The Effects of Integrating a Pain Assessment Scale on the Surgical Ward Nurse's Knowledge, Attitude, and Practice regarding Post-Operative Pain Management in Mengo Hospital Kampala, Uganda.

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RM17M11/065

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A Dissertation Submitted to the Faculty of Healthy Sciences

In Partial Fulfilment of the Requirements for the Award of the Degree of

Masters in Nursing Science of

Uganda Christian University

Mukono, Uganda

August, 2023

Uganda Christian University

Declaration

I Nabiwande Betty Musisi declare that this thesis has been composed solely by myself and that it has not been submitted, in whole or in part, in any previous application for a master's degree in nursing education.

Signed: .....

Date: 08/09/2023

Approval

This study of Integrating Pain Assessment Scale to the Nurse's Knowledge, Attitude, and Practice towards Post-Operative Pain Management on the Surgical Ward is the students own organized work that has been compiled, prepared, reviewed and approved under my supervision for submission for examination.

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Acknowledgement

Words can't express my gratitude to my supervisor Dr. Faith Sebuliba for her invaluable patience and feedback. I wouldn't have taken this journey without your support, always provided knowledge and expertise.

Additionally, this endeavor wouldn't have been possible without the generous support from my husband and family, who financed my research so far.

Additionally, am so grateful to my colleagues in MN8 class for their editing help, effort rendered, thank you so much.

Dedication

I dedicate this research to my husband Peter Mutesasira and my dear children Pius, Pretty, Praise, and Phillip. My family has been patient with me, thank you for your daily prayers.

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Abstract

Background

Post operative pain remains one of the greatest concerns for patients following surgery. Pain is an unpleasant sensory and emotional experience accompanied by actual and potential tissue damage. Failure to promptly assess and manage pain may upshot into postoperative complications like hypertension, depression, lengthened hospital stays, and overall patients' poor health outcomes.

Objective

The purpose of this study was to describe the effect of integrating the pain assessment scale on the nurse's knowledge, attitude, and practice toward post-operative pain management in the surgical ward in Mengo hospital, Kampala.

Methods

At the surgical wards (obstetrics/gynecology & other general surgical procedures), nurses participated in a descriptive quantitative cross-sectional, quasi-experimental study.
A total of 60 nurses participated in the study by applying the educational intervention of integrating the PAS into postoperative pain management using a 4-point Likert scale. The practice was observed using a checklist. Data were analyzed using SPSS version 20. A chi-square test was done, and significantly associated factors were acknowledged.

Results

In the pretest and posttest, the mean total knowledge scores about post-operative pain treatment were (M= 62.83, SD= 9.583), t = -59, P=0.01, respectively.
The results raise concerns about the respondents' intolerable lack of understanding regarding ho w to manage patients' post-operative pain.

Conclusion

Nurses' low level of knowledge, unacceptable attitude, and practice were acknowledged. Nursing curricula both at Under-Graduate and master's should be undertaken to ensure relevant, appropriate information equips nurses to effectively manage pain.

Chapter One:

Introduction

Pain is a negative sensory and emotional experience that is linked to tissue damage, either present or potential, or is portrayed as such harm (American pain society, 2008). Inadequate pain management after surgery can lead to postoperative problems like depression, deep vein thrombosis, deep vein hypertension, and chronic pain, lengthening hospital stays and readmission rates, and negatively affecting patients' overall health outcomes(Meissner et al., 2015). Pain intensity levels are assessed using both pharmacological and non-pharmacological methods, such as visual analog and numerical rating scales, and serve as a guide for effective pain treatment(Myles et al., 2017).

Despite the measures applied to manage postoperative pain, patients continue to experience acute pain after surgical procedure (Ayhan & Şerife, 2017; Menlah et al., 2018; Ogboli-Nwasor, Sule, & Yusuf, 2012). An educational intervention of introducing a pain assessment scale to the nurses knowledge ,attitude and practice will be employed to improve the assessment of the pain using a numerical rating scale in order to increase nurses' ability to provide effective postoperative treatment (Timby & Smith, 2018). As a result, the study will outline how using the pain assessment scale affected nurses' knowledge, attitude, and practices about post-operative pain care on the surgical ward. This concentrated on the first 48 hours following surgery, when pain is still recent and severe.

Background

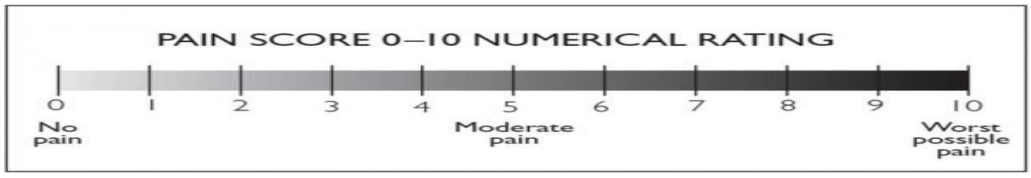
Postoperative pain (POP) remains one of the greatest concerns for patients following surgical procedures. Acute pain from tissue damage after surgical operations such skin incision, tissue dissection, manipulation, and traction is referred to as post-operative pain(Mahama &

Ninnoni, 2019; Timby & Smith, 2018; Masigati & Chilonga, 2014; Menlah et al., 2018). Therefore, nursing care for post-operative patients must include pain management as a key component. In order to provide and sustain comfort during the recovery phase, pain reduction is a goal(Eriksson, 2017 ; Timby & Smith, 2018) **.** Several pain management strategies are in place to promote postoperative pain management such as pharmacological measures, non-pharmacological measures, and assessment to make the pain visible so that it can be managed appropriately.

The pharmacological measures involve the use of prescribed drugs and their effects in the management of postoperative pain. Opioids such as morphine or pethidine injections are commonly used analgesics administered every 6 to 8 hours respectively regardless of the pain level. Nonpharmacological measures are science-based and non- invasive interventions that do not involve medication in preventing and managing pain. These include physical exercises like ambulation, positioning and turning in bed, music, imagery, and massage among others. The non-pharmacological measures help to minimize both the perception and sensation of postoperative pain (Kidanemariam et al., 2020; Komann, Weinmann, Schenkglenks, & Meissner, 2019). Fan and Chen (2020), did a systematic review to assess the evidence on the effectiveness of different non-pharmacological therapies for pain management used following orthopedic surgical procedures, such as relaxation therapy, guided imagery, music, and audio-visual distraction. Despite all the interventions done, no evidence was done after the assessment of pain intensity.

In addition, pain assessment is a cornerstone in postoperative pain management. The character, length, intensity, location, and impact of pain on a person's capacity to function are determined through pain assessment(Al-Quliti & Alamri, 2015; Myles et al., 2017). Pain is subjective and therefore varies from one individual to another. Pain assessment is carried out to

help make pain evident for patients who for some reason may be culturally bound not to reflect pain. Determining its characteristics is so crucial because it may lead to a change in the treatment approaches (Köse Tamer & Sucu Dağ, 2020). The principles of pain assessment involve history and physical, functional, and psychosocial assessment. However, to assess postoperative pain, WHO recommends the use of pain assessment scales such as visual analog and numerical rating scales for adults. It's the nurse's responsibility to carryout regular assessments for pain intensity and the effect of intervention during post-operative pain management (Bakalis et al. 2018; Karlsten, Strom & Gunningberg, 2005). Several tools exist, that nurses can use to help measure and better define a person's pain such as visual analog scales which typically ask a patient to mark a place on a scale that matches their level of pain. Numerical rating scales employ numbers to rate pain, while categorical scales use words as the major means of communication and may additionally use numbers, colors, or relative position(Al-Quliti & Alamri, 2015). The instrument of choice for this study is the numerical rating scale (0–10), where 0 denotes "no pain" and 10 denotes "the greatest pain possible." It was chosen due to its clarity, simplicity, and sensitivity to minute variations in pain levels.



Le-wendling, Glick, and Tighe (2018) carried out a study on the goals and objectives to maximize the value of an acute pain service in perioperative pain management, which highlighted the fundamental needs to meet post-operative pain management, such as routine assessments of pain intensity at rest and with movement. Due to the lack of a standardized technique for assessing

POP, a study looking into how nurses in Ghana assessed and treated postoperative pain discovered that some nurses had never used any evaluation tool(Mahama & Ninnoni, 2019).

Menlah et al. (2018), **c**onducted a descriptive cross-section survey to investigate the knowledge, attitude, and practices of nurses concerning POP management and found that 48% of 194 nurses not only failed to implement an adequate nursing intervention that would reduce postoperative pain but also lacked the assessment skills needed to identify the intensity of pain to inform proper management. Besides a lack of knowledge of postoperative assessment, the barrier has been identified in communicating pain assessment data. For instance, in the study to evaluate the knowledge, attitude, and practice of nurses at Wolaita Sodo University Teaching Referral Hospital about postoperative pain treatment, poor post-operative pain treatment resulted from the nurses' failure to share the results of the post-operative pain evaluation(Dendir, Sintayehu, & Anmut, 2020). There is a need for endless education on pain assessment to increase nurse's knowledge and enhance their practice regarding the assessment and management of post-operative pain (Al-Quliti & Alamri, 2015; Dessie, Asichale, Belayneh, Enyew, and Hailekiros 2019; Masigati & Chilonga, 2014). Therefore, it's necessary to conduct a study to examine the nurse's knowledge, attitude, and practice towards post-operative pain management.

Statement of the Problem

Following surgery, post-operative care focuses on addressing the patient's physical, functional, and psychological needs because unmanaged pain can have a severe impact on the patient's mood and physiological processes. In the first 24 hours, pain is typically treated with medication, non-medication approaches, and assessment. Regardless of the interventions done, insufficient pain management continues to bedevil post-operative patients because there is

minimal pain assessment reported, and mostly undocumented. Once done, it is not organized as it would be when guided by the pain assessment scale. Therefore, this calls for application of the pain assessment in postoperative pain management.

Purpose of the Study

The study was conducted to examine the effects of integrating the pain assessment scale to the nurse's knowledge, attitude, and practices toward the management of post-operative pain in one of the private hospitals in Uganda.

Research Objectives

1. To identify the effect of integrating the pain assessment scale on nurse's knowledge towards the management of post-operative pain.
2. To determine the effect of integration of the pain assessment scale to the nurses' attitude towards post-operative pain management.
3. To describe the effect of integrating the pain assessment scale on nurses' practice in the management of post-operative pain.

Research Question

What is the effect of integrating the pain assessment scale on nurses' knowledge, attitude, and practice of managing postoperative pain in patients in the surgical ward?

Scope of study

A study on the impact of integrating the pain assessment scale on nurses' knowledge, attitudes, and practices regarding post-operative pain care in the surgical wards was conducted at Mengo Hospital in Kampala, Uganda. The study is going to explore the nurse's knowledge,

attitude, and practice toward post-operative management in the surgical ward. With 61 participants, the study's sample size was limited to nurses who only worked on surgical wards. The necessary data was gathered over the course of four months.

Justification

Post operative pain is an exceptional subjective experience and its management has been an issue in the attention of Nursing research in the recent past ten years. Pain assessment scales were introduced to allow nurses and physicians to quantify the individual experience in a way that would allow them effectively to manage post operative pain.

Post operative pain is managed pharmacologically, non-pharmacologically and through assessment. Notwithstanding the interventions done, inadequate pain management continues to torment post operative patients because there is minimal pain assessment reported, and primarily not recorded. Where applied, isn't perfect as it would be when guided by the pain assessment scale. It was thought worthwhile to conduct the study and carryout an educational intervention on the application of the pain assessment scale towards post operative pain management on the surgical wards in Mengo hospital thus ensuring good health patient outcomes.

Significance of the Study

To the nurses.

The study will shed light on the variables that affect nurses' post-operative pain care, resulting in patient satisfaction. Additionally, it might give nurses more self-assurance and satisfaction when caring for patients who are experiencing post-operative pain. As well, it might investigate the nurse's understanding, behavior, and outcomes of post-operative nursing pain management.

Policy makers.

Based on the results, initiatives to enhance nurses' post-operative pain management knowledge, attitudes, and behaviors may be developed, put into practice, and then assessed. This would lead to enhanced nursing practice and a reduction in patient post-operative pain. This study's goal of identifying assessment knowledge gaps will help policy makers create protocols and policy directives that will enhance nursing practice. Also, the study will serve as a springboard for nursing management to offer nurses and other medical staff in the hospital additional ongoing medical education regarding pain evaluation and management. Further, the report will also serve as a guide for lawmakers as the Ministry of Health in Uganda considers how to give every patient the best possible medical care. Therefore, the study will contribute to the ongoing education of hospital nurses in the assessment and treatment of pain.

Nursing education and curriculum development.

Nurse educators in the training schools will emphasize the acquired knowledge and skills to be used in training the students on the proper assessment of postoperative pain during their clinical placement. It will provide insight to nursing curriculum developers as far as nursing education is concerned and add pain assessment in the current curriculum.

To the Patients.

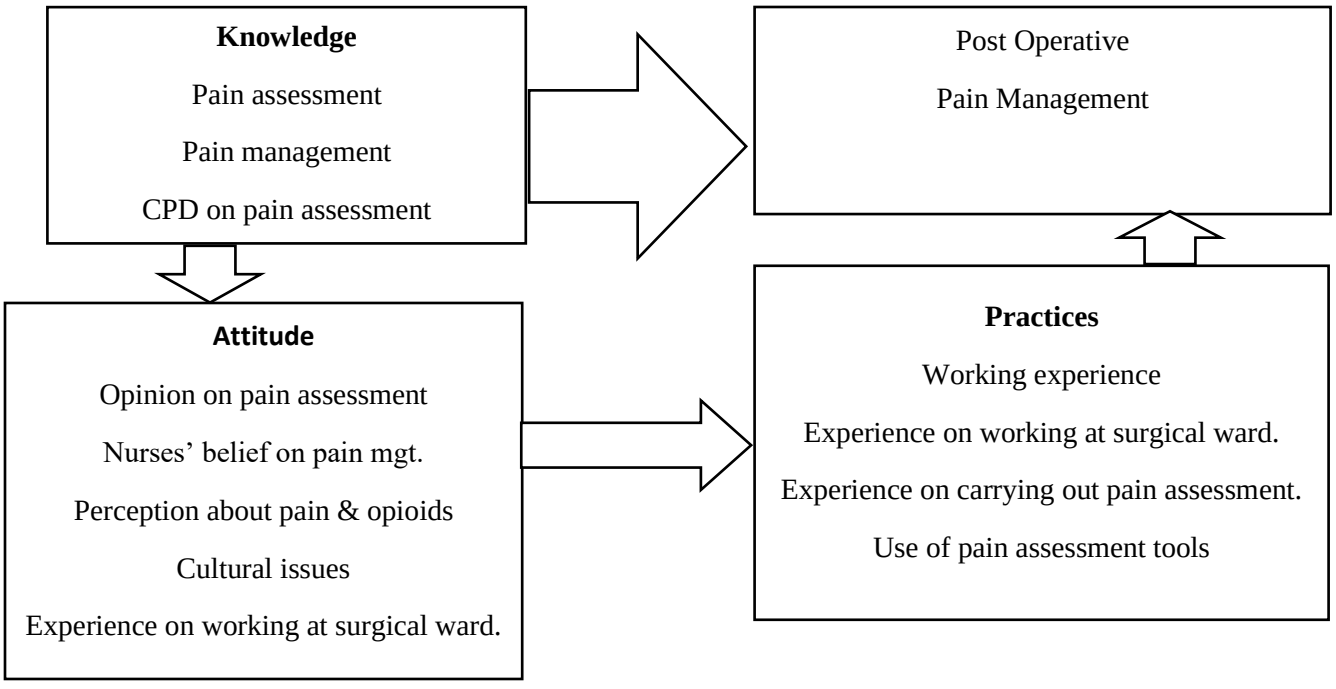
It will create patient satisfaction based on the timely administration of appropriate pain killers after assessing their pain levels. More still, good pain management after assessment will reduce the patient’s complications post operatively, for example chronic post-operative pain. In addition, good post-operative pain management will reduce the patient’s stay in hospital and costs spent in hospital as the study is in a private hospital. Lastly, the patients’ chances of becoming

addicted will be reduced as the pain assessment levels will determine which measure to take thus limiting the unnecessary use of opioids.

Study Variables

A variable is any item, circumstance, notion, emotion, moment, or other category that one is attempting to measure.(Oyebanji, 2017). Nurses' knowledge, attitude, and practice are the three primary variables in this study. The pain assessment scale, nurses' knowledge, attitude, and practice are independent variables since post-operative pain management is influenced by the other three variables, making it a dependent variable. According to Polit and Beck (2008) the variable that is assumed to depend on or be caused by another variable (the independent variable), the outcome variable of interest, is known as the dependent variable. The manipulated (treatment) variable in experimental research is an example of an independent variable because it is thought to affect or impact the dependent variable.

Conceptual Framework



The conceptual framework is described.

The conceptual framework explains how the dependent and independent variables are related. Post-operative pain management is the dependent variable, and nurses' knowledge, attitude, and practice are the independent variables. On the dependent variable, the independent factors have an effect. The nurse's knowledge on pain assessment, use of pain scale, pain management, and the continuous professional education development and audits have an impact on post-operative pain management.

Similarly, the nurse's attitude as regards opinion on pain assessment, beliefs on pain management, perception about pain and opioids, and cultural issues impact post-operative pain management. The positive attitude of the nurses will inspire them to carry out pain assessment and thereafter manage it to tolerable levels among post-operative patients. Additionally, nursing practices in relation to the experience in assessing and managing pain, working experience, experience on working at the surgical ward, and the confidence in the use of pain assessment tools will influence the nurse's practice of pain assessment and management.

Theoretical Framework

The theoretical framework is based on tried-and-true hypotheses that represent the results of various inquiries into the causes of events. The theoretical framework offers a broad depiction of how several elements interact in a particular phenomenon. Clinical coaching in nursing and midwifery by Faithfull-Byrne, Thompson, Schafer, Williamson, and Cross (2017) in this study will be the theory of choice. The research of enhancing nursing practice in terms of post-operative pain management is well related to clinical coaching, which is empowering staff and professional development that results in service improvement. Additionally, the nurses and midwives working

in the surgical wards must make the transition from treating postoperative pain without determining its severity and only administering medications on the doctor's prescription. This necessitates a change to a more contemporary approach whereby post-operative pain is evaluated by nurses before analgesia is given. Coaching is characterized by empowering people to accept accountability for themselves, make required changes in their personal and professional lives, and take personal responsibility. Additionally, coaching validates the idea that achieving both corporate performance and personal fulfillment is possible(A. Walker-Reed, 2016).

The context of coaching.

The intervention will concentrate on the midwives and nurses who work in the surgical wards. By administering a pretest to serve as a baseline for the training, the theory will assist the researcher in evaluating the nurse's knowledge, attitude, and practice prior to the educational intervention. The theory continues to explain that coaching solves the great demand for bedside training and support of unregulated health care workers like nurses and midwives in post-operative pain management. The intervention of using the pain assessment scale in the post-operative nursing management of pain will benefit more from the application of Faithfull-Bryne theory of clinical coaching in nursing and midwifery.

Clinical coach for nurses and midwives.

According to Faithfull-Bryne et al. (2017), clinical coaches deliver educational interventions to nurses and midwives at their workplaces during practice to help them attain clinical skills and practice. Similarly, the theory is going to help the researcher teach the nurses

when and how to assess for post-operative pain, how to provide suitable post-operative nursing care, and how to manage post-operative pain.

Using clinical coaching skills.

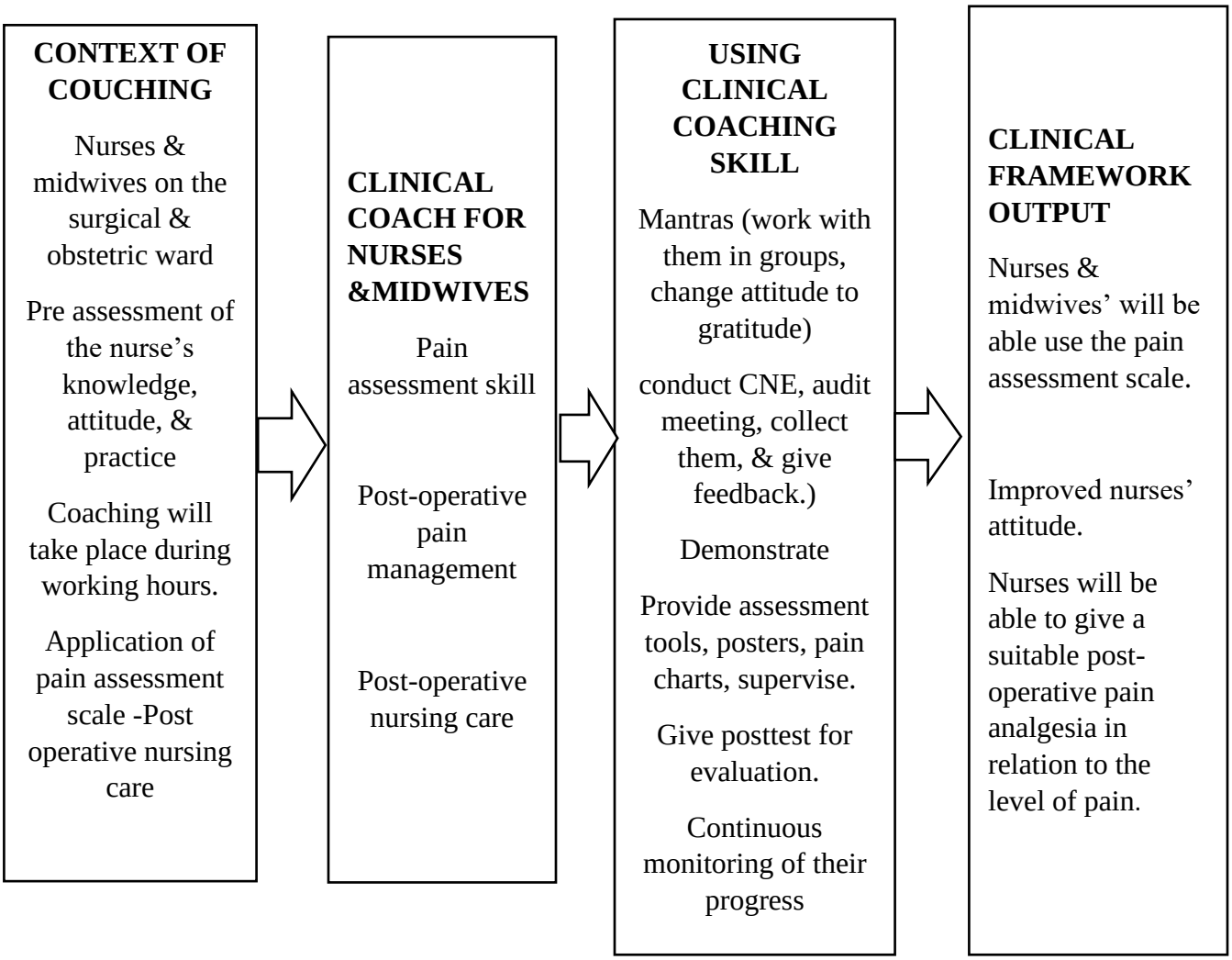
To accomplish these objectives within the framework of person-centered thinking, clinical coaches make use of coaching techniques and mantras, facilitation abilities, practice development concepts, adult learning methodologies, supported practice, and clinical assessment tools. As a similar educational intervention, the research will instruct nurses and midwives in the surgical ward on how to utilize a pain assessment scale in the daily post-operative nursing treatment of pain. The researcher will give the group instructional aids such charts for evaluating pain, books on the subject, and the pain assessment scale. The researcher will also instruct and mentor the nurses and midwives in the clinical techniques for measuring pain, including allowing patient self-reports (the gold standard), ensuring observer assessment by watching the patient's behavior, checking the patient's vital signs, and performing functional assessment. The researcher will advise them to always pay attention to and take seriously patients' complaints about post-operative pain. Additionally, the researcher will instruct and advise them on how to collect information on their pain, including provocation, comforting, quality, quantity, region, radiation, severity, time, therapy, and knowledge of the underlying causes.

The usage of the pain assessment scale will then be demonstrated, and their progress will be continuously monitored and evaluated with prompt feedback. A posttest to assess the impact of the education intervention will cap off the research at the conclusion of the training. The nurses' participation will be the key in this situation, with the researcher serving more as a facilitator than a teacher.

The Clinical framework output.

Therefore, in terms of post-operative pain management, this theory will contribute to personal and professional growth through critical thinking, creativity, self-confidence, assertiveness, effective communication, objectivity, and pain assessment abilities. The nurses will be able to select the best post-operative pain management strategy by listening to the patient's account of their discomfort. As a result, this will serve as a benchmark or guidance in selecting the best nursing care, leading to an improvement in the postoperative pain management process. According to institutional data, institutional coaching is necessary to increase the quality of care, job satisfaction, retention, and professionalism. Therefore, clinical coaching is an economical strategy to increase staff capability, transfer knowledge, and keep motivated employees**(Gaskell & Beaton, 2015).**

Theoretical Flame work



Chapter Two: Literature Review

The literature review focused on the nurse's knowledge, attitude, and practice towards post-operative pain management, and the three main concepts of the study were well addressed.

Nurse's knowledge towards postoperative pain assessment.

The nurse's knowledge is their awareness of the fundamental concepts involved in assessing and treating pain. The nurse's knowledge affects how well post-operative pain is managed. For the best decision to be made on providing quality care and support, a proper nursing assessment of the patients' pain is essential. In the evaluation and treatment of pain, nurses are indispensable. There are some obstacles within the healthcare system that cause postoperative pain to be assessed incorrectly by nurses, doctors, patients, and their caregivers. As a result, the aforementioned obstacles directly contribute to the ineffective assessment of pain, which leads to complete failure in the implementation of the necessary measures for postoperative pain management.(Kiekkas et al., 2015). This necessitates a study to determine the impact of including the pain assessment scale on nurses' understanding of post-operative pain treatment.

In a descriptive cross-sectional study, Kiwanuka and Masaba (2018) evaluated the level of knowledge among nurses at the Uganda Cancer Institute, Mulago National Referral Hospital, Kampala, Uganda, regarding pain assessment. The data demonstrated that the nurses had adequate understanding regarding pain evaluation. The majority of the respondents were able to give right answers on numerous qualities about expertise on pain evaluation. Of the 67 individuals, more than six seven percent (67.2%) were able to identify signs of pain intensity. Indicating good knowledge of pain management, the overall knowledge scale's average correct answer rate was 12 (interval: 0–16). The nurses should have adequate knowledge to assess whether a patient is going

through inner, emotional, psychological and physical pain. In order to determine whether a patient is experiencing internal, emotional, psychological, or physical discomfort, nurses need be sufficiently knowledgeable.

Yin, Tse and Wong (2015) using the framework of predisposing, reinforcing, and enabling causes in educational diagnosis and evaluation, a systematic review was conducted to provide an overview of the administration of opioid analgesics by nurses when prescription is on “as-needed" basis for postoperative pain and to identify the significant factors that influence nurses' decisions.

The results demonstrated that nurses' failure to provide enough analgesics for postoperative pain management was due to a knowledge deficit. The key to better pain management is educating nurses about pain. Despite all the mentioned measures used in post-operative management, it’s not mentioned anywhere that pain assessment was applied, making it crucial to be applied in post-operative pain management.

In a private tertiary care hospital in Peshawar, Pakistan, a quantitative descriptive cross-sectional study was done to examine nurses' understanding of post-operative pain management. Zeb et al. (2019) discovered that none of the participants had inadequate understanding of post-operative pain treatment, whereas 6.7% of participants had average knowledge, 71.7% had high knowledge, and 21.7% had exceptional knowledge. Ninety five percent of the participants (95%) agreed that pain is described as a bad sensory, emotional, and mental experience brought on by real or probable tissue damage.

Moreover, 95% of participants believe that pain should be considered as the fifth vital sign, following the pulse, respiration rate, temperature, and blood pressure. Furthermore, more than 78%

(78.3%) of the nurses thought that it was possible to tell when a patient was in pain by the way they behaved nonverbally. Besides, nurses are urged to rely on patients' own accounts as the lone source of information regarding the presence and degree of pain.(Zeb et al., 2019). Despite all the above measures, it was not indicated anywhere that pain assessment was part of the management.

Adams, Varaei, and Jalalinia (2020), conducted a descriptive cross-sectional quantitative study in Ghana's surgical facilities to ascertain the knowledge and attitudes of nurses concerning pain management among post-operative patients. Among 211nurses, the majority (79.1%) of the nurses had moderate knowledge and only20.9% had adequate knowledge. More than sixty three percent (63.5%) disagreed with the assertion “Vital signs are always reliable indicators of the intensity of a patient’s pain “since the majority of respondents (61.6%) had never received training on pain management The aforementioned studies showed that nurses lack knowledge of the proper methods for assessing pain.

Menlah et al. (2018) in a study to look at the knowledge, attitude and practices of 194 nurses in Ghana's four district hospitals about post-operative pain management identified a knowledge gap since just 52% of the participant nurses were knowledgeable. More than fifty eight percent (58.3%) of the participants agreed with the claim that "the patient's primary nurse is the most accurate assessor of the level of the patient's pain," hence it failed. However, the nurses in this study acknowledged that they lacked the necessary knowledge and evaluation abilities to effectively manage post-operative pain. The nurse's expertise may therefore be positively impacted by including the pain evaluation scale into post-operative pain treatment.

In Almadinah Almunawwarah, Saudi Arabia, a study was carried out in accordance with Al-Quliti and Alamri (2015) to give information on knowledge and attitudes about pain assessment

among health care practitioners. According to the findings, out of the 105 individuals, 73 scored 44% or below on knowledge of pain (69.5%), and 32 participants scored 45% and above (30.5%). Moreover, the nurses' scores on pain knowledge: 67 nurses (77.9%) scored 44% and below, and 19 nurses (22.1%) scored 45%, and only 6participants (5.7%) scored above 60%, which is an accepted passing rate. Findings point to a considerable knowledge gap in pain assessment, necessitating extensive pain assessment education to improve nurses' understanding of pain assessment and treatment.

Remarkably, there are reports of problems to post-operative pain care by nurses globally, including inadequate recordkeeping, inadequate patient assessment, and improper administration of analgesics.(Masigati & Chilonga, 2014). Ineffective post-operative pain management has been linked by other researchers to higher nursing workloads, communication problems, a lack of understanding on how to manage post-operative pain, and organizational change issues(Meissner et al., 2015; Diane Glowacki, 2013). In addition, Pasero et al. 2016; Mahama & Ninnoni, 2019), talked about the steps taken to provide the best pain assessment: verbalization, taking vital signs, and observing body language, emphasizing the patient's facial expression as one of the earliest signals of growing pain.

According to a study by Le-Wendling et al. (2018) and Yuceer (2011) pain is measured in a patient while they are at rest, while they are moving, when they are changing positions, and during physical therapy. As a result, after the self-report, the nurse must record the degree, quality, location, time, and duration, aggravating and mitigating factors, and their impact on the management of post-operative pain. Additionally, the effectiveness of a particular treatment should be assessed by measuring pain both before and after each intervention (Yuceer (2011). In order to

decide on the most effective action to relieve post-operative pain, the nurse is therefore required to include pain levels into everyday practice.

Priorities for change results from a study by Meissner et al. (2015) on post-operative acute pain management showed that poor post-operative acute pain management may result in serious medical complications like pneumonia and deep vein thrombosis, as well as progression to chronic pain and delayed discharge, especially after ambulatory surgery. In a 2014 study, 75% of participants experienced moderate to severe pain immediately after surgery, and 74% continued to feel this degree of pain after being discharged. Surveys indicate that patients' pain alleviation has slightly improved over the preceding 20 years.

After reviewing the state of post-operative pain management, this paper makes a number of suggestions for potential improvements that fall into four broad categories: patient-centered care, which involves greater patient involvement and shared decision-making; better training for doctors and other members of the multidisciplinary pain management team; and treatment optimization through the use of strategies like synergistic analgesia, patient-controlled analgesia, and, where appropriate, opioid substitution therapy. A substantial body of research backs up the execution of many of the measures as well as their potential advantages. A major barrier to their full potential is a lack of adequate financial resources.

Out of 433 participants, it was discovered that 56.5% had sufficient knowledge about post-operative pain management. Most of the participants, 368 (93.16%) scored a mean of 5 and 12, whereas only 8 (2.03%) responses answered every question accurately. The statement "Pain is what the patient says it is" was one of the questions in the current study that received the most correct responses from respondents, with 331 (83.8%), while the statement "Pain assessment

includes onset, duration, variability, location, and intensity of pain" received the most correct responses from respondents, 346 (87.6%), accounting for more than eighty seven percent of the total responses (87.6 %). More than half of the nurses in the research area, according to Dessie et al. (2019), had sufficient understanding of post-operative pain treatment. Their understanding of post-operative pain management would therefore be impacted by regular in-service training on the use of the pain assessment scale.

Salim, Tuffaha and Brant (2020) in the study, Pain Monitoring Program for Nurses: Effects on Nurses' Pain Knowledge and Attitude, found that nurses have knowledge gaps and preconceived notions about pain and its treatment. The average Pain Knowledge score increased from 69.1 percent at the pretest to 75.8 percent at the post-test following nurses' education. Regarding their level of expertise and proficiency in treating pain, their readiness to regularly measure pain, and their attentiveness to patients' concerns about pain, nurses' views have changed. The pain monitoring program was shown to be successful in enhancing nurses' understanding of post-operative pain management and directing the nurses' attention to patients' pain complaints.

It was discovered by Mahama and Ninnoni (2019) that verbalization, taking vital signs, and body language, to mention the patient's facial expression are some of the first indicators that a patient will experience in case of having post-operative pain. The study was an exploratory qualitative investigation to learn how nurses in a resource-constrained hospital, Ghana assessed and managed postoperative pain. Measures are taken to guarantee the best possible pain assessment along the same lines.

On the view that pain is subjective, it’s always better to find a pain measurement scale that will work for you consistently and easily. The most popular adult scales are the visual analog and

numerical rating scales because of their simplicity and sensitivity to minute changes in pain. The patients should be tasked to remember the worst pain they have ever experienced in their lives. The nurse requests the patient to relate current pain to the assessment scale by giving it a corresponding number on the scale (Atisook, 2021).

Consequently, the nurse will depend on the patients rating of pain intensity to administer the suitable pain killers (Masigati & Chilonga, 2014; Yüceer, 2011). Pain is measured while a patient is at rest, while moving, when changing positions, or during physical therapy (Le-wendling et al., 2018; Masigati & Chilonga, 2014; & Yüceer, 2011). In conclusion, a critical aspect of managing post-operative pain is pain evaluation. So, in order to choose the best intervention to treat post-operative pain, the nurse must consider measuring the patient's level of discomfort.

According to Yuceer (2011) in the Journal of Clinical and Experimental Investigations, patients who have trouble talking, such as those who are cognitively deficient, should receive extra consideration when it comes to post-operative pain assessment. In addition to pain assessment, nurses are advised to base on the vital observations as they can be affected by severe pain thus causing hypotension, tachycardia, or fever which can be immediately evaluated. Effective post-operative pain evaluation aids the nurse in assessing the efficacy of nursing interventions and pain management techniques (Yuceer, 2011).

In light of this, Faithfull-Bryne theory of clinical coaching in nursing and midwifery will aid me in implementing / integrating the pain assessment scale in post-operative pain treatment. Client satisfaction will result from a good post-operative pain assessment because it will help in selecting the most effective pain management strategy. Instead of just going through the motions, this will be selected after a pain intensity assessment.

In conclusion proper assessment of pain acts as a guide in choosing which measures to take as far as post-operative pain management is concerned. I'm going to demonstrate how to utilize a pain assessment scale to the nurses on the surgical wards so they can gauge how much pain the post-operative patients are experiencing. This will increase the nurses' knowledge of post-operative pain treatment, improving post-operative pain management quality of life.

Nurses' attitude towards post-operative pain management.

Accurate knowledge, a positive attitude, and proficient evaluation abilities in action are necessary for effective pain management. In this study, a nurse's attitude is described as their thoughts and feelings concerning postoperative pain control, which can be either good or negative. Based on sound training, the nurses must have a positive outlook when providing post-operative pain treatment. One of the obstacles to successful post-operative pain management has been recognized as having a poor attitude(Jemebere, Bekele, Tsegaye, & Yohannis, 2020). Within the worldwide health care system, nurses' negative attitudes regarding pain treatment continue to be a concern.

In line with Adams et al. (2020) did a study to ascertain nurses' knowledge and attitudes about postoperative pain care among surgical patients in Ghana and discovered that the majority of nurses (189, or 89.6%)) had negative attitudes, while 22 (10.4%) had favorable attitudes. More than fifty seven percent (57.3%) of respondents to all the questions agree with the stance that "Patients should be urged to endure as much pain as possible before utilizing an opioid.

In Almadinah Almunawwarah, Saudi Arabia, researchers conducted a different study to gather information on the knowledge and attitudes of healthcare professionals on pain assessment.

The findings showed that the medical professionals' attitudes on treating patients who are in pain are improper (Al-Quliti & Alamri, 2015)

In a descriptive cross-sectional study conducted by Manwere, Chipfuwa, Mukwamba, and Chironda (2015) to evaluate registered nurses' knowledge and attitudes toward the treatment of adult medical patients' pain, it was discovered that the nurses had a negative attitude toward post-operative pain management. With a range of 20–80 percent, the overall mean attitude score was above fifty-six percent (56%) overall. Below the mean score of 50 percent, 30% of the 52 respondents had a score of 47 percent or below. In a descriptive cross-sectional study conducted by Manwere, Chipfuwa, Mukwamba, and Chironda (2015) to evaluate registered nurses' knowledge and attitudes toward the treatment of adult medical patients' pain, it was discovered that the nurses had a negative attitude toward post-operative pain management. With a range of 20–80 percent, the overall mean attitude score was above fifty-six percent (56%) overall. Below the mean score of 50 percent, 30% of the 52 respondents had a score of 47 percent or below.

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According to Jemebere et al. (2020), conducted a study to evaluate the knowledge and attitudes of nurses working at the comprehensive, specialized hospital of Hawassa University toward post-operative pain management. It was discovered that out of 187 participants, more than

82 percent (82.2 percent) of the nurses had a negative attitude toward post-operative pain management. None of the nurses were described as having a cheerful or upbeat attitude. This was supported by Yin et al. (2015) Whoever said that nurses have bad views about patients expressing their agony by exaggerating it in order to attract staff attention. Taking into account the results, it is imperative to use a pain evaluation scale in postoperative nursing care, which will enhance the nurse's attitude.

Patient satisfaction varies depending on how patients feel about their care or whether they are met in terms of expectations (Eti Aslan et al., 2018). Patient satisfaction may be negatively impacted by nurses' post-operative caring behaviors and perceptions of post-operative pain as usual and unavoidable. As a result, post-operative pain assessment is recognized as a crucial and significant component of post-operative pain management. Because it is subjective, postoperative pain should always be treated on an individual basis. Inline, McGillion et al. (2011) conducted a study on post-operative pain assessment skills pilot trial, it was shown that health care workers frequently hold pain-related myths that make post-operative pain assessment inefficient.

In a descriptive cross-sectional study conducted by Kiwanuka and Masaba (2018) at the Uganda Cancer Institute, it was determined that nurses there had positive attitudes toward pain assessment. The average attitude scale score for nurses was nine out of a possible twelve, indicating a positive attitude towards pain assessment. For children under the age of eleven, nurses "should depend completely on the guardians'/parents' evaluation to establish a child's pain level." It was offered by 63 respondents, or 94.02 percent, showing a definite favorable attitude. The attitude and actions of nurses play a crucial role in fostering the patient's comfort. The nurse's

attitude may thus be positively impacted by including the pain assessment scale into post-operative pain care.

In a descriptive survey research design to assess nurses' knowledge, attitudes, and barriers surrounding pain, Shoqirat et al. (2019) and Buvanendran et al. (2015) discovered that the surgical nurses in this study had negative attitudes toward pain management in post-operative patients. The average of all replies was 3.12 out of 5, which is a low score (63.9%), showing that the participants had negative statements. Patients using opioids on a PRN basis may be more likely to exhibit clock-watching habits, according to the question item, which has a mean score of 3.78/5 and a standard deviation of 0.99. The mean score and standard deviation for another test item, "When a patient requests increasing amounts of analgesics to control pain, this usually suggests that the patient is psychologically dependent," were 3.94/5 and 0.94, respectively. According to the results, a bad attitude has an adverse effect on post-operative pain control. Therefore, it is advisable to use the educational intervention on the use of a pain assessment scale for post-operative pain management.

According to a study on nurses' knowledge and attitudes toward post-operative pain management conducted in Ghana by Adams et al. (2020), Salim, Tuffaha and Brant (2020), Al-Quliti & Alamri (2015), Dessie et al. (2019), and Menlah et al. (2018), there was a negative attitude among the nurses toward post-operative management.

As a result, postoperative pain management must incorporate pain evaluation, which may change the nurse's perspective on postoperative pain management. Client satisfaction will result from a good post-operative pain evaluation because, rather than just going through the motions,

an appropriate intervention to treat post-operative pain will be selected after assessment of pain severity.

Nurses' practice towards post-operative pain assessment.

In nursing, practice refers to the execution of interventions based on pain assessment and management concepts. In postoperative pain management, the assessment of pain is a critical nursing action that necessitates interaction between the patient and the nurse. The methods for assessing pain include physical responses, observation, and patient self-report using pain scales. Effective pain management is thought to start with successful pain evaluation, which is why it's imperative for all post-operative treatments to be done on a regular basis(Köse Tamer & Sucu Dağ, 2020).

According to Köse Tamer and Sucu Dağ (2020) observation, history taking, examination, palpation, and the use of the pain assessment scale to evaluate intensity are all steps in the process of assessing pain. A pain scale is a rating instrument that people can use to communicate their level of pain to a medical Professionals. There are several tools available for nurses to use to categorize the level of pain, including numerical rating scales that use numbers to rate pain, visual analog scales that ask patients to indicate where on the scale corresponds to their level of pain, and categorical scales that use words as the primary communication tool and may also incorporate numbers, colors, or relative location to communicate pain(Al-Quliti & Alamri, 2015). Because of its simplicity, consistency, comprehensibility, and sensitivity to minute changes in pain levels, the numerical rating scale will be employed in this investigation. The pain scale rates on a scale of 0 to 10, with 0 representing "no pain" and 10 representing "the worst suffering possible." The number that best depicts the pain component, typically intensity, is chosen (verbally) by the patient, or a

circle is drawn around it. The suitable patient's developmental, physical, emotional, and cognitive level are taken into consideration while choosing the pain scale to be used.

Further, the needs of the patient and the pain management team should also be catered to. In keeping with that, it is advised that patients who are unable to communicate, such as those who are cognitively impaired, the severely emotionally disturbed, children, those who do not speak the local language, and those whose education levels or cultural backgrounds differ significantly from those of the healthcare team, require special attention.(Al-Quliti & Alamri, 2015).

Since pain is a subjective experience, it is important to tailor patients' responses to it for the best possible results. (Mahama & Ninnoni, 2019). The core and fundamental components of managing the complex experience are established by the concepts connected to post-operative pain assessment and management. Regular assessments of pain severity and the impact of interventions are the nurse's job throughout post-operative pain management.(Bakalis et al., 2018 & Karlsten et al., 2005).

Inline, pain is evaluated when the subject is at rest and while moving, whilst vital signs, verbalization, and body language are crucial in the assessment of pain(Mahama & Ninnoni, 2019). Examining nurses' post-operative pain management knowledge, attitudes, and practices is therefore crucial to building the groundwork for better management strategies, assuring patient comfort, and completely improving nursing practice. According to Masigati & Chilonga (2014) assessing pain entails identifying a variety of aspects of pain, including its type, its intensity, and how long it lasts. The institutions should arrange trainings and workshops on post-operative pain management for staff nurses to improve pain evaluation and management.

Routinely, in the first 24hours, pain is managed by giving opioids such as morphine or pethidine injections every 6 to 8 hours respectively. Consequently, non-steroidal anti-inflammatory medications, such as ibuprofen 400mg, diclofenac 75mg 8hourly and non-pharmacological measures like physical exercises such as ambulation, listening to music, imaginary, positioning in bed post-operatively, distraction method and massaging are introduced. Because of its quick start of action and ability to greatly provide extra sparing opioid impact, intravenous paracetamol is commonly utilized in the management of post-operative pain (Mahama & Ninnoni, 2019; Kiswezi, Masiira & Mugisa, 2014; Chatchumni, 2016). Despite all of the aforementioned steps, it was never stated that pain evaluation was a part of management.

The World Health Organization (2018) and the American Pain Society propose using a step ladder to treat post-operative pain, with the pain evaluation scale serving as a reference. The doctors' post-operative pain medication is tapered (start with the strongest painkillers, then reduce to mild ones till patient discharge): usually on the first day post operatively they begin with strong opioids in injectable form to kill the acute pain thus offering a rapid relief. Then on the second day post operatively (48hr) the doctors prescribe non-opioid, multimodal analgesics, and adjuvants (Mahama & Ninnoni, 2019 ; Chatchumni, 2016).

Surprisingly, Şimşek Yaban (2019) in his study to review the work post-operative pain management done by nurses in Turkey, found something nurses either haven't used at all or have used sparingly pharmacological methods in pain management, and generally relied on physicians analgesic control in post-operative pain management where drugs are prioritized, unwilling to use non pharmacological measures being that they lack knowledge about their application. Concurrently, patients are not given necessary information about post-operative pain control

resulting in several patients thinking that postoperative pain is a natural consequence of surgery. This has progressed to the point that extreme pain that prevents patients from falling asleep is no longer reported. Based on the above information, it's wise to introduce a pain assessment scale to the post-operative nursing care thus improved pain control.

Barbara and Smith (2018) looked at 30 patients to assess post-operative pain after thoracic surgery and the relationship with demographic data as well as other parameters. They discovered that the advancement of the patient's pain relies on the recovery days following surgery (a drop was noted on the fifth and sixth day), as it showed a progressive reduction up to the day the patient was discharged. There was a reported lack of a recognized instrument to gauge post-operative discomfort felt by patients following thoracic surgery. We underline the importance of creating and using a suitable post-operative assessment questionnaire for these patients based on the findings of this study.

Eriksson (2017) conducted a thesis based on four research to analyze if pain ratings might be used to represent and forecast early physical post-operative recovery and to explain patients' perceptions on pain assessments. According to monitoring records, a correlation between moderate to severe pain intensity was discovered, which had an impact on how quickly a patient recovered physically after surgery. It was discovered that the first day's average pain intensity at rest and during activity also had an impact. On the first postoperative day, however, the presence of acute discomfort both at rest and when moving indicated that physical recovery would be affected within 48 hours. Additionally, the introduction of the Numeric Rating Scale (0-10) enhanced communication about pain but presented challenges in terms of interpretation and put a strain on medical staff and care procedures.

The descriptions of pain that patients have had were hindered by patients' resources and ward resources for performing pain assessments. The patient applied active and passive strategies to describe pain. In summary, the thesis revealed that pain assessment helps to bridge the communication gap between the patient and the health professionals. Concurrently, environmental factors like the attitude of healthcare professionals affect pain assessments in post operative pain management thus leaving the patients unsatisfied with the care. Therefore, the adoption of a standardized pain assessment scale for identifying and effectively managing post-operative pain is supported by suitable training and resource allocation. This necessitates carrying out an interventional study on application of pain assessment scale to post operative pain management.

As part of their investigation of post-operative pain knowledge and attitudes, Kiekkas et al. (2015) evaluated 182 surgical department nurses to find factors that predicted their knowledge and attitudes. The participants' attitudes toward post-operative pain assessment and management were found to be negative. The predictors for this are the mistaken belief that some patients should be evaluated based on objective facts, such as vital signs and sleepiness, and the fact that medical professionals, not patients, determine the severity of pain. In reality pain is subjective and should be individualized. It was revealed that attitudes toward post-operative pain of nurses are far from satisfactory. Negative opinions were found, mostly related to how pain is assessed and how analgesics are used. So, the educational program on using a pain assessment scale to manage post-operative pain may have an effect on nurses' views.

Kizza (2012) conducted a study with 170 nurses to learn about their knowledge, practices, and barriers related to assessing pain in critically sick patients. The results showed that 90% of the participants said they assessed pain in critically ill patients, but 96% said they did not use tools for doing so. More than seventy-nine (79.1%) of the participants who had their pain levels tested recorded their findings. Nursing

workload was one barrier to assessing pain (84.1%), lack of assessment tools (74.1%), lack of education on assessment tools (82.4%), lack of familiarity with tools (78.2%), lack of protocols and guidelines on pain assessment and management (74.1%), and poor documentation of pain assessment and management (77.6%). The researchers came to the conclusion that although nurses were knowledgeable about pain assessment and management, they lacked the necessary assessment tools and faced other obstacles(Serra et al., 2015). Therefore, based on these results, an education intervention on application of a pain assessment to the nurses' practice would benefit the nurses.

Chatchumni, Namvongprom, Ericksson and Mazaheri, (2016) conducted an exploratory cross-sectional study using a qualitative methodology to examine nurses' experiences with pain assessment in a surgical unit. Despite the fact that patients' self-reported pain is regarded as the gold standard in pain assessment, it was discovered that nurses did not ask patients to characterize their level of discomfort. In order to understand and meet their requirements and to deliver appropriate management based on the pain assessment process, nurses should involve patients when assessing pain.

The nurses abide mostly on patients' verbalization and facial expression to assess pain post-operatively. In order to treat pain, nurses address it based on their own clinical experiences rather than by adhering to set standards. The majority of nurses stated that they always treat patients' pain using medications given by the doctor, especially in the first 24 hours following surgery(Mahama & Ninnoni, 2019; Köse Tamer & Sucu Dağ, 2020). Researchers came to the conclusion that nurses' descriptions of post-opérative pain évaluation and treatment showed that post-operative pain assessments were inaccurate, leading to poor post-operative pain management.

Köse Tamer and Sucu Dağ, (2020) in a descriptive cross-sectional study undertaken to examine how surgical patients feel pain and the standard of nursing care in managing acute post-

operative pain, discovered that, out of 141 participants,87.9% experienced pain while getting out of bed, 86.5% stated that movement increased their pain, and 61.7% stated that their pain was relieved by rest. The pain assessment scale should be integrated into post-operative pain management despite the fact that the overall quality of care in the area of pain management received a high rating.

Şimşek Yaban (2019) performed a randomized control trial that examined 32 studies looking at the work on post-operative pain management done by nurses in Turkey in order to illustrate the current situation, draw attention to this field by examining the use of non-pharmacological pain relief methods, and contribute to future research. He claimed that non-pharmacologic methods might be used to enhance the effects of analgesics after surgery or in situations when they are not appropriate. Transcutaneous nerve stimulation, the use of heat and/or cold compresses, relaxation techniques, music therapy, massage, reflexology, and aromatherapy are non-pharmacologic methods that are rarely used to treat post-operative pain. Nevertheless, hypnosis, reiki, yoga and acupuncture were reported having failed to be implemented by nurses in Turkey. Transcutaneous nerve stimulation, the use of heat and/or cold compresses, relaxation techniques, music therapy, massage, reflexology, and aromatherapy are non-pharmacologic methods that are rarely used to treat post-operative pain.

In conclusion, an accurate assessment of pain serves as a guide in determining the best course of action for post-operative pain management. There is insufficient proof that the pain assessment scale is used promptly in post-operative pain treatment, despite the nurses giving out post-operative medication in a timely manner. Because treatment will be based on pain severity, the inclusion of the pain assessment scale will improve post-operative pain management practice.

Chapter Three: Methodology

The study describes the effect of application of the pain assessment scale to the nurse's knowledge, attitude, and practice towards post-operative pain management on the surgical ward in one of the big private hospitals in Uganda. The technique that was employed, study design, study population, sampling method, sampling size, method for data collecting, validity and reliability, protection of participant rights, data management, and analysis are all presented in this chapter.

Study design

This research was quantitative, quasi-experimental, and descriptive. Quantitative as it was collected and analyzed numerical data , quasi experimental regarding the application of the educational intervention of the application of the pain assessment scale, and descriptive because it was going to examine the effect of the education intervention. This looked at the practice as far as post-operative pain assessment is concerned, how post-operative pain was being managed, how and when assessed, and if not assessed what reasons contribute to its failure. In line with that, the participants were chosen without randomization and given a pretest for assessment. Focusing on the pretest results, they were given training on how to apply a pain assessment scale to post-operative pain management. Then after four weeks, the participants were given a posttest for evaluation of knowledge, attitude and practice as regards pain assessment.

Study area

The study was conducted in a hospital setting, Mengo hospital, located in Kampala city. Mengo is a teaching hospital, which covers out and in patients, carrying out an average of 45 operations per day, totaling to1350 operations a month and these include caesarian sections,

gynecological, orthopedic operations and other general surgical procedures. Therefore, this made Mengo hospital relevant to my study.

Study population

The appropriate population for my research question were all nurses working in Mengo hospital in Uganda, whereas the target population were the nurses in Mengo hospital working on the surgical ward only.

Sample size

The study population were 61 nurses. The maximum size of the sample attained at the setting was again 61 in relation to the population size and legality with respect to the characteristics of interest. I applied Krejcie and Morgan (1970)'s formula for determining sample size.

$$S = \frac{X^2 NP(1-P)}{d^2(N-1) + X^2 P(1-P)}$$

Where:

S = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841).

N = the population size

P = the population proportion (assumed to be 50 since this would provide the maximum sample).

d = the degree of accuracy expressed as a proportion (0.05).

Sample size

X^2 = 3.841, N = 61, P = 0.5, d = 0.05

$$\frac{3.841\ X\ 61\ X\ 0.5\ (1-0.5)}{0.05^2(61-1)+\ 3.481\ \ \text{X}\ 0.5(1-0.5)}\ = 53.25$$

Inclusion criteria.

The sample consisted of all nurses working on the surgical wards with the exception of those working beyond 4:00pm.

Exclusion criteria.

The nurses that were proven to be emotionally distressed were not included in the study.

Sampling method.

The convenience sampling technique was employed to recruit participants for the study. A sampling of the participants was done from five different wards: Mpereza ward, (10) Main theatre, (10) Katherine ward, (10) Roybillington, (10) intensive care unit, (10) Anne walker west, (5) and Anne walker east (5). The in charges of the different words played a key role in the process of consent. This was possible in relation to the readily available sample, quick data collection, fewer rules and the low cost.

Data collection process and procedure.

Intervention.

I presented myself to the nurses and midwives at the CNE meeting and went over the meeting's purpose, study topic, purpose, objectives, questionnaire, and consent form. The in charges of different units were provided with consent forms to be distributed to the nurses/midwives willing to take part in the study. After filling in the forms, the nurses returned them to the in charges, and these were requested to consent. Whoever had signed the consent form participated in the study, and those that won't sign were not part of the study. The participants

were given my contact details regarding any questions as far as the study was concerned, and data collection was the next step. Following the pretest, the researcher illustrated how nursing practice may incorporate the pain assessment scale. The importance, application, and timing of the pain assessment scale were explained to the audience. The participants were advised to use a numerical rating scale (0–10) to quantify the patients' pain postoperatively. The participants were encouraged to assess pain 4hrly and whenever necessary being the fifth vital sign within the 1st forty-eight hours post operatively. Before and after receiving painkillers, the subjects were instructed to rate their post-operative pain. For four weeks leading up to the post test, the study provided participants with ongoing training, mentorship, supervision, and timely feedback about the practice.

Data was collected during morning shifts, then checked for accuracy and completeness. The questionnaires were coded with numbers in ascending order for proper accountability. Furthermore, collected data was kept in the box file, and after collection, I kept it in a safe place (under key and lock). Then, later it was entered into the computer till analysis time to ensure privacy and confidentiality. The pre-test was entered in the computer, saved under google drive to ensure proper safety, privacy and confidentiality.

Research instruments.

A tool for data collecting was created by the researcher using the earlier technologies that were used. To establish a baseline and assess the effectiveness of the educational intervention, two sets of data were collected: pre-intervention and post-intervention. Three sections of a self-administered structured questionnaire were used to obtain the data. Part 1: Social demographic variables (age, gender, level of education, working experience as a nurse, working experience on the surgical ward and training on pain management). Part 2: Table one was composed of 20

questions to assess nurse's knowledge towards pain assessment with the highest score of 30 (100%) marks indicating better knowledge. Part 3: Table two contained 15 questions to assess nurse's attitude on post-operative pain management. It uses a 4-point Likert scale, with Strongly agreeing to be the highest score and strongly disagreeing being the lowest (1). The positive attitude received a score of 4, whereas the negative attitude received two disagreement and one strong disagreement points.

A very positive attitude was scored 60 (100%) and below 70% were taken as negative attitude. The practice was assessed using a checklist before and after the intervention to check the completeness of the pain assessment scale as regards the patient's care. The patient's case books were examined to make this possible.

Validity.

According to Polit and Beck (2008) validity is a measuring criterion that refers to how well-founded and accurate the study's conclusions are, as well as how well an instrument performs its intended function. The purpose of the questionnaire was to evaluate the nurse's understanding of and attitude toward post-operative pain treatment. The tool was reviewed by the supervisors, then applied to the study after approval for quality control.

Reliability.

The consistency or dependability with which an instrument measures an attribute is indicated by this(Polit & Beck ;2008). As a result, reliability was attained by testing my tool in a pilot setting before its intended use to ensure that it will function as intended. In addition, the

alpha coefficient was calculated to find out if the pretest has accurately measured the variable of interest (Polit & Beck, 2017).

$$alpha = (\frac{k}{k-1})(1 - \frac{\sum_{i=1}^{k} S_i^2}{S_x^2})$$

k represents the number of items used for measurement

S_i^2 represents the variance of the score (measured value) of the i-th item

S_x^2 Is the variance of the total score of the scale.

Variance calculation formula

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$$\mathrm{var}(x_1, x_2, \ldots, x_n) = \frac{(x_1 - \bar{x})^2 + (x_2 - \bar{x})^2 + \ldots + (x_n - \bar{x})^2}{n-1}$$

in the midst of t hem

$\bar{x}$ represents the average.

Data management plan and analysis

Analysis plan.

Data analysis was conducted under the following steps: pre analytical phase, univariant, and bivariant analysis. In the pre-analytical phase, data cleaning was done to check completeness of the questionnaire. The frequencies were run to ensure the completeness of the data and coding of questions in accordance to how it was entered in SPSS. The univariant analysis was conducted and the findings with the demographic characteristics of knowledge were presented in a frequency distribution table, histogram and pie charts. The frequencies, means and standard deviation of the attitude statements were presented in a table. The frequencies of the pre and posttest findings of

knowledge and attitude were presented in charts (histogram). The total scores of the knowledge and attitude were categorized and presented in the pie charts.

Bivariant analysis.

To investigate the link between demographic traits, post-operative pain management knowledge, and attitude, a chi-square independent test was conducted. Therefore, this test was run to see if there was any correlation between the variables. To compare demographic traits with knowledge and attitude towards post-operative pain management, an independent t-test was conducted. To ascertain the impact of the educational intervention on nurses' knowledge, attitude, and post-operative pain management practice on the surgical ward, a paired t-test was conducted. The intervention was application of a pain assessment scale towards post operative nursing care.

Rights of human subject

Focusing on ethical considerations, privacy was at the highest order, confidentiality was maintained, and the participant's rights were considered. They did not have strings attached that if they don't participate, they will have committed a crime. Secondly whoever opted to leave the study was free to do so without fear. Therefore, a consent form for the participants to sign before participating in the study has been designed to cater for the above.

Ethical consideration

Furthermore, I sought approval for the research proposal from the ethics committee of the Uganda Christian University School of Research and Post Graduate Studies and an introductory letter from UCU (Department of Health Sciences). The approved research proposal was submitted to the hospital research committee which granted me permission for data collection. The chief

nursing officer, the administrators of the various areas, and the people in charge of data gathering all received copies of the letter from the hospital research committee.

Privacy and confidentiality.

The data collected was kept under key and lock, then at the end of the day fed it into my computer and saved it under google drive. It was only the researcher and supervisor to access this data collected.

Social cultural issues.

There were some social cultural issues associated with gender where in the central region it is said that men should be strong despite the level of pain they might be experiencing. Therefore, it was a risk to underestimate the level of pain. Secondly there was a culture of the doctors prescribing the post-operative pain killer, and the nurse must always give it as prescribed without assessing the level of pain in relation to the dose. In addition, the manager was not supposed to implement anything in the institution without the top hospital management's consent.

Risks in the study

There might be delayed feedback, wrong interpretation of the questionnaire and increased costs compared to the initial budget.

Benefits

The nurses working on the surgical wards gained better information of post-operative pain management and developed their post-operative pain assessment skills. Additionally, attitudes and practices surrounding post-operative pain management have improved, leading to higher-quality treatment for these patients.

Conflict of interest

There was no conflict of interest as it was noted in my consent form that it was the participant's right to either participate in the study or not.

Limitations

There was a challenge of using nonprobability sampling methods as it was prone to bias. Secondly, I did not know how much knowledge they had as far as pain management was concerned. Thirdly, I could not predict if the number of operations done per day were still enough for practice in relation to the current situation of the Covid 19 pandemic and others could not be seen for now.

Chapter Four: Data Analysis

Introduction

In order to determine how the integration of the pain assessment scale affected nurses' knowledge, attitudes, and practices regarding post-operative pain management in a significant private hospital in Uganda, this chapter presents the data gathered, the outcomes of statistical analysis performed, and the interpretation of findings. Descriptive quantitative statistics were obtained to determine the impact of integrating the pain assessment scale (PAS) on the nurse's knowledge, to ascertain the impact of integrating PAS to the nurse's attitude, and to describe the impact of integrating PAS on the nurses' practice towards post-operative pain management.

The analysis is organized according to the following themes: demographic and background traits, knowledge of postoperative pain treatment, the nurse's attitude toward postoperative pain management, and a description of nurses' practices in postoperative pain management. After implementing the educational intervention of integrating the PAS to post-operative pain treatment, 60 nurses in total answered the questionnaire before (pretest) and after (posttest). The results showed how integrating the pain assessment scale affected the nurses' understanding attitude, and practice of post-operative pain care. Tables and figures are used to present them.

Demographic characteristics

The respondents were asked to give their demographic and background information in order to help describe their characteristics. The findings are presented in Figures 1-3 and Tables 1-3.

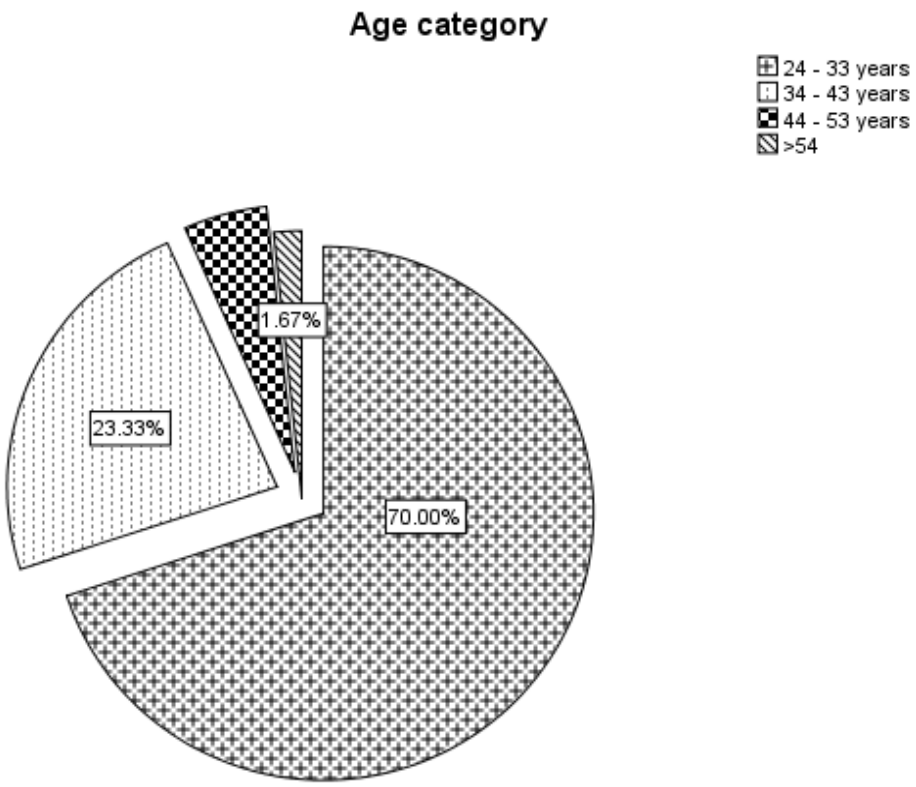

*Figure 1**: Age of respondents***

Figure 1 shows the age of the respondents ranged between 24 and 54 years where the largest category (70%) was between 24 and 33 years. The respondents were asked about the duration of their working experience in the surgical ward. The mean of the working experience was determined (4 years) and was used to obtain the categories in Figure 2.

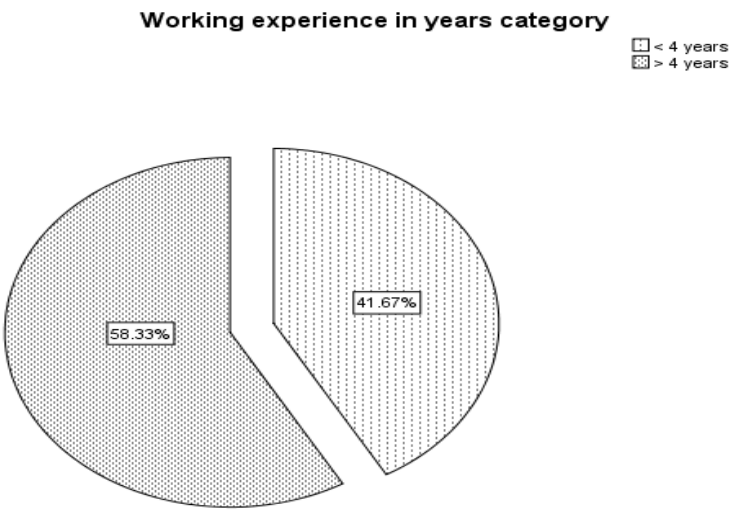

Figure 2: Experience in years of working on the surgical ward.

Figure 2 reveals the working experience ranged between 1 and 26 years where the majority (58.3%) had worked on the surgical ward for more than 4 years on average. The researcher further wanted to know the respondents' overall working experience. The average of the overall working experience was determined (8 years) to formulate the categories in Figure 3

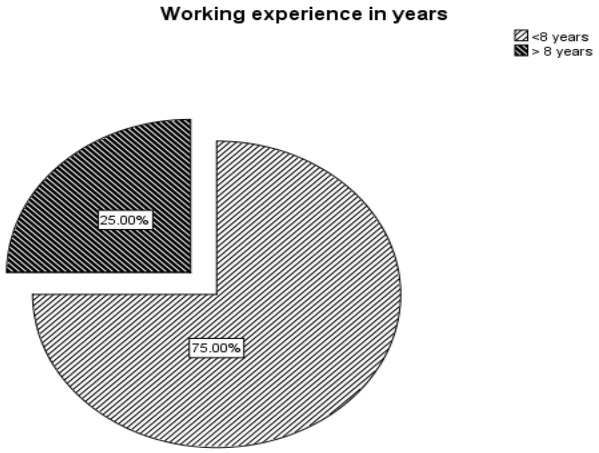

Figure 3 working experience in years.

Figure 3 shows the overall working experience of the respondents ranged between 1 and 26 years where the majority (75%) had worked for less than 8 years. Additional background characteristics of the respondents are presented in Table 1.

Table 1:Background characteristics

Variable	*f*	%
Sex of respondent		
Male	12	19.7
Female	48	80.3
Qualification		
Certificate	39	63.9
Diploma	20	34.4
Degree	1	1.6
Orientation to pain assessment		
CPD	12	19.7
CNE	30	49.2
Others	18	31.1

Table 1 reveals that respondents were mostly female (80.3 %), most (63.9%) held a certificate in nursing, and about half of them (49.2%) had received orientation to pain assessment through continued nursing education (CNE) seminars.

Pretest Knowledge of Postoperative Pain Management on the Surgical Ward

On a 0–10 number rating scale, respondents were asked how they would rank their level of pain (NRS). The questions in Table two (2 and 4) were stated such that the respondents who ticked "no" were likely to be knowing the correct way of rating POP on the 0-10 NRS. The findings are presented in Table 2.

Table 2 Scoring post-operative pain in the surgical ward.

Variable	*f*	%
1. On the NRS, is seven unmanageable pain?		
No	38	63.3
Yes	22	36.7
2. On NRS six denotes severe pain		
No	37	61.7
Yes	23	38.3
3. Does 2 on the NRS denote no pain at all?		
No	35	58.3
Yes	25	41.7
4. On a scale of 0-10, post-operative patients with 5/10 do not need any analgesic.		
No	44	73.3
Yes	16	26.7
5. On NRS three represents mild pain		
No	12	20.0
Yes	48	80.0
6. Today is Phillip's 1st post-operative day, and as you enter his room, he smiles at you and continues talking and joking with his visitor. Is his pain intensity 10 on the NRS?		
No	39	65.0
Yes	21	35.0
7. A patient report" I think about my pain all the time and give up many activities because of it". Is it right to score her 8 on the NRS?		
No	20	33.3
Yes	40	66.7
8. Miss N.B.M., said that "my pain bothers me, but I can ignore it most of the time. Could it be fine to score the pain as "5/10" on the NRS?		
No	16	26.7
Yes	44	73.3
9. Today marks Mr. P. M.'s first postoperative day. He is discovered peacefully in bed, curled up in a fetal posture, grimacing as he turns. Is it accurate to rate her at an 8?		
No	20	33.3
Yes	40	66.7
10. If a patient sleeps with no movement postoperatively, this indicates that the patient is not in pain.		
No	24	40.0
Yes	36	60.0

Table 2 shows that majority of the respondents had low knowledge towards scoring postoperative pain on the surgical ward. For example, more than sixty-three percent of the respondents (63.3%) knew that pain at level seven is not unmanageable. More than sixty-one percent (61.7%) of the respondents knew that pain at level "6" on the numerical rating scale is not severe. In addition, more than fifty-eight percent of the respondents (58.3%) knew that level "2"

denoted some pain. More than seventy-three percent of the respondents (73.3%) knew that a postoperative patient with pain at level “5” would need an analgesic. Also, eighty percent of the respondents (80%) knew that pain at level ‘3” represented mild pain. The vignettes/illustration that portray patient’s response to pain were used to ask how nurses would respond and rate the pain level on the NRS.

Further, sixty five percent (65%) of the respondents were aware that a pain rating of "10" is too intense for the patient to continue joking and chit-chatting with the visitors. More than sixty-six percent of the respondents (66.7%) knew that pain at level “8” can lead to patients giving up most of all their activities. Additionally, seventy-three percent of the respondents (73.3%) knew that the pain level of “5” could be ignored by the patient. Besides, sixty-six percent of the respondents (66.7%) knew that pain at level “8 “can affect the patient’s position in bed and also limit their movements. Though there were a few who had low knowledge towards scoring post operative pain in relation to the baseline set (79% being acceptable knowledge). Questions (10) was stated such that the respondents who ticked “no” were likely to know the correct way of rating POP on the 0-10 NRS. The researcher further asked the respondents about the methods they used to manage postoperative pain and findings are presented in Table 3.

Table 3 Assessment of post operative pain

Variable	*f*	%
1. Typically, patients who can be distracted from POP do not experience severe pain.		
No	12	20
Yes	48	80
2. Following administration of a first dose of an opioid analgesic, future doses should be modified in line with each patient's reaction.		
No	11	18.3
Yes	49	81.7
3. For the treatment of mild to moderate pain, non-drug therapies like touch, heat, and music are particularly beneficial.		
No	25	41.7
Yes	35	58.3
4. Prior to and following the administration of pain medication, pain should be evaluated.	8	13.8
No	52	86.7
Yes		
5. Vital signs are always accurate predictors of how much pain a patient is experiencing.		
No	15	25
Yes	45	75
6. Physical assessment is part of pain management.		
No	14	23,3
Yes	46	76.7
7. The primary nurse is the best assessor of the severity of the patient's discomfort.		
No		
Yes	21	34.0
	39	66.0
8. Is character, onset, location & duration of pain important in pain assessment?		
No		
Yes	4	6.7
	56	93.7
9. In order to assess surgical discomfort, observation is a part of the process.		
No	15	25
Yes	45	75
10. To identify cultural impacts on how pain is expressed, each patient needs to be evaluated separately.		
No	23	38.3
Yes	37	61.7

Table 3 shows that majority of the participants had good knowledge towards post pain management. For example, 80% of the respondents knew that postoperative patients who can be distracted from pain don't suffer from severe pain. Also, more than eighty one percent of the respondents (81.7%) knew that after an initial dose of opioids, the subsequent doses were adjusted

according to the patient's level of pain. However, some respondents had a low knowledge towards postoperative pain management. For example, more than forty one percent of the respondents (41.7%) didn't know that Nondrug interventions e.g., music, heat, and touch are very effective for mild to moderate pain control. The researcher further wanted to identify the nurse's knowledge towards post operative pain assessment. Questions (7) was stated such that the respondents who ticked "no" were likely to know the correct way of rating POP on the 0-10 NRS.

Moreover, eighty-six percent of the respondents (86.7%) knew that pain should be assessed before and after drug administration. Also, seventy-five percent (75%) of the respondents knew that vital signs were reliable indicators of the patient's pain intensity postoperatively. In addition, more than seventy-six percent of the respondents (76.7%) knew that physical assessment was part of pain management. More than ninety-three percent of the respondents (93.7%) knew that the character, onset, location & duration of pain were important parameters to observe when carrying out pain assessment. Additionally, majority of the respondents (75%) knew that observations are part of pain assessment. However, some respondents had low knowledge towards post-operative pain assessment, for example, 66% of the respondents didn't know that the most accurate judge of the intensity of the patient's pain is the primary nurse. Also, more than thirty-eight percent of the respondent (38.3%) didn't know that if a patient sleeps with no movement postoperatively, this indicated that the patient was not in pain. Likewise, 38.3% of the respondents didn't know that patients should be individually assessed to determine cultural influences in pain expression.

Posttest Knowledge of Postoperative Pain Management on the Surgical Ward

Following the educational intervention of integrating the pain assessment scale to nurses' knowledge, the researcher carried out a posttest to identify its effect to the nurse's knowledge

towards post-operative pain management. The findings of the nurse's knowledge towards rating and scoring post-operative pain using NRS (0-10) are well presented in Table 4.

Table 4: Rating and scoring post-operative pain.

Variable	*f*	%
1. On the NRS, is seven unmanageable?		
No	24	40.0
Yes	36	60.0
2. On NRS six denotes severe pain		
No	25	41.7
Yes	35	58.3
3. Does level 2 on the NRS denote no pain at all?		
No	28	46.7
Yes	32	53.3
4. On a scale of 0-10, postoperative patients with 5/10 do not need any analgesic.		
No		
Yes	23	38.3
	37	61.7
5. On the NRS level, three represents mild pain.		
No		
Yes	4	6.7
	56	93.3
6. Today is Phillip's 1st post-operative day, and as you enter his room, he smiles at you and continues talking and joking with his visitor. Is his pain intensity 10 on the NRS?		
No	19	31.7
Yes	41	68.3
7. A patient-reported," I think about my pain all the time and give up many activities because of pain". Is it right to score her 8?		
No	14	23.3
Yes	46	76.7
8. Miss N.B.M., said that "My pain bothers me, but I can ignore it most of the time. Could it be fine to score the pain as "5"?		
No	24	40.0
Yes	36	60.0
9. Mr. P.M. today is his 1st POD following abdominal surgery. He is found lying curled in a fetal position, quietly in bed, and grimaces as he turns in bed. Is it precise to rate and score her as 8?		
No	9	15.0
Yes	51	85.0
10. If a patient sleeps with no movement postoperatively, this indicates that the patient is not in pain.		
No	24	40.0
Yes	36	60.0

Table 4 shows that majority of the respondents had low knowledge towards rating and scoring post-operative. For example, 60% of the respondents didn't know that the pain level of

seven is manageable. Also, more than fifty-eight percent of the respondents (58.3%) did not know that NRS six denoted severe pain. In addition, more than fifty-three percent of the respondents (53.3%) didn't know that level "2" denoted some pain. Furthermore, 61.7% of the respondents didn't know that on a scale of 0-10, postoperative patients with 5/10 needed any analgesic. However, some respondents had good knowledge towards rating and scoring post-operative pain. For resistance, more than ninety-three of the respondents (93.3%) knew that level "3 "represents mild pain.

More than seventy-six percent of the respondent (76.7%) knew a patient who reported that" I think about my pain all the time and give up many activities because of pain" scored 8. Also, 60% of the respondents knew that it was right to Miss N.B.M.'s pain intensity was 5/10, having reported "My pain bothers me, but I can ignore it most of the time". In addition, 85% of the respondents knew that Mr. P.M. on his 1st POD following abdominal surgery was found lying curled in a fetal position, quietly in bed, and grimacing as he turned in bed, it was precise to rate and score 8. On the contrary, a good number of respondents had low knowledge towards rating and scoring pain. For example, more than sixty-eight percent of the respondents (68.3%) didn't know that it was not right to score Phillip's pain intensity 10 as he was found smiling, talking, and joking with his visitor on his 1st postoperative day. Following the integration of the pain assessment scale to nurses' knowledge, the researcher continued to identify the nurse's knowledge of the methods of postoperative pain management. The findings are presented in Table 5.

Table 5 Postoperative pain assessment.

Variable	*f*	%
1. Typically, patients who can be distracted from their suffering do not experience severe pain.		
No	20	33.3
Yes	40	66.7
2. Following administration of a first dose of an opioid analgesic, the following doses should be modified based on each patient's response.		
No	2	13.3
Yes	58	86.7
3. For the treatment of mild to moderate pain, non-drug therapies like touch, heat, and music are particularly beneficial.		
No	14	23.3
Yes	46	76.7
4. Pain should be assessed before and after administering pain drugs.		
No	1	1.7
Yes	59	98.3
5. Vital signs are always reliable indicators of the intensity of a patient's pain.		
No	4	6.7
Yes	56	93.3
6. Physical assessment is part of pain management.		
No	8	13.3
Yes	52	86.7
7. The most accurate judge of the intensity of the patient's pain is the primary nurse.		
No	39	65.0
Yes	21	35.0
8. Is character, onset, location & duration of pain important in pain assessment?		
No	1	1.7
Yes	59	98.3
9. Observation is part of the method used in surgical pain assessment.		
No	12	20.0
Yes	48	80.0
10. Patients should be individually assessed to determine cultural influences in pain expression.		
No	9	15.0
Yes	51	85.0

Table 5 shows that most of the respondents had good knowledge of postoperative pain management. For example, more than eighty-six percent of the respondents (86.7%) knew that after administering the initial dose of an opioid, the subsequent doses are adjusted according to the level of the patient's pain. Correspondingly, more than seventy-six percent of the respondents (76.7) knew that nondrug interventions are effective in the management of mild to moderate levels of post-operative pain. Likewise, more than sixty-six percent of the respondents (66.7%) knew that

the distraction method works best for patients not having severe pain. In addition, more than ninety-eight percent of the respondents (98.7%) knew that pain should be assessed before and after drug administration. Similarly, more than ninety-three percent of the respondents (93.3%) knew that vital signs are reliable indicators of a patient's pain intensity. Moreover, 87.7% knew that physical assessment is part of pain management.

Additionally, more than ninety-eight percent of the respondents (98.3%) knew that character, onset, location & duration of pain were important in pain assessment. Further, eighty percent of respondents (80%) knew that observations are part of surgical pain assessment. Besides, 85% of the respondents knew that culture impacts pain expression therefore patients should be assessed individually. However, a noticeable number of respondents had low knowledge of postoperative pain assessment. For instance, sixty percent (60%) of the respondents didn't know that if a patient slept with no movement postoperatively, it indicated that the patient wasn't in pain. Lastly, thirty-five percent of the respondents (35%) didn't know that the patients were the most accurate judge of their pain.

Effect of Educational Intervention on Nurse's Knowledge towards Post-operative Pain Management.

The researcher wanted to find out whether the educational intervention had any impact on the nurse's knowledge towards post-operative pain management. The total knowledge scores for both the pretest and posttest are presented in the tables located in the appendix. The total knowledge of the respondents was determined and categorized under two levels where below 79% denoted unacceptable knowledge and above 80% denoted acceptable knowledge respectively. The pretest and posttest findings of knowledge levels are presented in Table 6.

Table 3 Comparison of pre and post knowledge

	Knowledge totals	
	Pretest	Posttest
Below 79%	96.7%	53.3%
Above 80%	3.3%	46.7%

Table 6 shows that majority of the respondents (96.7%) had a low level of knowledge about postoperative pain management before the intervention. However, there was a notable improvement in the level of knowledge following the intervention where the number from 3.3%(pretest) to 46.7%(posttest). The researcher further wanted to determine the effect of the intervention on the nurse's knowledge of postoperative pain management. A paired t-test was conducted to compare the means of the pre and post-test knowledge to determine the significance. The findings are presented in Table 7.

Table 4: Paired sample test

	Paired differences							
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the Difference		t	df	Sig.(2-tailed)
Pair 1 Pretest & post-test knowledge	-11.333	14.982	1.934	lower	upper	-5.860	59	.000
				-15.204	-7.463			

Table 7 shows that the education intervention had a positive effect on the nurse's knowledge towards post-operative pain management (M= -11.333, SD= 14.982). t =-5.860, dt= 59, p= 0.01.

The results suggested that the teaching intervention was statistically significant to the nurse's knowledge of postoperative pain management.

The Effect of Integrating the Pain Assessment Scale on the Nurse's Attitude towards Post Operative Pain Management.

The researcher conducted a pretest on nurses' attitudes towards postoperative pain management before educating the nurses on how to use the pain assessment scale in postoperative pain management. The respondents were asked about the different methods of postoperative pain management. The researcher used statements in which the respondent agreed or disagreed to reflect their attitude towards post-operative pain management by the use of a Likert scale. All the items were stated positively except statements 4 and 5 in Table 12. In these statements, a respondent who disagreed with them tended to reflect an acceptable attitude towards post-operative pain management. The respondents who strongly disagreed, disagreed, agreed, and strongly agreed with these statements were scored (4, 3, 2, & 1) respectively. The findings are presented in Table 8.

Table 8 Pretest attitude toward post-operative pain management.

Variable	SD (1)	D (2)	A (3)	SA (4)	Mean	Std.
1. I anticipate pain in all surgical procedures before I assess and treat pain in a patient.	13	6	24	17	2.75	1.099
2. If patient's thoughts are distracted from pain, they usually do not suffer from severe pain	14	12	21	13	2.55	1.080
3. Using pain measurement instruments is integral in post-operative pain management	7	11	18	24	2.98	1.033
4. Elderly patients are not able to cope with opioid analgesics for pain relief	20	26	8	6	1.57	.500
5. Before using an opioid analgesic, I will encourage the patients to wait a while longer till the next dose.	17	23	10	10	1.55	.050

Table 8 shows that majority of the respondents had an acceptable attitude toward post-operative pain management. For instance, the respondents agreed to the statement that pain should be anticipated in all surgical procedures before the assessment and treatment of POP (M=2.75, SD=1.099). Also, the respondents agreed with the statement that patients' thoughts distracted from pain usually do not suffer from severe pain (M=2.55, SD=1.080). Additionally, the respondents agreed that using pain measurement instruments was integral in postoperative pain management. Nevertheless, the majority of the respondents disagreed with the statement that using an opioid analgesic would encourage the patients to wait a while longer till the next dose (M=1.57, SD= .500). Also then, the majority of the respondents disagreed with the statement that elderly patients are not able to cope with opioid analgesics for pain relief (M=1.55, SD =.050). The researcher determined the nurse's attitude toward post-operative pain assessment before the

educational intervention. Five out of the nine-question items were stated negatively (2, 3, 5, 7 & 8) in that the respondent who disagreed with the statement reflected an acceptable attitude towards post-operative pain management. Therefore, their total scores were reversed which portrayed the right scores for the given responses. The findings are presented in Table 9.

Table 9: Attitude pretest towards postoperative pain assessment.

Variable	SD (1)	D (2)	A (3)	SA (4)	Mean	Std.
1. I at all times agree with the patient's self-report of pain	10	4	33	13	2.82	.965
2. Lack of expression in the postoperative patient means lack of pain	14	31	7	8	1.63	.486
3. Patients suffering from POP always complain to the primary nurse	9	15	19	17	1.45	0.502
4. Your visual assessment of the patient reporting pain influences your response and treatment of POP.	9	15	19	17	2.73	1.039
5. Patients complaining of pain is not my priority when I am busy	48	10	2	0	1.20	.403
6. The type of surgery done affects your response to pain management.	19	10	15	16	2.47	1.200
7. Women exaggerate post-operative pain during assessment.	7	24	21	8	1.75	.437
8. Morphine is a very strong drug. Postoperative patients are not expected to fill pain when receiving it	8	31	11	10	1.70	.462
9. Nurses should rely exclusively on patients' assessment to determine pain intensity	15	11	19	15	2.57	1.125
10. The spiritual beliefs of a patient may determine how they respond to pain7	7	5	19	29	3.17	1.011

Table 9 shows that the majority of the respondents had an acceptable attitude toward post-operative pain management. For example, the majority of the respondents agreed to the statement that at all times agreed with the patient's self-report of pain (M= 2.82, SD= .965). Similarly, the majority of the respondents strongly disagreed with the statement that patients who complained of pain were not their priority when their busy (M= 1.20, SD=0.403). Additionally, the majority of the respondents disagreed with the statement that Morphine was a very strong drug where post-operative patients are not expected to fill pain when receiving it (M=1.70, SD=.462). As well, the respondents agreed with the statement that nurses should rely exclusively on patients' assessment to determine pain intensity (M=2.73, SD= 1.039). Likewise, the respondents disagreed with the statement that a lack of expression in the postoperative patient meant a lack of pain (M=1.63, SD=.486). Furthermore, the respondents disagreed with the statement that the type of surgery done affects the response to pain management (M=2.47, SD= 1.200).

However, some respondents displayed an unaccepted attitude toward post-operative pain management. For example, the respondents agreed with the statement that the visual assessment of the patient reporting pain influences the response and treatment of POP (M= 2.73, SD= 1.039). Correspondingly, the respondents agreed with the statement that Women exaggerate post-operative pain during assessment (M=1.75, SD=.437). The pretest attitude totals of the respondents were determined, presented in tables allocated in the appendix, and categorized under two levels (below 79% was an unacceptable attitude, and above 80% was an acceptable attitude) respectively. During the pre-attitude test for postoperative pain management, none of the respondents scored above 79%.

The Effect of Integrating the Pain Assessment Scale on the Nurse's Attitude towards Post Operative Pain Management.

After the application of the educational intervention of integrating the pain assessment scale to nurses' attitudes, the researcher carried out a posttest to determine its effect on their attitude towards post-operative pain management. The findings are presented in Table 10.

Table 5 Posttest attitude towards post-operative pain management.

Variable	SD (1)	D (2)	A (3)	SA (4)	Mean	(Std.
1. I at all times agree with the patient's self-report of pain	2	2	27	29	3.25	.773
2. Lack of expression in the postoperative patient means a lack of pain	7	17	20	16	1.62	.490
3. Morphine is a very strong drug. Post-operative patients would be contented with just one dose.	4	12	26	18	1.63	.486
4. Patients suffering from pain, always complain to the primary nurse	16	17	21	6	1.63	.486
5. Your visual assessment of the patient reporting pain influences your response and treatment of POP.	1	8	32	19	3.15	.709
6. Nurses should rely exclusively on patients' assessment to determine pain intensity	1	8	32	19	3.15	.709
7. Spiritual briefs may determine how a patient responds to pain.	7	5	19	29	3.17	1.011
8. Patients complaining of pain is not my priority when I am busy	5	22	24	9	1.77	.427
9. The type of surgery done affects your response to pain management.	13	6	28	13	2.68	1.049
10. Women exaggerate post-operative pain during assessment.	7	18	26	9	1.73	.446

Table 10 shows that most of the respondents had an unacceptable attitude toward post-operative pain management. For example, the respondents agreed with the statement that lack of expression in postoperative patients meant lack of pain (M=1.62, SD =.490). Similarly, the respondents agreed with the statement that morphine is a strong drug, and patients should be contented with just one dose (M=1.63, SD=.486). Furthermore, the respondents agreed with the statement that patients suffering from pain, always complain to the primary nurse (M=1.63, SD=.486). Likewise, the respondents agreed with the statement that the visual assessment of the patient reporting pain influences the response and treatment of POP (M= 3.15, SD=.709). Last but not least, the respondents agreed with the statement that patients complaining of pain is not the priority when busy (M=1.77, SD=.427). Lastly, the respondents agreed with the statement that women exaggerated post-operative pain during assessment (M=1.73, SD=.446).

Nevertheless, some respondents displayed an acceptable attitude toward post-operative pain management. For instance, the respondents agreed to the statement that at all times agree with the patient's self-report of pain (M= 3.25, SD= .773). Also, the respondents agreed with the statement that nurses should rely exclusively on patients' assessment to determine pain intensity (M=3.15, SD =.709). Likewise, the respondents agreed with the statement that spiritual briefs may determine how a patient responded to pain (M= 3.17, SD= 1.011). In addition, the patients agreed to the statement that the type of surgery affected the response to pain management (2.68, SD=1.049). Following the application of the educational intervention of integrating the pain assessment scale into nurses' attitudes, the researcher carried out a posttest and the findings are presented in Table 11.

Table 61 Posttest attitude towards post-operative pain management.

Variable	SD (1)	D (2)	A (3)	SA (4)	Mean	(Std.)
1. I anticipate pain in all surgical procedures before I assess and treat pain in a patient.	2	6	27	25	3.38	.715
2. If patient's thoughts are distracted from pain, they usually do not suffer from severe pain	7	14	18	24	2.88	1.027
3. Using pain measurement instruments is integral in postoperative pain management	7	5	19	29	3.17	1.011
4. Elderly patients are not able to cope with opioid analgesics for pain relief	5	22	24	9	1.77	.427
5. Before using an opioid analgesic, I will encourage the patients to wait a while longer till the next dose.	16	17	21	6	1.63	.486

Table 11 shows that the majority of the respondent had an acceptable attitude toward post-operative pain management. For example, the respondents agreed with the statement that pain should be anticipated in all surgical procedures before the assessment and treatment of pain in post-operative patients (M= 3.38, SD =. 717). In addition, the respondents agreed with the statement that patients distracted from pain don't suffer from severe pain (M= 2.88, SD= 1.027). Likewise, the respondents agreed that using pain measurement instruments was integral in postoperative pain management (M= 3.17, SD= 1.011). Further, the respondents disagreed with the statement that before an opioid analgesic is used, will encourage the patients to wait a while longer till the next dose (M=1.63, SD = .486). But then, some respondents displayed an

unacceptable attitude toward POP management. For example, the respondents disagreed with the statement that elderly patients are not able to cope with opioid analgesics for pain relief (M= 1.77, SD= .427). All the negatively stated statements were reversed for the respondents who disagreed received a higher score as they reflected an acceptable attitude. The post attitude total scores for the respondents were determined and categorized under two levels where (below 79% denoted an unacceptable attitude and above 80% denoted an acceptable attitude) respectively. The findings are presented in Table 12.

Table 7 Comparison of pretest and posttest totals.

Category of totals	**Attitude totals**	
	Pretest	Posttest
Below 79% (unacceptable attitude)	100%	78.3%
Above 80% (acceptable attitude)	None	21.7%

Table 12 shows that the respondent's level of attitude improved by 21.7% after the educational intervention. A paired t-test was conducted to determine the effect of the intervention. The findings are illustrated in Table 13

Table 13; Paired sample statistics for attitude

	Paired differences							
	Mean	Std. Deviation	Std. Error Mean	95% confidence interval of the Difference		t	df	Sig.(2-tailed)
Pair 1 Pretest & post-test knowledge	-10.933	11.324	1.462	lower	upper	-7.479	59	.000
				-13.859	-8.008			

Table 13 shows that after conducting a paired t-test to compare the pretest and post-test attitude totals a statistically significant difference was noticed in postoperative pain management. The pretest attitude (M = 60.72, SD=7.095) and the posttest (M=71.65.SD= 7.688), t =-7.479, dt= 59, p=.000. The results suggest that the teaching intervention improved the nurse's attitude towards post-operative pain management.

The Practice towards Post Operative Pain Management.

The respondents were pre-intervention assessed on the surgical ward's post-operative pain management practice using a checklist. The researcher was interested in learning if they were measuring post-operative discomfort and, if so, how. The research used a 14-item structured questionnaire to evaluate the practice prior to the educational intervention. The questions were worded so that the researcher may respond by checking the appropriate box when something was done or not done. The words "done" and "not done" indicated whether something had been completed correctly or not. Table 14 displays the results.

Table 14: Pretest regarding post operative pain management practice.

Activities during pain assessment and management	f	%
1. Provides direct nursing care to POP patients.		
Done	25	41.6
Not done	35	58.4
2. Assesses for pain intensity for patient who couldn't communicate.		
Done	0	0
Not done	60	100
3. Assesses pain using the PQRST.		
Done	0	0
Not don	60	100
4. Assesses pain using a pain assessment tool.		
Done	0	0
Not done	60	100
5. Clearly documents pain assessment findings using a numeric rating scale.		
Done	0	0
Not done	60	100
6. Explains clearly to ensure the patient understands the pain levels on the scale.		
Done		
Not done	0	0
	60	100
7. Communicates findings with the relevant authority.		
Done	0	0
Not don	60	100
8. Agrees with patients' statements about their pain.		
Done	18	30
Not don	42	70
9. Probes to validate patients' statements about their pain.		
Done	0	0
Not don	60	100
10. Educates patient about pain management strategies (list for each checklist)		
Done		
Not done	0	0
	60	100
11. Reassesses pain level after intervention.		100
Done	07	11.7
Not don3	53	88.3
12. Involves patient and family in pain assessment plan.		
Done	19	48.4
Not don	31	51.6
13. Documents treatment modality for pain		
Done	0	0
Not don	60	100
14. Impact of pain on functionality is documented.		
Done	0	0
Not done	60	100

The majority of responders, as shown in Table 14, did not rate the postoperative pain for the patients on the surgical wards as evidenced in the patient's case books. For instance, the responders were unable to assess pain intensity for patients who couldn't communicate.

None of them informed the appropriate authority of their findings because they failed to consider postoperative discomfort. Similarly, none of the respondents provided the patient with information on pain management techniques. In line, none of the patients' case book had the treatment modality for pain documented. More troublingly, 70% of the respondents did not agree with the patients about their post operative pain. It was revealed that only 11.7% of the respondents assessed for the pain intensity after administering a pain killer.

The Effect of Integrating the Pain Assessment Scale on the Nurse's Practice towards Post Operative Pain Management (posttest).

The researcher used an observation checklist to conduct a post evaluation test following the implementation of the educational intervention of incorporating the pain assessment scale into nurses' practice to ascertain its impact on the practice of post-operative pain management. The results are shown in Table 15.

Table 15: Post evaluation regarding post operative pain management practice.

Activities during pain assessment and management	f	%
1. Provides direct nursing care to POP patients.		
Done	45	75
Not done	15	25
2. Assessment for pain intensity for patients who are able to communicate.		
Done	32	53.3
Not done	18	46.7
3. Assesses pain using the PQRST.		
Done	52	87.0
Not don	08	13.0
4. Assesses pain using a pain assessment tool.		
Done	44	73.3
Not done	16	26.3
5. Clearly documents pain assessment findings using a numeric rating scale.		
Done	28	46.7
Not done	32	53.4
6. Explains clearly to ensure the patient understands the pain levels on the scale.		
Done	31	51.7
Not done	29	48.3
7. Communicates findings with the relevant authority.		
Done	34	56.7
Not done	16	43.3
8. Agrees with patients' statements about their pain.		
Done	29	48.3
Not done	31	51.7
9. Probes to validate patients' statements about their pain.		
Done	17	28.3
Not done	43	71.7
10. Educates patient about pain management strategies (list for each checklist)		
Done	25	41.7
Not done	35	58.3
11. Reassesses pain level after intervention.		
Done	26	43.3
Not done	34	56.7
12. Involves patient and family in pain assessment plan.		
Done	32	48.4
Not done	28	51.6
13. Documents treatment modality for pain		
Done	36	60
Not done	24	40
14. Impact of pain on functionality is documented.		
Done	35	58.3
Not done	25	41.7

According to Table 15, majority of respondents had their post-operative pain management practices improved. For instance, the majority of responders (87%) were able to use

the PQRST to evaluate post-operative pain. Additionally, more than seventy-three percent (73.3%) of the respondents used the pain assessment scale to manage post-operative pain. Also, 75% of the respondents gave POP patients direct nursing care. However, most respondents (71.7%) were unable to confirm the claims of the patients' pain by probing. Also, more than fifty eight percent (58.3%) of the responders did not inform patients about pain management techniques. Nevertheless, 56.7% of the respondents did not reevaluate the severity of the patients post operative pain following the intervention.

Chapter Five: Discussion of Findings

The results of the current research survey are presented in detail in this chapter. The study's conclusions are evaluated in further detail, with references to and evaluations of earlier published studies. The report's consequences are wide-ranging, as are its suggestions for future research and teaching projects. The goal of the current study was to determine how the pain assessment scale integration affected the nurses' knowledge, attitudes, and practices about post-operative pain care in the surgical ward at Mengo Hospital. The results raise concerns about the respondents' unacceptably low level of knowledge regarding how to manage patients' postoperative pain.

The theory of clinical coaching in nursing and midwifery was used as a flame work to the study findings. Application of the theory made it easy for the researcher to deliver the educational intervention to nurses and midwives at their workplace which helped them attain new knowledge, clinical skills, and practice (Salim, Tuffaha & Brant, 2020). The educational intervention enhanced nurses' understanding of pain assessment, work attitudes, and the application of administering appropriate analgesia in accordance with the intensity of pain. Consequently, leading to the provision of quality services to patients with post-operative pain (Faithfull-Byrne, 2017).

Nurses' knowledge of the management of post-operative pain

Based on the survey, the majority of the nurses in the Mengo surgical ward knew the correct way of rating POP on the 0-10 NRS. The findings of Albaqawi, Maude, and Shawha-Akl (2016) that nurses lack understanding regarding pain evaluation were not supported by these studies. Additionally, the patient's low pain rating score is comparable with Maestro-Gonzalez et al (2021). It is also interesting that the majority of surgical ward nurses thought that the attending physician

and the patient's primary nurse, rather than the patient himself, should determine the patient's pain level.

The most intriguing finding was that a mass of participants at Mengo Hospital mistakenly believed vital signs to be valid measures of patient pain intensity. Inline, nurses believed vital signs to be consistently reliable predictors of patient pain intensity, according to Khalil (2019). Accurate pain assessment is hampered by nurses' belief that shifts in vital signs are a reliable indicator of a patient's level of suffering. Patients can obtain successful pain management if pain evaluation and management techniques based on scientific knowledge and research are applied consistently to patient care. This can prevent stress and dissatisfaction with patient care.(Rahimi-Madiseh, Tavakol & Dennick, 2010).

In this contemporaneous study, analysis of the items that measured knowledge about assessing pain was generally positive, but several misunderstandings in this particular topic surfaced. The patient's self-report of the degree of pain is the most accurate and trustworthy indicator of the presence of pain, according to previously recognized standards(Masigati & Chilonga, 2014 & Yüceer, 2011). The majority of participants in this survey accurately concluded that the patient is the best judge of whether or not there is pain.

The patient is the most accurate judge of the presence of pain, according to a significant issue that emerged in this recent study of respondents. The findings showed that most nurses were more likely to believe the pain score of the patient who was grimacing than the one who was smiling when respondents were asked to rate both patients' degrees of pain intensity. This contradicts the adage that states that pain is whatever the person feeling it claims it to be (Mahama & Ninnoni, 2019)**.** This disparity showed that respondents' assessments of both patients in the case situations changed depending only on the presence or absence of physical pathology. This is in

line with the findings of previous researchers who have also demonstrated that nurses modify their numerical assessments of pain based on the behavior of patients, more likely to believe a patient who is displaying behavioral signs of pain than a patient who is not. (Rahimi-Madiseh, Tavakol & Dennick 2010). Additionally, according to assessed results from the majority of respondents, nurses' assessments of pain are based on their intuitive judgements and patients' nonverbal pain cues, both of which have been identified as obstacles to efficient pain treatment.

A significant proportion of participants in this survey, however, incorrectly asserted that physiological changes in vital signs are always reliable indicators of the presence of pain. This revealed other misconceptions about how to judge pain. This outcome is in line with earlier studies that supported the idea that vital signs were a significant indicator of the level of discomfort (Adams, Varaei & Jalalinia, 2020; Jemebere, Bekele, & Tsegaye et al., 2020).

Further, this study discovered erroneous assumptions and information gaps about patients' pain-related behaviors. The neuromatrix theory of pain maintains, as was already noted, that psychological factors, which are essential to how pain is experienced, have a considerable impact on pain(Persistent Pain ; What Is It ? What Can We Do about It ? Impact of Pain, n.d., Mandeville, 2010). This has led to a growing understanding of the need for non-pharmacological interventions as adjuvant therapy for the effective management of pain. When a significant portion of respondents to the current study were unaware that patients who can be distracted from pain typically do not have severe pain, this revealed knowledge gaps in this area.

Further, equally troubling was that nearly half of the respondents in this study believed that people with severe pain cannot sleep. This finding is parallel to Al-sayaghi et al. (2022) and Jemebere et al. (2020) who shown that nurses thought patients who could sleep were not in great discomfort. This finding also reflects the work of other researchers like Wang and Tsai (2010);

Khalil 2019 and Kiekkas et al., (2015) patients do employ coping strategies such as distraction techniques and sleeping to avert their attention from pain. This result also supports the findings of previous investigators, like Wang and Tsai (2010), Khalil 2019 and Kiekkas et al. (2015). Patients do use coping mechanisms including sleeping and distraction techniques to block out pain. This conclusion may be accurate given that nurses lack sufficient expertise in pain evaluation. These sleep-related discoveries can aid nurses and midwives in better managing patients' POP.

Nurses' attitude towards post-operative pain management.

In studies, nurses have stated a lack of emotional interest in pain and a perception that pain is a normal component of a person's state. Carolyn (2017) claims is a compelling case for a general lack of interest on the part of nurses in alleviating suffering. In this survey, nearly all of the respondents opposed the above statement by strongly disagreeing with the statement that patients complaining of pain wasn't their priority which displayed a good attitude. The present study, huge percentage of participants were against the opinion of women having exaggerated post-operative pain during assessment thus confirming pain being a subjective and discouraging generalization of patients' care for proper managing post-surgical pain. It will require ongoing training to strengthen the optimistic outlook toward post-operative pain management (Faithfull-Byrne, 2017).

Grounding on the survey, the results of this study showed an unacceptable attitude towards post-operative pain management when most participants admitted to waiting a while longer till the next dose of analgesia is being administered to a post-operative patient in pain. This did not align with the findings of other researchers who also found that the majority of respondents didn't agree with the statement of waiting a while longer till the next dose for a post-operative patient in pain without administration of any analgesic (Al-sayaghi et al., 2022). Uncontrolled post-operative pain

may call for a prolonged hospital stay and poor health outcomes (Meissner et al., 2015). Therefore, the unacceptable attitude needs to be handled as soon as being identified for quality care.

Since most respondents in this study concur with the statement that visual evaluation of the patient reporting pain affects their response and management of POP, unacceptable attitudes regarding pain assessment continue to emerge. Assessment of postoperative pain is hampered by this. According to research, pain is the fifth vital sign and demands constant evaluation and prompt treatment(Thapa & Gurung, 2020).

Additionally, most survey participants accurately noted that patients' spiritual beliefs may affect how they perceive pain. Curry (2010) claimed that each individual has a unique cultural perspective and that nurses tending to patients who are in pain need to be mindful of any opposing influences, such as spiritual and religious views. This result is congruent with Samarkandi (2018) who reported that the participants accurately accepted that some religious beliefs might influence patients' perceptions of the necessity of suffering. Therefore, pain assessment is vital in making pain evident for patients who for some reason may be culturally certain not to reflect pain (Köse Tamer & Sucu Dağ, 2020).

Nurses' Practice in the Management of Post–Operative Pain

Following the educational intervention of introducing the pain assessment scale into nursing practice, it was discovered that postoperative pain management practices on surgical wards had significantly improved. The results showed a positive effect on nursing practice for example, majority of responders were able to use the PQRST to evaluate post-operative pain.

According to the study findings a sizeable number of respondents documented the treatment modality for pain. Inline, Dessie et al. (2019) documentation facilitates therapy, helps with staff communication, and is essential for effective post-operative pain management. One of the most important aspects of effective pain treatment is the use of pain assessment instruments. This is in line with Kituyi et al. (2011) who claimed that inadequate pain assessment strategies have been blamed for impeding patients' ability to manage their pain effectively. Therefore, it is imperative that medical facilities make sure all nurses caring for post-operative patients use the pain assessment scale. The results imply that the respondent may easily adopt to daily use of the post operative pain assessment scale (NRS) thus improving the quality of post operative care.

A thorough assessment of the pain using standardized methods is the first step in effective pain management. This makes it easier to evaluate the success of the intercessions made in response to the various pain-alleviation needs of the patients. In most of the respondents, did not reassess pain level after intervention. The outcomes were consistent with those reported by Kaasalainen et al. (2007) who claimed that improper tool use resulted in an inaccurate estimate of the patient's discomfort. The patient's outcomes may be impacted by incorrect pain medication administration and misinterpretation of the patient's pain levels. The nurses are encouraged to carry out both pre and post pain assessments for quality care.

In the current study a good number of respondent did not document the impact of pain on functionality whereas a comprehensive evaluation of the patient and documentation makes therapy easier and aids in communication amongst medical staff and also considered to be the first steps in proper pain management.(Dessie et al., 2019). The findings could point to certain limitations in the pain assessment scale's ability to be used correctly.

Limitations of the Research.

This study had limitations while providing data regarding the knowledge, attitude, and practices of nurses working in the surgical ward at Mengo Hospital. The study cannot be applied to other nurse sample populations, primarily because it was restricted to nurses who worked in the surgical wards at Mengo Hospital. It's possible that nurses with little expertise or interest in pain management chose not to participate in this study. This may suggest that non-respondents may have had knowledge and attitudes that were less favorable than those of the nurses who took part in the current study (Rieman & Gordon, 2007).

As a result, this restricts the generalizability of the study's findings because they might not be representative of the greater population of nurses employed in Mengo Hospital's surgical ward. The fact that the researcher only included nurses on day shift, may have excluded interested workers who would have benefited more from the intervention, given that night nurses also care for patients who have just had surgery. This suggests that the additional researcher do yet another study concentrating on both day and night nurses who care for the same patients.

Conclusion

The results revealed a great improvement which was satistically significant in the nurses knowledge,attitude and practice towards post operative pain management($p= 0.01$). Regarding the survey, the knowledge, practice improved more. However, in the context of pain management,

some fundamental areas showed a lack of knowledge and attitudes regarding pain. The main areas that revealed the greatest knowledge gaps and shortcomings were the selection of opioids, the evaluation of pain, and the incorrect assessment of pain in the absence of behavioral expressions. This is concerning since effective pain management depends on the knowledge, attitude, and abilities of healthcare professionals. The knowledge, attitude, and practice of nurses in pain management should therefore be improved, as well as their role in pain assessment, through nursing education and ongoing professional advancement/development.

Recommendations

Regarding the survey, it was accepted that there was a substantial knowledge gap, unfavorable attitude, and poor practice, all of which were evident in the pretest but significantly improved in the post intervention evaluation. There was no significance for the demographic variables. In light of the fact that the education intervention of incorporating a pain assessment scale to the nurse's knowledge had a significant impact on the nurses' knowledge, attitude, and practice regarding postoperative pain management, nursing schools should give nurses adequate, accurate knowledge about the assessment and management of pain.

The results clarified the arguments in favor of the necessity for suitable educational interventions to improve nurses' knowledge, attitudes, and practices regarding post-operative pain management and expanded the suggestions of other experts. The institutions are advised to provide all nurses with continued nursing education in post-operative pain management at least once a month. Additionally, the institution's human resource department should prioritize annual sponsorship of at least one to three nurses from each surgical unit for refresher training.

The audit meeting should be promoted in the surgical, obstetric, and gynecological departments to improve the nurses' knowledge and outlook on quarterly basis towards post-

operative pain management. Since effective postoperative pain management requires multidisciplinary (teamwork) care, this necessitates ongoing training and mentoring of senior staff, including doctors and nurses.

More specifically, surgical nurses must be competent to identify and manage pain in order to provide high-quality nursing care. To achieve this, more work needs to be done in health organizations, such as a quality enhancement program like the quality improvement teams (QITs), which may adopt a variety of tactics targeted at enhancing knowledge and pain management procedures. Continuous training and programs in pain management can help with this.

The researcher also suggests that rigorous and comprehensive educational programs be modified to consider the demands of nurses at both the undergraduate and graduate levels. Nursing curriculum at the undergraduate and master's level needs to be extensively examined to make sure that the knowledge presented in these modules prepares nurses to treat pain in an appropriate manner.

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APPENDICES

Appendix A: Questionnaire

Questionnaire code _____ Date of interview _____

The questionnaire is going to examine the nurse's knowledge and attitude toward postoperative pain management using a pain assessment scale. It consists of three parts: -

Part 1 consists of demographic data.

Part 11 focuses on the knowledge questions.

Part 111 consists of questions to determine the attitude.

Part 1: Demographic characteristics

1. Age in years ----------

2. Sex: Male: ---------- Female …….

3. Qualification
    a. Certificate
    b. Diploma
    c. Degree
    d. Masters
    e. Others (please indicate …….

4. Working experience in years…….

5. Working experience on the surgical ward: ……
6. Orientation to pain management:
    a. CPD
    b. CNE
    c. Others…….

Part II: Nurse's Knowledge on post-operative pain assessment

Please tick the correct response

Variable	Yes (2)	No (0)
1. Pain should be assessed before and after administering pain drugs.		
2. Vital signs are always reliable indicators of the intensity of a patient's pain		
3. Patients who can be distracted from pain usually do not have severe pain		
4. On a scale of 0-10, seven is unmanageable		
5. After an initial dose of opioid analgesic is given, subsequent doses should be adjusted in accordance with individual patient's response		
6. Physical assessment is part of pain management.		
7. The most accurate judge of the intensity of the patient's pain is the primary nurse		
8. Is the character, onset, location, and duration of pain important in pain assessment?		
9. Observation is part of the method used in surgical pain assessment.		
10. On a scale of 0-10, six denote severe pain		
11. Patients should be individually assessed to determine cultural influences on pain expression		
12. If a patient sleeps with no movement postoperatively, this indicates that the patient is not in pain.		
13. Does 0-2 on the NRS (0-10) denote no pain at all?		
14. On a scale of 0-10, post-operative patient with 5/10 does not need any analgesic		
15. Nondrug interventions e.g., music, heat, and touch are very effective for mild to moderate pain control.		
16. On a scale of 0 – 10, three represents mild pain		
17. Today is Phillip's 1st post-operative day, and as you enter his room, he smiles at you and continues talking and joking with his visitor. Is his pain intensity 7/10 on the NRS?	**Yes**	**No**
18. A patient report" I think about my pain all the time and give up many activities because of pain". Is it right to score her 8/10 on the on the NRS?		
19. Miss N.B.M., said that "my pain bothers me, but I can ignore it most of the time. Could it be fine to score the pain as "5/10" on the NRS?		

20. Mr.P.M today is his 1st POD following abdominal surgery. He is found lying curled in fetal position, quietly in bed and grimaces as he turns in bed. Does 8/10 portray the patient's pain intensity using the NRS?		

Part III: Nurse's Attitude towards Post-Operative Pain Assessment.

Please tick the statement with the correct response regarding your attitude towards pain assessment and management

Variable	**Strongly disagree (1)**	**Disagree (2)**	**Agree (3)**	**Strongly Agree (4)**
1. I at all times agree with the patient's self-report of pain				
2. I anticipate pain in all surgical procedures before I assess and treat pain in a patient				
3. Lack of expression in the postoperative patient means lack of pain.				
4. If patient's thoughts are distracted from pain, they usually do not suffer from severe pain	**SD**	**D**	**A**	**SA**
5. Morphine is a very strong drug. Postoperative patients are not expected to feel pain when receiving it.				
6. A patient suffering from pain will always complain to the primary nurse				
7. Your visual assessment of the patient reporting pain influences your response and treatment of POP.				
8. Using pain measurement instruments is integral in post-operative pain management				
9. Elderly patients are not able to cope with opioid analgesics for pain relief				
10. Before using an opioid analgesic, I will encourage the patients to wait a while longer till the next dose				
11. Nurses should rely exclusively on the patient's assessment to determine pain intensity				
12. The spiritual beliefs of a patient may determine how they respond to pain.				
13. Patients complaining of pain is not my priority when I am busy				
14. The type of surgery done affects my response to pain management				
15. Women exaggerate post-operative pain during assessment				

Appendix B: Integration of The Pain Assessment Scale to the Nurses' Knowledge, Attitude, and Practice towards Post-Operative Pain Management

Checklist for practice

1. Activities during pain assessment and management	Done	Not done
2. Provides direct nursing care to POP patients.		
3. Assesses for pain intensity for patient who are able to communicate.		
4. Assesses pain using the PQRST		
5. Assesses pain using a pain assessment tool.		
6. Clearly documents pain assessment findings using a numeric rating scale		
7. Explains clearly to ensure the patient understands the pain levels on the scale		
8. Communicates findings with the relevant authority		
9. Agrees with patients' statements about their pain		
10. Probes to validate patients' statements about their pain		
11. Educates patient about pain management strategies (list for each checklist)		
12. Reassesses pain level after intervention		
13. Involves patient and family in pain assessment plan		
14. Documents treatment modality for pain		
15. Impact of pain on functionality is documented.		

Appendix C. Pre and Posttest Results for Integration of the Pain Assessment Scale to the Nurses Knowledge, Attitude and Practice towards Post Operative Pain Management.

Respondents	Pretest knowledge total	Posttest knowledge totals	Pretest attitude total	Posttest attitude total
1	55	75	67	58
2	55	65	55	77
3	70	60	63	67
4	60	85	50	85
5	55	60	68	62
6	70	55	57	62
7	75	65	57	67
8	65	80	57	73
9	80	80	47	88
10	65	70	47	68
11	55	65	60	60
12	55	85	50	67
13	60	70	63	67
14	75	80	50	77
15	60	60	65	68
16	70	60	67	62
17	70	55	63	68
18	55	75	50	80
19	65	80	63	73
20	65	90	60	67
21	40	70	68	75
22	65	85	70	82
23	55	90	55	83
24	70	85	62	82
25	70	90	65	78
26	60	80	70	80
27	65	70	70	73
28	65	65	67	67
29	75	85	48	73
30	65	85	62	73

Appendix C. Pre and Posttest Results for Integration of the Pain Assessment Scale to the Nurses Knowledge, Attitude and Practice towards Post Operative Pain Management.

Respondents	Pretest knowledge total	Posttest knowledge totals	Pretest attitude total	Posttest attitude total
31	50	80	62	68
32	50	95	60	82
33	45	90	60	80
34	55	85	55	80
35	70	50	60	68
36	75	85	63	85
37	65	80	58	67
38	60	65	62	65
39	60	90	63	78
40	55	75	62	78
41	55	70	63	68
42	60	50	55	63
43	60	65	55	55
44	65	60	68	72
45	70	75	63	78
46	65	85	72	75
47	95	85	52	82
48	65	70	72	72
49	75	65	57	82
50	65	85	68	62
51	65	90	55	68
52	70	60	63	60
53	45	60	57	65
54	65	65	63	62
55	70	85	78	70
56	50	85	58	70
57	45	55	62	73
58	70	80	75	67
59	65	70	48	67
60	55	75	58	75

Glossary of Terms and Acronyms

PAS – Pain Assessment

POP - Postoperative pain management

NRS- Numerical Rating Scale