

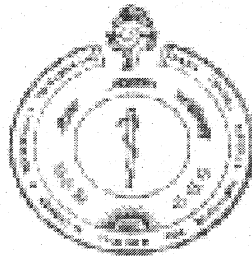
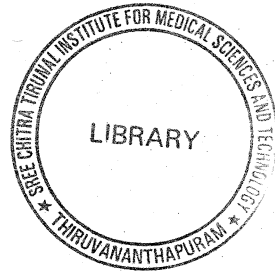
**EFFECT OF HEALTH EDUCATION ON
ANXIETY OF ADULT PATIENTS UNDERGOING
CRANIOTOMY**

PROJECT REPORT

**Submitted in partial fulfillment of the requirements
for the DIPLOMA IN NEURO NURSING**

Submitted by

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CODE NO.5784**



**SREE CHITRA TIRUNAL INSTITUTE FOR
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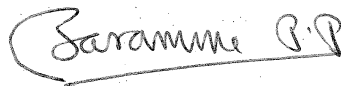
TRIVANDRUM

NOVEMBER 2008

CERTIFICATE FROM SUPERVISORY GUIDE

This is to certify that **Miss. ASHA GOPI G.S** has completed the project work on EFFECT OF HEALTH EDUCATION ON ANXIETY OF ADULT PATIENT UNDER GOING CRANIOTOMY under my direct supervision for the partial fulfillment for the Diploma in Neuro Nursing in the University of Sree Chitra Thirunal Institute for Medical Sciences and Technology, Trivandrum.

It is also certified that no part of this report has been included in any other thesis for processing any other degree by the candidate.



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CERTIFICATE FROM CANDIDATE

This is to certify that the Project on EFFECT OF HEALTH EDUCATION ON ANXIETY OF ADULT PATIENT UNDERGOING CRANIOTOMY is a genuine work done by me at Sree Chitra Tirunal Institute For Sciences and Technology, Trivandrum under the guidance of Mrs. Saramma P.P. It is also certified that this work has not been presented previously to any university for award of degree, diploma or other recognition.

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APPROVAL SHEET

This is to certify that Miss. ASHA GOPI G.S bearing Roll no - 5784 has been admitted to the Diploma in Neuro Nursing in January 2008 and she undertaken the project entitled, EFFECT OF HEALTH EDUCATION ON ANXIETY OF ADULT PATIENT UNDERGOING CRANIOTOMY , which is approved for the Diploma in Neuro Nursing awarded by the Sree Chitra Tirunal Institute For Medical Sciences and Technology, Trivandrum, as it is found satisfactory.

Examiners

1)-----

2)-----

Guide(s)

1)-----

2)-----

Trivandrum

November 2008

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The investigator wishes to express heartfelt thanks to parents and near ones for their prayer , encouragement and help throughout this project .

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

Asha Gopi.G.S

ABSTRACT

Effect of health education on anxiety of adult patient under going craniotomy.

Craniotomy is an elective neuro surgical procedure. Majority of people have fear about surgery, post operative complication and out come. Many studies have shown that pre operative health education reduce post operative anxiety. Objectives of the study was to find out (1) effect of health education on anxiety of adult patient undergoing craniotomy and (2) relationship between anxiety and selected variables such as age , sex , level of education , occupation, and income. The study was conducted in Neuro surgical ICU and Neuro surgical ward in SCTIMST , Trivandrum. Sampling technique was alternate sampling. The sample size was 34. Patients were randomly assigned to Intervention (patients those seeking health education) and Control group (not seeking health education). In this study the investigator used standardized Malayalam version of Speilberger's State Trait Anxiety Inventory , for assessing the anxiety. Two group pre test and post test design was used. Individual health education using a self prepared pamphlet was given after initial assessment. Major finding of the study was patients in the Intervention group the State anxiety level was reduced both in male and female after surgery compared than control group. The results support the existing knowledge that pre operative health education reduces post operative anxiety.

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CHAPTER - 1

INTRODUCTION

1.1 . INTRODUCTION

Craniotomy is the surgical opening of the skull to gain access to intracranial structures. This procedure is done to remove a space- occupying abnormality such as tumor, cyst or vascular malformation. This procedure may also be needed on an emergency basis to evacuate a hematoma ,relive intracranial pressure and reverse a herniation syndrome. In this procedure, a skull incision is made, the bone flap is elevated , dura is opened , and the tumor is subjected to biopsy or resection. (Hickey, 2003).

Craniotomy is indicated for the diagnosis or treatment of intracranial lesions demonstrated by neuroradiology , where there is adequate clinical indication with modern diagnostic facilities, truly exploratory procedures will rarely be needed.

Contra – indication may be the nature of lesion, the speed of progression symptoms and also the patients age and fitness. The few absolute

contraindications include overwhelming infections or abnormalities of blood coagulation. Poor neurological condition of the patient need to be a contraindication, since surgical treatment of an intracranial mass will usually be required before improvement can occur.

1.2. Background of the study

There are many reasons for performing a craniotomy. It may be done as an emergency following a head injury or brain hemorrhage. This is to remove blood clots, which are pressing on the brain. As a planned procedure , a craniotomy may be essential to remove a tumor or to clip an aneurysm. All operations carry some risks. Proper assessment of the postoperative status of the patients requires an awareness of the patient's symptoms, so that a comparison may be made between the pre operative and postoperative conditions. In case of craniotomy the complications occurs intra -operatively, during the immediate and late postoperative period. The complications after craniotomy includes increased intra cranial pressure, vasospasm, cerebral infraction, hydrocephalus, pneumonia, pulmonary embolism, diabetic insipidus, syndrome of inappropriate anti diuretic hormone (SIADH) , wound infectios meningitis , seizure, cranial nerve damage and functional disability. The late post operative complications includes wound infections, seizure, meningitis, and functional disabilities . Most

of the patients are very much anxious due to complications. So reduction of pre operative anxiety is widely accepted as part of nursing care. (Johnson 1971).

SCTIMST is one of the major center in India where craniotomy is done successfully. More than 100 cases were done in a month.

Johnson (1971) suggested that accurate pre operative information builds accurate expectation of surgery which will infact reduce emotional arousal during surgery. Anxiety is one of the most common emotions seen in health care setting. Care of anxious client is one of the grater challenges as nurses.

Anxiety is a universal experience and an unavoidable aspect of everyone life. Mainly anxiety is three types that are mild, moderate, and severe. The responsibility for giving pre operative information o reduce anxiety is recognized as a necessary and ongoing responsibility of the nurse as a source of emotional support (Oakely 1984)

Anxiety is one of the major problem in psychology and result in considerable functional impairment. State and trait anxiety is one of the most common features of anxiety. State anxiety refers to emotional reaction characterized by subjective conscious feeling of tension, apprehension, nervousness and worry. In contrast , Trait anxiety deals with individual difference in the dangerous, and in the frequency that state anxiety is experienced. Statistics very widely but most agree that anxiety disorders are

more common in women than in men. Medical illness and invasive procedure are often associated with anxiety.

The most common used psychometric self-report inventory is probably Speilberger's State Trait Anxiety Inventory (STAI – Speilberger's et al.,1970).State and Trait anxiety are analogous in certain respect to kinetic and potential energy. People who differ in trait anxiety will show corresponding difference in state anxiety depending on the extent to which each of them perceives a specific situation as psychologically dangerous or threatening and this is greatly influenced by each individual's past experienced.

1.3 . Need and significance of study

Patients who are admitted for craniotomy are found to be more anxious about the outcome of surgery . These patients also fear about the complications and are in high emotional stress before surgery. The patient's anxiety level is an indication of post operative problem . Pre operative anxiety increase the chance of post operative pain, analgesic consumption, and hospital stay and recovery.

In this situation pre operative teaching plays an important role in relieving anxiety and reducing anxiety related complications. The patients ask too many questions about surgery, ICU staying, complications follow up recovery etc. Hence the investigator felt the need to conduct the study about the effectiveness of preoperative teaching on anxiety.

1.4. Statement of the problem

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

1.5. Objectives

craniotomy.

1. To find out effect of health education on anxiety of adult patients undergoing craniotomy.
2. To find out relationship between anxiety and selected variables such as sex, age, education , occupation , and income

1.6 . Operational Definitions

Pre operative teaching :- In this study pre operative teachings describes an interactive process of providing in formations about surgical process, expected patients behavior and anticipated sensations and providing appropriate reassurance and therapeutic listening to patients who are about to under gone surgrey.

Anxiety :- It is a state of emotion and is measured by using Speilberger's State Trait Anxiety Scale.

Craniotomy: - Is a surgical opening of the skull to provide access to the intracranial content for reasons such as removal of tumor, clipping of an aneurysm , or repair of a cerebral injury , relive elevated ICP , evacuate a blood clot and control hemorrhage.

1.7. Methodology

Settings : Neuro surgical ICU and Neuro surgical Ward in SCTIMST.

Study design : Pre test and post test design. One group received health education (intervention group) and other group (control group) not received health education.

Pre test done before the day of surgery.

Posttest done before the day of discharge.

Sample technique : Alternate sampling.

Exclusion criteria : Children below the age of 18yrs.

1.8. Tool

The investigator assessed the anxiety level of patient by using Speilberger's State Trait Anxiety Inventory standardized Malayalam version. After assessing the anxiety level the investigator gives health education by using self prepared pamphlet. The content of health education includes the

disease condition, surgery, need for surgery , out come , ICU staying and follow up. The experts in neurology department in SCTIMST validated this content.

1.9. De limitations

1. The patients who speak Malayalam.
2. The patients who are conscious , oriented and co operative.

1.10 . Organization of the report

Chapter 1 deals with introduction, back ground of the study, need and significance of the study, statement of the problem, objectives , operational definition and delimitations. Chapter II deals with review of literature, Chapter III deals with the methodology, and Chapter IV presents analysis and interpretation of data and Chapter V include summary, discussion, Conclusion and recommendation, reference and appendices are given towards the end.

REVIEW OF LITERATURE

Review of literature is an important aspect of any research project from beginning to end. It gives character insight in to the problem and helps in selecting methodology, developing 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 presented in the following section.

2.1 Studies for reducing anxiety by pre operative education.

2.2 Studies on craniotomy.

2.1 Studies for reducing anxiety by pre operative education.

Andrews et al;(1999) investigated the impact of treatment information package on patients being monitored for possible surgical treatment for temporal lobe Epilepsy. 100 patients were randomly assigned to either a high or low information preparation condition. Level of anxiety were tested soon after admission. by using the Hospital Anxiety and Depression Scale (HADS). The State –Trait Anxiety Inventory(STAI),and a newly devised questionnaire to assess specific concern and anxieties of epilepsy patients presenting for monitoring and surgery. Patients assigned to the high- information condition

were exposed to an intervention package ,which included viewing a video depicting two separate interviews with patients who had undergone surgery as well as an information package ,which described the various tests that the patient would undergo in the course of the monitoring procedure . Patients assigned to the low - information group were given information that the hospital provided to all patients in there care. All subjects were then retested on anxiety levels a few days later. Those in the high - information group showed a significant in anxiety and depression levels compared with those in low information group.

Sjoling et al; (2003) observed that specific information given prior to surgery can help patients obtain better pain relief after total knee arthroplasty(TKE). Objectives were to study the impact of pre- operative information on state and trait anxiety,satisfaction with pain management and satisfaction with nursing care. The study was an intervention study with two group of equal size (n=30) . The intervention group was given specific information , while control group received routine information. Pain assessments were made pre operatively and first three post operative days using Visual Analogue Scale(VAS). The result of this study suggested that information influenced the experience of pain after surgery and related psychological factors. The post operative pain declined more rapidly for

patients in the treatment group, the degree of pre operative state anxiety was lower and they were more satisfied with the post operative pain management.

Asilioglu and Celik ;(2004) the purpose of this experimental study was to evaluate the effect of pre operative teaching method on anxiety levels of the patients. This study consisted of 100 patients having open cardiac surgery. Of 100 patients 50 were interventional group and remaining 50 were in the control group. The patients in the interventional group were given a planned teaching according to the patient education booklet. Patients in the control group were informed about only pre and post operative routine, by the purpose of comparing anxiety level of the patients in the interventional group and control group. Anxiety of both group were measured on the 3rd day after the operation by using Self Evaluating questionnaire for state and trait anxiety inventory scale. The mean post operative state and trait anxiety score in the control group was slightly higher than the mean of the patients in the intervention group.

Deyirmenjian et al ; (2006) assessed the impact of pre operative patients education on anxiety and recovery of patients undergoing open heart surgery. This quasi- experimental study the patients were randomly assigned to a experimental (n=57) on a control group (n=53) group. The patients in the experimental group received special education and the control group followed the routine hospital protocol. Anxiety was assessed using the Beck Anxiety Inventory Scale (BAIS). Borderline statistical significance was noted for the

experimental group in terms of pre operative and post operative anxiety. It is also reported that the experimental group had a shorter time from awaking to extubation.

Vanzurren et al ; (2006) studied the potential beneficial effect of an information brochure on patients undergoing a gastrointestinal endoscopy for the first time. Patients were randomly assigned to an experimental group receiving the brochure at least 1st day before the gastroscopy (n=47) , or control group not receiving the brochure (n=48) . The result showed that all experimental subjects , those receiving the brochure experienced less anxiety before the gastroscopy and after wards they reported grater satisfaction. Low bunters (those not seeking information) as compared to high blunters showed extra reduced anxiety after reading the brochure. High moitores (those seeking information) receiving the brochure showed reduced anxiety during the gastroscopy as compared to low monitores.

Nemi-Murola et al ; (2007) studied about patients often suffer from inadequate treatment of post operative pain. The purpose of this study was to survey the factors affecting patients satisfaction with post operative pain management . A questionnaire with 41 items given on the 3rd postoperative day to 102 patients undergoing major orthopedic or vascular surgery. Intensity of pain was assessed using a 10-cm visual analogue scale (VAS) and given analgesics were recorded. Nurse (n=74) working on the ward received a

questionnaire concerning attitudes towards management of pain. The questionnaire were returned by 75.5% of the patients and 86.3% of the nurses. 28% of the patients agreed having hard pain during the day of operation and 39.3% during the 1st post operative night. 80% of the patients were satisfied with pain management their satisfaction correlated significantly with received the pre operative information. Pre operative interview is very important tool to receive and give information concerning post operative pain management.

Beaupre et al ; (2004) observed that the effectiveness of a pre operative exercise \ education program following primary total knee arthroplasty (TKE) . 131 subjects were randomized to either the control (n=66) or treatment (n=65) group 6weeks before TKE surgery. Patients in the treatment group underwent a 4 week exercise \educational program before surgery. All subjects were assessed 6 weeks pre operatively (before the exercise \education intervention) immediately pre operatively (after the exercise \educationl intervention) ,and 3,6and12 months after surgery utilizing the western Ontario McMaster osteoarthritis Index. Subjects were similar in demographic characteristics and all measures at the baseline assessment.

Davis et al ; (1994) to examine the effects of coping style and type of preparatory informational treatment on cardiac catheterization patient anxiety. Pre test - post test randomized control group design. 145 adult patients (107 men and 38 women) scheduled for their first cardiac catheterization. Age range

was from 34 to 78 yrs. Patients randomly assigned to monitoring (information seeking) or blunting (information avoiding) . Subject's coping style was assessed by means of Miller's Behavioral Style Scale. Subjects anxiety was assessed by means of Spielberg's A-Trait and A-State Inventory. Subjects anxiety was assessed before and after intervention (time1&time2) and before and after catheterization (time3& time4) . Monitors who received the procedural –sensory modeling video treatment and blunters who received the procedural modeling video treatment reported significant reductions in A-State anxiety .At time 4 monitors and blunters in each of the treatment group reported a significant decrease in A-State anxiety. Female monitors and blunters reported significantly higher A-State anxiety level than male .

Blay and Donoghue (2005) observed the objectives of randomized controlled study were to determine if pre admission patients education affects post- operative pain levels , domiciliary self care capacity and patient recall following a laproscopic cholecystectomy (LC) .Sampling is 93 elective Lcpatients. Participants were randomized to receive the standard pre admission program (SP) or an individualized , education intervention (EI). A pre – operative questionnaire was administered in the pre admission clinic to determine participants' knowledge of LC and post operative management. Telephone follow-up and postoperative questionnaire were conducted approximately 14 days post discharge. EI participants experienced lower pain

levels and significantly greater recall of provided information . However no significant difference were found between the control and intervention group for domiciliary self-care. Pre education intervention helps reduce post operative pain levels following LC and significantly increases patients' knowledge of self care and complication management.

Lilja et al ; (2003) evaluate the effects of extended pre operative information , given by anesthetic nurses, on pre operative stress in patients operated on for breast cancer or total hip replacement (THR) .46 consecutive patients scheduled for surgery for breast cancer and 55 for THR , were randomized in to two groups which were given different modes of pre operative information . Patients in the controlled group were informed about pre and post operative routine by ward nurse . Patients in the intervention group were given extend formalized information by an anesthetic nurse . Wilcoxon rank sum test was used to show relations between variables . There were no significant differences between the intervention group and control group for patients with breast cancer or for the patient with THR . Breast cancer patients in the intervention group were significantly more anxious than THR patients in the intervention group ($p<0.01$). Breast cancer patients in the intervention group showed the highest anxiety scores on the Hospital Anxiety and Depression Scale (HADS) on the day of surgery . This information may reflect an increased level of anxiety due to the extend information given pre operatively . The

information may have negative effect on breast cancer patients , resulting in an increased state of anxiety .

2.2 Studies on Craniotomy.

Brackmann et al ; (2007) conducted a to evaluate the long-term facial function of patients after translabyrinthine vestibular schwannoma [VS] surgery and identify factors that influence these outcomes. A retrospective review was performed that included 580 consecutive patients who underwent translabyrinthine craniotomy for removal of VS. A total of 512 patients who underwent primary microsurgical treatment of sporadic unilateral VS met inclusion criteria. Patient and tumor characteristics as well as perioperative complications are described. Perioperative and long-term facial function were evaluated in 392 patients who had at least 1-year follow-up. Complication rates after translabyrinthine craniotomy for VS are low. Patients with smaller tumors have significantly better postoperative facial function than those with larger tumors. Excellent long-term facial function can be expected in the majority of patients who undergo microsurgical removal of VS via the translabyrinthine approach. Alternative treatment strategies may need to be developed for the treatment of VS > 3.5 cm in order to maximize postoperative facial function.

Kourbeti et al ; (2007) conducted a retrospective cohort study to determine the incidence, bacteriological features, and risk factors for postcraniotomy meningitis. Patients older than 18 years who underwent

nonstereotactic craniotomies between January 1996 and March 2000 and who survived for more than 7 days were included. Operations for placement of burr holes and shunts were excluded. Records of the first 30 postoperative days were abstracted. Host factors, types of craniotomy, and pre- and postoperative variables were evaluated as risk factors for meningitis. Among 453 patients, there were 25 cases of meningitis. Eight out of 12 culture-positive cases were the result of gram-positive cocci. 420 (92%) patients received antibiotic prophylaxis, most commonly a first-generation cephalosporin. In multivariate analysis, the risk of meningitis was increased by surgery that entered a sinus , and increases in the number of days of external ventricular drainage and intracranial pressure monitoring. Access of upper airway bacteria to the surgical wound, host factors as expressed by the American Society of Anesthesiologists score, and duration of device-related postoperative communication of the cerebrospinal fluid and the environment are major risk factors for postoperative meningitis after craniotomy.

Curry et al ; (2005) conducted a study was to determine the risk of adverse outcomes after contemporary surgical treatment of meningiomas in the US and trends in patient outcomes and patterns of care. The study were performed a retrospective cohort study by using the Nationwide Inpatient Sample covering the period of 1988 to 2000. Multivariate regression models with disposition end points of death and hospital discharge were used to test

patient, surgeon, and hospital characteristics, including volume of care, as outcome predictors. Multivariate analyses revealed that larger-volume centers had lower mortality rates for patients who underwent craniotomy for meningioma. Adverse discharge disposition was also less likely at high-, and a significantly less frequent adverse discharge disposition. In-hospital mortality rates decreased 61%, from 4.5% in 1988 to 1.8% in 2000. Reductions in the mortality rates were largest at high-volume centers (a 72% reduction in the relative mortality rate at largest-volume-quintile centers, compared with a 6% increase in the relative mortality rate at lowest-volume-quintile centers). The number of US hospitals where craniotomies were performed for meningiomas increased slightly. The mortality and adverse hospital discharge disposition rates were lower when meningioma surgery was performed by high-volume providers.

Mark Bernstein ; (2001) observed that routinely performed awake craniotomy for intra-axial brain tumors with low complication rate and low resource utilization. A pilot study was initiated to assess the feasibility of performing craniotomy for tumor resection as an outpatient procedure. A rigorous protocol was developed and adhered to, based around the patient's arrival at hospital at 6:00 am, undergoing image-guided awake craniotomy with cortical mapping, and being discharged by 6:00 p.m. During the 48 month period from December 1996 to December 2000, 245 awake craniotomies were

performed and of those, 46 patients were entered into the outpatient craniotomy protocol. Pathology in the 46 intent-to-treat group was: 21 metastasis, 19 glioma, and six miscellaneous. Four patients required conversion to inpatients and one patient was readmitted later the same evening due to headache. Thus 41/46 patients successfully completed the protocol (89%). There were five complications in the 46 intent-to-treat group (10.9%). Outpatient craniotomy for brain tumor is a feasible option which appears safe and effective for selected patients, the procedure may be psychologically less traumatic to patients than standard craniotomy for brain tumor.

:- The key terms used for search.

<http://www.ncbi.nlm.nih.gov/pubmed>

Table 2.1

Key terms used for literature search

Key Terms	No of articles
Effect of health education on anxiety of patients under gone surgery.	123
Craniotomy studies on 2000.	1023
Study related to effect of pre operative and post operative health education.	123

CHAPTER 111

METHODOLOGY

This chapter deals with research approach, research design,

Setting, the sample and sample technique, development of tool, description of tool , pilot study , data collection and plan of analysis.

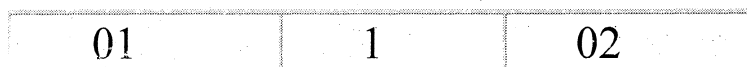
The aim of the study was:-

- To find out the effect of health education on anxiety of adult patients undergoing craniotomy.
- To find out relationship between anxiety and selected variables such as sex, age, education level, occupation , income etc.

3.1 Research approach : Pre experimental study

3.2 Research design :

For full filling the objective of the study one group pre test - Post test was used. The schematic representation shown in figure 3.1. In the figure 01 represent pre test , 1 represent is the health education , 02 represent the post test.



3.3 Settings:

The study was conducted in the Neuro surgical ICU and Neuro surgical ward at SCTIMST; Trivandrum. The rationale for selecting this hospital was that this is one of the superspeciality hospital in India doing craniotomy. In this hospital on an average, 100 craniotomy cases are done every month on a regular basis. More over, the investigator was familiar with this hospital.

3.4 Sample and sampling technique:

Alternate sampling technique was used for selecting the sample. All the patients who met the inclusion criteria were selected. The total duration of the study period was September - October 2008.

3.5 Inclusion criteria :

- Both male and female patients undergone craniotomy.
- Those patients who are co operative, conscious and oriented.
- Those patients who know Malayalam.

3.6 Exclusion criteria :

Children below the age of 18 yrs.

3.7 Development of tool

An extensive review and study of literature helped in preparing a health education pamphlet and it was scrutinized and approved by experts in Sree

Chitra Thirunal Institute Of Medical Science and Technology. In this study the investigator used standardized Malayalam version of Speilberger's State Trait Anxiety Inventory of assessing pre operative anxiety and to assess post operative anxiety which contain 36 questions.

3.8. Description on tool :

The tool used in present study consists of the following parts:-

Part – 1

This part contains demographic data including age, sex, education, occupation and income.

Part –11

It consists of Speilberger's State Trait Anxiety Inventory which is popular instrument for measuring anxiety. It has been used previously in many researches to assess emotional reaction to surgical procedure. This inventory consists of 36 self reporting items and has two parts. The State anxiety and Trait anxiety.

Part – 111

Patients were randomly assigned to experimental and intervention group. After assessing the anxiety level, health education was given to the intervention group. The health education pamphlet contains details about the disease condition, Surgery, need for surgery and ICU stay.

3.7 Pilot study :

Pilot study was conducted from September 15th to 25th, 2008. The aim of the study was to assess the effect of health education on anxiety of adult patients undergoing craniotomy. The study was conducted among five patients, both male and female between the age group of 18 to 60 yrs. The tool used is State Trait Anxiety Inventory (STAI) with 36 questions. The questions were asked in Malayalam. Total time period required was 30 minutes for a patient. Pilot study revealed that post test anxiety score was lower than pre test anxiety. After making necessary correction in the scoring part of the tool the main study was conducted.

3.8 Data collection :

For data collection formal permission was obtained from the authorities. Period of data collection from September 2008 to October 2008. Data was collected from patients in the Neuro surgical ward and Neuro surgical ICU.

The investigator first introduced herself and explained need and purpose study to the patients. After getting consent from the patients, anxiety level of the patients was assessed with the help of Speilberger's State Trait Anxiety Inventory. After this health education was given to patients in the intervention group by using self-preparing health education pamphlet. The patients were also given the opportunities to clear their doubts. In case of experimental group

health education is not received. On the 1st post operative day, both groups (Intervention and control group) anxiety were assessed by using the same structured anxiety scale, to find out the effectiveness of health education in reducing the anxiety level .

3.9 Plan of analysis :

A plan of data analysis was developed by the investigator after the pilot study. A master sheet was prepared with the score obtained in the STAI. (Descriptive statistics is used to analyses the data).

3.10 Summary :

This chapter deals with research approach, the study design , setting of the study, sample and sampling technique , development of tool , data collection and plan of analyze.

CHAPTER 1V

Analyse and interpretation of data

This chapter presents the analysis and interpretation of data collected from 34 patients who underwent craniotomy at SCTIMST , Trivandrum. Analysis is a process of organizing and synthesizing in such a way that project elicit meaning from collected data. The aim of the research study was to assess pre operative anxiety of patients undergoing craniotomy and to assess the effect of pre operative teaching on the anxiety level of patients undergoing craniotomy.

Interpretation refers to the process of making sense of the results and of examining the implication of the findings with in a broder content.

The data were coded , entered in Microsoft excel and analysed using epi info version 3.2 .

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

4.1 Distribution of Sample according to the demographic variables .

4.2 . Mean , standard deviation and P. value of pre -operative anxiety.

4.3. Mean, standard deviation and P. value of post- operative state anxiety.

4.1 . Distribution of sample according to the Demographic variables.

(1) Distribution of sample according to sex.

Table 4.1

Sex	Frequency	Percentage
Male	20	58.8%
Female	14	41.2%
Total	34	100%

The data given in table 4.1 shown that 58.8%of sample consisted of male.

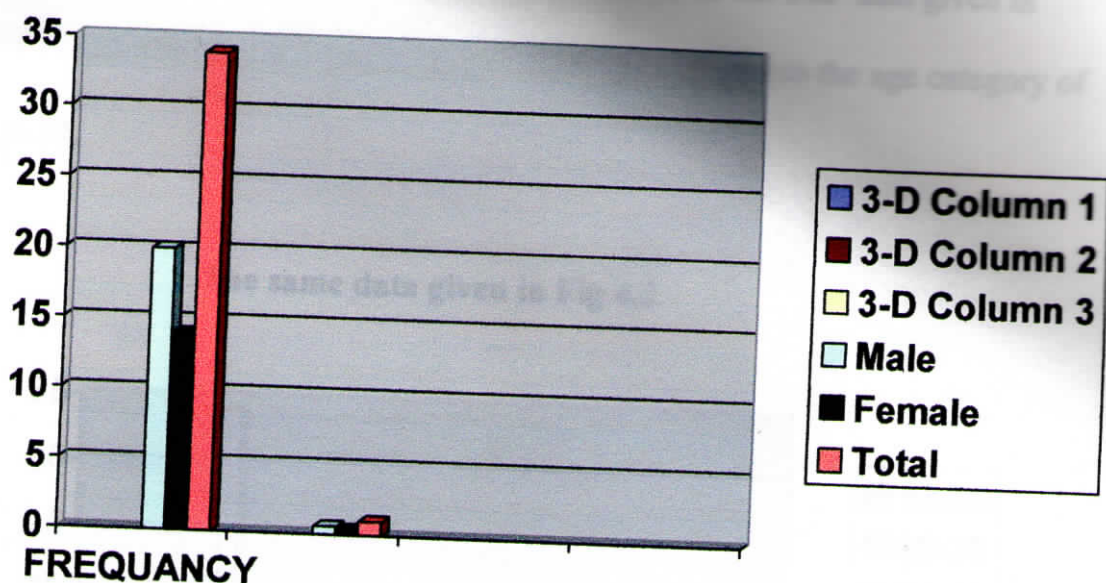


Fig 4.1

Bar diagram showing the distribution of sample

According to sex.

(2) Distribution of sample according to the age group.

Table 4.2

Age group	Frequency	Percentage
18 - 25	5	14.7%
26 - 33	9	26.5%
34 - 41	2	5.9%
42 - 49	4	11.7%
50 - 57	10	29.4%
58 - 65	3	8.9%
>66	1	2.9%
Total	34	100%

The mean age of the sample was 41.71 (with mean of 14.99) . The age ranged between 18 to 75. With medial age of 42 and mode of 18. The data given in table 4.2 shown that 29.4 percentage of subjects belonged to the age category of 50 to 57.

The same data given in Fig 4.2

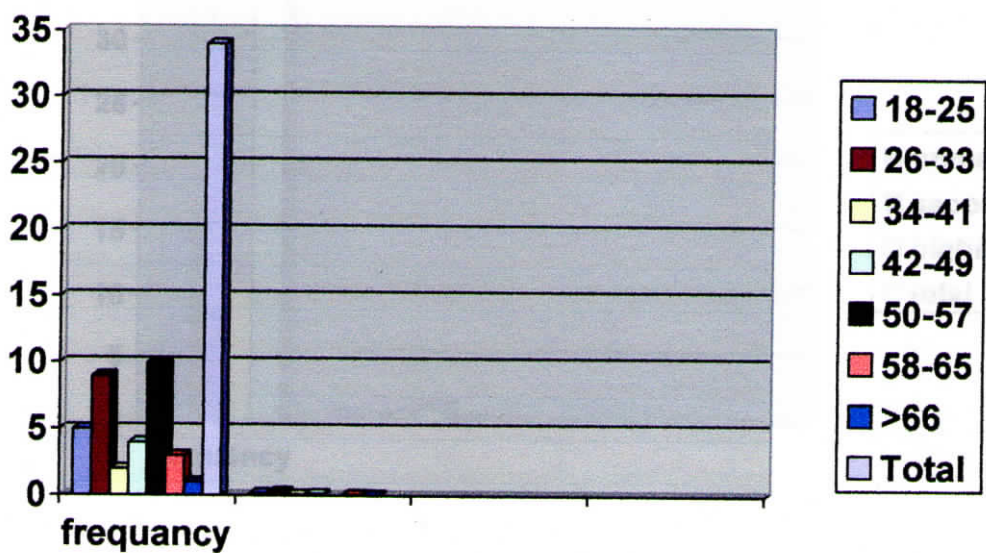


Fig 4.2

Bar diagram showing the distribution of sample according to age.

3. Distribution of sample according to education level.

Table 4.3

Education level	Frequency	Percentage
Primary	15	44.1%
Secondary	8	23.5%
Higher	11	32.4%
Total	34	100%

The data given in table 4.3 show that 44.1 percentage of subject belonging to the education category of primary level.

The same data given in Fig 4.3.

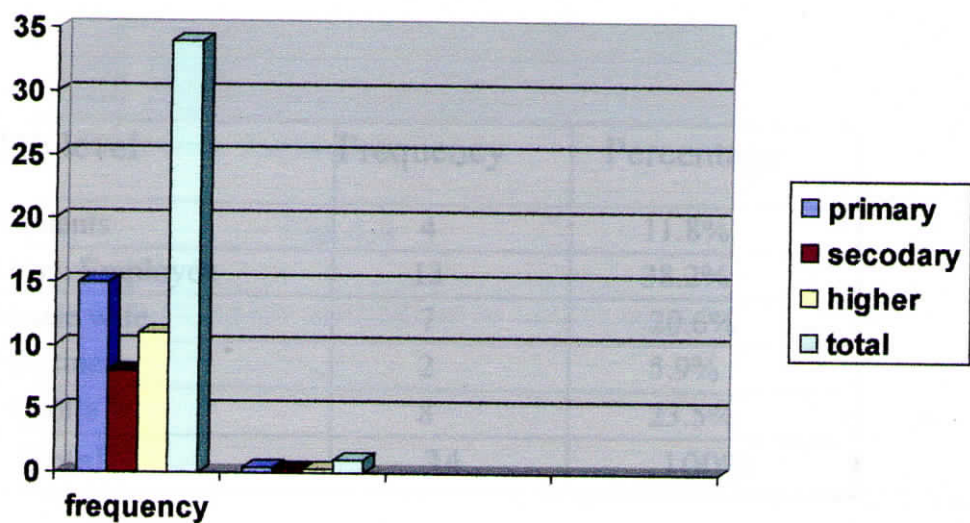


Fig 4.3

Bar diagram showing the distribution of sample according to education level.

The same data given in Fig 4.4.

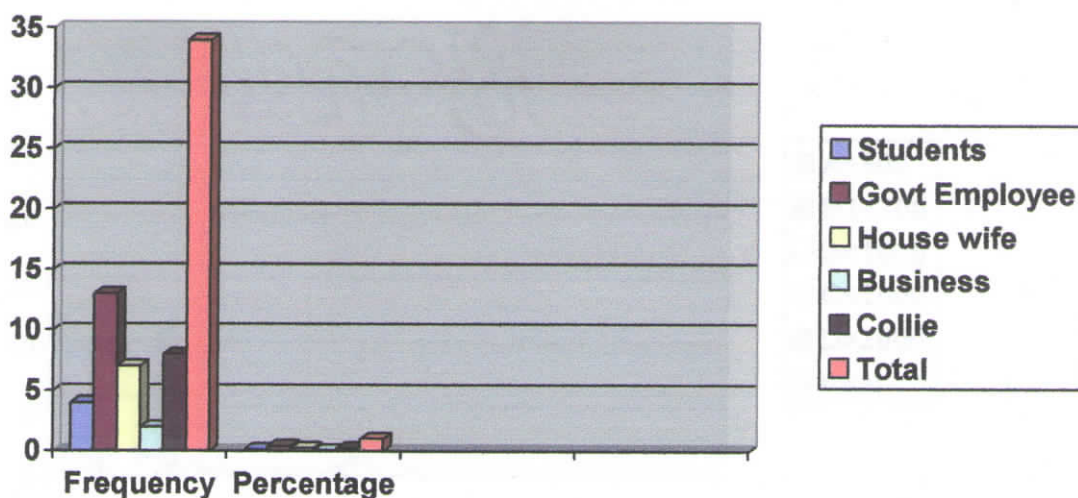


Fig 4.4

Bar diagram showing the distribution of sample according to level of occupation.

4. Distribution of sample according the income and hospital category.

Table 4.5

Income and Hospital category	Frequency	Percentage
<500 (A)	10	29.4%
<700 (B1)	6	17.6%
< 1000 (B)	6	17.6%
< 1500 (C)	1	2.9%
>2000 (D)	11	32.4%
Total	34	100%

Table 4.6

The mean, standard deviation and P value of Pre – operative State anxiety score of Intervention and Control group.

Type of anxiety	No	Mean	Standard deviation	t-value	P-value
Pre Operative state anxiety of intervention group.	18	47.7	10.44	0.876	0.388
Pre- Operative state anxiety of Control group.	16	44.63	10.11	0.876	0.388

The same data is given in Fig 4.6.

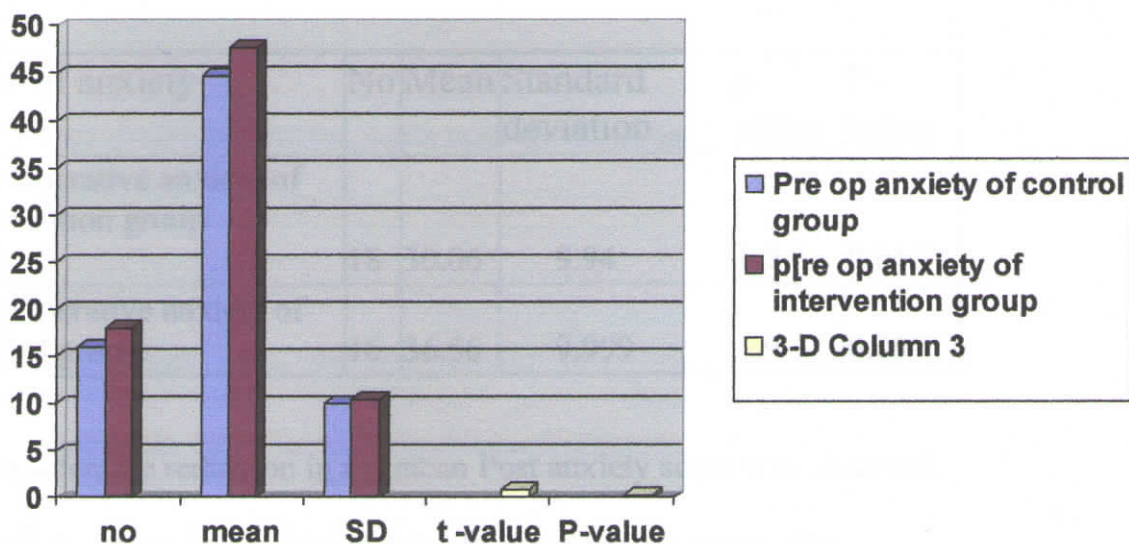


fig 4.6 Bar diagram showing mean and standard deviation of Pre - Operative state anxiety of Intervention and Control group.

Control group .How ever the obtained P value (0.06) was not significant at .05 level.

The same data is given in Fig 4.7.

Fig 4.7

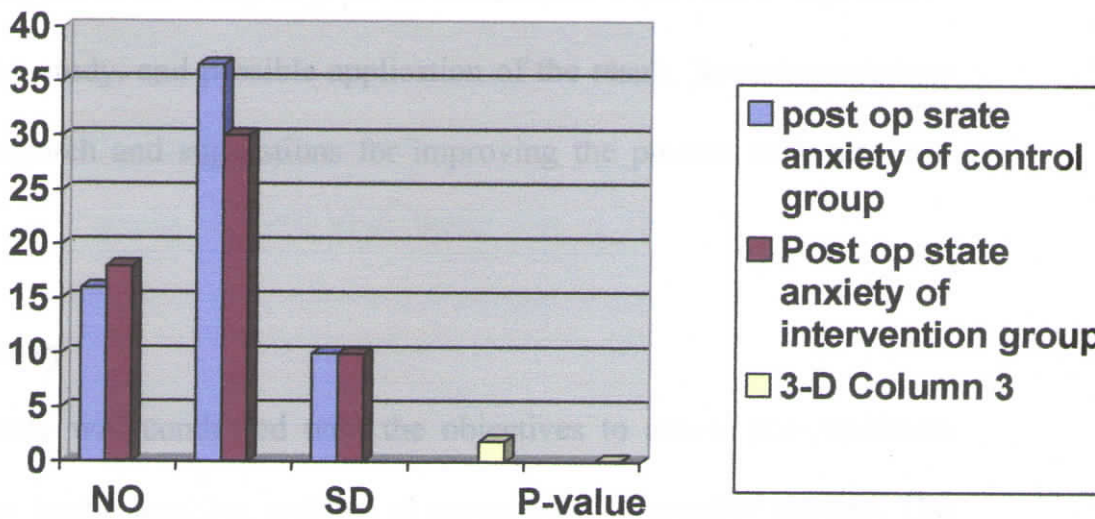


Fig 4.7 bar diagram showing mean post operative state anxiety.

Summary

This chapter deals with analysis and interpretation of data collected from 34 patients. Descriptive statistics and inferential statistics were used for the analysis. Bar diagram were used to illustrate the findings of the study.

(4) Distribution of sample according to the level of occupation.

Table 4.4

Job level	Frequency	Percentage
Students	4	11.8%
Govt: Employee	13	38.2%
House wife	7	20.6%
Business	2	5.9%
Coolie	8	23.5%
Total	34	100%

The data given in Table 4.4 shown that 38.2 percentage of subjects belonged to the occupation frequency of 13.

4.3 Mean , standard deviation and P. value of Post-

Operative state anxiety score of Intervention and control group.

Post state score of Control group ranged from 22 to 53 and that of Intervention group ranged from 19 to 53. The mean Post state anxiety score of the Control group was 36.56 (9.999) and that of the mean Post state anxiety of Intervention group 30.06 (9.94).

Table 4.7

Mean, standard deviation and P.value of the Post operative state anxiety score of Intervention and control group.

Type of anxiety	No	Mean	Standard deviation	t-value	P-value
Post Operative anxiety of Intervention group	18	30.06	9.94	1.9	0.067
Post-Operative anxiety of Control group.	16	36.56	9.999	1.9	0.067

A considerable reduction in the mean Post anxiety score was observed among the Control group as well as the Intervention group. The reduction of anxiety was more among the Intervention group than the

CHAPTER - V

SUMMARY , CONCLUSION , DISCUSSION AND RECOMENDATION

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 present study are also presented.

5.1 . Summary

The study was conducted with the objectives to assess pre- operative anxiety before health teaching and and to assess post – operative anxiety. The structured State-Trait Anxiety Inventory was for collecting data from 34 samples.

A review of related literature helped 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.

A standardized Speilberger's State Trait Inventory was used for assessing the anxiety level of the patients with a standardized questionnaire , health education on surgery , ICU stay , complication and outcome was given.

The study was conducted in SCTIMST , Trivandrum ,during the period of Sep – Oct 2008.The sample comprised of 34 patients, both males and females. Between the age group of 18 –75 years. Tool used for data collection patients demographic data, Speilberger's State Trait Anxiety Inventory. State anxiety scale consisted of 18 questions and Trait anxiety scale consisted of 18 questions.

5.2. The major findings of the study

The study results showed that there was a statistically significant reduction in the mean post state craniotomy anxiety of the samples .

5.3. Limitation

1. Study was limited to the SCTIMST ,Trivandrum
2. Study was conducted in a single group of patients admitted for craniotomy.
3. The study was conducted only among patients who could read Malayalam.

5.4 . Discussion

Assessment of anxiety level of patients who undergoing craniotomy is very important , because these patients are anxious about surgery, ICU stay , complication, outcome etc.

According to Andrewes et al ; (1999) Asilioglu and Celik (2004) VanZuuren et al ; (2006) Nemi-Murola et al ;(2007) pre operatively patients had

higher level of anxiety than post operatively. The findings of the present study is comparable to these results. The present study showed that health education seemed to decrease the anxiety level post operatively

5.5. Recommendations

The following recommendations are made on the basis of present study.

- Similar study can be reported by increasing the sample size.
- True experimental study to assess the effectiveness of pre operative teaching on anxiety level of patients before and after surgery can done.

5.6 . Conclusion

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

- With this limited number of patients it is not possible to generalize findings.
- There is need for study studies involving more number of patients validate the findings.

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APPENDIX

വാർഡ് (ഇടത്തേയ്ക്കുള്ള) ധനുരപ്പിള്ളി നഗരസഭ

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 താഴെകൊടുത്തിരിക്കുന്നു. അവ സാധാരണയായി നിങ്ങൾക്ക് എത്രത്തോളം അനുഭവപ്പെടുന്നുവെന്ന് ഉചിതമായതിനുനേരെ X അടയാളത്തിലൂടെ രേഖപ്പെടുത്തുക.

19.	എനിക്ക് മനസ്സുഖം തോന്നുന്നുണ്ട്	1	2	3	4
20.	എനിക്ക് പെട്ടെന്ന് ക്ഷീണം അനുഭവപ്പെടാറുണ്ട്	1	2	3	4
21.	എനിക്ക് കരയണമെന്ന് തോന്നുന്നുണ്ട്	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 ഗൗരവപൂർവ്വമെടുക്കുന്നു മനസ്സിൽനിന്ന് അവയെ മാറ്റുവാൻ കഴിയാറില്ല	1	2	3	4
35. സ്ഥിരചിന്തയുള്ള വ്യക്തിയാണ് ഞാൻ	1	2	3	4
36. അടുത്തകാലത്ത് എന്റെ സംരഭങ്ങളെക്കുറിച്ചും താല്പര്യങ്ങളെക്കുറിച്ചും അലോചിക്കുമ്പോൾ എനിക്ക് മനോസമ്മർദ്ദമുണ്ടാകുന്നു.	1	2	3	4

NB: എല്ലാ ചോദ്യത്തിനും ഉത്തരം എഴുതിയിട്ടുണ്ടോ എന്ന് ഒരിക്കൽകൂടി പരിശോധിക്കുക.

സമ്മതപത്രം

എന്റെ രോഗത്തെപ്പറ്റിയുള്ള അറിവ് പരിശോധിക്കുന്നതിനും എന്റെ മാനസികനില അളക്കുന്നതിനുംവേണ്ടി, ഞാൻ പൂർണ്ണമായി സമ്മതിച്ചിരിക്കുന്നു. ഇത് ഒരു പഠനത്തിന്റെ ഭാഗമാണ്. ഈ പഠനത്തിനുവേണ്ടി ഞാൻ സഹകരിച്ചുകൊള്ളാമെന്ന് സമ്മതിക്കുന്നു.

എന്ന്,

പേര്
ഒപ്പ്

SCORE

State Anxiety

Trait Anxiety

No	S	c	o	r	e	No	S	c	o	r	e
1	4	3	2	1		19	4	3	2	1	
2.	4	3	2	1		20.	1	2	3	4	
3.	1	2	3	4		21.	1	2	3	4	
4.	4	3	2	1		22.	4	3	2	1	
5.	1	2	3	4		23.	1	2	3	4	
6.	1	2	3	4		24.	4	3	2	1	
7.	4	3	2	1		25.	4	3	2	1	
8.	1	2	3	4		26.	1	2	3	4	
9.	4	3	2	1		27.	1	2	3	4	
10.	4	3	2	1		28	4	3	2	1	
11.	1	2	3	4		29.	1	2	3	4	
12.	1	2	3	4		30.	4	3	2	1	
13.	4	3	2	1		31.	1	2	3	4	
14.	4	3	2	1		32.	4	3	2	1	
15.	1	2	3	4		33.	1	2	3	4	
16.	1	2	3	4		34.	1	2	3	4	
17.	4	3	2	1		35.	4	3	2	1	
18.	4	3	2	1		36.	1	2	3	4	