

Pre-Operative Anxiety among Patients Undergoing Major Surgery in a Government Hospital of Nepal

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ABSTRACT

Background: The extreme form of pre-operative anxiety may lead to severe cardiovascular complications like hypertension, arrhythmia etc. and other severe post-operative complications like post-operative pulmonary complications, delay ambulation, wound infection etc. This study aims to find out the association between study variables and the level of anxiety.

Methods: The study was conducted in surgical wards of Tribhuvan University Teaching Hospital (TUTH). The level of pre-operative anxiety of 47 patients in the surgical wards planned for major surgery was assessed using Beck Anxiety Inventory. Descriptive and inferential statistical analysis were used to measure the association between anxiety and selected demographic and surgery related factors.

Results: All the patients experienced anxiety while 70.7% and 29.8% experienced very low and moderate levels of anxiety. None experienced severe anxiety. The major cause identified were health professionals' inadequacy to provide information and fear of blood transfusion. No significant association between the level of anxiety and sociodemographic and surgery-related characteristics was found.

Conclusion: This study concludes that surgical patients experienced low to moderate levels of anxiety. Also, the need to incorporate pre-

operative orientation and counseling programs in routine nursing care can be suggested.

Keywords: Beck Anxiety Inventory, nursing care, Hospital anxiety, surgery, anxiety.

INTRODUCTION

Anxiety can be defined as an unpleasant feeling of tension, apprehension, nervousness, fear and high autonomic activity that varies in intensity and degree of fluctuation over time (MEJ anesthesia, 2015). Anxiety is common in surgical patients during the pre-operative period. [1] Pre-operative anxiety is an unpleasant state of uneasiness or tension that is secondary to a patient being concerned about a disease, hospitalization, anesthesia and surgery. Among adult patient's prevalence rate of pre-operative anxiety have been reported to vary from 11% to 80% (MEJ anesthesia, 2015).

The commonly used scale includes Visual analogue scale, State trait anxiety inventory, hospital anxiety and depression scale, beck anxiety inventory. There are various factors contributing to pre-operative anxiety and most common causes are fear of complication of surgery and anesthesia, concern about family, post-operative pain. Globally, there is evidence of prevalence of pre-operative anxiety among patient

undergoing surgery though the factors associated with pre-operative anxiety varies. [2]

A study done in Czech Republic on measuring pre-operative anxiety in patients undergoing elective surgery had shown statically significant consideration with a p-value<0.05. Females and patients without previous surgery experienced higher anxiety measured by Visual Analogue Scale (VAS) and Amsterdam preoperative anxiety and information scale (APAIS). [3]

The research conducted in Nigeria on "Assessment of pre-operative and post-operative anxiety among elective major surgery patients in a tertiary hospital showed the prevalence of pre-operative anxiety i.e. 51% while 15.7% had post-operative anxiety. [4] The study done in the national hospital of Sri Lanka on pre-operative anxiety in surgical patient's experience of a single unit revealed the high prevalence of anxiety among female Sri Lankan patients than males. [5] Similar findings were found in study done in South India on assessment of pre-operative anxiety in patients for elective surgery. [6] Since pre-operative anxiety is globally prevalent and also found significantly high in SAARC countries, so it may be the problem and prevalent in our country too.

Anxiety is common in surgical patients during the pre-operative period. High level of pre-operative anxiety has unfavorable effects on induction and maintenance of anesthesia as well as the recovery from anesthesia and surgery. So pre-operative anxiety has always been the concern of patients as well as the anesthesiologist and the surgeons. Extreme form of anxiety prior to surgery has been shown to lead to cardiovascular disturbances. Moreover, pre-operative anxiety may lead to post-operative complications and delay in ambulation. So, that it is necessary to detect the pre-operative anxiety and factors contributing anxiety for early recovery and effective

outcome of surgery. Therefore, this research was conducted to find out the level and factors associated with pre-operative anxiety on patient undergoing major surgery. [7]

METHODOLOGY

A descriptive research was used to find out level of anxiety and causes of preoperative anxiety among patient undergoing major surgery. Tribhuvan University Teaching Hospital, Kathmandu, Nepal was selected as study area which is one of the central and referral Centre where more than 15 major surgeries are carried out in a day.

Both male and female patients who were planned for major surgery of gynaecology, gastrology, urology and neurology were selected for the study with inclusion criteria for age being 18 and above. Non probability, purposive sampling technique was used in the study. The sample size was calculated 47 using 86.26% prevalence and 10% allowed error.

The interview schedule was developed focusing on two parts namely Socio demographic data, questions related to anxiety and validated anxiety assessment tool was obtained from research department of psychiatry of TUTH. Data was collected through face to face interview with the respondent.

Interview was conducted in a separate room for ensuring privacy and confidentiality. Pre-test was done in five respondents admitted for major operation in Surgical Ward for two days. There wasn't need of any modification as per result of pre-test in tool. Data was collected for 2 weeks in surgical department of TUTH.

Data was analyzed and categorized on the basis of research objective by using SPSS version 20. Then the level of anxiety was assessed and inferential statistics (Chi-square test) was used to show the association of the level of anxiety and study variables.

RESULTS

The socio-demographic information is presented in Table 1.

Table 1: Socio-demographic information of respondents n=47

Variable	Frequency	Percentage
Age	-	-
Mean=47.68		
Standard Deviation (±)=17.597	-	-
Sex		
Female	26	55.3
Male	21	44.7
Marital Status		
Married	40	85.1
Unmarried	7	14.9
Educational Status		
Illiterate	15	31.9
Able to Read and Write without Formal Education	5	10.6
Primary Level	9	19.1
Higher Secondary Level	8	17.0
Up to Bachelor Level	10	21.3
Ethnicity		
Brahmin/Chhetri	25	53.2
Janajati	17	36.2
Madhesi	3	6.4
Dalit	1	2.1
Others	1	2.1
Monthly Income		
< 5000	9	19.1
6000-15000	18	38.3
16000-25000	10	21.3
> 25000	10	21.3

Table 2 presents the level of anxiety experienced by respondents pre-operatively. 70.7 % faced low level of anxiety scoring 0-21 whereas 29.8 % experienced moderate level of anxiety scoring 22-35 score in Beck Anxiety Inventory of anxiety measurement scale. No one experienced severe level of anxiety.

Table 2: Level of anxiety among respondents n=47

Variable	Frequency	Percent
Level of Anxiety		
Very Low Level	33	70.2
Moderate Level	14	29.8

Table 3 reveals that around half of respondents were admitted for gynecological surgeries followed by gastrological surgeries, urological and neurological surgeries. Among them less than one third had no previous experience of surgery. During the admission for the surgery majority of respondents i.e. 55.3% received pre-operative information only about the surgery from the doctor. Among them 53.2% got clear information whereas 46.8% didn't get clear information during pre-operative teaching.

Table 3: Surgery related characteristics of the respondents n=47

Variable	Frequency	Percent
Type of Surgery		
Gynaecology	19	40.4
Gastrology	18	38.3
Urology	8	17.0
Neurology	2	4.3
Past Experience of Major Surgery		
Non-experienced	36	76.6
Experienced	11	23.4
Clear Pre-operative Teaching		
Received	25	53.2
Not received	22	46.8
Received Pre-operative Teaching		
About Surgery	26	55.3
About Pre-operative Preparation & Care	7	14.9
About Anesthesia	6	12.8
Nothing	5	10.6
All	3	6.4

The various causes of pre-operative anxiety are presented in Table 4. There were various causes that enhanced anxiety among the pre-operative patients like health personal's behavior, inability to pay hospital bills and

performing family responsibility, fear of nakedness, blood transfusion and others. Among these causes all most all of the respondents had experienced anxiety related with the health personnel's behavior.

Table 4: Causes of pre-operative anxiety among the respondents n=47

Variable	Frequency	Percentage
Health Personnel's Behavior Type		
Not Providing Adequate Information	26	55.3
Restriction of Visitors	11	23.4
Rude Behavior	5	10.6
Ignoring the Problem	4	8.5
Nothing	1	2.1
Fear of One's Life	31	66.0
Fear of Unknown	31	66.0
Anxious of Waiting Surgery	27	57.4
Fear of Physical Disability	24	51.1
Fear Related to Nakedness	22	46.8
Worry of Not Waking up from Surgery	21	44.7
Fear related to Family Responsibilities	21	44.7
Unsuccessful Surgical Procedure	20	42.6
Worry about Hospital Bill Payment	16	34.0
Fear of Blood Transfusion	14	29.8

The association between the socio-demographic characteristics and the level of the anxiety of the respondents was assessed, which was calculated by using chi-square test and Fisher's exact test. No any

association between the socio-demographic data and level of the anxiety with p value more than 0.05 was found as shown in Table 5.

Table 5: Association between Socio-demographic characteristics and anxiety level n=47

Socio-demographic Characteristics	Level of Anxiety		p Value
	Low level	Moderate level	
Sex			0.205
Male	17(80.95%)	4(19.05%)	
Female	16(61.54%)	10(38.46%)	
Educational Status			0.535
Literate	20	7	
Illiterate	13	7	
Monthly Income			1.000
< 25000	19	8	
≥25000	14	6	
Marital Status			0.657
Married	27(67.5%)	13(32.5%)	
Unmarried	6(85.71%)	1(14.29%)	

Table 6: Association between Surgery Related Characteristics and level of Anxiety n=47

Surgery Related Characteristics	Level of Anxiety		p Value
	Low Level	Moderate Level	
Type of Surgery			0.076 (>0.05)
Gastrology	16(88.89%)	2(11.11%)	
Gynaecology	10(52.63%)	9(47.37%)	
Urology	5(62.5%)	3(37.5%)	
Neurology	2(100%)	0	
Clear Pre-operative Teaching			0.760 (>than0.05)
Received	17(68%)	8(32%)	
Not received	16(72.73%)	6(27.27%)	
Past Experience of Major Surgery(n=11)			0.185 (> than 0.05)
Once	5(71.43%)	2(28.57%)	
Twice	2(100%)	0	
Three Times	0	1(100%)	
Four Times	0	1(100%)	

The association between the surgery related characteristics and the level of the anxiety among the respondents using chi-square test and significance by Pearson chi-square and Fisher's exact test was assessed as shown in Table 6. Various characteristics related with surgery like type of surgery, acquiring clear pre-operative teaching and past experience of surgery revealed no association with level of anxiety with p value greater than 0.05 in each case.

DISCUSSION

In the study prevalence of anxiety among surgical population was found to be 100%. Similar study conducted by Norris & Baired (1967) among 500 patients for the presence of pre-operative anxiety, 60% were found to be anxious pre-operatively. [8] The difference may be due to sample size and time gap.

In the study, the female showed more anxious than that of male with 55.3% and 44.7% respectively. Similar study done in the National hospital of Sri Lanka (2012) also found that female was more anxious than male who have never had surgery are more anxious than those who have had surgery. Also, the study revealed 70.7% and 29.8% respondents with low level and moderate level of anxiety with zero severe anxiety. [9] The finding of this study is inconsistent with the finding of studies done by Ahmed et.al.(2010), Chanda (2012) and Bakr (2014) that reported anxiety level as 17%,6%,50% respectively. [10-12]

The causes of the pre-operative anxiety among the respondents was found to be related with health personnel's behavior of not providing adequate information, fear of one's life and fear of unknown which was of 55.3%, 31% and 31% respectively. The study done by Jawaid et al (2007), showed the most common factors of anxiety were concern about family (89.6%), fear of complication (87%), result of operation (82.4%) and post-operative pain (78.8%). [13] In the study by Chanda (2012) reported fear of not waking from anesthesia was the cause while it ranked in 7th rank in this

study. [11] The study by Perks et al. (2009) documented that the greatest concern was waiting for surgery while in the present study in 4thrank. [14] It may be due to the lack of proper information and explanation about anesthesia and frequent cancel of operation.

The study done by Kiyohara et al. (2004), Pokhrel et al. (2011) and Ting et al. (2013) showed that patients, who have information regarding the surgery procedure have lower anxiety level which is not consistent with the findings of the present study as it may be due to lack of proper and adequate information.[15-17] The study findings of Ebrim & Tobin (2010), Chanda (2012) and Matthias & Samarasekera (2012) showed that history of previous surgery was associated with low pre-operative anxiety which is inconsistent in this study with p=0.760. The study done by Chanda (2012) reported fear of not waking from anesthesia was the most feared factor while in the current study it ranked in 7th position.

The current study showed no association with the various factors like past experience, clear pre-operative teaching with p value more than 0.05, while study findings of Ebrim & Tobin (2010) and Chanda (2012) showed that history of previous surgery was associated with low preoperative anxiety. [1, 11] It may be due to the low sample size in this study. The study by Kiyohara et al. (2004), Pokhrel et al. (2011) and Ting et al. (2013) showed that patients who have information regarding the surgical procedure they will undergo, have lower anxiety level while the current study revealed inconsistency result as patients who didn't get information have lower anxiety than those who got information. [15-17] It may be due to improper and inadequate information provided to patients and insufficiency to satisfy the queries of patients.

CONCLUSION

The study was conducted with the objective to identify the presence and the level of anxiety and to find out association between

the various characteristics and the level of anxiety. On the basis of the study findings, it can be concluded that the presence of pre-operative anxiety was found to be of low level in majority of respondents. And among the respondents the major cause was lack of proper and adequate information by health personal along with psychological fear. So the level of anxiety can be even reduced to significant level with adequate information and proper psychological assessment and preparation. Establishment of pre-operative counselling clinics, timely visit of anesthesiologist before surgery to provide adequate information about anesthesia and operative procedures could help to reduce pre-operative anxiety. Also, incorporation of psychological assessment as routine assessment for psychological preparation could be of major help to surgical patients to cope with their preoperative anxiety.

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REFERENCES

1. Ebirim, L. N., & Tobin, M. Factors responsible for pre-operative anxiety in elective surgical patient at a university teaching hospital. *The Internet Journal of Anesthesiology*. 2010; 29:2.
2. Wondmienenh A. Preoperative anxiety and associated factors among adult elective surgery patients in North Wollo Zone, Northeast Ethiopia. *Open Access Surgery*. 2020; 13:85-94.
3. Zelenikova R. Measuring preoperative anxiety in patients undergoing elective surgery in Czezh Republic. *Central European Journal of Nursing and Midwifery* 2015; 6(4):321-26.
4. Akinsulore A, Owojuyigbe AM, Faponle AF, Fatoye FO. Assessment of Preoperative and Postoperative Anxiety Among Elective Major Surgery Patients In A Tertiary Hospital In Nigeria. *Middle East J Anaesthesiol*. 2015; 23(2):235-40.
5. Metthias AT, Samarasekera DN. Preoperative anxiety in surgical patients – experience of a single unit, *Acta Anaesthesiol Taiwan*. 2012; 50(1): 3-6.
6. Christal Vimala T J, Martin R, Rao AS, Joy M. Effectiveness of structured preoperative education on anxiety level of patients undergoing elective orthopedic surgery. *Indian J Cont Nsg Edn* 2021;22:200-6.
7. Mulugeta, H., Ayana, M., Sintayehu, M. *et al*. Preoperative anxiety and associated factors among adult surgical patients in Debre Markos and Felege Hiwot referral hospitals, Northwest Ethiopia. *BMC Anesthesiol* 2010; 18:155.
8. Norris W. and Bird W.L.M. Pre-operative anxiety: A study of the incidence and aetiology. *Brit. J. Anaesth*. 1967; 39:503.
9. Matthias A. T and Samarasekera D. N. Preoperative anxiety in surgical patients-experience of a single unit. *Acta Anaesthesiol Taiwan*. 2012; 50(1):3-6.
10. Ahamed, S., Ahmed, s., Ghauri, A.Q., & Ahamed, S. Frequency of anxiety in patients reporting for pre-anesthesia assessment. *Pakistan Armed Forces Medical Journal*. 2010; 1:1-10.
11. Chanda, C. Assessment of Preoperative Anxiety amongst Patients Presenting for Elective Surgery at the Kenyatta National Hospital, University of Nairobi, Kenya.2012.
12. Bakr, S. A. (2014). Effect of age and previous surgery experience on preoperative anxiety. *Kufa Journal of Nursing Sciences*. 2014; 4(1)-1-7.
13. Jawaid, M., Mustaq, A., Mukhtar, S., & Khan, Z. Preoperative anxiety before elective surgery. *Article in Neuroscience*. 2007; 12(2):145-148.
14. Perks, A., Chakravati, S., & Manninen, P. Preoperative anxiety in neurosurgical patients. *Journal of Neurosurgical Anesthesiology*. 2009; 21(2):127-30.
15. Kiyohara, L. Y., Kayano, L. K., Olivera, et al. Surgery information reduces anxiety in the preoperative period. *Rev hospClinFac Med S Paulo*. 2004;59(2):51-56.
16. Pokhrel, K., Bhattarai, B., Tripathi, M., et.al. Nepalese patient's anxiety and concern before surgery. *Journal of Clinical Nursing*. 2011; 23(5):372-378.

17. Ting, K. E., Ng M. S., and Siew W. F. Patient perception about preoperative information to allay anxiety towards major surgery. *International Journal of Medical and Health Sciences*. 2013; 7(1):29-32.

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