

ASSESSMENT OF PREOPERATIVE AND POSTOPERATIVE ANXIETY AMONG ELECTIVE SURGERY PATIENTS IN A TERTIARY HOSPITAL

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ABSTRACT

Background: Anxiety is an unpleasant emotional experience that involves feelings of tension, apprehension, nervousness and high autonomic activity. Few studies will be conducted on anxiety levels among patient undergoing surgical operation.

Objective: The aim of this study is to assess preoperative and postoperative anxiety level of patients and identify factors that may influence patient's preoperative anxiety level.

Methods: Adult patients scheduled for elective surgery in a tertiary public hospital will be assessed a day before and after their surgery using a questionnaire with socio-demographic and clinical details. Anxiety will be assessed with the state portion of the State-Trait Anxiety Inventory (STAI) and different factors responsible for their anxiety were selected from a list.

Result: From the proposed study, we have concluded that patients undergoing elective surgeries are prone to fall in preoperative anxiety than postoperative. Fear regarding the surgical procedure is prominently reflected than that of anesthetic procedure going to be performed over the intraoperative management.

Conclusion: The prevalence of preoperative anxiety will be high in patients. Psychological preparation and provision of correct information that addresses identified factors may help in reducing preoperative anxiety.

Keywords: Anxiety, preoperative anxiety, postoperative anxiety, STAI questionnaire, mean anxiety, elective surgery.

INTRODUCTION

Anxiety is a distressing psychological experience which had leads to avoiding a surgical procedure by an individual patient prior to the proceedings. It refers to a fluctuation of emotions (like fear, jittery, increased autonomic activities) varying through situations over a period of time. Anxiety prior to the procedural activity may leads to increase the risk of cardiovascular diseases such as tachycardia, hypertension, arrhythmias and can increase pain during postoperative period. It will also lead to cause adverse effects over anesthetic induction as well as patient recovery, so proper consultations from the anesthesiologist should be given prior to the surgical procedure. Anxiety over anaesthesia is very common and can improve risks in various aspects of the perioperative experience. It is a much-needed thing to know about this anxiety through an open communication with the anaesthesiologist and potentially utilizing techniques to get rid of anxiety or medications to help manage it and improve a smoother experience. There are different scales are used to measure the anxiety in patients during perioperative management all over the world. Some of them are Depression, Anxiety and Stress Scale (DASS), the State-Trait Anxiety Inventory questionnaire (STAI), and the Visual Analogue Scale of Anxiety (VAS). These are the commonly used anxiety level scales which consists of multiple set of questions (questionnaire) regarding how the patient will feel prior and after the surgical procedure.

It's very common to feel anxious prior to a surgical procedure, and that anxiety can become more significantly when administering anaesthesia. Fear of the unknown, loss of control, potential complications, and even a history of difficult experiences may lead to cause this preoperative anxiety. Increased anaesthetic

requirement, delayed recovery and prolonged hospital stay, increased postoperative pain, negative impact on patient satisfaction is the most significant impact over anaesthesia in case of anxiety. Impact of preoperative and postoperative anxiety over surgical procedures can cause physiological effects like producing stress hormone which can lead potentially affecting the heartrate, blood pressure and even the immune response such as poor wound healing. Anxiety is linked to slower recovery from anaesthesia, longer extubating times, and extended hospital stays are associated with delayed recovery.

Concern about pain (delayed recovery or wound healing), mild to intense pain, an unease associated with PONV, insomnia or sleeping disorders which can negatively impact the cognitive function, inability to perform regular activities (daily routines) or lifestyle changes, body's changes over surgical trauma, alterations in hormone levels, effects of anaesthesia are the common impacts over postoperative anxiety. In this study, we have used the State-Trait Anxiety Inventory (STAI) questionnaire over 64 patients undergoing elective surgeries to analyse, assess and compare the level of anxiety in both the preoperative and postoperative period.

AIM

The aim of this study is to assess preoperative and postoperative anxiety level of patients and identify factors that may influence patient's preoperative anxiety level.

OBJECTIVES

- To rule out the significant differences between the preoperative and postoperative mean STAI scores.
- Fear of complications and result of operation will be the most common factors responsible for preoperative anxiety while few patients were anxious about nil per mouth, getting stuck with needle and harm from doctor/nurse mistake.
- And to conclude that preoperative anxiety is higher than postoperative anxiety.

MATERIALS AND METHODS

- **Study type**

Retrospective study type:

Is an observational study that analyses data collected from past events or records to investigate potential relationships between exposures and outcomes.

- **Study design**

Cross-sectional study design:

Is a type of observational research that analyses data from a population at a single point in time.

- **Study population**

1. *Inclusion criteria* (the specific characteristics or attributes that make a participant eligible to be included in a study)

- AGE-18-65 years old.
- Patients undergoing elective surgery
- Preoperative and postoperative assessment of the patient

2. *Exclusion criteria* (the reasons why someone might be excluded from a study despite initially appearing to be a good fit)

- AGE- More than 65 years old and less than 18 years old
- Severe psychological complications
- Trauma and shock patients

- **Study area**

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- **Sampling method**

Convenience sampling method:

Is a non-probability sampling technique where participants are chosen for a study because they are readily available and easy to access, rather than through random selection.

- **Sample size:** 64

- **Data collection tool**

Various instruments have been used in the assessment of levels of anxiety in adult surgical patients in the developed countries. The commonly used scales include the Depression, Anxiety and Stress Scale (DASS), the State-Trait Anxiety Inventory questionnaire (STAI) and the Visual Analogue Scale of Anxiety (VAS). In this study the data from the patients regarding anxiety was observed using STAI questionnaire.

RESULTS

From the proposed study, we have concluded that patients undergoing elective surgeries are prone to fall in preoperative anxiety than postoperative. Fear regarding the surgical procedure is prominently reflected than that of anesthetic procedure going to be performed over the intraoperative management. Using STAI questionnaire in both the preoperative and postoperative period to analyze the patient anxiety level over an elective procedure, we had found that anxiety plays a major role in the preoperative period.

DISCUSSION

- The aim the proposed study is to analyze the patients undergoing elective surgery over preoperative and postoperative anxiety and to identify the factors affecting preoperative anxiety among patients.
- Responses were collected from 64 patients undergoing elective surgeries in both preoperative and postoperative period, the concluded result from the statistics says that patients undergoing elective surgeries are more prone to preoperative anxiety because the fear over the surgery and not over anesthetic procedure.
- Procedure undergone to collect samples are explained below;
 - Patient selection: According to the inclusion and exclusion criteria, patients were selected for the assessment of preoperative and postoperative anxiety level analyses.
 - According to the inclusion criteria patients undergoing any kind of elective surgery with age above or below 18 and 65 respectively.
 - The patients were explained about the study then got signed with informed consent which consists of a detailed disclosure or protocols regarding the study they participating.
 - After that using STAI questionnaire as S1 and S2 are used to measure the anxiety levels of the patient in both the preoperative and postoperative period respectively, then the collected data were finalized and completed by convenience sampling method.
 - Average mean had been calculated by using descriptives for both preoperatively anxiety and postoperatively anxiety simultaneously.

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S no	Symptoms of anxiety	Preoperatively mean (SD)	Postoperatively mean (SD)
1	I feel calm	2.16 (0.87)	3.39 (0.74)
2	I feel secure	2.34 (0.99)	3.27 (0.98)
3	I feel tense	2.70 (1.35)	1.50 (0.75)
4	I feel strained	2.91 (0.92)	-
5	I feel at ease	1.97 (1.19)	3.23 (0.92)
6	I feel upset	2.86 (0.68)	1.70 (0.46)
7	I am presently worrying over possible misfortunes	2.86 (1.16)	1.42 (0.49)
8	I feel satisfied	2.02 (1.35)	3.22 (0.95)
9	I feel frightened	3.23 (0.79)	1.25 (0.43)
10	I feel uncomfortable	3.03 (0.71)	1.66 (0.47)
11	I feel self- confident	2.06 (1.35)	3.48 (0.50)
12	I feel nervous	3.05 (1.03)	1.52 (0.73)
13	I feel jittery	3.33 (0.83)	1.30 (0.70)
14	I feel indecision	2.58 (1.11)	1.17 (0.38)
15	I feel relaxed	2.41 (1.16)	3.13 (0.67)
16	I feel content	2.22 (1.06)	3.72 (0.49)

17	I feel worried	3.05 (1.13)	1.59 (0.49)
18	I feel confused	2.64 (0.78)	1.14 (0.35)
19	I feel steady	2.38 (1.06)	3.27 (0.44)
20	I feel pleasant	2.55 (1.35)	3.91 (0.29)

Table 1: Comparison of preoperative and postoperative individual item mean score for the State-Trait Anxiety Inventory (State form) among patients

- From table 1, the individual mean anxiety score is compared among the preoperative and postoperative anxiety with average mean and standard deviation of the data obtained.

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Variables	Statistics			
	Preoperative	Postoperative	Statistics	p value
Low anxiety	1.97 (1.19)	1.14 (0.35)	19.92	<.001
High anxiety	3.33 (0.83)	3.91 (0.29)		
Mean anxiety score (Standard Deviation)	1.039 (0.22)	0.553 (0.24)	6.84	.001

Table 2: Comparison of level of anxiety preoperatively and post operatively among respondents

- From table1; the lower anxiety and higher anxiety means are analyzed to give a result with the mean anxiety score using t test.
- From table 2, the comparison between levels of anxiety preoperatively and postoperatively had concluded that the preoperative mean anxiety score (1.039) is higher than the postoperative mean anxiety score (0.553).
- Hence there is increased anxiety level is noted in preoperative period than that of postoperative period.

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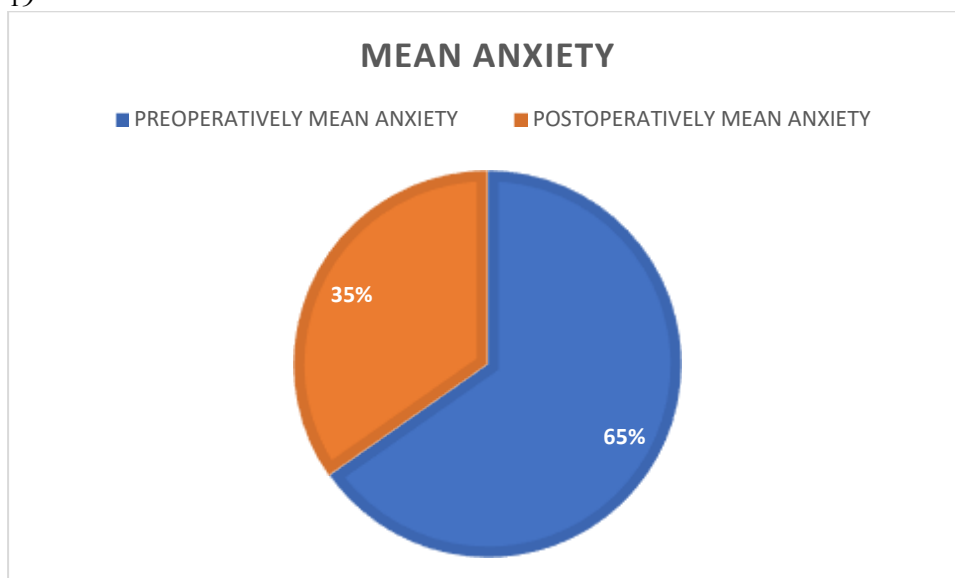


Chart: Comparison of average mean anxiety over preoperative and postoperative anxiety.

- From the above chart, the mean anxiety score is compared and concluded that 65% of the patients were prone to preoperative anxiety and 35% of the patients were affected over postoperative anxiety.
- The incidence of preoperatively anxiety among the patients undergoing elective surgeries may undergo significant changes over the perioperative procedure such as fluctuations in heart rate, blood pressure which shows a major difference in the mean anxiety levels over the comparison.

- From the comparison of the individual mean scores and the overall mean average results that the preoperative anxiety is predominantly more incidence than the postoperative anxiety with 65% and 1.039 mean anxiety scores.
- Hence, we had concluded that preoperative anxiety with 65% is higher than postoperative anxiety with 35% among patients undergoing elective surgeries.

CONCLUSION

Anxiety is an unpleasant emotional experience that involves feelings of tension, apprehension, nervousness and high autonomic activity. Few studies will be conducted on anxiety levels among patient undergoing surgical operation.

From the proposed study about the assessment of preoperative and postoperative anxiety in patients undergoing elective surgeries, we have concluded that patients undergoing elective surgeries are prone to fall inpreoperative anxiety than postoperative.

Fear regarding the surgical procedure is prominently reflected than that of anesthetic procedure going to be performed over the intraoperative management.

The prevalence of preoperative anxiety will be high in patients. Psychological preparation and provision of correct information that addresses identified factors may help in reducing preoperative anxiety.

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