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RESEARCH ARTICLE

PATIENT'S SELF- REPORTING ASSESSMENT OF PAIN INTENSITY AND ANXIETY STATE LEVELS IN THE PERIOPERATIVE ENVIRONMENT OF OBAFEMI AWOLOWO UNIVERSITY TEACHING HOSPITALS COMPLEX, ILE-IFE, NIGERIA.

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Abstract

The primary responsibility of the health care providers is to assess and educate the patient during perioperative phases, to minimize the dangers during the surgery. Anxiety and pain are subjective experiences of surgical patients. Hospitalization provokes anxiety in the patient admitted for surgery, even in the absence of disease. In Nigeria, 95% of surgical patients were reported to have experienced postoperative pain of various degrees. Pain is unique to every patient as it is first of all a subjective experience. This study described patients self-reporting assessment of pain and anxiety among surgical patients in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria.

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 into the experimental and control groups respectively. Data was processed using statistical package for social science version 21. One research question was answered using descriptive statistics of percentages.

This study showed that majority of the surgical patients in the experimental group (100%) and control (87%) reported that nurses did not assess their levels of anxiety state with any self-reporting standard tool before surgery, neither was it done post-operatively by the response of 93% of patients in the experimental group and 100% of the control group. There were nearly similar responses of the surgical patients in the assessment of pain intensity, as 93% of the experimental group before surgery and 100% of control group after surgery reported that nurses did not use the standardized patient's self-reporting tool.

Nurses should adopt the use of self-reporting of pain and anxiety levels by individual surgical patient during their phases of care for effective management of anxiety states and postoperative pain.

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Introduction:-

The primary responsibilities of the health care providers as reported in literatures are to assess and educate the patient during preoperative phase, to minimize the dangers during the surgery and have better outcomes of the patients. The main rationale for preoperative phase of care is linked to reduction of defects, operative morbidities and decrease stay of patients at hospital (Association of Anesthetists of Great Britain, and Ireland (AABI) safety guidelines, 2016). Pain continues to be poorly controlled and pose a substantial obstacle to the care of surgical patients with the protracted existence of postoperative pain as a serious public health problem, despite the increased knowledge and resources for treating pain (Botti et al 2004; Dihle et al 2006; Helfand and Freeman, 2009; Manias et al 2005).

In Nigeria, 95% of surgical patients were reported by Kolawole and Fawole (2003) to have experienced postoperative pain of various degrees. Another study carried out in Nigeria reported that inadequate pain relief after surgery is suffered among a high percentage of patients in Nigeria (Size et al 2007). 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 (Goebel et al 2011; Jafar & Khan, 2009; Swindale, 2004; Yilmaz et al 2011). The prevalence of anxiety in a recent study conducted in Port Harcourt, Niger Delta region of Nigeria was reported to be 34.4% using a visual analogue scale (Ebirim and Tobin, 2010).

A number of researches have also correlated preoperative anxiety with pain aggravation, nausea and vomiting after surgical operations, increased incidence of infections and delayed recovery (Bailey, 2010; Fauza and Shazia, 2007; Foggitt, 2001; Pittman and Kridli, 2011; Pokharel et al 2011). Preoperative anxiety was reported as one of the factors causing delayed discharge following a day surgery (Vadivelu et al 2010).

McCafferey (1972) describes pain as whatever the person experiencing it says it is, existing whenever he/she says it does. According to the International Association for the Study of Pain, pain is linked with potential or actual tissue injury resulting to an unpleasant sensory and emotional occurrence (Boström, 2003; Hinkle and Cheever, 2013; International association for the study of Pain, 2010).

The problem of the patients who do not express their pain verbally unless they are asked was addressed by Kozier et al (2004), and advised the nurse to initiate assessment of pain early. Hawthorn and Redmond (1999) reported that pain is generally not being managed satisfactorily and is as common in most clinical situations as we have it among postoperative patients. The individual experiencing pain is the proficient person to report the existence and nature of the unpleasant sensation only him or her can feel (Burke et al 2011). The British Pain Society (2010) explains that asking the individual in pain is the best way of acknowledging the person in pain or observe them. Hægerstam (2008) therefore, opined that there is a vain possibility of pain measurement, but the expressions of suffering from pain can be measured. Pain is unique to every patient as it is first of all a subjective experience (Hawthorn and Redmond, 1999). It is one of the most important factor for consideration by healthcare providers in the management of pain. Pain is now considered to be the fifth vital sign that must be assessed (respiration, temperature, blood pressure, pulse, and pain). According to Taylor (2010), the first step in managing pain is pain assessment and its improvement on pain management has been reported.

Pritchard (2011) reported greater requirements of analgesic and anaesthetic, increased postoperative pain and extended hospital stay in patients with anxiety.

The assessment of anxiety in the preoperative phase of advanced elective surgical cases is very challenging due to the compelling time-bound for the tasks (Jlala, 2010; Mitchell, 2004). High levels of anxiety in preoperative phase is common among surgical patients awaiting surgical procedures (Akinsolure et al 2015).

Materials And Methods:-**Study Design:**

The study adopted two groups pre-test post-test quasi-experimental design to describe patients self-reporting assessment of pain and anxiety among surgical patients at 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) (Spielberger, 1983) 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 (Spielberger, 1983). According to Spielberger (1983), 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 and Lane (1999), the coefficient alpha for state anxiety scale as an established value for the study sample as 0.90. A standardized numeric pain rating scale described by Downie et al (1978) in which a patient was asked to provide a rating to pain intensity experienced on a scale from 0 to 10. Pain intensity rating between 7 to 10 was categorized as high pain intensity, pain intensity rating between 4 to 6 was categorized as moderate pain intensity and pain intensity rating between 0 to 3 was categorized as low pain intensity. Construct validity of the numeric pain rating scale has been established by using factor analysis. The numeric pain rating scale has excellent internal consistency rating with alpha coefficient value of 0.84. The test-retest reliability value was $r = 0.79$ (Jensen et al 2001).

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 pain intensity and anxiety state levels were obtained using the demographic data form, numeric pain intensity rating scale and the STAI Questionnaire in which patient was asked to rate the pain intensity and anxiety state experienced on the scale 12 hours after surgery.

Phase 2:

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

Phase 3:

Data on post- intervention pain intensity and anxiety levels were obtained 24hours after surgery from individual surgical patients in both the experimental and the control group using the numeric pain intensity rating scale and STAI Questionnaire respectively.

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. One research question was answered using descriptive statistics of percentage.

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 adequately 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.

Results:-

Socio-Demographic Data of Study Participants

Table 1:-Socio-Demographic Data of Study Participants

	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 \pm SD	43.87\pm13.6	45.2\pm15.2	44.53\pm14.1
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)

Source: Field Work

According to the findings presented in Table 1, the oldest age group of the respondents were in the 75-84-year bracket (6.7%) for the experimental and control groups. The mean age of patients in the experimental group was 43.9, while that of the control group was 45.2. The gender distribution appears to be in favor of female surgical patients in the experimental (80%) and control (67%) groups as compared to male surgical patients.

There are more respondents whose educational background were secondary education in the experimental (47%) and control (33%) groups respectively, followed by those with primary education (27%) in the experimental group and same proportion having first degree and above in the control group. The distribution of ethnicity favored two ethnic groups in Nigeria: Yoruba and Ibo. The majority of the respondents were from Yoruba ethnic group (93%) of the experimental, and 80% of the control surgical patients. A total of 4(12%) surgical patients were of Ibo origin. No other ethnic groups in Nigeria was represented.

Table 2:-Assessment of Anxiety states using patient's self-reported tool/ instrument by nurses

	Preoperative		Postoperative		Total
	Experimental n(%)	Control n(%)	Experimental n(%)	Control n(%)	

Patients' reported measurement of their anxiety state levels by nurses					
Yes	0 (0%)	2 (13%)	1(6.7%)	0(0%)	3(5%) 57(95%)
No	15 (100%)	13 (86.6%)	14(93.3%)	15(100%)	

Table 3:-Assessment of pain intensity using patient's self-reported tool/ instrument by nurses

	Preoperative		Postoperative		Total
	Experimental n(%)	Control n(%)	Experimental n(%)	Control n(%)	
Patients' reported measurement of their pain intensity by nurses					
Yes	0 (0%)	1 (6.7%)	1(6.7%)	0(0%)	1(13.4%) 56(93.3%)
No	15 (100%)	14 (93.3%)	14(93.3%)	15(100%)	

Table 2 reveals that a great number of surgical patients in the experimental group (100%) and control (87%) reported that nurses did not assess their levels of anxiety state with any standard tool before surgery, neither was it done post-operatively by the response of 93% of the experimental group and 100% of the control group. The scanty number of patients who reported that nurses measured their levels of anxiety state before their surgical procedures were just 2(13%) patients in the control group and 1(7%) patient in the experimental group after surgery. However, they could not identify or recognize the item used on them by the nurses. The nurses of the surgical wards where the patients responded as "yes" did not admit to the claim of anxiety state assessment with the use of a standard tool/questionnaire.

Table 3 reveals that there were nearly similar responses of the surgical patients to whether the nursing staff assessed their pain intensity with any standard tool preoperatively or post-operatively, just like anxiety state assessment. Pain intensity of majority (93%) of the surgical patients were reported as not done by nurses. There was no known tool utilized on the patients whose responses were "yes". The nursing staff did not admit to the claim of pain or anxiety assessment being done with the use of a standard tool.

Discussion:-

The study findings revealed that the nurses did not measure the anxiety state levels and pain intensity of surgical patients before administering nursing interventions. The patients who reported that nurses measured their anxiety state and pain intensity could not mention or describe the tool(s). At present, there was no use of any standard assessment tool for anxiety level and infrequent use of pain intensity assessment tool in the health facility. This is a serious challenge to the effective management of pain and anxiety among surgical patients.

Layman et al (2008) reported that generally pain assessment tools are not been used in clinical assessment of pain was in line with this study. Harsoor (2011) reported lack of proper pain assessment as among the many challenging factors affecting effective pain management and Taylor (2010) reported that the first step to effective pain management is pain assessment. According to Joint Commission on Accreditation of Healthcare Organizations (2001) all patients should have appropriate assessment and management of pain, in which self-report of pain by the surgical patient to the nurse is the most reliable indicator for pain (American Pain Society, 2009; Stillwell, 2006). It is usually assumed that patients' pain can be measured through other objective tests other than the use of standardized assessment tools. This belief is contradictory to the position of American Pain Society (2009) which stated that there is no existing objective tests to measure pain since pain is a subjective experience. Brookoff (2000) advised that behavioural or physiological indicators are not reliable for the assessment of patients pain in place of self report of pain using standardized pain scale (examples include Numeric Rating Scale, verbal Rating Scale to mention but a few). This is corroborated by the clinical definition of pain by McCaffery (1999) that pain is whatever the experiencing person says it is and exists where it does. The adoption of self-report for assessing the existence and measurement of its intensity and to evaluate response to pain management is very important.

This is also applicable to anxiety state levels using the standard scales that have been validated for clinical use (e.g. Halminton Anxiety Scale, Visual Analogue Rating Scale for Anxiety and depression (Kindler et al 2000), State-Trait Anxiety Inventory (STAI) (Spielberger, 1983) to mention a few).

Conclusion:-

Patients self-reporting assessment of pain and anxiety by nurses among surgical patients in Obafemi Awolowo University Teaching Hospitals Complex, Ile-Ife, Osun State, Nigeria was the focus of this study. Based on findings of this study, majority of participants in the experimental and control group reported that nurses do not involve them in the assessment for their pain intensity and anxiety state level at the preoperative and postoperative phases of care. This is not a good report in the effective management pain and anxiety states of surgical patients before and after surgery. Nurses should adopt the use of self-reporting of pain and anxiety levels by individual surgical patient during their phases of care. Health institutions should adopt specific standardized assessment tools for pain and anxiety assessment and embark on in-service training of nurses on the use of the tools.

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