

Preoperative Anxiety, Expectations and Challenges of Surgical Patients in a South Western State's Hospitals, Nigeria

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ABSTRACT

This study investigated preoperative anxiety, expectations and challenges of surgical patients in selected hospitals in Osun State of Nigeria. Descriptive cross-sectional design was adopted for the study. Purposive sampling and census were used to select the respondents. Semi-structured questionnaire was adopted for data collection while data analysis was done using the Statistical Package for Social Sciences. Hypotheses were tested using logistic regression and correlation at level of significance of $p < 0.05$.

Findings show that 58.9% of the respondents had high anxiety before surgery and more than two third ((78.3%) reported fear of unknown, 77.7% reported fear of death while 62.3% reported fear of surgical errors as their major challenges. Also, majority of respondents (92%) agreed that provision of clear information about surgery, nurses' communication with the surgical team (96.6%), and 97.7% reported involving them in decision about their treatment were their expectations from the surgical team. Also, there was a positive relationship between expectations of surgical patients and their challenges. Furthermore, results revealed that age above 50 years, nature of the surgery (emergency surgery) and occupation (retiree) were associated with preoperative anxiety. The study concluded that level of preoperative anxiety was high while age, nature of surgery and occupation were statistically significant for preoperative anxiety.

Key Words: Preoperative; Anxiety; Challenges; Expectations; Surgical Patients

Introduction

Hospitalization for surgical procedures could generate apprehensions, challenges and fear in patients; after all, the surgical procedures and the hospitalisation represent a threat to patients and their families due to physical changes, psychological and social reactions to the situation (Garcia, *et al.*, 2018). The condition is worsened when it comes to patients undergoing critical surgical operation with underlying clinically significant suffering (Best *et al.*, 2015).

According to D'Alesandro (2015), anxiety is an expected response to an unknown circumstances or event. Although perioperative anxiety is common, it can activate physiologic stress responses that can affect the patients' appearance, recovery process, and healing abilities. Apart from the patients themselves, patients' family members who are waiting for the patient also experience anxiety during surgical procedures. The extent at which each patient displays anxiety depends on previous experiences and many other factors. These include sociodemographic characteristics, type and extent of the planned surgery, prior surgical experience, and personal vulnerability to stressful circumstances (Nigusie *et al.*, 2014).

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It also includes reason for surgery, nature of pathology, trauma, or unknown aetiology requiring biopsy, some patients experience a perceived loss of control due to the need for sedation or the unknown recovery time that will require the patient to rely on health workers for basic needs (Mulugeta, et al., 2018). Other factors include distress of postoperative pain or a modification of body image, separation from loved ones, and unfamiliar environments (D'Alesandro, 2015).

Studies have also reported preoperative anxiety caused by fear of anaesthesia (Elmore *et al.*, 2014; Lee *et al.*, 2016), fear of surgical errors, concern about the success of surgery as well as of loss of control and independence (Ali *et al.*, 2014) and fear of death (Nigussie *et al.*, 2014). Brook (2012), submitted that mistakes in patients' care are uncommon, happening in up to forty percent of patients who experience surgical procedures. These errors can lead complications in up to 18% of the patients. These errors often lead to malpractice litigation, rise medical expenses, delayed hospital admissions, and can lead to increase morbidity and mortality.

Preoperative assessment guarantees that patient's condition is enhanced for surgery, and probable complications are planned for. Study has indicated that basic approaches, including effective communication and suitable humour, can also lessen preoperative anxiety and can be used for patients that require surgery—even those not showing signs of anxiety (Davis-Evans, 2013)

A critical approach towards improving patient satisfaction, relieve their uncertainties and delivering patient-centred care is to first comprehend patient expectations of health care (El-Haddad, *et al.*, 2020). Expectations can meaningfully influence health outcomes, including the effects of surgical interventions such as cardiac surgery, joint replacement and chemotherapy. Indeed, the well-studied placebo response is underpinned by patient expectations of the advantage of a therapy (Erick *et al.*, 2013). Consequently, it has been suggested that every clinical encounter should start with a resolution of the patient's expectations (Main *et al.*, 2010). Furthermore, expectancy theory suggests that satisfaction is principally determined by the difference between that which is expected and what is received (Bowling *et al.*, 2013). There paucity of empirical data on anxiety level, challenges and expectations of surgical patients in this part of country, hence, this study.

Methods

This study employed a cross-sectional design to investigate anxiety level, expectations and challenges of surgical patients in three selected hospitals in Osun State of Nigeria. This study was conducted at Ife Hospital Unit, Ile-Ife and Wesley Guild Hospital, Ilesa of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife (OAUTHC); and Ladoke Akintola University Teaching Hospital, Osogbo. Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife (OAUTHC) is a federal tertiary institution, which was established by the Western Region Government of Nigeria in 1975 covering the Ife-Ijesa zone and was known as Ife Teaching Hospital Complex, later renamed after Chief Obafemi Awolowo in 1987.

Ladoke Akintola University of Technology (LAUTECH) Teaching Hospital is a tertiary institution established by Osun and Oyo state governments. This Hospital was jointly established by Oyo and Osun states. The Hospital started as Africa Hospital at Osogbo and was renamed "General Hospital" like other health institutions across the nation then. By the late 1960's, specialist medical care was already being carried out by specialist staff that was already working in the hospital. The State Hospital was released to LAUTECH for establishing a Teaching Hospital in June 1996. These consist of two hundred and sixty beds. Also, a joint arrangement existed wherein; the Osun State Hospital at Asubiaro, Osogbo is also being used as a training centre for the medical students. All the selected hospitals are tertiary institutions within Osun State with the highest number of surgical procedures which could enhance generalizability of the results of this study. Also, these hospital settings were considerably better equipped, with health professionals that were well trained to carry out surgeries.

Surgical patients from the three selected hospitals formed the target population for this study. All these patients had an ailment which requires surgical operations. Because of the small size of surgical patients in the selected hospitals, census rather sampling was adopted for the study and one hundred and sixty-seven surgical patients participated in the study.

The three teaching hospitals in the state were purposively chosen for this study, considering the fact that these institutions were the mainstream for surgical cases in the state. Convenient sampling method was used to select 57 participants from IHU, 51 from WGH and 58 from LAUTECH. All surgical patients who were physically and mentally fit and were available during the data collection were used for the study. An adapted questionnaire from previous studies (Akinsulore, et al., (2015); Almaki, et al., 2017) was utilized to obtain data for this study. The questionnaire contained four sections as follows: **Section A** assessed socio-demographic data of the respondents.

Section B was a twenty-item four-point Likert scale adapted from State Trait Anxiety Inventory-State and Trait (STAI-S&STAI-T); the STAI-state was a four-point Likert scale statement (not at all, somewhat, moderately so, and very much so), designed to determine patient's current anxiety level; the STAI-trait (STAI-T) has a set of 20 statements designed to determine patient's underlying anxiety level. Statements in the STAI-T were rated on a four-point scale (almost never, sometimes, often, and almost always). This was used for each participant on entering the study. The overall (total) score for STAI ranged from a minimum of 20 to a maximum of 80; STAI scores are commonly classified as 'no or low anxiety' (20–37), 'moderate anxiety' (38–44), and 'high anxiety' (45–80) (Newham, et al., 2012). **Section C** – had 11-items rated on 'Yes = 1' or 'No = 0' option to determine the challenges perceived by the surgical patients. The highest attainable score was 11. Scores 9-11 will be categorized as high challenge, 6-8 as medium, 1-5 as low/no challenge. **Section D** – A structured 20-item questionnaire that was adapted from a previous study that intended to assess realistic patient expectations in the processes of surgical care. Options were rated on a 4-point Likert scale, ranging from; "strongly agree =1, agree =2, disagree = 3, and strongly disagree =4". The mean score was calculated and scores below the mean score showed high expectation. Hence, higher expectations are reflected by lower scores.

Validity of the instrument was established through face and content validity; an exhaustive literature review was done by the researcher to extract the related items to measure the research variables and by assessing each item using standard scales. Same was sent to the expert in the surgical field to examine the contents for correction, being more knowledgeable about the subject matter. Items that were not significant at the critical level were eliminated. For the reliability of the study, internal consistency reliability test was carried out and Cronbach's Alpha value was calculated to be 0.76. The ethical clearance approval was obtained from the ethical committee of LAUTECH Teaching Hospital with approval number: LTH/EC/2021/04/515. Informed consent was obtained from the study participants. Informed consent was obtained from the participants and strict confidentiality of data obtained was also assured. They were also informed that their privacy would be protected and their right to withdraw from the study at any time was emphasised.

The data for this study was obtained using questionnaires. Permission was taken from the heads of each institution and that of each unit where the questionnaires were administered. The process of data collection took four weeks.

Data collected were coded and analyzed with the aid of Statistical Package for Social Sciences, version 25.0. Descriptive statistics like frequency tables and percentages were used to answer research questions while inferential statistics was employed to test the associations between variables. The main inferential statistics for the study were ANOVA and logistic regression to test hypotheses generated from the study at a significance level of 0.05.

Results

Table 1: Socio-demographic Characteristics of Respondents

Variables		Frequency	Percentage
Age	10-19	37	21.1
	20-29	53	30.4
	30-39	28	16.0
	40-49	20	11.4
	50 and above	37	21.1
	Total	175	100.0
Educational Status	No formal education	19	10.9
	Primary	34	19.4
	Secondary	64	36.6
	Tertiary	58	33.1
	Total	175	100.0
Gender	Male	85	48.6
	Female	90	51.4
	Total	175	100.0
Ethnicity	Hausa	17	9.7
	Igbo	25	14.3
	Yoruba	133	76.0
	Total	175	100.0
Marital status	Married	83	47.4
	Single	75	42.9
	Separated/divorced	9	5.1
	Widowed	8	4.6
	Total	175	100.0
Religion	Christian	81	46.3
	Muslim	92	52.6
	Traditional	2	1.1
	Total	175	100.0
Occupation	Artisan	73	41.7
	Civil servant	38	21.7
	Farmer	29	16.6
	Students	21	12.0
	Retiree	14	8.0
	Total	175	100.0
	Nature of surgery	Elective	108
Emergency		67	38.3
Total		175	100.0

The table above reveals the socio-demographic distribution of the respondents. Majority of the respondents (30.4%) were between 20-29 years with a mean of 49.30 ± 16.26 , 36.6% were secondary holder, more than half 51.4% were female, more than two third of the respondents (76.0%) were Yoruba while 47.4% were married and 61.7% had elective surgery.

Table 2: Preoperative Anxiety among Surgical Patients

Variables	Not at all	Somewhat	Moderately	Very much
I feel calm when I was informed about the surgery	87(49.7)	38(21.7)	29(16.6)	21(12.0)
I feel secure	26(14.9)	84(48.0)	40(22.9)	25(14.3)
I am tense	21(12.0)	88(50.3)	51(29.1)	15(8.6)
I feel Strained	16(9.1)	61(34.9)	73(41.7)	25(14.3)
I feel at ease	25(14.3)	50(28.6)	79(45.1)	21(12.0)
I feel upset	47(26.9)	44(25.1)	61(34.9)	23(13.1)
I am presently worrying over possible misfortunes	50(28.7)	43(24.7)	35(20.1)	46(26.4)
I feel satisfied	21(12.0)	42(24.0)	66(37.7)	46(26.3)
I feel frightened	30(17.1)	42(24.0)	40(22.9)	63(36.0)
I feel comfortable	12(6.9)	59(33.7)	50(28.6)	54(30.9)
I feel self-confident	17(9.7)	54(30.9)	50(28.6)	54(30.9)
I feel nervous	17(9.7)	50(28.6)	90(51.4)	18(10.3)
I am Jittery	27(15.4)	44(25.1)	87(49.7)	17(9.7)
I feel indecisive	26(14.9)	53(30.3)	78(44.6)	18(10.3)
I am relaxed	22(12.6)	66(37.7)	65(37.1)	22(12.6)
I feel content	25(14.3)	65(37.1)	43(24.6)	42(24)
I am worried	47(26.9)	61(34.9)	49(28)	18(10.3)
I feel confused	48(27.4)	70(40,0)	40(22.9)	17(9.7)
I feel steady	22(12.6)	72(41.1)	48(27.4)	33(18.9)
I feel pleasant	18(10.3)	67(38.3)	50(28.6)	40(22.9)

The table above shows the level of preoperative anxiety among surgical patients. 49.7% of the respondents reported not to feel calm at all, 50.3% feel secured a little, nearly a third feel tense a little, 41.7% feel strained moderately, 45.1% moderately feel at ease at all, nearly a third (34.9%) moderately feel upset, 28.7% worried over misfortune a little while, 28.2% do not feel satisfied at all and 41.2% somewhat feel consistent. 29.5% feel indecisive a little, 30.2% somewhat feel relaxed and roughly one quarter (29.5%) of the respondents do not feel pleasant at all.

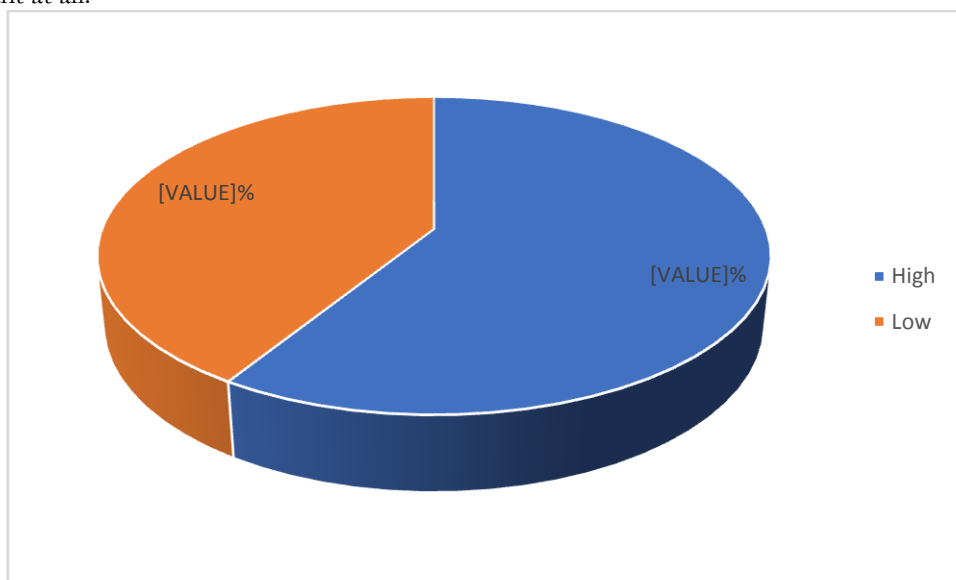


Figure 1: Summary of Level of Preoperative Anxiety among Surgical Patients

The bar chart above shows that majority of the respondents (58.9%) had high anxiety prior to perioperative surgery while 41.1% had a low anxiety.

Table 3: Challenges of Surgical Patients

Variables	Yes	No
Fear of unknown	137(78.3)	38(21.7)
Fear of death	136(77.7)	39(22.3)
Surgical errors	109(62.3)	66(37.7)
Type of surgery	99(56.6)	76(43.4)
Inadequate Finances	96(54.9)	79(45.1)
Competence of surgeon	96(54.9)	79(45.1)
Treatment failure	95(54.3)	80(45.7)
Lack of Support system	88(50.3)	87(49.7)
Impaired Health	87(49.7)	88(50.3)
Uncooperative surgical team	86(49.1)	89(50.9)
Type of surgery	80(45.7)	95(54.3)
Preventable complications	69(39.4)	106(60.6)

The table above shows challenges of surgical patients. More than two third 77.7% of the respondents reported that fear of unknown, 62.3% fear of death, 56.6% fear of surgical errors, 50.3% had fear of impaired health, 54.9% inadequate finances, 50.3% lack of support system, 54.3% reported treatment failure while 60.6% had fear of preventable complications

Table 4: Expectations of Surgical Patients

Variables	Strongly Agree	Agree	Disagree	Strongly Disagree
Provision of clear information about my surgery	134(76.6)	27(15.4)	14(8.0)	0(0.0)
given an appointment for a convenient date/time	109(62.3)	44(25.1)	22(12.6)	0(0.0)
Attended to without wasting time	99(56.6)	50(28.6)	26(14.9)	0(0.0)
I found that the surgical reception staff were helpful	102(58.3)	51(29.1)	22(12.6)	0(0.0)
Communication with the surgical team was helpful	144(82.3)	25(14.3)	6(3.4)	0(0.0)
Surgical team respect and treat me with dignity	132(75.4)	38(21.7)	5(2.9)	0(0.0)
They have knowledge about my surgical condition /problem	119(68.0)	50(28.6)	6(3.4)	0(0.0)
I understand clearly what the surgical team told me	127(72.6)	43(24.6)	5(2.9)	0(0.0)
They involved me in decisions about my treatment	136(77.7)	35(20)	4(2.3)	0(0.0)
The surgical team examined me physically	154(88.0)	20(11.4)	1(0.6)	0(0.0)
I did some tests/investigation	156(89.1)	18(10.3)	1(0.6)	0(0.0)
My diagnosis or previous diagnosis was confirmed	149(85.1)	25(14.3)	1(0.6)	0(0.0)
I got a new, changed, or repeat prescription	129(73.7)	44(25.1)	2(1.1)	0(0.0)
I was referred to another doctor/specialist	136(77.7)	35(20)	4(2.3)	0(0.0)
I was given reassurance about my condition	141(80.6)	32(18.3)	2(1.1)	0(0.0)
I was given advice about my health/condition	148(84.6)	25(14.3)	2(1.1)	0(0.0)
They explained what caused my condition/problem	147(84.0)	26(14.9)	2(1.1)	0(0.0)
They explained how to manage the condition	151(86.3)	22(12.6)	2(1.1)	0(0.0)
They explained the risks and / benefits of the treatment	148(84.6)	25(14.3)	2(1.1)	0(0.0)
I was given the opportunity to discuss problems in my life	151(86.3)	22(12.6)	2(1.1)	0(0.0)

The table above shows the challenges facing surgical patient among elective patients. Majority of respondents strongly agree that provision of clear information about my surgery could be challenges facing surgical patients, given an appointment for a convenient date/time, communication with the surgical team was helpful, surgical team respect and treat me with dignity, knowledge about my surgical condition /problem, understand clearly what the surgical team told me, involved me in decisions about my treatment, surgical team examined me physically, tests/investigation, diagnosis or previous diagnosis was confirmed, changed, or repeat prescription, referred to another doctor/specialist, reassurance about my condition, advice about my health/condition, explained what caused my condition/problem, explained how to manage the condition while explained the risks and / benefits of the treatment and opportunity to discuss problems in my life.

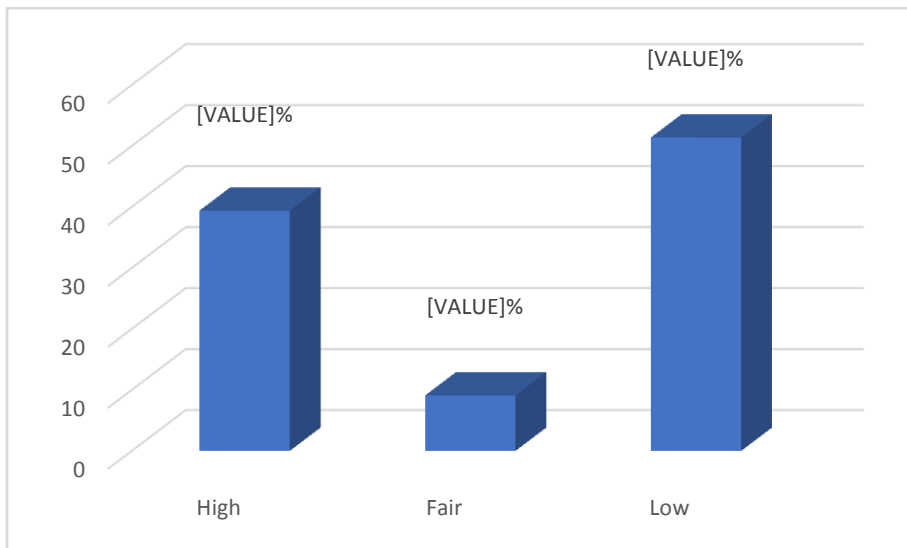


Figure 2: Summary of Expectation of Surgical Patients

The bar chart above shows that majority of the respondents (51.4%) low expectation, 39.4% rated their expectation as high and 9.1% fair had fair expectation.

Hypotheses Testing

Table 5: Logistic Regression Analysis Predicting Likelihood factors influencing perioperative anxiety

Variables	Statistical Significance	Odds Ratio	Confidence interval	
			Upper Level	Lower Level
Age				
10-19	1(ref)			
20-29	0.74	1.18	3.13	0.43
30-39	0.75	1.19	2.95	0.48
40-49	0.89	0.99	2.79	0.35
50 and above	0.01*	1.62	4.00	0.19
Educational Status				
No formal education	1(ref)			
Primary	0.43	1.62	5.50	0.48
Secondary	0.24	1.80	4.90	0.66
Tertiary	0.16	1.80	4.20	0.77
Gender				
Male	1(ref)			
Female	0.88	0.94	1.97	0.45
Ethnicity				
Hausa	1(ref)			
Igbo	0.82	1.14	3.59	0.36
Yoruba	0.13	0.46	1.25	0.17
Marital status				
Married	0.99	1.00	5.92	0.17
Single	1(ref)			
Separated/divorced	0.21	0.27	2.12	0.03
Widowed	0.44	0.43	3.56	0.05
Religion				
Christian	0.10	1.67	3.07	0.90
Muslim	1(ref)			
Occupation				
Artisan	1(ref)			
Civil servant	0.16	0.40	1.43	0.11
Farmer	0.08	0.30	1.19	0.07
Students	0.97	1.02	4.31	0.24
Retiree	0.01*	3.71	24.22	0.57
Nature of surgery				
Elective	1(ref)			
Emergency	0.01*	1.41	4.96	0.21

Tables 5 revealed logistic regression analysis predicting likelihood factors that influence symptoms of perioperative anxiety. The result also revealed that age 50 and above was 2 time likely to have symptoms of perioperative anxiety compared to other age groups ($P < 0.05$, Odd ratio- 1.62, CI: 4.00 - 0.19). Retiree were 4 time likely to have symptoms of perioperative anxiety compared to other occupations ($P < 0.05$, Odd ratio- 3.71,

CI: 24.22 – 0.57). Also, emergency was 1 time

likely to have symptoms of perioperative anxiety compared to other occupations ($P < 0.05$, Odd ratio-1.41, CI: 4.96 – 0.21).

Hypothesis Two: There is no significant relationship between expectations of surgical patients and challenges.

Table 6: There is no significant relationship between expectations of surgical patients and challenges.

Variables	N	Df	r-cal	sig-val
Expectations of surgical outcome	175	173	0.567	0.023
Challenges	175			

Table 6 shows the spearman rho Pearson's correlation coefficient statistics used to test the relationship between expectations of surgical patients and challenges. The pearson correlation coefficient derived a value of 0.567, a degree of freedom of 173 and a significant value of 0.023. The sig. value is lesser than our critical value of 0.05 the result is significant. Therefore, the hypothesis is rejected. Hence, there exists a positive relationship between expectations of surgical patients and challenges.

Discussion

The mean age of the respondents in this study is 49.30 ± 16.26 years similar to the study conducted by Fagbamigbe, et al (2015) where mean age of the respondents was 29.8 (7.3) years. Also, more than half of the respondents were female as consistent with findings of Haile Eyasu et al., (2016) where majority of the respondents were married as well. Similarly, large proportion of the respondents were married as documented in the study conducted by Matthias, & Samarasekera (2012).

From the present study, substantial number of the respondents had high level preoperative anxiety prior surgery. More than one third not feeling calm, forty percent feel little secure before the operation, some feel tense, little feel strained, one quarter not at all feel ease, less than half somewhat feel upset. These findings are similar with study conducted to determine the prevalence and factors related to preoperative anxiety among patients that undergone elective surgeries (Woldegerima, et al., 2018). It is also in accordance with the finding of institutional-based, cross-sectional study conducted in University of Gondar Hospital. Affirm with the study carried out a study in Turkey two third of the surgical patient had high level of anxiety. Almaki, et al, (2017) conducted a study on evaluation of preoperative anxiety among patients undergoing elective surgical procedures in Egypt had a high level of anxiety. Studies conducted in the United States of America revealed that the prevalence of preoperative anxiety was as high as about twenty percent while the prevalence of preoperative anxiety in Brazil was 24%.

This present study in agreement with the studies conducted across African countries a study conducted in Rwanda indicated that the incidence of clinical significance of preoperative anxiety was 72.8% in surgical patients (Ryamukuru, 2017), Jimma University Specialized Hospital, South west Ethiopia, showed the prevalence preoperative anxiety was 70.3% (Nigussie et al, 2014), Gondar University Specialist Hospital, North-West showed 59.6% prevalence of preoperative anxiety (Woldegerima, et al., 2018). In Nigeria, the level of preoperative anxiety in adult patients was recorded to be high among more than half of the respondents as reported by Akinsulore et al. (2015) and Abate, et al., (2020).

The study revealed that majority of the respondents expect provision of clear information about the surgery, expect nurses to be knowledgeable and be attended to without wasting time. This finding in line with the report of Shawa, et al., (2017) in their study that examined surgical patients' expectations at Kenyatta National Hospital in Nairobi, Kenya. According to position of Auer, et al., (2016) expectations can differ in their degree of specificity or generality, and they can be held for very specific contexts. Similar with study of Colloca & Miller, (2011) reported that expectations are about the structural or process-related aspects of a treatment are likely to impact on the result expectations. Expectations can either be linked to a patient's illness and treatment-associated behaviour or to the treatment the patient is receiving. Present study is in agreement with the study of Rief, et al, (2017) that behavioural and treatment outcome expectations distinguishable expectations of benefits and side effects. The findings also support the report of Waljee, et al., (2014) and Wijayanayaka (2020). Mulugeta et al. (2018) also revealed that the mostly reported factors responsible for preoperative anxiety were fear of complications (52.4%), concern about family (50.4%), fear of postoperative pain (50.1%) and fear of death (48.2%). Also, in line with the study of Marinelli et al. (2020) revealed that patient's psychosocial functioning in terms of cognitive style, behavioural and coping strategies and to the quality of social support perceived. Collaborate with the study of Nigussie et al, (2014) revealed that factors such as previous surgical experience, and personal susceptibility to stressful situations are related to the prevalence of anxiety prior surgeries.

This present study identified challenges facing surgical patients to clear information about my surgery, given an appointment for a convenient date/time, communication with the surgical team was helpful, surgical team respect and treat me with dignity, knowledge about my surgical condition /problem, understand clearly what the surgical team told me, involved me in decisions about my treatment, surgical team examined me physically, tests/investigation, diagnosis or previous diagnosis was confirmed, changed, or repeat prescription, referred to another doctor/specialist, reassurance about condition, advice about health/condition, explained what caused condition/problem, explained how to manage the condition, explained the risks and benefits of the treatment and opportunity to discuss problems of life. This is in line with the study conducted by Earnshaw & Alderson, 2014; Wang *et al*, 2014 when they identified breakdown in communication within and amongst the surgical team, care providers, patients and their families; delay in diagnosis or failure to diagnose; delay in treatment or failure to treat. How can patients be sure that their surgeon is competent, knowledgeable, and well trained. This present study similar with the study of Nigussie, et al (2014) Change of environment, waiting time of surgery, postoperative pain, concern about family, fear of one's life, nil per mouth, blood transfusion, fear of unknown, harm from doctor/nurse mistake, getting stuck with needles, fear of complications and result of operation. Previous studies conducted by Akinsolure, et al, (2015). Almaki, et al., (2017) had similar position on the factors; knowledge about my surgical condition, understand clearly what the surgical team told me, involved me in decisions about my treatment, surgical team examined me physically, tests/investigation, diagnosis or previous diagnosis was confirmed, changed, or repeat prescription, referred to another doctor/specialist, reassurance about condition, advice about health condition, explained what caused condition/problem

Conclusion

This study concluded that the level of preoperative anxiety among surgical patients was high. Age, retiree and emergency surgery were found to be statistically significant for preoperative anxiety. Perioperative nurses need to regularly assessed surgical patients for anxiety during the preoperative visit and appropriate anxiety reduction methods should be introduced to improve post-operative surgical outcomes.

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