

Assessment of Baseline Anxiety and Effect of Nursing Intervention on Post-Operative Anxiety among Surgical Patients of Obafemi Awolowo University Teaching Hospitals Complex, Ile Ife, Nigeria

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Abstract

Surgical patients perceived the day of surgery as highly terrifying in their lives. Patients manifest different levels of anxiety states in relation to what is expected in future and these are associated with many factors which may be type and extent of the proposed surgery, gender, age, previous surgical experiences, and personal tendency for unpleasant events. The study aimed to assess baseline anxiety and effect of nursing intervention on post-operative anxiety states among surgical patients.

Two-group pre-test, post-test quasi-experimental study was adopted and thirty surgical patients were included. Sample size was determined using Leslie Kish formula and purposive sampling technique was adopted to select 15 surgical patients in to the experimental and control groups respectively. The intervention group had structured nursing information but control group did not. Data was processed using statistical package for social science version 21. Two research questions were answered using descriptive statistics of percentages and one hypothesis was tested using inferential statistics of student t-test at 0.05 level of significance.

This study shows that anxiety states are common to all surgical patients. The surgical patients (in both experimental and control groups) (33%) experienced high anxiety state preoperatively. The percentage reduction in the number of respondents that expressed high level of anxiety state in the experimental group (40% reduced to 26.7%) as they move from preoperative to postoperative periods as compared with the control group (26.7% increased to 33.3%). This shows the relative impact of the nursing intervention, but the mean differences of anxiety of the experimental group was 0.08; while that of the control group was 0.15 respectively. Result reveals no significant difference in anxiety level among participants in the experimental and control groups ($p=0.514$).

Surgical patients should be assessed of anxiety states in the perioperative environment. The information needed and provided to each surgical patient should be assessed and patient-centered to prevent failure of preoperative information.

Keywords: Purposive sampling; Post-operative anxiety; Quasi-experimental study; Surgical patients

Introduction

Surgery is one of the major life changes that cause anxiety. Hospitalization provokes anxiety in the patient admitted for surgery, even in the absence of disease. Stress resulting from protracted anxiety may eventually endanger the client if not discovered early and slow-down recovery [1-4]. Surgery can trigger a panic attack in a patient who is prone to anxiety. The preparative care of surgical patients becomes very challenging with the increasing existence of anxiety before surgery. Anxiety experience is common to most patients awaiting elective surgery and generally seen as normal response [5].

Surgical patients perceived the day of surgery as highly terrifying in their lives. Patients manifest anxiety with varying degrees in relation to what is expected in future and these are associated with many factors which may be type and extent of the proposed surgery, gender, age,

previous surgical experiences, and personal tendency for unpleasant events [6]. The intervention for employed by the healthcare providers has been found to promote, comfort, and favorable surgical outcomes. Nurses and other healthcare givers needs to know patients who are prone to anxiety in the population in order to reduce the occurrence of anxiety resulting from surgery.

The observation of the researcher in the past 10 years of clinical practice at the perioperative environment was the apparent uneasiness, confusion and anxious appearance demonstrated by the surgical patients coming for procedures in the operating suites. A number of these patients' responses to their surgical procedures were undesirable. Preoperative anxiety was reported as one of the factors causing delayed discharge following a day surgery [7]. According to Agarwal et al. [8] and Pritchard et al. [9] greater amount of analgesic and anaesthetic are required with increased postoperative pain and extended hospital stay in patients with anxiety. Delayed wound healing has been associated with anxiety and response to stress in different research studies [10-12].

Anxieties of patients in general have been reported to be linked with poor information. Anxieties, fear, challenges of communication have been found to intensify the experience of pain by the patients [13]. According to Mitchell et al. [14] the pre-operative anxiety experienced by surgical patients before general anaesthesia is common. Therefore, the effectiveness of preoperative nursing intervention on the relief of anxiety state among surgical patients needs to be studied by evaluating the different levels in patient's care in the context of the Nigerian health facilities and many cultural diversities.

Materials and Methods

Study design

The study adopted two groups pre - test post - test quasi-experimental design to evaluate nursing intervention on post-operative anxiety among surgical patients in Obafemi Awolowo University Teaching Hospitals Complex, Ile- Ife, Osun State, Nigeria between February 10th to March 15th, 2017.

Population

The population was 60 adult surgical patients admitted and booked for abdominal surgery in Obafemi Awolowo University Teaching Hospitals Complex, Ile- Ife, Osun State which was obtained from the previous one month record. Adult surgical patients admitted and booked for abdominal surgery were included in the study. Adult surgical patient who were unconscious and unwilling to participate in the study were excluded.

Sample size and sampling technique

Sample size was determined using Leslie Kish formula and purposive sampling technique was adopted to select 30 adult surgical patients (15 surgical patients who formed the experimental group and 15 patients who formed the control group).

Instrumentation

The instrument utilized for data collection were a developed demographic data form consisting of four items and used to collect data about the surgical patients demographic data. A standardized State-Trait Anxiety Inventory (STAI) [15] was adopted for the study. The state-Anxiety Questionnaire consists of 20 statements on a 4-point scale and it is used to assess momentary anxiety. According to Spielberger et al. [15] STAI has been evaluated for its reliability in terms of stability and internal consistency for test-retest correlations and Alpha coefficients using the Kuder Richardson formula. Low values of test-retest correlations for State anxiety scale were reported ranging between 0.54 and 0.60. According to Calvin et al. [16] the coefficient alpha for state anxiety scale as an established value for the study sample as 0.90.

Procedure for data collection

The procedure for data collection involved three phases:

Phase 1: It involved meeting with the recruited surgical patients individually where information about the purpose, course and potential benefits of the study was discussed. Consent was obtained from each surgical patient in both the experimental and control group after which the demographic data of each surgical patients was

obtained using the developed demographic data form. Data on pre-intervention anxiety state levels were obtained using the STAI Questionnaire in which patient was asked to rate the anxiety state levels experienced on the scale 12 hours after surgery (Table 1).

Phase 2: Surgical patients in the experimental group were exposed to structured preoperative teaching music therapy and guided imagery 12 hour after surgery over the period of 12 hours while surgical patients in the control group were not exposed to the nursing interventions.

Phase 3: Data on post- intervention anxiety level was obtained 24 hours after surgery from individual surgical patients in both the experimental and the control group using the STAI Questionnaire.

	Experimental Group	Control Group	Total
Age: (in grouped years)	n(%)	n(%)	n(%)
25-34 years	4(26.8)	6(40)	10(33.3)
35-44 years	7(46.8)	2(13.3)	9(30.0)
45-54 years	2(13.3)	2(13.3)	4(13.3)
55-64 years	0(0.0)	4(26.8)	4(13.3)
65-74 years	1(6.7)	0(0.0)	1(3.3)
75-84 years	1(6.7)	1(6.7)	2(6.7)
Mean age ± SD	43.87 ± 13.6	45.2 ± 15.2	44.53 ± 14.1
Gender			
Male	3(20)	5(33.2)	8(26.7)
Female	12(80)	10(66.8)	22(73.3)
Marital Status			
Single	2(13.3)	2(33.3)	4(13.3)
Married	13(86.6)	13(86.6)	26(86.7)
Educational Background			
Primary Education	4(26.8)	1(6.7)	5(16.6)
Secondary Education	7(46.8)	5(33.2)	12(40.0)
OND	2(13.2)	3(20.0)	5(16.6)
HND	0(0.0)	2(13.2)	2(6.6)
First Degree and above	2(13.2)	4(26.6)	6(20.0)
Ethnicity			
Yoruba	14(93.3)	12(80.0)	26(88.3)
Igbo	1(6.7)	3(20.0)	4(11.7)
	15(100.0)	15(100.0)	30(100.0)

Table 1: Frequency and percentage showing demographic data of surgical patients.

Method of data analysis

Data gathered from surgical patients were processed using statistical package for social science (SPSS) version 21. Frequency table was constructed and data were expressed on it. Two research questions were answered using descriptive statistics of percentage and one hypothesis was tested using inferential statistics of student t - test at 0.05 level of significance.

Ethical Consideration

Ethical clearance was obtained from the Babcock University Health Research Ethics Committee (BUHREC) with clearance number BUHREC604/16. Permission was also obtained from the management of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria before the study was conducted. The surgical patients were ad equally informed about the study and consent was obtained before data was collected. Information obtained from the surgical patients was kept confidential and the right to withdraw from

the study at any point by the surgical patients was respected with no consequences suffered. No harm was suffered by the surgical patients during the research study. Post research benefit includes improvement in the management of pre –operative and post-operative anxiety states among surgical patients by nurses.

The analysis in Table 2 revealed that the baseline anxiety level among the study participants between the experimental group and the control group. The results showed that surgical patients experienced high baseline levels of anxiety in the experimental group (40%) and the control group (26.7%).

Table 2 also showed that 60% of the surgical patients had low level anxiety and 26.7% had high level anxiety in experimental group during the postoperative period. 53% of the control group had low level of anxiety while 33% had high level of anxiety.

The mean differences of anxiety of the experimental group was 0.08; while that of the control group was 0.15 respectively.

			Surgical Patients		Total f(%)	Statistic
			Experimental f(%)	Control f(%)		
Pre-Operative	Baseline Level of Anxiety	Low	4(26.7)	7(46.7)	11(36.7)	X ² =1.329 df=2 p=0.514
		Moderate	5(33.3)	4(26.7)	9(30.0)	
		High	6(40.0)	4(26.7)	10(33.3)	
		Mean ± SD	1.74 ± 0.49	1.79 ± 0.49	1.77 ± 0.5	
			Surgical Patients		Total	Statistic
			Experimental	Control		
Post-operative	Level of Anxiety	Low	9(60.0%)	8(53.3%)	17(56.7%)	X ² =0.170 df=2 p=0.919
		Moderate	2(13.3%)	2(13.3%)	4(26.7%)	
		High	4(26.7%)	5(33.3%)	9(30.0%)	
		Mean ± SD	1.66 ± 0.5	1.64 ± 0.46	1.60 ± 0.5	

Table 2: Baseline anxiety and post-operative anxiety among surgical patients.

Hypothesis Testing

H01 - There is no significant relationship between nursing interventions for the relief of preoperative anxiety among surgical patients (Table 3).

Statistics	X ²	df	p
	1.329	2	0.514

Table 3: Statistical relationship between nursing intervention and relief of anxiety.

Discussion

There were more surgical patients between 25-34 years in the hospital during data collection. This implies that more surgical patients between 25-34 years develops abdominal disease conditions requiring surgery and reports to the hospital. This finding disagrees with previous quasi-experimental study in which there were more surgical

patients between 35-44 years during data collection [17]. There were more female surgical patients during data collection. This implies that more female surgical patients reports to the hospital for treatment with abdominal disease conditions requiring surgery. This finding supports previous quasi-experimental study in which there were more female surgical patients during data collection [18]. There were more married surgical patients during data collection. This implies that more married surgical patients’ reports to the hospital for treatment with abdominal disease conditions requiring surgery. This finding supports previous quasi-experimental study in which there were more married surgical patients during data collection [19]. There were more tertiary school certificate holders among surgical patients in the hospital during data collection. This implies that more surgical patients with tertiary school certificate develops abdominal disease conditions requiring surgery and reports to the hospital. This finding agrees with previous quasi-experimental study in which there were more tertiary school certificate holders among surgical patients in the hospital during data [17]. This study found that anxiety states are common to all surgical patients, 33% of the surgical patients (in both experimental and control groups)

experienced high anxiety state preoperatively. This corroborates the opinions of Ebirim et al. [1] as well as Yilmaz et al. [4] that Hospitalization associated with surgery is one of life changes that causes anxiety. According to Akinsolure et al. [19] 51% incidence of high anxiety level among surgical patients occurred in the same health facility. Although, the sample size of their study (n=51) was slightly higher than the current study (n=30). Another study found that 25% of surgical patients experienced high anxiety state levels [10]. A prevalence of preoperative anxiety of 34.4% was reported by Ebirim et al. [1] in a study at Niger-Delta region of Nigeria (Port Harcourt) using a visual analogue scale. Regarding the prevalence rate of preoperative anxiety, it is a common opinion that many elective surgical patients experience a level of anxiety [20].

The mean baseline levels (1.77) of preoperative anxiety state of the study respondents were higher before surgery, this was consistent with the study by Ebirim et al. [1] who reported a preoperative mean score of 42.72, although the baseline mean anxiety level of this study was not as high as the one reported.

The percentage reduction in the number of respondents that expressed high level of anxiety state level in the experimental group (40% reduced to 26.7%) as they move from preoperative to postoperative periods as compared with the control group (26.7% increased to 33.3%). This showed the relative impact of the nursing intervention. Although, the relative impact of nursing was not statistically significant ($p=0.919$, $d=2$), there was an observable difference in the patients' responses. This study supported Goebel et al. [2] and Miner et al. [13] who reported inverse association of anxiety and education. Also, Giraudet-Le Quintrec et al. [19] in an interventional study for comparison of the collaborative multidisciplinary information session with the routine method of verbal information on preoperative and postoperative anxiety among surgical patients booked for total hip arthroplasty reported that the experimental group were significantly less anxious preoperatively following the teaching ($P=0.01$).

The researcher observed that the information provided to each individual patient should be assessed and patient-centered. According to Chumbley et al. [20] little effects is provided by detailed preoperative information with either an interview or information leaflet. It was reported that patients are better informed and less confused. The possible reasons for the failure of preoperative information to yield benefits was its inability to quickly change patients' long-held perception and beliefs [20].

Conclusion

The assessment of baseline anxiety and effect of nursing intervention on post-operative anxiety among surgical patients of Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria was the focus of the study.

The study found out that the experience of anxiety states among surgical patients is a common phenomenon in the perioperative environment. The mean baseline levels of preoperative anxiety state of the study respondents were higher before surgery. The percentage reduction in the number of respondents that expressed high level of anxiety state level in the experimental group as they move from preoperative to postoperative periods as compared with the control

group showed the relative impact of the nursing intervention. There was an observable difference in the patients' responses to nursing intervention.

The baseline levels of preoperative anxiety state is a crucial indicator of determining quality of care. The information needed and provided to each individual surgical patient should be assessed and patient-centered to prevent failure of preoperative information.

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