TURKISH REPUBLIC OF NORTH CYPRUS
NEAR EAST UNIVERSITY
INSTITUTE OF GRADUATE STUDIES

DETERMINING PAIN ASSESSMENT AND MANAGEMENT PRACTICES OF SURGICAL AND CRITICAL CARE NURSES

IBRAHIM HANTSI

MASTERS IN NURSING (SURGICAL NURSING)

Advisor

PROF. DR. ÜMRAN DAL YILMAZ

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APPROVAL

The Directorate of Institute of Graduate Studies, this study has been accepted by the thesis committee in Nursing Program (Surgical Nursing) as a master in Nursing thesis.

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According to the relevant article of the Near East University post graduated study education

andexaminationregulation,thisthesishasbeenapprovedbytheabovementioned

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

ABSTRACT

Aim: Post-operative pain is a problem that can cause potentially life-threatening complications. There is a need to assess and improve on management practices of surgical and critical care nurses regarding surgical pain. The aim of this study is to "determining pain assessment and management practices of surgical and critical care nurses.

Methods: This descriptive cross-sectional study was conducted at the Specialist Hospital Sokoto in March 2021. A total of 148 Surgical and Critical Nurses voluntarily participated in this study. Data was collected using questionnaires. The statistical analysis wasperformed by Statistical Package for Social Science (SPSS). Descriptive statistics and Pearson Chi-Square tests were used in data analysis.

Results: The result of the study showed that nurses had a highlevel of awareness on all domains of pain assessment and management practices however practice levels were found to be low.

Conclusions: 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, provide any course/training on surgical pain management and assessment to improve nurses knowledge and practices.

Key Words: Pain assessment, Pain management, Critical care, Surgical, Nursing care.

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Anabilim Dalı: Hemşirelik (Cerrahi Hastalıkları Hemşireliği)

Cerrahi ve Yoğun Bakım Hemşirelerinin Ağrı Değerlendirme ve Yönetimi Uygulamalarının Belirlenmesi

ÖZET

Amaç: Ameliyat sonrası ağrı, potansiyel olarak yaşamı tehdit eden komplikasyonlara neden olabilen bir sorundur. Cerrahi ve yoğun bakım hemşirelerinin cerrahi ağrı yönetimi uygulamalarının değerlendirilmesi ve iyileştirilmesine ihtiyaç vardır. Buçalışmanın amacı "cerrahi ve yoğun bakım hemşirelerinin ağrı değerlendirme ve yönetim uygulamalarının belirlenmesidir.

Gereç ve Yöntemler: Çalışma tanımlayıcı ve kesitsel olarak Mart 2021'de Sokoto İhtisas Hastanesi'nde yapılmıştır. Bu çalışmaya toplam 148 errahi ve yoğun bakım hemşiresi gönüllü olarak katılmıştır. Veriler anketler kullanılarak toplanmıştır. Sokoto Eyaleti, İhtisas Hastanesinde Çalışan Cerrahi ve Yoğun Bakım Hemşirelerinin Ağrı Değerlendirme ve Yönetim Uygulamalarının Belirlenmesi ÜzerineVerilerin analizinde Statistical Package for Social Science (SPSS) programı ile tanımlayıcı istatistikler ve Pearson Ki-Kare testleri kullanılmıştır.

Bulgular: Araştırma sonucunda hemşirelerin ağrı değerlendirme ve ağrı yönetim uygulamalarının tüm alanlarında farkındalık düzeylerinin yüksek olduğu ancak uygulama düzeylerinin düşük olduğu saptanmıştır.

Sonuç: Çalışmanın sonuçlarına dayalı olarak, ağrı skorları ve yönetiminin ele alınmasıiçin politikaların geliştirilmesi, hemşirelerin bilgi ve uygulamalarını geliştirmek için sürekli eğitim, cerrahi ağrı yönetimi ve değerlendirmesi konusunda herhangi bir kurs/eğitim verilmesi önerildi.

Anahtar Kelimeler: Ağrı değerlendirmesi, Ağrı yönetimi, Yoğun bakım, Cerrahi, Hemşirelik bakımı.

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Abbreviations

- APS: American Pain Society.
- ICU : Intensive Care Unit.
- WHO: World Health Organisation.
- SHS: Specialist Hospital Sokoto.
- VAS: Visual Analogue Scale.
- NRS: Numerical rating Scale.
- VRS: Visual Rating Scale.
- NSAID: Non steroidal anti-inflamatory drugs.
- CCN : Critical Care Nurses.
- IASP: International Association for the Study of Pain.
- MPQ : McGill Pain Questionnaire
- CPSP: Chronic post surgical pain.

1. INTRODUCTION AND AIM

1.1 Definition of the problem

Pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage (International Association for the Study of Pain, 2019). Also Pasero and Mc Caffery (2011) opined that pain is the patient's reported experience. Mortan and Fontaine (2013), stated that pain that is not well controlled can lead to discomfort and suffering which can include unwanted consequences such as delayed healing, an increased risk of morbidity, a prolonged hospital stay, and the risk of developing chronic persistent pain. Despite substantial advances in pain research and management, people continue to suffer because of inadequate pain assessment and pain control, thereby leaving gaps in the quality and safety of pain management provided to patients (IASP, 2011).

Screening for pain should be a part of a routine assessment, and this has led the American Pain Society (APS) to declare pain as the "fifth vital sign" (Khawla Nuseir, Manal Kassab and Basima Almomani, 2016). Accurate assessment of pain is paramount for appropriate pain management (Christine et.al, 2016). Pain assessment requires health care providers to have a good knowledge of it, and involves a number of care providers including the nurses among others. Inadequate assessment and documentation areattributed to the high incidence of acute pain experienced by patients (Awube *et al.*, 2018). The quality of life and performance of patients is worsened if pain is under diagnosed by health care providers (Mansour *et al*, 2016).

In practice, nurses are responsible for assessing pain by obtaining subjective responses from the patient using a verbal set of questions, and also objectively observing nonverbal actions like facial expressions of the patients (Kiwanuka and Masaba, 2018). Pain is still a major problem in critically ill patients admitted to intensive care units (ICU) and 40–77.4% of ICU patients complain about the experience of pain (Kolsoum Deldaret.al,2018). In Uganda, Kizza, Muliira, Kohi and Nabirye (2016) observed that nurses generally had adequate knowledge about pain assessment principles, but there was a lack of knowledge about some key concepts such as value for patients autonomy in pain assessment and pre-emptive analgesia concepts.

The outcome of any surgery is partly dependent on pre; -intra; and post-operative pain assessment and management. Effective pain assessment and `management is an integral part of nursing care. Pain can interfere with early recovery of surgical patients

if not effectively controlled. Effective assessment of pain is key to effective control of pain. This knowledge gap may affect their ability to provide quality pain assessment and management. In most health-care settings, nurses constitute the biggest population of the health workforce and have 24-hour direct contact with patients (World Health Organization, 2016). Nurses play a vital role in pain management and therefore require thorough knowledge and skill in managing pain (Chatchumniet.al, 2016). Consequently, nurses are well placed to manage pain and must ensure that their interventions are tailored to suit individual preferences and comfort. Pain management practices are defined as a set of activities that should be provided by nurses to manage the patients' pain effectively (Hossain, 2010).

Inadequately managed postoperative pain is prevalent worldwide which adversely affects patients' experience and outcome (Tocheret.al,2012).

Inadequate treatment of pain is widespread throughout surgical wards, intensive scare units, accident and emergency departments, in the management of all forms of acute or chronic surgical pain and in end life care (Karamjeet, 2017). The knowledge about pain assessment and management, inability to assess pain, and poor communication between the patient and the health care provider ledto ineffective pain management and approximately 79% of the hospitalized surgical patients suffer from it (Kiwanuka and 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 shade more light on the awareness of pain assessment and management practices of surgical patients Therefore, the researcher decided to conduct a study aim in "Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses" in Specialist Hospital (SHS) Sokoto, Nigeria.

1.2 Aim of the Study.

The aim of this study is to determining pain assessment and management practices of surgical and critical care nurses

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 pain assessment scale in the management of pain?

3. What is the level of clinical use of pain assessment affecting the clinical uses of pain assessment scale in the management of pain among critical care and surgical Nurses?

4. What are the factors affecting the use of pain assessment scale in the management of pain among critical care and surgical nurses in SHS?

2. GENERAL INFORMATION.

2.1 Definition of Pain.

According to (Kumar & Elavarasi, 2016) the Task force on taxonomy of the International Association for the Study of Pain(IASP)says pain is "An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage. Also, The North American Nursing Diagnosis Association define pain as a state, in which an individual experiences and reports severe discomfort or an uncomfortable sensation; the reporting of pain may be either by direct verbal communication or by encoded descriptors (Kumar & Elavarasi, 2016)

Pain is the most common experience reported by patients, and patient anxiety is a form of warning signal. It is a sensual and perceptual phenomenon, which causes suffering an emotional state of risks connected with anxiety. Pain has many forms. It warns against damage to the body, which is important for avoiding injuries and consequently for survival. Pain not caused by acute injuries can be unpleasant for the patient, or it can alter a person's life, reduce the quality of life, and also have an impact on the patient's family (Swieboda et al., 2013). The word "pain" for the patient means disease and suffering, for the doctor it is a symptom, and for the physiologist it is a kind of feeling that has its own anatomical and physiological system which begins with the receptors and ends up in the brain cortex is a physical sensation that can be confirmed by electrophysiological methods, but in practice it is only a subjective sensation. Its intensity and quality come under various internal and external factors; therefore, the same stimulus can be experienced differently in different circumstances, somatic and psychiatric conditions.

2.2. Classifications of pain

According to (Boore et al, 2016), prior to diving into the assessment process, it is necessary to have a general understanding of the various types of pain that can be experienced, as well as how these are manifested. This understanding will ultimately help to inform management decisions it is the first step in the assessment process.

There are several classifications of pain some overlap and patients may present with one or more. Pain can be:

■ Acute: pain that is of short duration (less than 3 months) and is reversible

■ Chronic: pain that is persistent and has been experienced for more than 3 months

■ Nociceptive: pain resulting from stimulation of pain receptors by heat, cold, stretching, vibration or chemicals.

■ Neuropathic: pain related to sensory abnormalities that can result from damage to the nerves (nerve infection) or neurological dysfunction (a disease in the somatosensory nervous system)

■ Inflammation: stimulation of nociceptive processes by chemicals released as part of the inflammatory process.

■ Somatic: nociceptive processes activated in skin, bones, joints, connective tissues and muscles

■ Visceral: nociceptive processes activated in organs (eg stomach, kidneys, gallbladder).

■ Referred: pain that is felt a distance from the site of origin.

(Kettyle, 2015; Boore et al, 2016; Cunningham, 2017; Mears, 2018).

2.3. Definition of Surgical Pain.

Pain after surgery can have a substantial impact on a patients recovery. Understanding patient views and concerns regarding postoperative pain is critical for determining low health care providers might enhance post-operative treatment (Garimella V & Cellini C 2013). More than 73million procedures are conducted in the United State each year with up to75% of patient experiencing after ward.

The location of medical care has changed from inpatient to out patient settings over the last decade as a result of changes the in hospital payment system, the expansion of manage care, developments in medical technology and changes in practice patterns. Approximately 70% of all surgeries in the United States are now performed in an ambulatory setting (Alzghoul, B. I., & Abdullah, N. A. C. (2016) Despite the fact that pain is an unavoidable component of the postoperative experience, poor pain management is frequent and can have serious consequences. Untreated postoperative pain can lead to clinical and psychological changes that increase morbidity, mortality, and expenditures, as well as worse quality of life. Deep vein thrombosis, pulmonary embolism, coronary ischemia, myocardial infarction, pneumonia, poor wound healing, sleeplessness, and demoralization are among negative clinical effects of poorly postoperative pain management. Economic and medical consequences, such as lengthier hospital stays, are linked to these issues. Patient discontent with medical care and readmissions. The cost of treating chronic pain that arises from acute pain in a 30-year-old person over their lifetime is estimated to be as high as $1 million. Acute

pain prevention and alleviation may enhance clinical outcomes, reduce clinical complications, save healthcare costs, and increase the quality of life. (Franck, L. S., & Bruce, E. (2009).

2.4. Nurses Practices of Pain Assessment.

Documenting assessment findings, addressing pain assessment and management during nurse-to-nurse reports, and testing for analgesics required before wound care were the most common pain assessment method was the most significant impediment to pain evaluation.;Poor recording and communication of pain assessment priority; lack of knowledge and familiarity with assessment tools. In clinical practice, using validated pain assessment instruments improves patient outcomes in clinical trials (efficacy) and in real-world practice (effectiveness). One may, however, claim that it is. Separating the impacts of structured evaluation from the impacts of pain therapy on patient outcomes is difficult or impossible. Intermediate or process outcomes may be more useful in assessing pain, allowing doctors to provide more effective treatment. While there may not be a direct influence of assessment on pain reduction, one can notice, for example, higher pain documenting, which allows for more effective therapy and, as a result, a better patient outcome. As a result, investigations of pain management strategies may contain evidence for pain assessment effectiveness (Franck, L. S., & Bruce, E. 2009).

During a patient's admission and after surgery, a pain assessment should be performed. (Things to think about) Pain history, pain location, and pain intensity pain perception and cognitive development (Franck, L. S., & Bruce, E. 2009)

Pain is one of the most prevalent sensations that patients encounter, with 79 percent of hospitalized patients experiencing it. Pain assessment procedures are a collection of actions that nurses should perform to properly assess a patient's pain. (Hossain, 2010).

Assessing the patients' pain, offering suitable nursing actions to relieve the patients' pain, and reassessing the patients' pain following intervention are all part of these duties. Three key impediments influenced pain management strategies in any healthcare system: patient barriers, organizational barriers, and healthcare provider barriers.

Nurses are not the only healthcare professionals who are responsible for assessing and treating patients' pain; they also play an important part in pain management. (Lewthwaite et al., 2011). This is due to the fact that nurses are in the middle of everything between the responsible physicians and their patients. Neglecting a patient's pain is unethical and moral, and it has numerous ramifications and issues for both the patient and the healthcare institution. As a result, numerous worldwide groups concerned with improving patient safety and healthcare quality focused on this issue, stating that nurses in all nations deliver poor pain management. (The Oncology Nursing Society [ONS], 2012).

2.5. Nurse's Practices on Pain Management

The primary goal for all patients is to preempt and prevent pain from occurring in the first instance; however, if pain cannot be avoided, optimal analgesic management is vital.

   The word analgesia refers to be without feeling of pain, is derived from the Greek language, and in terms of pain management can relate to medication and alternative interventions (Laws and Rudall, 2013). Therefore, pain management plans should incorporate a multi-modal approach in order to successfully and holistically treat patients' pain (Flasar and Perry, 2014). Boore et al. 2016) claimed that this is an effective way to manage pain, but stressed that the decisions about which management strategies to use, also need to take into consideration the context of the clinical situation, the patient's level of acuity, the environment and physical space, and the availability of resources.

Pharmacological treatements.

One very effective strategy that health professionals have within their management arsenal is the use of pharmacological treatments. The choice of treatment depends on whether the pain is nociceptive, neuropathic, and inflammatory or of mixed origin. There are three main categories: opioids, non-opioids/non-steroidal anti-inflammatories, and adjuvants/co-analgesics.

FIGURE 2. 1. Classification of Pharmacological Treatment

Classification of pharmacological analgesics	
Class	**Examples**
Non opioids/Non-Steroidal Anti-Inflammatory Drugs (NSAIDs)	Paracetamol Aspirin Ibuprofen Naproxen Diclofenac
Opioids	Codeine Fentanyl Morphine Oxycodone Tramadol
Adjuvants/co-analgesics	Gabapentin Pregabalin Duloxetine Ketamine Amitriptyline

Source: Smith and Muralidharan, 2014.

The most efficient pharmacological regime, for moderate to severe pain (i.e cancer-related pain) often incorporates a combined approach, by administrating a specific drug in conjunction with adjuvants or co-analgesics.

Non-pharmacological therapies

Pharmacological treatments are not the only strategy at health professionals' disposal, and all-inclusive management cannot be achieved without the incorporation of other nonpharmacological therapies. Some of these interventions are long-standing, are ingrained in some traditional medical practices and, when used correctly, can enhance patients' feelings of empowerment and involvement (Flasar and Perry, 2014). However, due to limited resources, funding, space, time, knowledge of use, and personal beliefs, some therapies are not fully used or embraced (Cullen and MacPherson, 2012).

These can be placed into three main groups and the choice of which to use will depend on patients' preferences and existing coping mechanisms. The following strategies have been highlighted as they align with the fundamental core values of care and compassion, and require very little in terms of resources or time.

■ Distraction: this can take various forms, such as talking to the patient about their specific hobbies. This basic skill often requires no equipment, can be done anywhere and is a useful way of taking the patient's mind off their pain.

■ Imagery/meditation: this management technique takes distraction therapy one step further by using a more structured approach.

■ Therapeutic touch and massage: for centuries, the therapeutic placing of hands has proven to be a useful skill and has beneficial physiological (stimulation of A-beta which restrict pain pathways) and psychological properties (Kettyle, 2015).

■ Environment: sound, lighting and the temperature of the patient's immediate environment have been shown to heighten or reduce perceptions of pain.

■ Body positioning and comfort: this can reduce the pain associated with nociceptive and inflammatory pain signals.

■ Thermoregulation: for some types of pain, it has been shown that the use of heat or cold packs can help reduce pain experiences. However, care needs to be taken if these treatments are to be used on postoperative sites and areas with related contraindications.

■ Electrostimulation: this technique is noninvasive and uses pulsed electrical currents to stimulate A-beta which inhibit the transmission of nociceptive signals in the pain pathway (Johnson, 2012).

FIGURE 2.2. Non Pharmacological Management Strategies

Examples of non-pharmacological management strategies		
Psychological	**Physical**	**Alternative**
Spiritual Relaxation Information Breathing Music Art therapy Distraction Imagery Yoga Tai chi	Heat and cold Exercise Massage Body position/comfort Rest	Acupuncture Electrostimulation Herbal remedies Reflexology Biofield therapies (e.g reiki)

Source: Cunningham, 2017

2.6. Pain Assessment Tools.

The holistic assessment and management of pain is important, as pain involves the mind as well as the body, and is activated by a variety of stimuli, including biological, physical, and psychological (Boore et al, 2016). For some patients, the pain they experience can be short-lived and easy to treat, but for others, it can cause significant issues in relation to their overall health and wellbeing (Flasar and Perry, 2014).

Mismanaged pain can affect an individual's mobility, sleep pattern, nutritional and hydration status and can increase their risk of developing depression or becoming socially withdrawn (Mears, 2018). As nurses are the frontline force in healthcare settings, they play a vital role in the treatment of individuals in pain. This article examines and explores some of the holistic nursing assessment and management strategies that can be used by health professionals.

Individuals react to pain in varying ways; for some, pain is seen as something that should be endured, while for others it can be a debilitating problem, which is impeding their ability to function. Therefore, in order to develop an effective and individually tailored holistic management plan, it is important to understand how the pain is uniquely affecting the individual, from a biopsychosocial perspective (Flasar and Perry, 2014).

To do this, health professionals use an array of tools, such as the skills of observation (the art of noticing), questioning techniques, active listening, measurement and interpretation. No one skill is superior; rather, it is the culmination of information gathered via the various methods that enables a health professional to

determine if a patient is in pain, and how this pain is affecting them physically, psychologically, socially, and culturally (Cunningham, 2017).

One of the first skills that can be used is to visually observe the patient, and examine body language, facial expressions, and behaviors, as these provide information about how a person is feeling. For example, an individual in pain may be quiet and withdrawn or very vocal, angry, and irritable. They may display facial grimacing and teeth clenching or exhibit negative body language, guarding and an altered gait (Ford, 2019).

However, there may be times when an individual may not be able to show behavioral signs of pain, such as when a patient is unconscious. Therefore, physiological response to noxious stimuli can be observed through the measurement of vital signs, such as hypertension, tachycardia, and tachypnoea. Although these observations are routinely used within perioperative and critical care areas, these signs can be present in the absence of pain; consequently, these must be used in conjunction with other assessment strategies (Laws and Rudall, 2013).

Assessment tools

Although vital observations and behavioral manifestations may indicate that a patient is in pain, questioning, measurement and interpretation skills will assist with determining the intensity, severity, and effect of the pain on the patient's wellbeing and quality of life. This process can be aided with the use of specifically designed tools, which act as prompts for health professionals and facilitate the assessment of one or more dimensions.

Unidimensional tools

A visual analogue scale (VAS), numerical rating scale (NRS), or verbal rating scale (VRS) can be quick, easy to use, regularly repeated and do not require complex language. These are limited in terms of the information gained, as examining one specific aspect is not sufficient for adequate and holistic pain management (Mears, 2018). However, for individuals who are unable to communicate or where language barriers exist, unidimensional tools, such as the WongBaker FACES tool can be very useful (Kettyle, 2015).

The Wong-Baker FACES tool (https:// wongbakerfaces.org/), which was originally created for children, has been successfully integrated into the care of older people

(with or without cognitive impairment) and is beneficial in facilitating an individual's ability to communicate if they are experiencing pain (Ford, 2019).

Multidimensional tools

These ask for greater information and measure the quality of pain via affective, evaluative and sensory means. According to (Ford, 2019), McGill Pain Questionnaire (MPQ) is one example. This long-established tool is often used to assess individuals who are experiencing chronic pain. However, due to its higher levels of complexity health professionals can sometimes find this tool more difficult to use, especially if unfamiliar with it. The Abbey pain scale (Abbey et al, 2004) is another multidimensional tool that has proven to be beneficial for assessing pain in older adults who are unable to articulate their needs.

2.7. Knowledge of pain assessment

Nurses must be highly competent, knowledgeable and possess positive attitudes towards pain management so that patients receive high quality pain management practices to facilitate optimal patient health outcomes (Karamjeet, 2017). Moreover, many nurses have insufficient knowledge about basic mechanisms of action of medications, dosages and uses of certain pharmaceuticals, in addition to other pain management interventions. While pain assessment and management is taught as part of the curricula of many nursing programs, it is often not enough in terms of time allotted and depth of academic inquiry to be effective (Nimer & Ghrayeb, 2017). Deficient knowledge about pain management is not uncommon among health-care professionals. It is estimated that around 50% of health-care providers reported lack of knowledge in relation to pain assessment and management (Saunders, 2015).

A handful of international studies have examined nurse knowledge of pain management showing that nurses from Turkey (35%), Italy (55%), Iran (66.6%), Saudi Arabia (42%), Canada (41%), and the United States (72%) have inadequate knowledge and attitudes regarding pain as measured by the Nurses Knowledge and Attitudes Survey Regarding Pain (NKARSP) (Salim et al., 2019).

A study on Knowledge and Attitude Regarding Pain Management among Staff Nurses in India by Karamjeet (2017), majority of the respondents 66% had average knowledge related to pain management, 20% had poor knowledge related to pain management, and only 14% of respondents had good knowledge related to pain

management. Alzghoul and Abdullah (2016), who conducted a descriptive cross-sectional study in Saudi Arabia which revealed that there was a lack of knowledge and poor attitudes among nurses towards pain management, In another study conducted by Rasmi Issa et al (2017) on Knowledge and Attitude about Pain and Pain Management among Critical Care Nurses in a Tertiary Hospital in Saudi Arabia showed that 60% of the knowledge questions were answered incorrectly by more than 50% of the nursing staff participated in the study which showed lack of knowledge among nurses regarding pain management. A study conducted by (Shoqirat et al., 2019) in Jordan revealed that Nurses had inadequate knowledge of Pain Management, with a mean knowledge score of 63.9% . Findings by Nimer & Ghrayeb (2017) who conducted a study on Palestinian Nurses knowledge and attitude regarding pain management revealed that nurses had very poor knowledge about pain assessment and management with only 18% of the population answering correctly.

A study by (Umuhoza et al., 2019) on perceived knowledge and practice among nurses in Rwanda revealed that the majority of the nurses 74% had high levels of knowledge on pain management. Also According to (Umuhoza et al., 2019), In Kenya, only 41% of the nurses reported that they had sufficient knowledge to assess and pain while Wulff (2012) who conducted a study in South Africa revealed knowledge deficits, inconsistent clinical practices as well as limited training in post-operative pain management among nurses. A study by (Oyetunji & Popoola, 2020) in southwest Nigeria revealed that 59.7% of Nurses have good level of knowledge towards pain management.

Nurses' pain knowledge and assessment is a very important part of nursing care, which enables health care providers to manage pain in the best way possible. Effective and accurate pain management requires efficient knowledge, positive attitudes and effective skills of clinical decision-making about pain (Rasmi Issa et al., 2017).

2.8 Attitude of nurses on the use of pain assessment scale

Attitude is a latent variable and cognitive, affective and conation reactions, verbal and nonverbal are manifest indicators of attitude, this have an important role in nurses' attitude towards effective pain management (Oyetunji & Popoola, 2020). Alleviation of pain is an important nursing goal embodied in the profession's philosophy. Nurses are responsible for regular pain assessments, medication administration, monitoring of the patient's responses. These responsibilities require an understanding of the nature of pain in relation to a patient's clinical condition (Gugsa, Ingeborg & Ragnhild, 2018).

Internationally, ineffectively managed pain due to nurses' negative attitude is the source of major human and financial problem for patients, their families and the society. The average worker lost 2.6 days at work due to body pain alone, which is estimated to have cost the global economy more than $245 billion dollars USD annually. For two in ten, pain is seen to be hurting their career progression (GlaxoSmithKline, 2017). Approximately half of workers claim to regularly work through their pain, which is directly impacting their performance. Across all aspects of everyday life, pain is negatively impacting the lives of both the sufferer and those closest to them, from damaging self-perception and negatively impacting time spent with friends and families, through to having a detrimental impact on parenting abilities. In addition, the vast majority of sufferers are concerned by their pain to some extent, causing either worry or anxiety in 85% and 78% of pain sufferers respectively (GlaxoSmithKline, 2017).

The onus rest on the nurse to promote health and safety of patients, suitable and effective pain relief, preserve wholeness of character and integrity, maintain competence, and continue personal and professional growth (Hrabe, Melynk & Neale, 2018). Notwithstanding, nurses' attitude to effective pain management is unprincipled, many patients experienced unsatisfactory and unrelieved pain due to the negative attitude of some nurses to effective pain management and a left untreated pain is considered professional misconduct or a violation of fundamental human rights (Shakya & Shakya, 2016).

A study by Karamjeet (2017) on Knowledge and Attitude Regarding Pain Management among Staff Nurses in Punjab India showed that the majority of respondents 74% were having a negative attitude towards pain management only 26%

was having a positive attitude towards pain management. As opined by (Rasmi Issa et al., 2017) in his study on Knowledge and Attitude about Pain and Pain Management among Critical Care Nurses in a Tertiary Hospital in Saudi showed poor attitude of respondents regarding pain management as 65% of attitude questions were answered incorrectly by more than 50% of them. Also another study on Chinese nurses showed that poor knowledge about pain management is linked with negative attitudes regarding pain management (Samarkandi, 2018). A study on Nurses' Knowledge, Attitudes, and Barriers Toward Pain Management Among Postoperative Patients in Jordan by (Shoqirat et al., 2019) revealed that the mean score of all responses was 3.12 (63.9%), indicating that participants' attitudes were poor. Also another study carried out in Malaysia revealed that personal nurses' experience with pain had influence on pain management and age groups of more than 40 years had better knowledge which positively influence their attitude on pain management (Ho, Ho, Pang-Yuen, Lexshimi & Choy, 2013). A study by De Silva and Rolls (2011) assessed Sri Lankan nurses' attitudes, beliefs, and knowledge about cancer pain management and showed that poor behavior toward pain management was related to knowledge deficit and lack of authority. A study conducted in Zimbabwe as cited by Karamjeet, (2017), showed that nurses have inadequate attitude towards pain management with mean score of 56%. A study conducted on the nurses' attitude, practice and barriers toward cancer pain management in Addis- Ababa, Ethiopia by (Kassa & Kassa, 2014) revealed that 53.7%, of the nurses' have a negative attitude, towards pain management which was attributed to socio-cultural, demographic, personal, and environmental factors and, lack of adequate knowledge of pain management. A study by (Oyetunji & Popoola, 2020) on knowledge as predictors of nurses attitude towards effective pain management in selected secondary hospitals in Ibadan, Oyo state, Nigeria revealed that 68.5% of nurses have negative attitude towards effective pain management.

2.9. Level of clinical use of pain assessment scale

A study by (Ehwarieme et al., 2018) on Perceived factors affecting utilization of pain assessment tool among nurses in selected tertiary hospital in Benin City Edo State shows that majority 99.0% assess patient pain using pain assessment tool/scale. Since pain assessment is considered the responsibility of nurses, nurses are required to utilize the appropriate assessment measures and intervene accordingly (Salim et al.,

2019). A study by (Torvik et al., 2015) to determine Pain Assessment Strategies in Home Care and Nursing Homes in Mid-Norway revealed that Pain assessment instruments were not used frequently in nursing homes and home care. Verbal and numeric rating scales were used significantly more frequently in home care than in nursing home

Pain assessment practices were significantly associated with perceived workload and priority given to pain assessment (Kizza & Muliira, 2015). A study conducted by (Umuhoza et al., 2019) showed that 88% of the nurses had moderate levels of practice with regards to immediate post-operative pain management. Again, another study revealed that the knowledge of pain management had a strong correlation with pain management practices (Alzghoul & Abdullah, 2016). Similarly (Kassa & Kassa, 2014) reported 65.9% of nurses Ethopian Nurses had poor pain management practice.

2.10. Barriers to affecting the use of pain assessment.

Despite having many types of research and scientific advancement in pain management over the years, inadequate knowledge remains a major barrier to achieving effective pain management. Knowledge and attitude of nurses towards pain management have an influence on how pain is managed (Karamjeet, 2017). Inadequate pain management affects 80% of the global population, and poses a serious problem in more than 150 countries(Al-mahrezi, 2017).

Several barriers (system-related, staff-related, nurse-related, physician-related, and patient related) have been identified that hinder the health care professionals from achieving optimal pain management (Mędrzycka-Dąbrowskaet.al,2015); System-related barriers include a lack of clearly defined standards and pain management protocols, and limited access to pain specialists and analgesics (Mędrzycka-Dąbrowskaet.al,2015). Staff-related barriers include inadequate knowledge and skills, and lack of teamwork. Lack of knowledge and false concerns about addiction and overdosing are examples of physician-related barriers. Nurse-related barriers include inadequate knowledge, heavy workload, and lack of time (Mędrzycka-Dąbrowskaet.al,2015). Also as reported by (Salim et al. 2019) inadequate knowledge about pain and its characteristics is a common barrier to effective pain management. Ineffective pain management skills by nurses and nurses' disinclination to embrace all dimensions regarding pain are problematic. For instance, nurses were observed to have insufficient knowledge about opioid analgesic drugs.

Limited knowledge and negative attitude of nurses toward pain management were reported as major obstacles in the implementation of an effective pain management (Samarkandi, 2018). In another study conducted by (Toba et al., 2019) showed that Inadequate pain assessment (76.8%), insufficient knowledge of pain control (70.5%) and strict regulation on opioid use (69.5%) were the most frequently perceived barriers among nurses. Nurses may have a negative perception, attitude, and misconception toward pain management (Alqahtani and Jones, 2016).Misconceptions include the belief that patients tend to seek attention rather report real pain, that the administration of opioids results in quick addiction, and that vital signs are the only way to reflect the presence of pain (Kwon,2014). Several interventions have been attempted to address these provider-related barriers. Addressing these barriers resulted in a significant improvement in the health-care team attitudes and practice toward pain management (Qadire and Al Khalaileh, 2014). Also (Shoqirat et al., 2019) revealed in his study that: a high level of perceived barriers among nurses in the surgical wards, with a mean total barriers questionnaire score of 3.00 of 4.00.

Kizza & Muliira, (2015) opined that the main barriers to pain assessment were workload; lack of education and familiarity with assessment tools; poor documentation and communication of pain assessment priorities.

3. MATERIALS AND METHODS

3.1 Study Design

The study was designed as a Cross Sectional Descriptive Study.

3.2. Study Setting

This study was conducted at specialist hospital Sokoto, a government hospital located in the northern part of Nigeria. It was established in 1932 the hospital received patients from all 23 local government areas of the state and also served as referal centre from primary health, secondary health in Sokoto, Kebbi, Zamfara state patients from these centers are referred to this state tertiary health facility. The hospital has a 920 bed capacity and the hospital provide special services in Surgery, Medicine, Neurosurgery, Family health medicine, Obstetrics, Gynaecology, paediatrics, Accident and Emergency, Otorhinolargology, Opthalmology departments. The Hospital has 148 Nurses in the area of Critical and Surgery that provides promotive, curative and Rehabilitative health care services.

3.3. Sample Selection.

The study was carried out on the Nurses in specialist hospital Sokoto rendering surgical care to a patient admitted in the hospital. The nurses in surgical areas of the hospital stood at 148. All voluntary nurses were included in the sample of the study.

3.3.1 Inclusion criteria, only nurses who consented to participate and who are on permanent and pensionable appointment in specialist Hospital Sokoto was involved.

3.3.2 Exclusion criteria: All Nurses who are on annual or maternity leave from work. Nurse not willing to participate in the study.

3.4. Study Tools.

The data was collected by using a questionnaire formed by a researcher based on the literature (Nese Uysal 2018; Eccleston 2011; Salamoisa, HU and Gallego 2016; Pasero and Mc Caffery 2011). Questions were prepared by taking expert opinions. A little change on the data collection form was made after obtaining expert opinion.

The questionnaire consists of five sections. (Appendix 1).

1. The first section developed by the researcher regarding the Demographic characteristics of the Nurses constitute 5 questions such as (age, gender, professional qualification, rank, duration in the rank, number of years you have worked as a registered nurse)

2. The second section will include 9 statements on the knowledge level of nurses in critical and surgical areas of Specialist Hospital Sokoto (SHS) about pain assessment and management practices.

3. The third section will include 17 statements on attitudes of nurses in critical and surgical areas on the use of pain assessment scale in the management of pain with choice of Strongly Agree, Agree, Undecided, Disagree, Strongly Disagree.

4. The fourth section will include 6 statements on practice on the use of pain assessment scale in the management of pain among critical and surgical nurses with the choice of YES or NO.

5.The fifth section will contain 13 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. The pilot study was not conducted in this study.

3.5. Data Collection.

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

3.6. Ethical Aspect.

Ethical approval was obtained from the Near East University Research and Ethics Committee 02/04/2021/89-1312. (Appendix 2). Permission was gotten from the hospital ethics and research committee before the study was carried out in the hospital (Appendix 3) In addition, the researcher explained the purpose of the research and obtained nurses consent in verbal form.

3.7. Data Analysis.

Statistical Package Social Science (SPSS) software version 24 was used to analyze the collected data. The method uses to analyze the data include the analysis of descriptive statistics variable such as frequency and percentage for the categorical variables. The pearson Chi-square test was done to determine the differences when F statistic was significant the chosen level of significance is $P < 0.05$.

4. RESULTS
Table 4.1 Descriptive Characteristics of the Nurses (N= 148)

Descriptive Characteristics	Number	Percentage
Gender		
Female	33	22.3
Male	115	77.7
Education		
Registered Nurse	39	26.4
Registered intensive care Nurse	11	7.4
Registered Nurse Midwife	3	2.0
DIPLOMA	26	17.6
Bachelor's Degree	68	45.9
Master Degree	1	0.7
PhD	-	-
Position		
Nursing Officer	30	20.3
Senior Nursing officer	36	24.3
Principal Nursing officer	29	19.6
Assistant Chief Nursing officer	24	16.2
Chief Nursing officer	29	19.6
Characteristics	**Mean**	**± SD**
Age	36.61	8.59
Experience (Years)	4.34	3.3

In this descriptive and cross-sectional study conducted with the aim of "Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses, among the surgical Nurses among the Nurses majority were Male the highest score of 77.70% and the mean age of the Nurses was 37years. The majority of Nurses stay less than 5 years working experience in the unit. The highest qualification of the participants was bachelor degree representing 45.90% some of them were Senior Nurse Officers (SNO) representing 24.3% and few of them were RNM and Master Degree representing 2% and 0.7% respectively. The majority of the Nurses stated that they have not received training or attend any course/training on Surgical Pain Management and Assessment and there organization didn't provide any update on Pain Assessment and Management Practices.

Table 4.2: Knowledge Level of Nurses about Pain (N=148)

STATEMENT.	Yes		No	
	F	**%**	**F**	**%**
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 assess through various tools, according to numerical rating Scales a patients pain is 9 on pain scale, it would indicate Severe pain.	21	14.2	127	85.8
4. Acute post-operative 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 4.2 shows knowledge level of nurses about pain based on "Yes" and "No" along with their corresponding frequency and percentage. Majority of nurses, more than 70% 99.3% indicated that they: knew the meaning of pain, believed pain assessment is necessary prior to pain management, agreed acute post-operative pain is objective and cannot be measured, accepted music, relaxation techniques, etc, were non – pharmacological strategies of surgical management, studied books and journals on surgical pain and attended course (or training) on surgical pain management and assessment. But, so many of the nurses disagreed that pain can be accessed through various tools. The mean (7.13) and standard deviation (SD=1.38) of the nurses' knowledge about Pain assessment and management Practices were displayed.

Therefore, from the above outcome, majority of the nurses knew what pain is all about and had good and reasonable knowledge about surgical pain assessment and management practices.

Table 4.3. Comparison of Nurse's Knowledge Level by Age Group, Descriptive Statistic of Professional Qualification, Rank and Gender (N=148)

Variable	Knowledge (N=148)			Total n (%)
	Low n (%)	Average n (%)	Advanced n (%)	
Age Group				
<= 25	1 (0.7)	1 (0.7)	4 (2.7)	6 (4.1)
26 ->30	1 (0.7)	11 (7.4)	29 (19.6)	41 (27.7)
31- >40	2 (1.4)	18 12.2)	43 (29.1)	63 (42.6)
>= 41	2 (1.4)	9 (6.1)	27 (18.2)	38 (25.7)
Total	6 (4.1)	39(26.4)	103 69.6)	**148 (100)**
P-value	**0.766**			
Professional Qualification				
Registered Nurse	1 (0.7)	9 (6.1)	29 (19.6)	
Registere Intensive Care Nurse	0 /(0)	5 (3.4)	6 (4.1)	
Registered Nurse Midwife.	0 /(0)	1 (0.7)	2 (1.4)	
Diploma	1 (0.7)	6 (4.1)	19 (12.8)	
Bachelor of Nursing Sciences.	4 (2)	17 (11.5)	47 (31.8)	
Master of Science.	0 (0)	1 (0.7)	0 (0)	
Rank				
Nursing Officer	1 (0.7)	10 (6.8)	19 (12.8)	
Senior Nursing Officer	2 (1.4)	9 (6.1)	25 (16.9)	
Principal Nursing Officer	1 (0.7)	7 (4.7)	21 (14.2)	
Assistant Chief Nursing Officer	1 (0.7)	7 (4.7)	16 (10.8)	
Chief Nursing Officer	1 (0.7)	6 (4.1)	22 (14.9)	
Gender				
Female	2 (1.2)	10 (6.8)	21 (14.2)	
Male	4 (2.7)	29 (19.6)	82 (69.6)	

Table 4.3 shows nurses' knowledge level by age group, descriptive statistic of professional qualification, rank and gender. that correspond respectively to those who said yes less than 4 times, those who answered Yes 5 or 6 times and those whose positive answers were 7 and above]. In addition, four group ages as those aged less than 25, between 26 and 30, between 31 and 40 and those aged 41 and more.

This shows that there is an overall good knowledge of the pain assessment by the Nurses.

On top of all, 103 which account for 69.6 % of the 148 participants have advanced knowledge while 39 which account for 26.4% have average knowledge and just 6 which account for 4.0%with lowknowledge.

Now, checking if there is a statistical significance between all group ages and all knowledge groups, and a p-value of 0.766 which is greater than the threshold 0.05 therefore the null hypothesis conclude that there is no statistical significance between all groups Knowledge Level by Age Group, Descriptive Statistic ofProfessional Qualification, Rank and Gender**.**

The table 4.3 show that the highest group with advanced knowledge is the group of Nurses with a BNSC qualification with 47 (31.8) % Followed by those with RN qualification which account for 29 (19.6) %. The Pearson Chi-Square test statistics is 6.566 and the p-value is 0.766 which is greater than the threshold 0.05 and i fail to reject the null hypothesis and conclude that there is no statistically significant knowledge amongs Nurse's qualification.

The table also, shows that the highest group with general knowledge is the group of Nurses with a SNO (Senior Nursing Officer) qualification with 25 Nurses which account for 25 (16.9)%. The Pearson Chi-Square test statistics is 1.716 and the p-value is 0.988 which is greater than the threshold 0.05 and i fail to reject the null hypothesis and conclude that there is no statistically significant knowledge among Nurses' ranks.

The number of male Nurses (77.70%) outweigh the number of female Nurses (22.30%). The Pearson Chi-Square test gives 0.89 and a p-value of 0.641 which is above 0.05 and reject the null hypothesis and conclude that there is no statistical difference between female and male nurses of the sokoto hospital. descriptive statistics was adopted in the case of Professional Qualification, Rank and Gender, so p-value was not computed.

The statistics above on the knowledge shows, that the overall knowledge of the Nurses about pain assessment and management at the Sokoto hospital is good.

Table 4.4. **Attitude Frequency of Nurses on the Use of Pain Assessment Scale**

Attitude	Frequency of Valid Response									
	Agree		Disagree		Strongly Agree		Strongly Disagree		Undecided	
	N	%	N	%	N	%	N	%	N	%
A01. Pain is seen in the behavior	111	75.00	4	2.70	26	17.60	0	00	7	4.70
A02.Distraction reduce pain intensity.	64	43.20	21	14.20	42	28.40	0	00	21	14.20
A03.Non pharmacological intervention are very effective for mild to moderate pain not severe pain	116	78.40	2	1.40	28	18.90	0	00	2	1.40
A04.The use of placebo is important in determining if the patient's pain is real	97	65.50	1	0.70	47	31.80	0	00	3	2.00
A05. Medical patients usually do no experience pain which is as intense as that experienced by surgical patients	98	66.20	1	0.70	47	31.80	1	0.70	1	0.70
A06 When a medical patient complains of pain the best management is to assess the genuineness of the pain	91	61.50	0	00	56	37.80	0	00	1	0.70
A07 Using pain assessment tools usually makes nursing more complicated and consumes time for other ward activitie	93	62.80	1	0.70	52	35.10	1	0.70	1	0.70
A08.Surgical patients who complain of pain often, will be seeking staff attention	54	36.50	1	0.70	93	62.80	0	00	0	00
A09.The nurse personal experience with pain affects the way the nurse manages pain on adult medical patients.	76	51.40	6	4.10	50	33.80	1	0.70	15	10.10
A10.Observable changes in vital	34	23.00	0	00	113	76.40	0	00	1	0.70

signs must be relied on to verify patients complain of severe pain									
A11.Pain management received during nursing training is adequate for effective pain management post qualification.	58	39.20	27	18.20	40	27.00	3	2.00	20	13.50
A12. The legal processes required to obtain and administer narcotic makes it difficult to deliver effective pain management	101	68.20	0	00	42	28.40	0	00	5	3.40
A13. Nurses are the best judges of the patient's pain intensity because they spend 24hours with the patients	53	35.80	0	00	94	63.50	0	00	1	0.70
A14.Adult medical patients experience pain as often as surgical patient	57	38.50	19	12.80	43	29.10	8	5.40	21	14.20
A15.Because patients are not medically educated cannot give reliable report of their pain	73	49.30	15	10.10	39	26.40	3	2.00	18	12.20
A16.Patient may sleep inspite of sever pain	16	10.80	63	42.60	4	2.70	62	41.90	3	2.00
A17.Giving surgical patients sterile water by injection (placebo) is a useful test to determine if the pain is real.	101	68.20	1	0.70	41	27.70	1	0.70	4	2.70
Overall	1293	873.5	162	109.6	857	579.2	80	54.1	124	83.9

Table 4.4 show attitude of nurses on the use of pain assessment scale. Majority of the nurses were at agreement side either "agree" or "strongly agree" with minimum and maximum agreement percentage of 38.5% and 78.4% respectively. But few of the respondants were at disagreement region in item A16 with 41.9%. and 42.6%

Here, the above results suggested that virtually nurses had good attitude towards use of pain assessment scale but in exception of item A16.
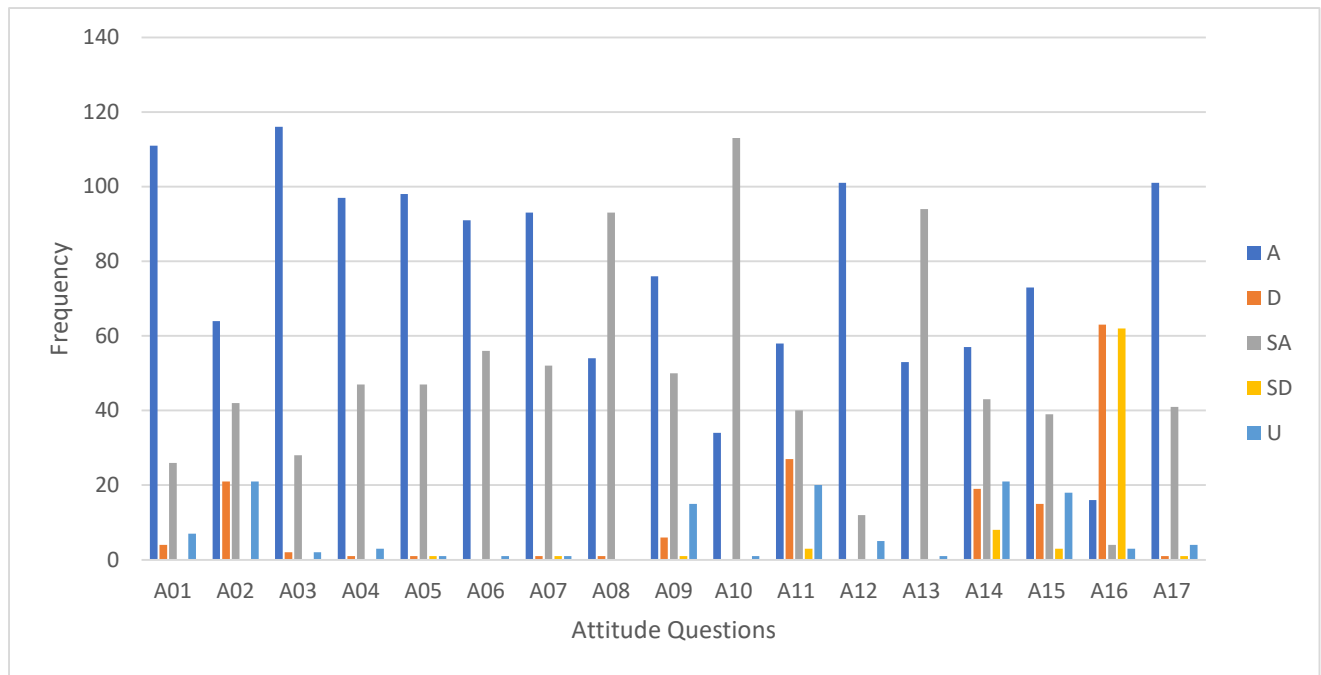
Figure 4.1. Frequency of response for attitude assessment.

The histogram illustrates the distribution of response categories for each question assessing the attitudes of Nurses in critical and surgical areas on the use of pain assessment scale in the management of pain. The Y-axis is the frequency of each response category. On the X-axis are the different questions coded from A01 to A17. The dark blue color represents the A category, the orange color the D category, the grey color the SA category, the yellow color the SD category, and the fair blue color the U category.

Table 4.5. Practice Distributions of Nurse's Pain Assessment.

Variable	Yes		No	
	N	**%**	**N**	**%**
Do you assess patientsfor pain?	143	96.6	5	3.4
Do you use a Pain Assessment Tool for pain assessment?	140	94.6	8	5.4
Do you document the findings after using the Pain Assessment Tools?	135	91.2	13	8.8
Are pain scores and management discussed during handling and taking over/ward rounds	141	95.3	7	4.7
Do you always agree with pain assessment tools statement about patient's pain	141	95.3	7	4.7
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 4.5 shows the practice of pain management by nurses. More than 79% to 97% 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. The means (5.53), standard deviation and (SD=0.72) of the nurses' practice of pain management are given.

Hence, the above outcome implied that nurses practiced pain management in their health care delivery extensively.
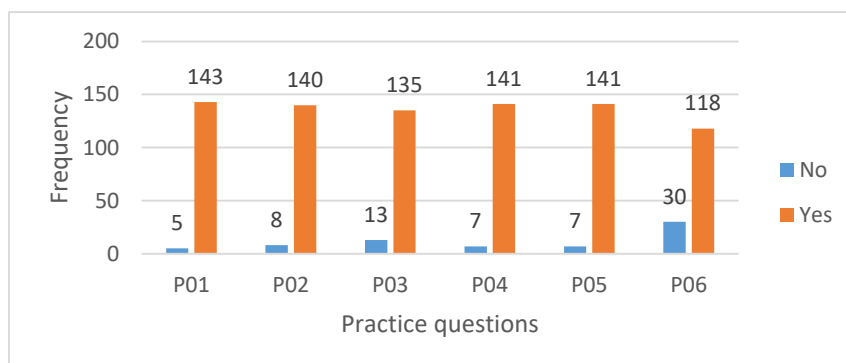

Figure 4.2 Histogram of Answers frequency to practice question assessment.

The figure presents the answers' records for the questions assessing the level of clinical use of pain assessment affecting the clinical uses of pain assessment scale in the management of pain among critical care and surgical Nurses. The Y-axis is the frequency of each response categories. On the X-axis are the six questions involved coded from P01 to P06. The blue color code each No response, and the orange color code each Yes response.

The practice part account for 6 questions and we are going to split the participants in two groups based on the number of **Yes** each one answered out of the 6 proposed practices questions. So, the first group gathers all those who answered by YES to at most 4 questions and the second will be those who said Yes to at least 5 questions.

After splitting them, we are going to see if there is an association between the two groups and the Gender, the Rank, and the professional Qualification.

Table 4.6. Practice of Pain of Management by Professional Qualification, Rank, and Gender of Nurses (N=148)

Variable	Number of Practice answer = YES		Total	P-Value
	<=4 n (%)	>=5 n (%)		
Professional Qualification				
Registered Nurse	2 (1.4)	34 (25)	39 (26.4)	
Registered Intensive Care Nurse	1 (0.7)	10 (6.8)	11 (7.4)	
Registered Nurse Midwife	1 (0.7)	2 (1.4)	3 (2)	0.627
DIPLOMA	2 (1.4)	24 (16.4)	26 (17.6)	
Bachelor of Nursing Science	8 (5.4)	60 (40.5)	68 (45.9)	
Master in Science	0 (0)	1 (0.7)	1 (0.7)	
Rank				
Nursing Officer	1 (0.7)	29 (19.6)	30 (20.3)	
Senior Nursing Officer	5 (3.4)	31 (20.9)	36 (24.3)	
Principal Nursing Officer	2 (1.4)	27 (18.2)	29 (19.6)	0.618
Assistant Chief Nursing Officer	3 (2)	21 (14.2)	24 (16.2)	
Chief Nursing Officer	3 (2)	26 (17.6)	29 (19.6)	
Gender				
Female	2 (1.4)	31 (20.9)	33 (22.3)	0.449
Male	12 (8.1)	103 (69.6)	115 (77.7)	

Table 4.6 shows those who answered <=4 questions and those who answered >=5 by their Professional qualification, their rank, and their gender. The Pearson's Chi-square test and its corresponding P-value for profession qualification, rank and gender are $\chi^2 = 3.47,\ P > 0.05;\ \chi^2 = 2.65,\ P > 0.05$ *and* $\chi^2 = 0.57,\ P > 0.05$ respectively, in these cases, at level of significance, *0.05*, the null hypothesis is not rejected and therefore conclude that there is no statistical significance difference between those with Yes on 4 or less questions and those with at least 5 Positive answers based on their Professional qualification, their rank, and their Gender.

Now, the result above suggested that they manage pain effectively.

Table 4.7. Mean Score of Barriers of Nurses on Use of Pain Assessment Scale

Variable	Minimum	Maximum	Mean	Std. Deviation	Median
Barriers Total	7.00	13.00	10.37	1.35	10.00
Practice Total	3	6	5.53	0.72	6

Table 4.7 shows the statistics of those who answered "Yes" in barriers and practice. There were minimum (7) and maximum (13) factors affecting the use of pain assessment scale in the management of pain among critical care and surgical Nurses in Specialist Hospital Sokoto.
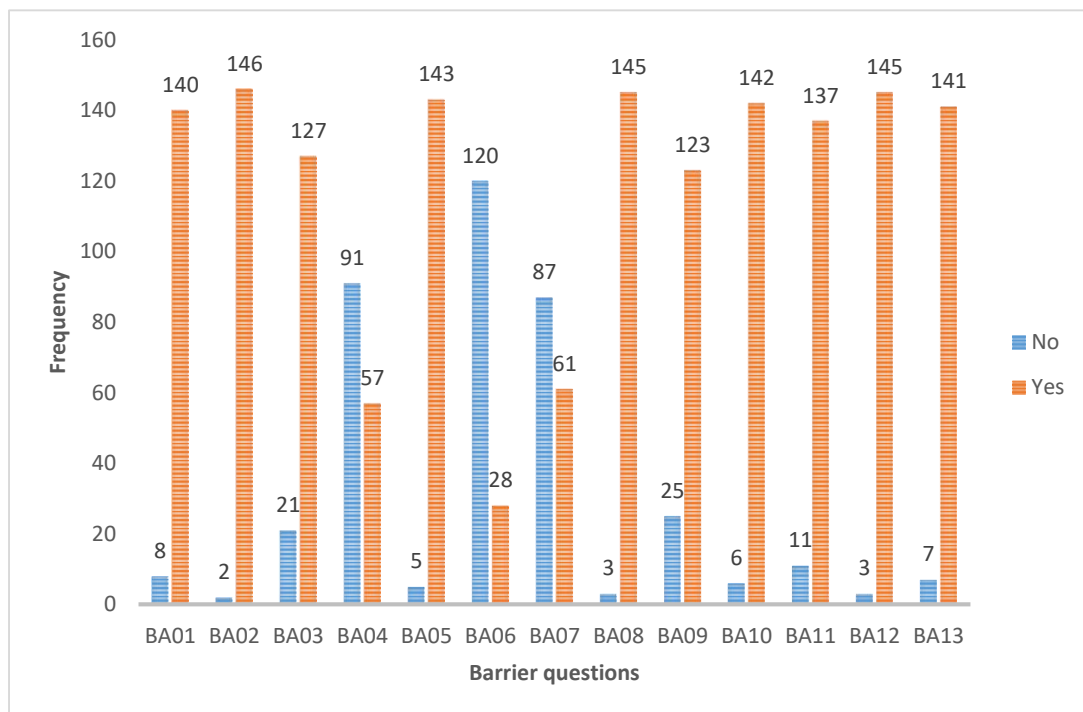
Figure 4.3. Histogram of Answers frequency to barrier question assessment.

The histogram illustrates the frequency of answers categories for the questions assessing the factors affecting the use of pain assessment scale in the management of pain among critical care and surgical nurses in SHS. The Y-axis is the frequency of each response categories. On the X-axis are the thirteen questions involved coded from BA01 to BA013. The blue color code each No response, and the orange color code each Yes response.

Taking into consideration the statistics of **10.37±1.35** and the minimum of **7** factors affecting them, we can easily say from the histogram that BA02, BA08, BA12, BA05,

BA10, BA13 and BA01 are the main one. Besides, BA04, BA06, BA07 stand as factors not affecting with respectively 91, 120, and 87 peoples saying it does not affect them.

Table 4.8. Barriers Faced by Gender of Nurses (N=148)

Gender	Number of Barrier n (%)			P-value
	<=9	>=10	Total	
Female	8 (5.4)	25 (16.9)	6 (22.3)	**0.991**
Male	28 (18.9)	87 (58.8)	115 (77.7)	
Total	36 (24.3)	112 (75.7)	148 (100)	

Table 4.8 shows gender, female and male of nurses by groups of number of barriers affecting nurses. Those who mentioned less or equal to 9 factors as affecting them and those who said 10 or more affect them.

It also shows that 87 male Nurses believed that at least 10 factors out of 13 are barrier to them. The Pearson Chi-Square is 0.00 and the p-value is 0.991. i therefore conclude that there is no statistical significance between the number of male and female with many barriers.

5. DISSCUSSIONS

Determining pain assessment and management practicesis crucial for the prevention of negative outcomes delay recovery, increase morbidity and mortality, chronic persistent postsurgical pain, decrease patient satisfaction and unanticipated readmissions (Althauset.al, 2014).This descriptive cross-sectional study was carried out to determine pain assessment and management practices. The study was carried out on 148 nurses with vary gender, ages, Professional qualification, Rank/ position, Duration in the position and Number of years working in the present ward/unit in Specialist Hospital Sokoto (SHS).

This therefore means that Nurses have a high knowledge on pain assesssment and management practices results to the similar study by Issa, Awajeh and Khraisat, (2017). In saudi pain assessment and management are essential parts of nursing care and two of the most fundamental patient rights. It is unethical to let a patient suffer from pain without taking appropriate measures to relief his or her pain. In Zimbabwe registered nurses had low knowledge levels and poor attitude regarding pain management of adult medical patients (Manwereet.al,2015). However, postoperative pain remains one of the greatest concerns for patients following surgical procedures (Mahama and Jerry, 2019). Pain measurement tools may be categorized as either single-dimensional or multidimensional scales. The measures require patient self-report on an aspect or aspects of the pain. The results must be viewed as guides and not absolutes. They should be viewed as only adjuncts to the history and physical examination of the patient. The three most commonly utilized tools to quantify pain intensity include verbal rating scales, numeric rating scales, and visual analogue scales (Honorio *et al* 2011). Verbal Rating Scales (Verbal Descriptor Scales) utilize common words (eg, mild, severe) to grade pain intensity. The Melzack and Torgerson scale uses five verbal descriptors: mild, discomforting, distressing, horrible, and excruciating (Stephen, 2018). Reproducibility, and sensitivity to small changes in pain. Children that are able to count and have a concept of numbers may use this scale (Correll, 2011)

Detailed evaluation of the attitudes of nurses on pain assessment and management practices the results of the study showed that there is a satisfactory level of attitudes in all the domains. The finding regarding the general attitudes domain of nurses on pain assessment and management practices were satisfying with the highest percentage value of78.40% of Agree in total 17 items had the most frequent correct answer to the

statement results to the similar study showed pain management is considered by patients as a right and an expectation. As opined by Nahin (2015), it was estimated that within a previous three-month period, 25 million U.S. adults had daily chronic pain, and 23 million more reported severe pain. Those with serious pain need and use more health care services and suffer a greater disability than persons with less severe pain (America Society of Pain, 2015).

The negative effect of the pain both initial pain intensity and pain resolution during the first five post-operative days independently contributed to the prediction of CPSP 6 months after surgery. In terms of vulnerability, anxiety and depression had clear but opposing effects on post-operative pain trajectories. Whereas depressive patients exhibited impaired pain resolution, patients with high anxiety showed better rates of pain resolution after surgery. Both effects on acute pain resolution extended to chronic pain 6 months after surgery (Althauset.al,,2014) 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 and have the majority of yes96.6% in total of 6 items had the most frequent correct answer to the statement by their professional qualification, their rank, and their gender, the respective Pearson Chi-square test of 3.47, 2.65, and 0.57 for respective p-value of 0.627, 0.618, and 0.449**.** All those p-values are above the threshold 0.05.Results to the similar study by Eccleston (2011) identified suboptimal pain management practices among nurses which were attributed to nurses' professional culture, ward culture, inadequate requisite lack of theoretical knowledge, lack of priority toward pain management, clarity on the evidence base for different pain management interventions.Insufficient treatment of pain is a pervasive clinical problem in patients admitted within the hospital, resulting in significant physiological, psychological, and financial consequences which include poor recovery, a higher rate of complications, anxiety, sleep disturbance, and lowered quality of life. However, globally, many nurses in general practice settings lack the knowledge about basic pain assessment and management principles, this also applies to the attitudes that nurses have towards pain and its assessment (Unget.al,, 2016) and management of pain in critical and surgical areas health facilities. This study explores nurses' use of pass assessment scales in the management of pain. Standard pain assessment methods, with emphasis on Numeric Rating scale, provide more reliable and valid assessment of this subjective symptom. While assessing patient's pain level, nurses should be

open-minded and unprejudiced, they should show that they acknowledge the patient is in pain, and try to establish an empathetic relation (Vallerand, 2011)

Barriers of Nurses on pain assessment and management practices the results of the study revealed that Arithmetic Mean 10.37 and 58.80% male Nurses believes that at least 10 factors out of 13 are barriers to them such as nursing workload, lack of designated are for charting pain, lack of protocol for pain assessment, lack of familiarity with assessment tools, unconducive envernoment, unavailability of pain assessment tools, lack of education, poor documentation of pain assessment.pain assessment tools is difficult to use and complex to interprete and the use of pain assessment tools is time consuming and not practicable. The Pearson Chi-Square is 0.00 and the p-value is 0.991 the results of other study highlightedthat adequate pain assessment and interdisciplinary team work can provide pain control and an increase in quality of life (Kwon, 2014). A comprehensive pain management deals with pain's physical, psychological, mental and socio-cultural effects. Hence, a comprehensive assessment is quite important to provide adequate pain management (McCracken, 2015). Improper management of post-operative acute pain can contribute to medical complications including pneumonia, deep vein thrombosis, infection and delayed healing (Meissner et al., 2015). The World Health Organization came up with analgesic management of pain which is a three-step approach, it provides an effective treatment of pain at various levels of severity. Nurses are often the only ones who may hear of pain endured by the patients and who carry out the advice of the physicians on pain management. Therefore, their knowledge and attitude are very important in pain management. There are still problems regarding pain management despite countless training courses, application strategies, and multidisciplinary pain teams (Alzghoul and Abdullah, 2016).

6. CONCLUSION

The results of this study showed that nurses had a high level of knowledge of pain assessment and management practice (64.2%). 35.8% of the nurses have received a training on Pain assessment and management practices from school. Most nurses said the need training on pain assessment and management practices (64.2%) and the mean year experience of 4.34. but there is need for the organizations to provide pain related update, course/training on Surgical Pain Management and Assessment. Preventing post-operative pain is a main patient safety concern of surgical Nurses. Therefore, Surgical Nurses should receive training on pain assessment and management practices. They should be encouraged to further their education so as to prevent any barriers Nurses should work with other healthcare personnel throughout the postoperative cycle in order to help mitigate if not eradicate inadvertent surgical pain which would result in improved outcomes for their patients. Most of the nurse have good attitude which account for 78.4% and agreed on the use of pain assessment scale, their practices is good which stood of96.6% and on the barrier it was revealed that 10 factors out of 13 are considered as barriers.

Limitation

The regulations in place during the COVID 19 pandemic limited the from conducting pilot study, where questionnaires could be administered.

7. FINDINGS AND RECOMMENDATIONS.

7.1. FINDINGS.

The main findings of the study with the aim of Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses are as follow.

* A total of 148 nurses participated in this study. The majority were male with the highest score of 77.70% and the mean age of the nurses was 36.6 years. The majority of nurses stay less than 5 years working experience in the unit. 45.90% of the participants had bachelor degree. The majority of the nurses stated that they have not received training or update on any course/training on Surgical Pain assessment and management practices.(64.2%). 35.8% of the nurses have received a training on Pain assessment and management practices from school. Most nurses said the need training on pain assessment and management practices (64.2%) and the mean year experience of 4.34. (Table 4.1.)

* Regarding the general Attitude of Surgical nurses on Pain assessment and management practices most of the nurses had the correct answer from the 17 items, with highest percentage of78.40% of Agree on the use of pain assessment scale (Table 4.4).

* The majority of the nurses have a good majority of nurses practice effectively and have the majority of yes 96.6% in total of 6 items had the most frequent correct answer to the statement by their professional qualification, their rank, and their gender, the respective Pearson Chi-square test of 3.47, 2.65, and 0.57 for respective p-value of 0.627, 0.618, and 0.449. All those p-values are above the threshold 0.05 and mean score of 5.53 and standard deviation of 0.72 (Table 4.5, 4.6).

- With regards to the reported barriers to nurses revealed that Majority of nurses revealed that Arithmetic Mean 10.37 and 58.80% male nurses believes that at least 10 factors out of 13 are barrier to them. The Pearson Chi-Square is 0.00 and the p-value is 0.991 (Table 4.7, 4.8).

- The findings of the study comparing the descriptive characteristics and overall practice mean scores of the nurses on pain assessment and management practices demonstrated that differences in duration in ward/unit were statistically significant (p<0.05).

7.2 RECOMMENDATIONS

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.
- Hospital management should introduce policies to ensure surgical nurses are discussing pain score and management during handing and taking over.
- Hospital management should provide update on pain.
- Hospital management should encourage surgical nurses to further their education
- Pain assessment tools should be provided in the hospital.
- Hospital management should provide a conducive surgical environment.
- Hospital management should employ more surgical nurses to reduce work overload.
- Patient satisfaction about pain management should be measured.
- Using pain management protocols is necessary.
- There is need to replicate this qualitative in feature to cover to cover the whole hospitals in Sokoto state.

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APPENDIX

QUESTIONNAIRE

Dear respondent,

I am a Master student carrying out research on **Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses**working in Specialist Hospital, Sokoto state. Information obtained shall be treated with strict confidentiality. Your participation in this study is completely voluntary. There are no questions that should perturb you. Completion of this study implies your consent. Your responses are confidential and none of the information you provide will identify you personally. INSTRUCTIONS: Please tick [√] the appropriate option

SECTION 1. DEMOGRAPHIC CHARACTERISTICS

1. Age: _____
2. Gender: Male [ ]   Female [ ]
3. Prrofessionall   qualification:Professional   Qualification: RN,{   ]   RM,{   ] RICN{ }, RNM{ }, Diploma [ ] BNSc [ ] MSc [ ] Phd [ ]
4. Rank/Position Nursing Officer [ ]   Senior Nursing Officer [ ]   Principal Nursing Officer [ ] Assistant Chief Nursing Officer [ ] Chief Nursing Officer [ ] others Specify _____
5. Duration in the above position? _____
6. Number of years working in the present ward/unit ? _____

SECTION 2: KNOWLEDGE LEVEL

Write Yes or No in front of any of the question where applicable.

QUESTIONS	Yes	No
1. Pain is defined as an unpleasent, sensory and emotional experience arising from actual and potential tissue damage.		
2. Do you think pain assessment is necessary prior to pain management.		
3.Pain can be assess through various tools, according to numerical rating Scales a patients pain is 9 on pain scale, it would indicate Severe pain.		
4. Acute post-operative pain is objective and can not be measured.		
5. Do you think Music, relaxation techniques, massage,quided imaginary and application of heat and cold are non pharmacological strategies of surgical pain management.		
6. Do you read any books or journal about Surgical pain frequency of using objectives tool while assessing Pain.		
7. Do you attend any course on Surgical pain management and assessment.		

SECTION 3: ATTITUDE

S/N	Variable	S A	A	U	D	SD
1	Pain is seen in the behavior					
2	Distraction reduces pain intensity					
3	Non pharmacological intervention are very effective for mild to moderate pain not severe pain					
4	The use of placebo is important in determining if the patient's pain is real					
5	Medical patients usually donts experience pain which is as intense as that experienced by surgical patients					
6	When a medical patient complains of pain the best management is to assess the genuineness of the pain					
7	Using pain assessment tools usually makes nursing more complicated and consumes time for other ward activities					
8	Surgical patients who complain of pain often, will be seeking staff attention					
9	The nurse personal experience with pain affects the way the nurse manages pain on adult medical patients					
10	Observable changes in vital signs must be relied on to verify patients complain of severe pain					
11	Pain management received during nursing					

S/N						
	training is adequate for effective pain management post qualification					
12	The legal processes required to obtain and administer narcotic makes it difficult to deliver effective pain management					
13	Nurses are the best judges of the patient's pain intensity because they spend 24hours with the patients					
14	Adult medical patients experience pain as often as surgical patients					
15	Because patients are not medically educated cannot give reliable report of their pain					
16	Patient may sleep inspite of sever pain					
17	Giving surgical patients sterile water by injection (placebo) is a useful test to determine if the pain is real.					

SECTION 4: PRACTICE

S/N	Variable	Yes	No
1	Do you assess Patients for pain		
2	Do you use a Pain Assessment Tool for pain assessment		
3	Do you document the findings after using the Pain Assessment Tools		
4	Are pain scores and management discussed during handling and taking over/ward rounds		
5	Do you always agree with pain assessment tools statement about patients pain		
6	Do you assess for any side effect of the medication ?		

SECTION 5: BARRIERS

S/N	Variable	Yes	No
1	Unavailability of pain assessment tools		
2	Nursing workload		
3	Sedation interfering with pain assessment		
4	Unconducive working environment		
5	Poor documentation of pain assessment and management		
6	Patient instability		
7	Patient inability to communicate		
8	Lack of protocols for pain assessment		
9	No designated area for charting pain		
10	Lack of familiarity with assessment tools		
11	Pain assessment tools is difficult to use and complex to interpret		
12	The use of pain assessment tools is time consuming and not practicable		
13	Lack of education		

APPENDIX II

NAER EAST UNIVERSITY

SCIENTIFIC RESEARCH ETHICS COMMITTEE

02.04.2021

Dear Prof. Dr. Ümran Dal Yılmaz

Your application titled **"Determining Pain Assessment and Management Practices of Surgical and Critical Care Nurses"** with the application number NEU/2021/89-1312 has been evaluated by the Scientific Research Ethics Committee and granted approval.

Prof. Dr. Rüştü Onur

Near East University

Scientific Research Ethics Committee Director

APPENDIX III.

SPECIALIST HOSPITAL SOKOTO
SULTAN ABUBAKAR ROAD
P.M.B 2133, Sokoto, Nigeria

HOSPITAL ETHICS AND RESEARCH COMMITTEE

CHAIRMAN
DR. BELLO U. TAMBUWAL
Chairman Medical Advisory
Committee

MEMBER
DR. NASIRU ABDULLAHI
HOD Obs & Gyn.

MEMBER
DR. ALI A. YAROKO
Deputy CMAC/HOD ENT.

MEMBER
BELLO I: LADAN
HOD Health Record

MEMBER
BALA SAIDU
HOD Operating Theater

SECRETARY
USMAN M. MUH'D
Secretary Clinical Services

SHS/SUB/133/VOL.I

16th March, 2021

IBRAHIM HANTSI,
Faulty of Nursing,
Near East University.-
Near East Boulevard,
TRCNMersin 10 Turkey/

Re: Ethical Clearance

I am directed to refer to your topic proposal dated 10th March, 2021 and to inform you that, the Hospital Ethics Committee has approved your request to carry out a research on **"DETERMINING PAIN ASSESSMENT AND MANAGEMENT PRACTICES OF SURGICAL AND CRITICAL CARE NURSES IN SPECIALIST HOSPITAL, SOKOTO, NIGERIA".**

2.   All research programs should be carried out in line with the Hospital regulations.

3.   The Hospital should have the copy of the research work upon completion.

4.   Thanks.

USMAN M. MUH'D
Secretary Hospital Ethics Committee
For: Chairman Hospital Ethics Committee
Specialist Hospital, Sokoto.

APPENDIX IV

Hantsi

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İNTERNET KAYNAKLARI

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YAYINLAR

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