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Pre-operative Anxiety among Patients Undergoing Surgery in a Tertiary Hospital of Morang

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Abstract

Introduction: Hospitalization, itself is an anxiety provoking situation whatever may be the problem. Surgery being an invasive and traumatic procedure, triggers physiological, cognitive and behavioral responses among patients resulting in anxiety. It affects about one in two patients having surgery in low- and middle-income countries (LMICs) resulting in delayed recovery.

Objective: The study aims to assess the preoperative anxiety among patients undergoing surgery in a tertiary hospital of Morang district.

Method: A cross-sectional descriptive research design was used with face-to-face interview using standard APAIS (Amsterdam Preoperative Anxiety and Information Scale) to assess presence of anxiety before surgery. The study population was patients admitted in surgery, gynecology, ENT & orthopedic wards for the surgery. Data was collected after ethical clearance from the Nepal Health Research Council. Descriptive statistics as mean, frequency and standard deviation were used to assess prevalence of pre-operative anxiety among patients.

Result: About half (40.9%) of the respondents were of age group 20-40 years, 62.9% were male and almost all were Hindu by religion. More than three-fourth were married whereas less than one-third were illiterate and unemployed. Among the participants, more than one-fourth did not know the type of surgery they were undergoing and the type of anesthesia being used during the surgery. More than three-forth (77.3%) were informed about their diagnosis whereas only 29.5% were informed about possible complications of the surgery. Findings showed that 37.1% patients had anxiety related to surgery.

Conclusion: More than one-third of the patients undergoing elective surgery had anxiety related to surgery. More than half of the patients undergoing surgery had not received adequate pre-operative information related to type of surgery and type of anesthesia being used. It is imperative to appropriately assess and address pre-operative anxiety with timely visit by anesthesiologist, premedication with anxiolytic medicines and psychological preparation of the patient.

Keywords: Anxiety; Patients; Pre-operative; Surgery

Introduction

Hospitalization, itself is an anxiety provoking situation whatever may be the problem. Surgery being an invasive and traumatic procedure, it is natural for anyone undergoing surgery to have anxiety.[1] Therefore, surgery-related anxiety among pre-operative patients is commonly accepted as a normal reaction. It affects about one in two patients in low- and middle-income countries (LMICs) like Nepal.[2,3,4] Various factors like socio-demographic characteristics (age, sex, marital status, socioeconomic status and past exposure to anesthesia, number of previous surgeries),[5,6] fear of complications, concern about family, fear of postoperative pain[7] are found to be associated with pre-operative anxiety. It is stressful and affects both physiological and psychological parameters, thus greatly influencing the surgery outcomes.[8,1] And if anxiety persists for a prolonged period, it may harm the wellbeing of patients and delay recovery.

The extent and severity of anxiety among patients may vary at different time points before surgery i.e. in the ward, the preoperative holding area, and the operating room.[6] Different studies have revealed correlation of high levels of preoperative anxiety with lower quality perioperative sleep, requirement of higher doses of anesthetic induction agents and increased postoperative analgesics.[9] It could cause hypertension, increase heart rate, and might lead to bleeding. Different studies conducted in Nepal among patients undergoing surgery revealed a huge variation in prevalence of preoperative anxiety from 22.85%[8] to 58.5%.[5,6] It is imperative to assess and reduce preoperative anxiety through appropriate psychological preparation of the patient is imperative.[1,6,10] Also appropriate preoperative education was found to reduce perioperative anxiety among patients.[6]

However, factors as lack of time, work overload, multiple roles, etc among the health professionas have made it difficult to appropriately address the problem as it should have been.[4,11] Thus the study aims to assess the preoperative anxiety among patients undergoing surgery in a tertiary hospital of Morang district.

Method

A cross-sectional descriptive research design was used for this study. The data was collected from the patients admitted in surgery, gynecology, orthopedic and ENT wards of the Koshi hospital for the surgery from July to September, 2024. Standard APAIS (Amsterdam Preoperative Anxiety and Information Scale) was adopted to assess the presence of anxiety before surgery. APAIS is a valid 5-point Likert type scale which consists of 6 items, with a score ranging from 4 to 20.[12,13,14] The English tool was translated into Nepali language and then back-translated to English to retain the meaning of the questionnaire. Data was collected after ethical clearance from the Nepal Health Research Council (Ref no 2408) and administrative approval from the hospital. Consecutive sampling was done and the total sample was 132. Those patients who underwent emergency surgery and caesarean section were excluded as the study participants. Data was collected from the patients who were scheduled for elective surgery and were waiting for the surgery in the ward by face-to-face interview using the validated questionnaire. Data was analyzed using Statistical Package for Social Sciences (SPSS) version 20. Descriptive statistics as mean, frequency, percentage and standard deviation were used to assess the socio-demographic distribution and presence of anxiety among the patients.

Result

Table 1: Participants' Socio-Demographic Characteristics (n= 132)

Variables	Frequency (f)	Percentage (%)
Age (in completed years)		
20-40	54	40.9
41-59	53	40.2
≥ 60	25	18.9
Mean age ± SD = 44.48 ± 15.87		
Sex		
Male	83	62.9
Female	49	37.1
Ethnicity		
Brahmin / Chhetri	48	36.4
Madhesi	53	40.1
Others#	31	23.5
Religion		
Hindu	124	93.9
Others*	8	6.1
Marital status		
Unmarried	26	19.7
Married	101	76.5
Widow/Widower	5	3.8
Education		
Illiterate	44	33.3
Primary	31	23.5
Secondary	27	20.5
Higher Secondary & above	30	22.7
Occupation		
Profession	11	8.3
Semi-profession	2	1.5
Clerical/shopkeeper/farm	41	31.1
Skilled	19	14.4
Semiskilled worker	5	3.8
Unskilled	12	9.1
Unemployed /Retired	42	31.9

Other# (Janjati, muslim, dalit)
Others*(Buddhist, Islam, Christian)

Less than half (40.9%) of respondents were from age group 20-40 years, among them more than

half (62.9%) were male and married (76.5%). Most of them (93.9%) were Hindu, one third (33.3%) were illiterate and only 22.7% had education of higher secondary and above (Table 1).

Table 2: Surgery Related Details according to Patients (n= 132)

Variables	Frequency (f)	Percentage (%)
Type of surgery		
Don't Know	35	26.5
Minor	36	27.3
Intermediate	33	25.0
Major	28	21.2
Type of Anaesthesia		
Do not know	37	28.0
General Anesthesia	47	35.6
Spinal Anesthesia	33	25.0
Local Anesthesia	15	11.4
Pre-operative Medicine the night before surgery		
Received	83	62.9
Not received	49	37.1
Surgery has complication		
Yes	43	32.6
No	89	67.4
Surgery is associated with Post-operative Pain		
Yes	84	63.6
No	48	36.4
Surgery can result in body image change		
Yes	64	48.5
No	68	51.5
History of Past surgery		
Yes	30	22.7
No	102	77.3

Information was not provided to one-fourth about the type of surgery and type of anesthesia being used (Table 2). More than half (62.9%) had received pre-operative medicine. Only one-third believed that surgery can have complication, two-third assumed there will be post-operative pain and about half thought that surgery can bring change in the body appearance. Only 22.7% had undergone surgery in the past.

Table 3: Surgery Related Pre-operative Information provided to Patients n= 132

Pre-operative Information provided	Frequency (f)	Percentage (%)
Diagnosis	102	77.3
Duration of surgery	44	33.3
Prognosis	58	43.9
Possible complication	39	29.5
Expected expense	60	45.5

Table 3 depicts that three-fourth were provided information about the diagnosis whereas majority had not received information about other surgery related details.

Table 4: APAIS Score of Patients undergoing Surgery (n=132)

Variables	Not at all f (%)	Slightly f (%)	Moderately f (%)	Very Much f (%)	Extremely f (%)
I am worried about the anesthetic	69 (52.3)	23 (17.4)	13 (9.8)	10 (7.6)	17 (12.9)
The anesthetic is on my mind continually	82 (62.1)	17 (12.9)	16 (12.1)	15 (11.4)	2 (1.5)
I would like to know as much as possible about the anesthetic	43 (32.6)	18 (13.6)	18 (13.6)	32 (24.2)	21 (15.9)
I am worried about the procedure	55 (41.7)	20 (15.2)	16 (12.1)	24 (18.2)	17 (12.9)
The procedure is on my mind continually	55 (41.7)	20 (15.2)	16 (12.1)	27 (20.5)	14 (10.6)
I would like to know as much as possible about the procedure	31 (23.5)	16 (12.1)	18 (13.6)	33 (25.0)	34 (25.8)

Nearly half of the patients had no worries at all related to the surgery and the anesthesia followed by one-fourth having slight to moderate worries whereas only 40% had high level of worries about their surgery as displayed in Table 4. Among those who were worried very much, most of them wanted know as much as possible about the anesthetic and the surgery procedure.

Table 5: Anxiety among Patients undergoing Surgery (n= 132)

Variables	Frequency (f)	Percentage (%)
Anxiety*	49	37.1
No Anxiety	83	62.9

**Categorized as per APAIS Score where score ≥ 11 is considered Anxiety*

More than one-third (37.1%) of respondents had pre-operative anxiety because of surgery (Table 5).

Discussion

Surgery is a stress factor which demands individuals undergoing surgical procedures for coping strategies, however, patient's worry is often overlooked and the need for information is neglected. Many patients do not receive adequate information related to the surgery. In this study, one-third believed that surgery can have complication, two-third assumed there will be post-operative pain and about half thought that surgery can bring change in the body appearance. Likewise, 22.7% had previous experience of surgery and anesthesia in the past.

This study findings revealed that one-fourth participants were not aware whether they were undergoing minor or major surgery. Similarly, 28%

were not aware of the type of anesthesia being used. This is consistent with the study in Gondar city of Ethiopia among patients undergoing surgery where 52.2% and 69.1% were not aware of surgical plan and anesthetic plan respectively.[4] This might be due to the anesthetist's assumption that anxiety is common in patients undergoing surgery. Also, inadequate human resources and work overload in the health care settings of LMICs might have led to less prioritization to pre-operative health education. The study highlighted anesthetists' responsibility for treating preoperative anxiety.[15] Anesthetists can reduce anxiety and boost patients' confidence in the treatment by going over the anesthesia plan with patients, including the kind of anesthesia to be given and any dangers involved.

Individual's need for surgery related information if addressed appropriately during the pre-operative visits can help alleviate anxiety among patients. Information related to duration of hospitalization, post-operative pain, possible complications, body image changes and expected period of rest after surgery are the areas to be addressed by the health care team. On the contrary, the study revealed that three-fourth patients were informed only about the diagnosis whereas majority had not received information about other surgery related details. Other studies also reported the lack of adequate patient education and information before the surgery.[4,15]

High level of stress and fear is associated with surgery among patients. Out of 132 patients undergoing elective, 37.1% had pre-operative anxiety as assessed by APAIS score >=11. This result is consistent with different other studies conducted in Nepal which reported 31% and 22.85%.[16,8] whereas lower than study from TUTH which showed prevalence of 51.81%.[15] Similarly, study from Serbia among cardiac surgery patients also revealed comparable results of 43.4% and 31.2% prevalence of anesthesia and surgery related anxieties.[17] On the contrary, higher prevalence of pre-operative anxiety were reported as 59.6% from Ethiopia[4] and 69.5% from Turkey.[18] The variation might be due to the variation in protocol of pre-anesthetic consultation and provision of pre-operative education in different hospital settings. Also, the lower prevalence might be due to the pre-medication of patients with anxiolytics the day before the surgery. This study also revealed that 62.9% of the total participants undergoing surgery had received pre-operative medicines.

The study depicts that 40% of the patients had high level of worries about their surgery whereas nearly half of them had no worries at all related to the surgery and the anesthesia followed by one-fourth having slight to moderate worries only. Among those who were worried very much, most of them wanted know as much as possible about the anesthetic and the surgery procedure. Pre-operative anxiety was equally prevalent in male and female patients whereas various studies conducted in Nepal[8,15,16] as well as abroad[2,3,17,19] have depicted higher prevalence in female patients and middle adults.

The findings of the study suggest that there is need of adequate information and education to the patients about the surgery they are undergoing. This may help to alleviate the anxiety and aid in the early recovery of patients. However, the association of anxiety with socio-demographic and other characteristics could not be established, thus research to determine the factors associated is needed.

The limitation of the study was that the data should have been collected the day before surgery when the patients had not received the anxiolytic pre-operative medicine.

Conclusion

More than one-third of the patients undergoing elective surgery had anxiety related to surgery and more than half of them had not received adequate pre-operative information related to surgery. Thus, the assessment of pre-operative anxiety among patients scheduled for surgery is crucial.

Recommendation

It is imperative to appropriately assess and address preoperative anxiety with timely preoperative visit by anesthesiologist, premedication with anxiolytic medicines and psychological preparation of the patient by the nurses. Effectiveness of music therapy in reducing pre-operative anxiety may be recommended in future studies.

Conflict of interest

The author declares no conflict of interest.

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