ORIGINAL ARTICLE

Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses

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Abstract

Objective: The aim of this study is to determine the pain assessment and management practices of surgical and critical care nurses.

Method: This descriptive cross-sectional study was conducted at Specialist Hospital Sokoto in March 2021. A total of 148 surgical and critical care nurses voluntarily participated in this study. Data were collected using questionnaires. The statistical analysis was performed by Statistical Package for Social Science. Descriptive statistics were used in data analysis.

Results: The result of the study showed that nurses had a high level of awareness of all domains of pain assessment and management practices; however, the barriers to practice were too high.

Conclusion: Based on the results of the study, development of policies to ensure that pain scores and management are discussed during handling and taking over ward rounds, continuous education, providing any course/training on surgical pain management, and assessment to improve nurses' knowledge and practices.

Keywords: Intensive care, nursing, pain management

Introduction

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage (Sirinivasa et al., 2020). Also Pasero and Mc Caffery (2011) opined that pain is the patient's reported experience. Morton and Fontaine (2013) stated that poorly controlled pain can lead to delayed recovery, increased risk of morbidity and prolonged hospital stay, and risk of developing chronic persistent pain. This is not a desirable situation. Despite improved understanding of pain mechanisms, advances in pain-management approaches, inadequately controlled postoperative pain continues to be widespread, and people continue to suffer because of inadequate pain assessment and pain control. This is an unresolved health care problem. Pain is still a major problem in critically ill patients admitted to intensive care unit (ICU) and 40%–77.4% of ICU patients complain about the experience of pain.

Assessment of pain by the nurse should be routine. The American Pain Society urges that health care providers should treat pain as the "fifth vital sign" (American Pain Society, 1999; Khawla et al., 2016). Nurses should have a good knowledge of pain assessment. Inadequate assessment and documentation cause patients to experience pain and adversely affect their quality of life (Awube et al., 2018; Mansour et al, 2016). Accurate assessment of pain is paramount for appropriate pain management (Christine et al., 2016). Nurses are responsible for the assessment of pain. The nurse can use measurement tools for assessment of pain. The range of pain measurement tools is vast. This pain assessment tools are Visual Analogue Scales, Verbal Rating Scales, Graphic Rating Scales, Numerical Rating Scales, and Verbal Descriptor Scales (Kiwanuka & Masaba, 2018).

If pain is not effectively controlled, it prolongs the recovery period of surgical patients. Effective assessment of pain is essential in providing effective control of pain. Nurses play a key role in the management of pain, and this role is dependent on adequate knowledge and practices. The role of nurses in pain management is very important. Therefore, it is necessary to have comprehensive knowledge and skill in managing pain (Chatchumni et al., 2016;

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Karamjeet, 2017). The Lack of knowledge and communication about pain assessment and management leads to ineffective pain management. A vast majority of hospitalized surgical patients are adversely affected by it (Kiwanuka & Masaba, 2018). However, little is documented about the knowledge, attitude, utilization, and barriers of nurses regarding pain management in northern Nigeria. And the results will shed light on the awareness of pain assessment and management practices of surgical patients. Therefore, the researcher decided to conduct a study aiming in "determining pain assessment and management practices of surgical and critical care nurses" in Specialist Hospital Sokoto (SHS), Nigeria.

Material and Methods

Study questions include the following:

1. What is the knowledge level of nurses in critical and surgical areas of Specialist Hospital Sokoto (SHS) about pain assessment and pain management?
2. What are the attitudes of nurses in critical and surgical areas on the use of the pain assessment scale in the management of pain?
3. What are the factors affecting the use of the pain assessment scale in the management of pain among critical care and surgical nurses in SHS?

The study was designed as a cross-sectional descriptive study. It was conducted at specialist hospital Sokoto, a government hospital located in the northern part of Nigeria. The hospital has a 920-bed capacity and has 178 nurses in the area of critical and surgery that provides primitive, curative, and rehabilitative health care services.

A total of 148 surgical and critical care nurses voluntarily participated in this study. Inclusion criteria included only nurses who consented to be a volunteer.

Exclusion criteria included all nurses who were on annual or maternity leave from work and nurses not willing to participate in the study.

Data were collected by using a questionnaire formed by a researcher based on the literature (Eccleston, 2011; Pasero and Mc Caffery, 2011; Ung et al., 2016; Uysal, 2018). Questions were prepared by taking expert opinions. Expert opinion was obtained from five faculty members in the field of surgery and public health nursing. A little change on the data collection form was made after obtaining expert opinion.

Main Points

- Pain is a problem that can cause potentially life-threatening complications.
- Preventing pain is the main patient safety concern of surgical and critical care nurses.
- There is a need to assess and improve on management practices of surgical and critical care nurses regarding surgical pain.

The questionnaire consisted of four sections:

1. The first section was developed by the researcher regarding the demographic characteristics of the nurses and constitutes questions related to age, gender, professional qualification, rank, duration in the rank, and number of years have work as a registered nurse.
2. The second section included statements on knowledge level of nurses about pain assessment and management practices.
3. The third section included statements on practice of pain assessment and management of pain among critical and surgical nurses with choice of yes or no.
4. The fourth section contained statements on barriers affecting the clinical uses of pain assessment scale in the management of pain among critical and surgical nurses with choice of yes or no.

Data were collected using a questionnaire after obtaining permission from SHS. The questionnaire was written in English Language and was administered by the researcher between April 10 and 30, 2021 on nurses while they were on the ward or clinics during duty shift by face-to-face, self-completion method. Completion of the questionnaire took almost 20 minutes.

Ethical approval was obtained from the Near East University Research and Ethics Committee April 2, 2021/89-1312. Permission was gotten from the hospital ethics and research committee before the study was carried out in the hospital. In addition, the researcher explained the purpose of the research and obtained nurses consent in verbal form.

Data Analysis

Statistical Package Social Science software version 24 (IBM Corp.; Armonk, NY, USA) was used to analyze the collected data. The methods used to analyze the data include the analysis of descriptive statistics variables, such as frequency, and percentage for the categorical variables.

Results

The majority of nurses were male (77.7%) and the mean age of the nurses was 37 years. The majority of nurses had less than 5 years of working experience in the unit. The highest qualification of the participants was a bachelor's degree representing 45.9%, some of them were senior nurse officers representing 24.3%, and a few of them were registered nurse midwives and had a master's degree representing 2% and 0.7%, respectively. The majority of the nurses stated that they have not received training or attended any course/training on surgical pain management and assessment and their organization did not provide any update on pain assessment and management practices.

It was determined that the majority of nurses knew the meaning of pain and the need for pain assessment before pain management. A Majority of nurses agreed acute postoperative pain is objective and cannot be measured. Almost

all of the nurses considered music, relaxation techniques, massage, imagination, and application of heat and cold to be non-pharmacological strategies for surgical pain management. The mean of nurses' knowledge of pain assessment and management practices was 7.13, and the standard deviation was 1.38 (Table 1).

Table 2 shows the practice of pain management by nurses. More than 79.7%-96.6% of nurses indicated that they were utilizing pain management in their health care delivery. But, very few of them showed non-practice of pain management.

Table 3 and Figure 1 show the barriers to nurses on the use of the pain assessment scale. The participants stated that they see the high nursing workload, insufficient documentation of pain assessment and management, a lack of protocol for pain assessment, time-consuming use of pain assessment tools, and a lack of education as barriers. Almost half of the nurses did not see the unfavorable working environment and the patient's inability to communicate as a barrier.

Disscussion

Pain assessment and management are very important to prevent adverse patient outcomes, accelerate recovery, prevent morbidity and mortality, increase patient satisfaction, and prevent readmissions (Althaus et al., 2014). In the study by Kizza et al., (2016), it was observed that in Uganda, nurses generally have sufficient knowledge about pain assessment, but there is a lack of knowledge about patients' autonomy and pre-emptive analgesia concepts.

In our study, nurses have a high knowledge on pain assessment and management practices, similar to the results of the study by Issa et al. (2017). However, postoperative pain remains a problem for patients (Mahama & Ninnoni, 2019). Pain measurement tools provide the patient's history and physical examination. The most commonly used tools to measure pain intensity are Verbal Rating, Numerical Rating, and Visual Analog Scales. Common words for rating pain intensity include mild, moderate, and severe (Dijkers, 2010). Nahin (2015) states that 25 million US adults have daily chronic pain, and 23 million report more severe pain. Those with severe pain need more health care and have more problems than those with less severe pain. The negative effect of postoperative pain also affects for a long period after the operation. Chronic pain can be seen in patients after surgery (Althaus et al., 2014).

In our study, it is satisfying to know that nurses had good attitude on pain assessment and management practices. With respect to practices, the result of the study showed that majority of nurses practice effectively. In the study by Eccleston (2011), postoperative pain management defined nurses' professional culture, service culture, and insufficient theoretical knowledge, not giving priority to pain management and non-optimal pain management practices among nurses.

Inadequate treatment of pain is a common clinical problem in hospitalized patients with significant physiological, psychological, and financial consequences such as poor recovery, higher complication rate, anxiety, sleep disturbance, and poor quality of life.

However, many nurses in general practice settings do not have sufficient knowledge of the basic principles of pain assessment and management (Ung et al., 2016). Nurses should be unprejudiced when assessing the patient's pain level. If the patient says he has pain, nurses should accept it and show it. They should try to establish an empathetic relationship with the patient (Vallerand et al., 2011).

In our study, it was determined that nurses faced many barriers to the practice of pain assessment and management. They reported barriers such as nursing workload, lack of protocol for pain assessment, lack of familiarity with assessment tools, unsuitable environment, lack of pain assessment

Table 1. Knowledge Level of Nurses About Pain (n=148)	Yes		No	
Statement	n	%	n	%
1. Pain is defined as an unpleasant, sensory, and emotional experience arising from actual and potential tissue damage.	147	99.3	1	0.7
2. Do you think pain assessment is necessary prior to pain management?	121	81.8	27	18.2
3. Pain can be assessed through various tools, according to numerical rating scales. If patient's pain is 9 on the pain scale, it would indicate severe pain.	21	14.2	127	85.8
4. Acute postoperative pain is objective and cannot be measured.	140	94.5	8	5.4
5. Do you think music, relaxation techniques, massage, guided imaginary, and application of heat and cold are non-pharmacological strategies of surgical pain management?	147	99.3	1	0.7
6. Do you read any books or journal about surgical pain frequency of using objectives tool while assessing pain.	104	70.3	44	29.7
7. Do you attend any course on surgical pain management and assessment?	129	87.2	19	12.8
Knowledge total	Mean		±SD	
Knowledge	7.13		1.38	

Table 2.
Practice Distributions of Nurse's Pain Assessment

	Yes		No	
Variable	*n*	%	*n*	%
P01. Do you assess patients for pain?	143	96.6	5	3.4
P02. Do you use a pain assessment tool for pain assessment?	140	94.6	8	5.4
P03. Do you document the findings after using the pain assessment tools?	135	91.2	13	8.8
P04. Are pain scores and management discussed during handling and taking over ward rounds?	141	95.3	7	4.7
P05. Do you always agree with pain assessment tools statement about patient's pain?	141	95.3	7	4.7
P06. Do you assess for any side effect of the medication?	118	79.7	30	20.3
Practice total	**Mean**		**±SD**	
Practice	5.53		0.72	

Table 3.
Barriers of Nurses on Use of Pain Assessment Scale

	Yes		No	
Variable	*n*	%	*n*	%
BA01. Unavailability of pain assessment tools	140	94.6	8	5.4
BA02. Nursing workload	146	98.6	2	1.4
BA03. Sedation interfering with pain assessment	127	85.9	21	14.1
BA04. Unfavorable working environment	91	61.5	57	38.5
BA05. Poor documentation of pain assessment and management	143	96.6	5	3.4
BA06. Patient instability	120	81.1	28	18.9
BA07. Patient inability to communicate	87	58.8	61	41.2
BA08. Lack of protocols for pain assessment	145	97.9	3	2.1
BA09. No designated area for charting pain	123	83.1	25	16.9
BA10. Lack of familiarity with assessment tools	142	95.9	6	4.1
BA11. Pain assessment tools are difficult to use and complex to interpret	137	92.6	11	7.4
BA12. The use of pain assessment tools is time-consuming and not practicable	145	97.9	3	2.1
BA13. Lack of education	141	95.3	7	4.7

tools, lack of education, and inadequate documentation of pain assessment. Pain assessment tools are difficult to use and complex to interpret, and their use is time-consuming and not practicable. Other studies have shown that adequate pain assessment and interdisciplinary team work can improve pain control and quality of life (Kwon, 2014). With a comprehensive pain management tool, the physical, psychological, mental, and socio-cultural effects of pain are evaluated. A comprehensive assessment is essential to ensure adequate pain management (McCracken & Morley, 2015). Improper management of acute pain after surgery causes some problems such as pneumonia, deep vein thrombosis, infection, and delayed healing (Meissner et al., 2015).

Nurses are the people who feel the pain of the patients and intervene because they spend more time with the patient. Therefore, knowledge and attitude are very important in pain management. They should receive training on pain management and attend courses. Although there are multidisciplinary pain teams in hospitals, there are still problems in pain management (Alzghoul & Abdullah, 2016).

Figure 1.
Histogram of barriers of nurses on use of pain assessment scale.

The results of this study showed that nurses had a high level of knowledge of pain assessment and management practice. Most of the nurses have received training on pain assessment and management practices only from school. There is a need for the organizations to provide a pain-related update and course/training on surgical pain management and assessment. Preventing postoperative pain is the main patient safety concern of surgical nurses. Therefore, surgical
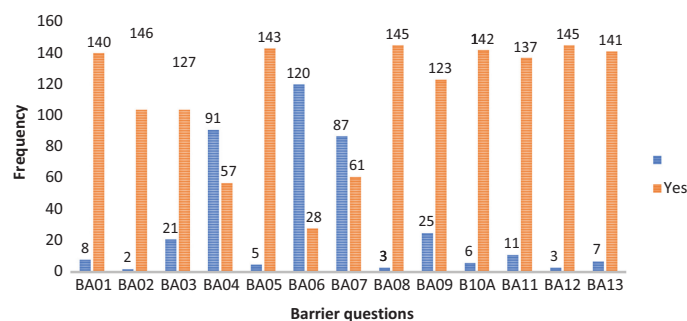
nurses should receive training on pain assessment and management practices. They should be encouraged to continue their education further so as to prevent any barriers.

As a result, it was determined that although critical and surgical nurses had good knowledge about pain management and practices, there were many barriers affecting the clinical use of the pain assessment scale.

Based on the results of this study, the following recommendations were made:

Hospital management should encourage and sponsor surgical nurses to attend courses/training on surgical pain management and assessment and encourage surgical nurses to continue their education further. Hospital management should introduce policies to ensure surgical nurses are discussing pain score and management during handling and taking over and are providing update on pain and should employ more surgical nurses to reduce work overload. Patient satisfaction about pain management should be measured. Pain assessment tools should be provided in the hospital, and using pain management protocols is necessary.

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