട്ടുണ്ടാവും. നിങ്ങളുടെ വായിൽ ശ്വസിക്കുന്നതിനായി ഒരു ട്യൂബുണ്ടായിരിക്കും, അതിനാൽ നിങ്ങൾക്ക് സംസാരിക്കാനാവില്ല. നിങ്ങൾക്ക് തനിയെ ശ്വസിക്കാനാവുന്നത് വരെ ആ ട്യൂബ് നിങ്ങളുടെ വായിൽ തന്നെയുണ്ടാവും. 4-5 മണിക്കൂറിനുള്ളിൽ നിങ്ങൾക്ക് കുടിക്കുവാൻ വെള്ളം തരും. വേദന കുറയുവാനുള്ള ഗുളിക നിങ്ങൾക്ക് തരും. നിങ്ങളുടെ ഒരു ബന്ധുവിനെ കാണാൻ നേഴ്സ് അനുവദിക്കുന്നതാണ്.

Physiotherapistഉം നേഴ്സും നിങ്ങൾക്ക് Chest physiotherapy തരും. ഇത് കഫം പുറത്തു കളയുന്നതിനു സഹായിക്കും. അവർ നിങ്ങളെ Incentive Spirometry ഉപയോഗിക്കാൻ പഠിപ്പിക്കും. രണ്ടുമൂന്നു ദിവസത്തിനുള്ളിൽ നിങ്ങളുടെ ശരീരത്തിൽ ഘടിപ്പിച്ചിരുന്ന ട്യൂബുകൾ മാറ്റുന്നതാണ്. 3-4 ദിവസം കഴിഞ്ഞ് നിങ്ങളെ വാർഡിലേക്ക് മാറ്റും. എല്ലാദിവസവും നിങ്ങളുടെ ആരോഗ്യ നിലയെക്കുറിച്ച് ബന്ധുക്കളോടു ഡോക്ടർ സംസാരിക്കുന്നതാണ്.