

**KNOWLEDGE, ATTITUDE AND PRACTICES OF NURSES RELATED TO PAIN
ASSESSMENT AMONG POST-OPERATIVE PATIENTS IN THREE
HOSPITALS IN KCCA**

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**AN UNDERGRADUATE RESEARCH DISSERTATION SUBMITTED TO THE SCHOOL
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AWARD OF A BACHELOR'S DEGREE IN NURSING OF INTERNATIONAL
HEALTH SCIENCES UNIVERSITY**

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DECLARATION

I solemnly certify that this is entirely my original work and it has never been presented for an award of degree in any university.

Signature:

Jane June Otieno

Date:

APPROVAL

The dissertation carried out by Jane June Otieno on “Knowledge, Attitude and Practices of Nurses related to Pain Assessment among Post-operative Patients in three Hospitals in KCCA” has been done under my supervision and is now ready to be submitted in partial fulfillment of the requirements for the award of a degree of Science in Nursing of International Health Sciences University.

Signature:

Judith Apio Allsaints

Date:

DEDICATION

I would like to express my heart-felt thanks to my loving parents, Mr. and Mrs. Otieno Sulle, who sponsored my studies and supported me to the finish line, I am forever grateful

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I praise the Almighty God for his grace which has enabled me accomplish the exercise of research and writing this book.

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My sincere appreciation goes to the research ethics committee of IHSU, IHK, Naguru Hospital and Lubaga Hospital for granting me permission to go ahead conduct the study.

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OPERATIONAL DEFINITIONS

Attitude:	Way of thinking or feeling about something that may be reflected in nurses' behavior when assessing and managing patients' pain. (Insley, 2004)
Knowledge:	Information, understanding and skills that a nurse has in relation to pain assessment and management which is gained through education and experience. (Walter, 2005)
Post-operative patients:	Patients who have undergone surgery, from completion of the operation to the time when one fully recovers. (Pietrangelo, 2013)
Practices:	The way nurses carry out their activities/ interventions related to pain assessment and management. (Insley, 2004)
Pain:	Is an unpleasant sensory and emotional experience associated with actual or potential damage or described in terms of such damage (IASP, 1979).
Acute pain:	Is pain temporarily related to injury and that resolves during the appropriate healing period (Duarte, 1997)
Pain assessment:	Is a systematic way of evaluating patients' pain to determine the character, duration, intensity and location of pain (Mosby, 2009)
Pain assessment tool:	A standard tool used by the nurse to gauge patients' pain (Carr & Mann, 2000)

LIST OF ABBREVIATIONS AND ACRONYMS

AHCPR	-Agency for Health Care Policy and Research Purpose
IASP	-International Association for the Study of Pain
IHK	-International Hospital Kampala
IHSU	- International Health Sciences University
KCCA	- Kampala City Council Authority
NKAS	- Nurses Knowledge and Attitude Survey Regarding Pain
PAT	- Pain Assessment Tool
PTSD	-Post-Traumatic Stress Disorder
SASA	- The South Africa Society of Anesthesiologist
SPSS	- Statistical Package for the Social Sciences
VAS	- Visual Analogue Scale
VNRS	- Verbal Numeric Rating Scale
VRS	- Verbal Rating Scale
WHO	- World Health Organization

ABSTRACT

Post-operative patients in particular experience severe to moderate pain following surgical procedure. Pain management is a vital component when caring for these patients to ensure prompt recovery. It was essential to explore the knowledge, attitude and practices of nurses related to pain assessment among post-operative patients. The significance of the study was to generate data required and to develop strategies to improve nurses' knowledge, attitude and practices related to pain assessment among post-operative patients in order to improve patients comfort and quality of life through improved nursing practice.

A descriptive, cross-sectional design was employed after approval from IHSU research committee and the three target hospitals. A total population of N=373 nurses and midwives who work on post-operative patients in the three hospitals in Kampala participated in the study. A structured, self-administered questionnaire was used to collect data. Data was analyzed by tables, graphs, pie charts and percentages.

The study revealed that majority of respondents, 290 (77.8%) had a high level of knowledge on pain management among post-operative patients; 208 (56%) had positive attitude towards pain management among post-operative patients and 227 (60.9%) reported to use pain assessment tools in the evaluation of pain.

Findings highlight the need to improve nurses' knowledge, attitude and practices related to pain assessment and management among post-operative patients. Initiatives are recommended such as the need to conduct routine continuous health education, setting up strict guidelines, policies, routine supervision and motivating nurses with up to date information among others.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Pain is one of the most common concerns that occur in health institutions. It is among the topmost experiences that can limit patients' wellbeing and quality of life. Assessing pain is the first step in ensuring that the patient's pain is relieved and this is a significant goal in care (Gelinas et al, 2006). Millions of surgeries are performed on patients every year globally for various indications. These surgeries are accompanied by some degrees of pain. The management of pain is an important aspect of patients' care and nurses play an essential role in providing pain assessment and treatment. (Coulling 2005, Courtenay and Carey 2008, Luiso and Fong 2008). Nurses who have a strong foundation in the management of pain and who can provide individual care to patients with proper attitude can make a significant outcome in pain management. Pain associated discomfort can thus be decreased and thus, patients quality of life improved (Lui So & Fong 2008)

Studies conducted in Canada reveal that 55 to 78.6 percent of hospitalized patients suffer from pain of moderate to severe (Strohbecker et al. 2005,). Studies show that there are gaps on the subject of pain assessment and management regardless of training (Lui So & Fong 2008). Though studies show that education programs on pain increases nurses' knowledge and improve their attitudes towards assessment and management of pain, there is still a problem with the management of post-operative pain by the nurses. (Goodrich 2006; Elliot et al. 1996). Inadequate education and training of nurses are amongst the issues that lead to poor post-operative management of patients' pain (Dalton et al. 2005; De Rond et al. 2004). A number of nurses depend on their own opinion about patients' pain, instead of assessing the patient for pain to assist in choosing the proper management. Appropriate tools for assessing pain are not usually used regularly in acute care settings such as post-operative ward; this contributes to inadequate pain treatment (McCaffery et al. 2000; Clarke et al. 1996).

Managing patient's pain is an essential part of nursing practice, however many nurses still lack basic knowledge required to manage patients' pain appropriately (McCaffery et al. 2000; Puntilo

et al. 1997). If pain is not relieved post-operatively it is likely to be harmful and adversely affect the patient's quality of life (Howell Et al. 2000; Watt-Watson et al. 2000). Nursing education has developed to meet the changing demands of health care and technological advancement. Within the post-operative setting, the advanced practice nurse with special knowledge in pain assessment and management offers effective pain control services to patients (Sawhney and Sawyer, 2008). Within the surgical context postoperative patients in many countries including Uganda still experience moderate to severe pain following surgical procedure (Clegg-Lamprey and Hodasi, 2005; Quet al., 2008). Outcomes of a study done in Ghana revealed that nurses underestimate patients' pain, do not believe patients are in pain, thus they do not perform proper assessment and management (Aziato and Adejumo, 2013; Rejeh et al., 2009). Nevertheless, ineffective postoperative pain assessment leads to poor management which poses problems for patients such as pulmonary complications that retard their recovery (Pasero and McCaffery, 2011).

WHO guideline of pain assessment and management, which is adopted by the Ministry of Health (MOH) in Uganda, has six key steps for effective pain assessment and management of post-operative pain. The steps are; determining medical or surgical emergency based on vital signs, assessing the patient for pain, determining pain management treatment plan or modifying the pre-operative plan, implementing the pain management treatment plan, evaluating then follow up of the patient. Each step should be document for future use and also to provide continuity of care.

Most of the developing countries including Uganda do not have access to the latest technologies and techniques, this limits clinicians in practice as they are unable to provide the best care and ensure patient's comfort and quality of life. Lack of these critical resources affects the management of post-operative pain. A survey conducted by Paul Firth (2012) from Massachusetts General Hospital, United States revealed that post-operative pain is poorly managed in Uganda.

Regardless of increased knowledge and resources for pain assessment and management, research reveals that many patients in hospitals in developing countries including Uganda still experience pain. Nurses' knowledge, attitude and practice related to assessment of pain among post-operative patients is the core and an essential element and the first step in controlling the

complex experience. It is therefore important to examine these components as a vital step in building a ground for stratagems in proper pain management thus guaranteeing patients' comfort and quality of life and ultimately improving nursing practice.

1.2 Problem statement

Majority of post-operative patients experience moderate to severe pain. Pain after surgery is highly prevalent and is still a major challenge when managing patients despite measures put in place to ensure that they are free from pain. Proper assessment and effective postoperative pain management, which includes both pharmacological and non-pharmacological measures administered to relieve pain, is an essential component in ensuring patients' comfort and quality of life.

Nurses are professionally responsible and play a vital role in the assessment and management of pain; therefore, they should be greatly knowledgeable to make sure their practices are of a high quality standard when managing pain. All nurses undergo training and they ought to have knowledge about pain assessment and be in a position to carry out practices to ensure that the patient is free from pain. Regardless of these, patients in many countries including Uganda still experience moderate to severe pain post-operatively.

Many patients in Uganda, especially Kampala who have undergone surgery complain of post-operative pain during their stay in hospital. Poor pain control has been one of patients' complaints traceable to poor assessment and management. Pain can delay early recovery of post-operative patients if not effectively managed. Impaired sleep which comes as a consequence of unrelieved pain contributes to development of anxiety, depression, delirium and PTSD among these patients (Ely, Shintani, Truman, Speroff, Harrell & Gordon, 2005). Pain compromises recovery, this affects sickness and death negatively due to its adverse effects. (Dale, Knechtel, Fraser, Haslam, Pinto & Rose 2011). Effective assessment of pain is the key to effective control of pain. This study is designed to assess knowledge, attitude and practices of nurses' related to pain assessment among post-operative patients in three hospitals in Kampala. Data will be collected to provide timely, and baseline information which may be used for comparison on pain management research in future.

1.3 Study Objectives

1.3.1 General objective

To assess knowledge, attitude and practices of nurses related to pain assessment among post-operative patients in Kampala. September 2015

1.3.2 Specific objectives

1. To assess the level of nurses' knowledge related to pain assessment among post-operative patients in Kampala in September 2015.
2. To assess the nurses' attitude related to pain assessment among surgical patients in Kampala in September 2015.
3. To identify nurses' practices related to pain assessment among surgical patients in Kampala in September 2015.

1.4 Research Questions

1. What is the level of nurses' knowledge related to pain assessment among post-operative patients in Kampala in September 2015?
2. What are the nurses' attitudes related to pain assessment among post-operative patients in Kampala in September 2015?
3. What are nurses' practices related to pain assessment among surgical patients in Kampala in September 2015?

1.5 Significance of study

The significance of this study is to generate data required and develop strategies to improve nurses' knowledge, attitude and practices related to pain assessment among post-operative patients there by improving patients' comfort and quality of life through improved nursing practice. As a result, policies may be formulated to improve nursing practice hence quality services will be offered to ensure patients comfort.

1.6 Conceptual frame work

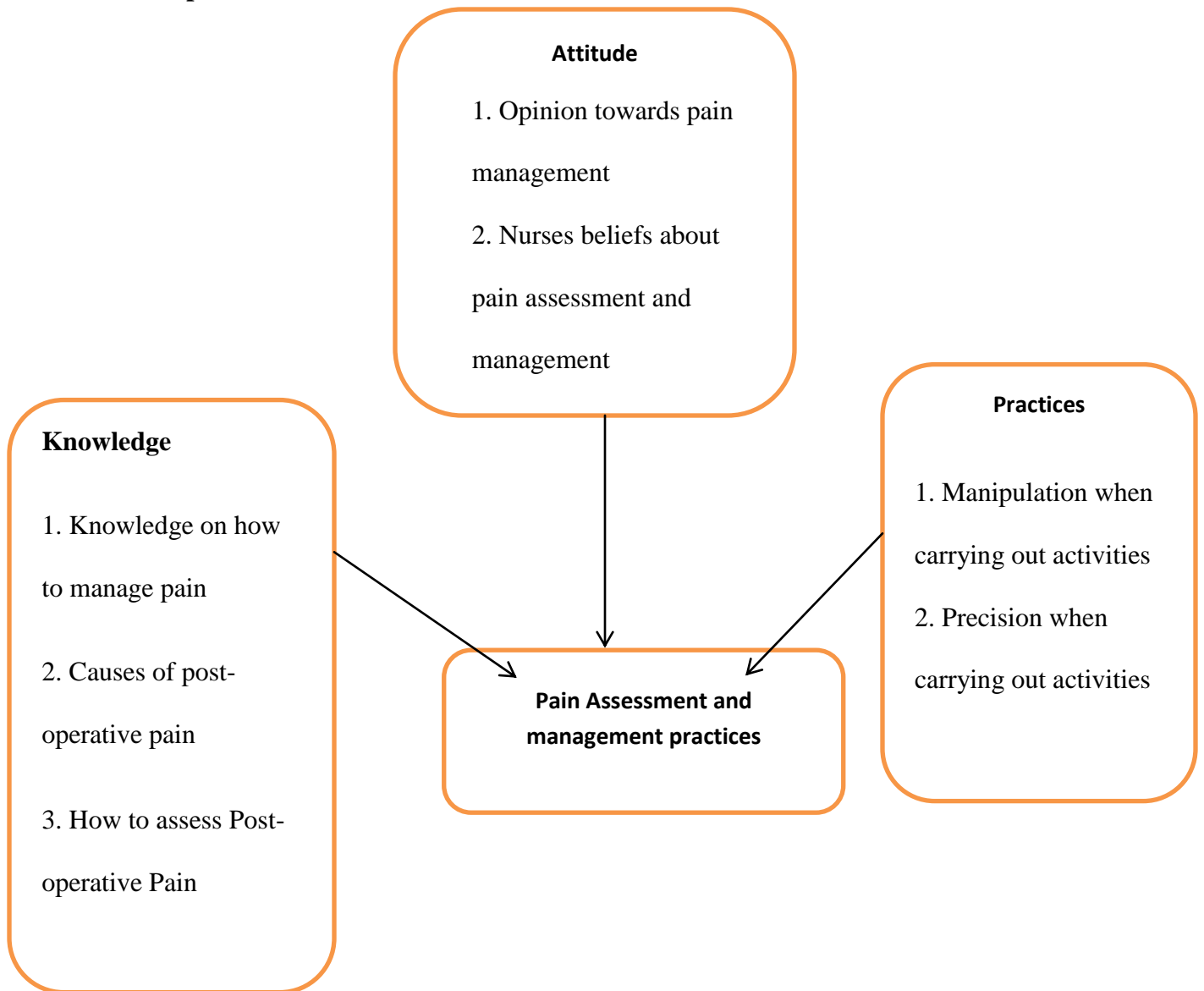


Figure 1: Conceptual Frame Work

CHAPTER TWO: LITRATURE REVIEW

2.0 Over view about pain

Pain it is whatever the person experiencing it says it is and existing whenever the person experiencing it says it does (McCaffery, 1968). This emphasizes that pain is subjective in nature and that the patient is the authority on the pain therefore his or her self-report is the most reliable indicator of pain.

Pain is an experience universal to all humans and the commonest reason of seeking medical assistance. Conventionally, pain was merely considered as a physical symptom of illness or injury brought about by a simple stimulus response mechanism. Although one of the significant roles of a nurse is to relieve pain and suffering, there has been little understanding of the complexity of pain and only limited ways have been developed to manage it. Pain is difficult to assess and manage since it is fundamentally subjective in nature and influenced by several factors, for example psychological and social influences can determine or affect how a patient perceives, expresses and tolerates pain (Miller and Newton, 2006). For this reason, pain is considered as pain a personalized experience with a number of dimensions (Reuter & Bower, 2009). Therefore it is important for a nurse to have that in mind during practice. Consequently it is essential for medical personnel to assess patient's pain so that individualized care is given. (Arif and Grap, 2009)

Pain after surgery is known as postoperative pain, which is the immediate consequence after surgery. Generally, pain after surgery is a type of pain and which may take a number of days to reduce (Smart, 2005). The most severe post-operative pain occurs within 48 hours after a surgical procedure, though, this depends on the type and site of surgery. Pain after surgery arises not only from sensory components, but also from psychological components. Factors which are personal for example gender, age, past experience of pain or social-cultural group also make a contribution to the expression of and coping up with pain. Anxiety is also a chief factor which contributes to the psychological component of post-operative pain (Jacob, 2007).

Proper management of pain starts with a systematic assessment of the patient and documentation which facilitate treatment and is also helpful in communication among medical personnel (Arif and Grap, 2009). Pain assessment techniques available to the nurse are observation,

physiological responses, self-report from the patient using pain scales, location and intensity of the pain and assessing pain at rest and during movement (SASA, 2009:16-21; Robertson, 2007)

The patient's self-report is considered to be the "golden standard" to assess the existence and intensity of pain (McCaffery and Pasero, 2011) Though, the patient's report of pain, it is not always believed by the nurses, as they depend on their own judgment about the presence of pain and the associated behavior of the patient (Zanolinet *al.*, 2007; Klopperet *al.*, 2006; Pasero and McCaffery, 2001; Schafheutleet *al.*, 2001:732). Although the nurses may not be certain of the self-report from the patients on pain, they should accept the report, assess the patient for pain and offer appropriate management (Pasero and McCaffery, 2001).

Pain assessment scales help patients to "self-report", that is, to communicate the intensity of their pain and provide a guide for pain management (SASA, 2009; Smeltzeret *al.*, 2008; Robertson, 2007). An appropriate pain scale should be selected for the patient and explained by the nurse (Robertson, 2007 and Bird, 2003). The available pain scales include visual analogue scale (VAS), verbal numeric rating scale (VNRS), verbal rating scale (VRS) and Wong-Baker facial expressions scale for adults with cognitive impairment (SASA, 2009).

Professionally, nurses have an ethical and philanthropic responsibility to offer adequate pain relief so as to relieve unnecessary pain in addition to supporting the legal right of the patient to relief of pain (Hunter, 2005). Furthermore, it is their legitimate and professional responsibility to document practices related to pain, putting in records pain assessment findings ought to be as important as recording of vital signs (Charlton 2006, Smeltzer and Bare 2005). Additionally, they should carefully and systematically document all aspects of pain assessment and management to aid in the continuous care of the patients. It has been recognized that an important activity of pain after surgery is to 'make pain visible' and this method ought to include both assessment and records of pain (Stromberg et al. 2003).

2.1 Knowledge

Pain is an intolerable sensation which makes a person vulnerable. It is well known that if pain is not managed well the consequences are deleterious and may result in many complications post-operatively; to manage these, nurses should have up-to date knowledge which is an important precursor in the clinical practice of post-operative pain management. It is therefore important for

nurses to have in depth knowledge and understanding of pain, its characteristics, assessment and, management (Rao, 2006). The in-depth knowledge of the concept of pain required includes; types and causes of pain, the pathophysiology of pain, and individual differences in pain perception in relation to age, gender and cultural or spiritual aspects of patients. The knowledge of assessment of pain includes clear concepts and use of different tools as appropriate for an individual patient. The nurses also need also to be equipped with enough knowledge on all aspect of pain management; this should include both pharmacological and non-pharmacological management. Knowledge of the indications and contraindications of analgesic drugs, the side effects, doses, routes and actions of specific drugs are important when providing nursing care. For effective management of pain, nurses need to be concerned about established guidelines and protocols from a pain management perspective. They should also know about the ethical issues of patients' pain in order to protect the patients' rights, their family, as well as their individual and professional rights.

Research done shows that medical personnel including nurses have inadequate knowledge on pain; misjudge patient's report of pain, do not give adequate pain medication and infrequently document pain. Nurses need to have adequate knowledge on pain, its assessment, management and outcomes of poorly or unmanaged pain amongst other conceptions about it. (Garfinkel, Stevens, Streiner, Watt-Watson and gallop, 2001)

Finding of a research done revealed that education level and various topics taught in continuous professional education did not influence reported perceptions on how pain assessment is essential (Rose et al, 2011). Comparable results of a study done in Hong Kong showed that the level of education was not considerably related to knowledge and attitude in relative to management of pain (Lui et al, 2008). Another study also revealed that the level of education was not found to be connected with frequency on how nurses assess pain using the Numerical Rating Scale. (Shurgarman and colleagues, 2010). On the other hand, research done among nurses working in emergency department showed that increased nurses' capability to assess and manage patients well was not connected with post qualification education on pain compared to nurses who did not have such education. The same study revealed that there was no relationship validated between knowledge scores and ages, years of working as a nurse and years of working as an emergency nurse. (Tanabe Et al, 2005). Literature reveals varying reports about knowledge and

practices in association to education level, post qualification education, age and years of experience. Consequently, this is seen in practice, as the knowledge attained is applied differently and knowledge if not put into practice it can easily be forgotten. For instance outcomes of a the research done in Hong Kong the disclosed that nurses who had worked for several years, had more experience, could apply the knowledge they had of pain assessment and management in their day to day practice. When the respondents' knowledge was assessed they scored high percentage and had positive attitude when carrying out activities related to pain assessment and management (Lui et al., 2008).

Statistics of a study conducted at Moi Teaching and Referral Hospital in Kenya, in relation to managing post-operative pain amongst 200 clinicians, of which 170 (87%) were nurses. Among them 41% of the nurses showed they had enough knowledge to identify, assess and manage pain appropriately (Kuremu, Kituyi, Sisenda, Imbayo, and Wambami). 21% of the respondents had never gone through formal teaching on the subject of pain assessment and management. Additionally, outcomes of the study revealed that the respondents' knowledge was not influenced by the duration of time they had worked in the post-operative department (Kituyi, 2011). This study does not clearly show how the level of knowledge was evaluated.

A study done to determine post-operative assessment and management among nurses at ObafemiAwolowo University Teaching Hospital, Nigeria demonstrated poor knowledge in post-operative pain assessment and management as only 46.4% of the respondents demonstrated good knowledge. According to Pule-McColl et al. (2001) nurses need increased knowledge and skills in the area of pain management.

Results of a study done in Turkey amongst 91 nurses' to assess their practices in relation to pain practices among patients in intensive care units who were not able to verbally report their pain revealed 85.7% reported that the best precise assessment would be stated by the individual patients. Among them, 29.7 % centered their assessment on the patients' individual communication (Aslan, Badir and Selimen,2006). Researchers came to a conclusion that the outcomes evidently showed the nurses had inadequate knowledge with regards to pain assessment and management principles. Furthermore, 57.1% of them failed to administer pain medication immediately; rather they postponed to verify the magnitude of pain even in situations where the patients had reported their pain to the nurses. Clearly, this indicates that knowledge

learnt is not usually interpreted into practice. 14.3 % of the subjects had received education on pain assessment and management during student training. (Aslan et al., 2003)

Nurses were also found not to consistently use current guidelines and standards available for pain management (Riemanet al. 2007) and also the gap between theory and practice is reported by Stellenberg and Bruce (2007).

2.2 Attitude

Personal factors contribute to nurses' attitude in relation to pain management practices. Their past experience to pain and analgesia use was found to be an essential aspect in changing their attitudes. This was researched to have helped in achieving optimum pain management outcome during their practice (Pud, 2005 and Courbani et al, 2005). In certain instances nurses have the belief of using their culture to judge patients from other respects in relation to their pain. It is important to be cultural sensitive when providing care to patients. This can be expressed by the influence on attitudes, for example meaning of a disease and pain (Twycross et al, 2006)

Regarding the respondents attitude to post-operative pain assessment and management, 66 out of 95 Of the participants (66%) demonstrated negative attitude this is according to a study done to determine post-operative assessment and management among nurses at Obafemi Awolowo University Teaching Hospital, Nigeria. This could be a replication of understaffing and excess workload which does not give opportunity for quality nursing care (Taylor 2010).

Effective assessment and management of pain can be limited by cultural beliefs and social attitudes (Ashley, 2009). Studies show that nurses have reported pain as a reasonable consequence of injury and taking analgesic is a sign of that one is weak (Dijk, Vervat, Albertyn and As, 2011; Thomas, 2008; Rampanjoto et al., 2007). According to them, patients should be able to bear their pain

A research conducted to assess nurses' attitude in relation to how they rate patients' pain revealed that a third of the nurses did not agree with their patients' on how they scored pain greater than 25% of the time. 40% of them alleged patients highly estimated their level of pain. This could be as a result of negative attitude and or knowledge deficits. This suggests that nurses may be unable to appropriately assess and manage patients' pain efficiently since they are

probably to give pain medication inadequately such as wrong dose or wrong frequency. The research also showed that only 47% of the prescribed analgesics were given to patients who complained of moderate to severe pain (Watt-Watson et al., 2005). According to these outcomes from studies done before, more research needs to be done to discover if post-operative nurses appreciate the importance accurately assessing patient's pain.

A study done to investigate nurses' attitudes towards opioid analgesics recognized that (49.9%) of 350 nurse participants claimed addiction was a significant side-effect of chronic opioid therapy for pain. (Broekmans et al., 2006) Correspondingly, a study done among 313 student nurses 30% of them correctly identified that the risk of addiction as a result of narcotic use in patients receiving opioid analgesics for pain is less than 1% (Plaisance and Logan, 2006). The following year, it was confirmed that nurses highly projected the frequency of addiction in patients with pain where only 11% of 616 nurses correctly answered the question pertaining to estimated risk of opioid addiction in patients (Yu and Pertrini, 2007).

A study done by Schafheutle, Cantrill and Noyce in 2008 confirmed that the fundamental reason for not openly asking pain-related questions was based on nurses' perceptions and judgments of the patients' non-verbal behavior. Certainly, patients may illustrate pain through changes in vital signs for example increase in heart rate, blood pressure, respiratory rate and through behavioral responses like moaning and changes in facial expression. Without doubt, physiological and behavioral responses can provide a brilliant sign that pain is present especially in those who are unable to verbally express themselves. However, if a patient does not express pain, it does not mean that pain is absent (Romsing, 1996).

2.3 Practices

In order to accomplish optimum pain management as an organizational aim, majority of hospitals have recognized and come up with written measurable standards of care on pain assessment and management. This is to eliminate and resolve the fundamental causes of existing problems; therefore it is an important element for quality management of pain. As part of caring for patients, nurses have the responsibility to manage their pain although if the problems are many a multi-disciplinary team may be required. Establishing a multidisciplinary team puts the organization in place for carrying out collaborative care during pain management. This consists of staffs from different fields who have interest in pain assessment and management (Betts,

Moriarty, Twycross, 2000). Nonexistence of organizational procedures as well as strategies on assessment of pain has been quoted to impede appropriate management. (Kituyi et al, 2011).

Satisfactory pain assessment and management is hindered by lack of enough nurses and a lot of work to be carried out when caring for patients as this brings about reduced time given for the two to relate (Tunabe et al, 2005).

Effective pain management begins with proper pain assessment by use of standardized tools, this aid in evaluation of efficiency of the intercessions directed towards individualized patients' needs in relation to relief from pain. However, studies still show inadequacy in the use of the tools. If the tools are not used, nurses depend solely on their clinical judgment and this is possibly prejudiced by several notions and attitudes about the pain that the patients are in. In sequence this affects the outcomes of the patients as almost all the managements are centered on the nurses' pain ratings. A study done by revealed that half of the nurses used informal methods instead of the NRS to assess their patients' pain (Kaasalainen and colleagues, 2007).the same results were cited even in the availability of procedure (Shugarmann et al, 2010).

The international nursing studies found some nurses do not use a pain scale (Idvall& Berg, 2008; Eneet *al.*, 2008; Dihleet *al.*, 2006:473-474; Manias *et al.*, 2004). Nurses have also expressed distrust of the pain rating chosen by the patient as a true reflection of the pain level experienced by the patient (Layman Young, Horton and Davidhizar, 2006; Schafheutle*et al.*, 2001). Even when pain rating tools are used, nurses have a tendency to underestimate the pain intensity experienced by the patient in relation to the patient's own pain rating (Sloman, Rosen, Rom &Shir, 2005; Klopper*et al.*, 2006). Though, following a pain management programme, it was found that the nurses showed slight improvement in their pain assessments in accordance with those of the patients. (Eneet *al.* 2008)

A study conducted in Mulago Hospital, Kampala among 170 nurses, 90% (153) revealed that they assess patients' pain among adults who can communicate while 10% (17) didn't. Reports on open questions reveals that 53% (9) of those who did not see the need to assess patients' pain, the most common reason was that patients were able to report their pain. Heavy nursing staff work load, absence of tools for assessing pain and absence of strategies for assessing pain were

among the other reasons nurses did not assess for pain. Majority 96% (147) of the respondents who said they assessed patients' pain didn't use formal pain assessment tools. (Kizza, 2002)

Many studies have been done to assess how nurses who work on post-operative units assess patient's pain. A study conducted among 52 nurses working on patients in the post-operative period showed that nurses were observed carrying out a total of 316 cases. It was revealed that no assessment of pain was carried out 43.7% of the times. Pain assessment tools were only used in less than 9% of the cases. In cases where the patients expressed lack of understanding when using the tool, the nurses barely attempted to help make clear the meaning to them.(Bucknall, Botti & Manias, 2006)

A study done among 143 nurses caring for patients in medical wards in Hong Kong revealed that 89% of the respondents had never or hardly ever used the pain assessment tools. Among them only 19% had done courses connected to assessment and management of pain (Lui et al., 2008). In contrast, outcomes of a research done in Canada amongst nurses who caring for patients in ICU reported appropriate use of tools used when assessing pain. Among 140 nurses who participated in the study 98.6% of them used one or more pain assessment tools to evaluate patients able to individually report their pain while 45.7% of them also used one or more pain assessment tools for patients unable to individually report their pain. The same study also revealed that 84.3% of the nurses reported that they attend continuous professional trainings on matters related to pain (Rose et al., 2011).

Documenting information related to pain assessment findings and management offered including the efficiency of the intercessions for example how a patient responds to analgesic treatment administered. This is one of the principles for managing patients' pain (Herr and Kwekkeboom, 2011). Minimal or no documentation of practices among critical care nurses have been reported (Watt-Watson et al.2001 and Haonga et al., 2011). Though it is proven that documentation of pain assessment improves management which in turn improves patient's comfort, continuous absence of pain assessment documentation has highlighted (Bucknall and Shannon, 2008).

CHAPTER THREE: METHODOLOGY

3.0 Introduction

This chapter gives a brief description of the study design that was adopted for the study, the research area where the study was carried out, the population, sample size determination, eligibility, study variables, sources of data, instrument, data collection technique, data analysis plan, quality control, ethical considerations, limitation and plan for dissemination.

3.1 Research design

The study was a descriptive, cross-sectional design which employed quantitative data collection methods on knowledge, attitude and practices of nurses related to pain assessment among post-operative patients. It aimed at obtaining data on a representative sample of nurses at a specific time in the three hospitals.

3.2 Study Area

This study was conducted in three hospitals in Kampala, namely; International Hospital Kampala (IHK), Lubaga Hospital and Naguru Hospital. IHK is owned by the International Medical Group and is the largest private healthcare group in Uganda; it is located at Namuwongo, St. Barnabars road, about 6 kilometers from the central business district of the city and it has a bed capacity of 100. Naguru Hospital is also known as Uganda China Friendship Hospital Naguru it is located along Naguru road on Naguru hill, Nakawa division, it's about 6.5 kilometers from Kampala central business district and has a bed capacity of 100. Lubaga Hospital is located along Mutesa road on Lubaga hill, Lubaga division it's about 3 kilometers from Kampala central business district and has a bed capacity of 275. Nurses' who work in these hospitals have qualification and are registered by the nursing council of Uganda. These hospitals were selected because they are among the well- known large hospitals in Kampala and they have units where post-operative patients are taken care of.

3.3.0 Study Population

This comprised of nurses and midwives working at the above named hospitals caring for post-operative patients.

3.3.1 Target Population

Nurses and midwives who were caring for post-operative patients comprised the target population

3.3.2 Accessible Population

This comprised of nurses and midwives who were caring for post-operative patients during the study period and who met the eligibility criteria

3.4 Inclusion and Exclusion Criteria

3.4.1 Inclusion Criteria

- i. Nurses and midwives who were officially employed by the hospitals
- ii. Nurses and midwives who accepted to participate in the study by consenting
- iii. Nurses and midwives who were working on post-operative patients/ post-operative wards

3.4.2 Exclusion Criteria

- i. Nurses who do not directly care for patients for example a nurse manager
- ii. Auxiliary nurses
- iii. Student nurses

3.5 Sample size Calculation

Sample size was calculated using Kish Leslie, 1965, formula.

$$N = \frac{Z^2 P (1 - P)}{d^2}$$

Where N = sample size

P = 41%, the projected percentage of nurses who had adequate knowledge to identify and manage pain (Kuremu, Kituyi, Wambami, Sisenda, &Imbayo, 2011)

d = 5%, maximum margin of error allowed

Z = 1.96, the standard deviation value corresponding to 95% confidence level

The calculated sample size $N = \frac{1.96 \times 1.96 (0.41 \times 0.59)}{0.05^2}$

$$0.05^2$$

$$N = 371.8$$

$$N \approx 372$$

$$N \approx 372 + 1$$

$$N \approx 373$$

Table 1: Estimated probability proportionate to size of the sample population.

Name of Hospital	Capacity	%	Sample
IHK	100	24.1	90
Lubaga	215	51.8	193
Naguru	100	24.1	90
Total	415	100	373

The calculation above was used to estimate the probability proportionate to size of the sample population.

3.6 Sampling technique

A simple random sampling method was used to select participants for the study. The units were selected purposively to make sure that only nurses who have experience with caring for patients post-operatively were assessed. The researcher approached the nurses who were accessible in the course of the study at the particular wards and they were explained to the reason for conducting the study and requested to participate. Nurses who wished to participate in the study were given a consent form to read and sign.

3.7 Study Variables

3.7.1 Dependent Variable

The dependent variable for this study was pain assessment and management

3.7.2 Independent Variable

The independent variables were:

- a) Nurses Knowledge: this included; knowledge on how to manage pain, causes of post-operative pain and how To assess Post-operative Pain.
- b) Attitude: this included; opinion towards pain management, nurses beliefs about pain assessment and management and nurses' attitudes towards the value e of patients pain
- c) Practices: this included; manipulation when carrying out activities and precision when carrying out activities

3.8 Sources of Data

The study had both primary and secondary sources of data. Primary sources included nurses who worked in the post-operative ward. Secondary data was got from prior studies and surveys done of the similar topic.

3.9 Instrument

The Nurses' Knowledge and Attitude Survey Regarding pain (NKAS) tool was used to conduct the study. This tool was established in 1987 and has broadly been used from then to date. The researcher modified this tool to suit the study. The initial version of the tool has modified severally, this study utilized the most recent version available on: <http://prc.coh.org> which was edited and updated in April 2011 (Ferrell and McCaffery, 2011). This tool contains data which was derived from pain up to date guidelines on pain management from AHCPR and WHO. Ferrell and McCaffery permit the use and adjustment of the tool. Validity and reliability of this tool has been confirmed (Ferrell and McCaffery, 2008).

The revised version of the NKAS tool consists of three different sections; A, B, C and D. section A assess demographic data; B assess nurses knowledge; C assess nurses attitude and D nurses practices. Each of the sections has 3 parts

3.10 Data Collection Technique

The researcher used self-administered questionnaire to collect data. Rapport was created then questionnaires distributed to eligible participants at various shifts. Completed questionnaires were retrieved immediately after completion which accounted for high retrieval rate. Data was collected in a period of 10 days (Monday – Friday) to allow for coverage of the participants who were on shift duties.

3.11 Data analysis plan

Data concerning knowledge, attitude and practices of nurses related to pain assessment among post-operative patients in the three hospitals was analyzed and conclusions made. The response from the participants was collected; every single questionnaire was checked entirely for legibility, mistakes and any missing data to ensure privacy. Information which is not clear was retrieved from the participant. The data was further analyzed using statistical computer package such as SPSS version 16.0, Microsoft excel, graphs, tables, pie charts and percentages were derived.

3.12 Quality Control

Data was collected by a single researcher. The data was entered two times by two different people to make sure that correct data quality and uniformity. The instrument was pretested at Kisumu Hospital, refining and evaluation was done among 10 nurses who work there. This helped provide clarity, validity, sequencing and insight on how much time would be required to administer each instrument. Changes were made according to the results. Great care was put in place when coding, entering, verifying and cleaning data.

3.13 Ethical Considerations

Ethical clearance was granted from the research committees of IHSU and each of the three hospitals. All participants were required to sign informed consent forms prior to answering the questionnaire. The objectives and nature of the research was explained to all participants with the emphasis on voluntary participation and the right to pull out at any given time from the study without being penalized. Participants confidentiality was maintained, they took part in the study anonymously, no names were affixed to the questionnaires.

3.14 Limitation of the study

The limitations of the study were; limited time to collect data, participants requiring payment in order to participate in the study and lack of enough funds and some institutions asking for money to allow the researcher to carry out the study.

3.15 Plan for dissemination

The findings of the study will be presented to IHSU, the three selected hospitals under KCCA and the ministry of health Uganda.

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.0 Introduction

This chapter presents the results of the findings from the study and the analysis of these results. A total of 373 participants from 3 hospitals were included in the study. The results are presented in accordance with the specific objectives of the study using tables, graphs and charts.

4.1 Demographic characteristics of the sample population

Table 2: Demographic characteristics of the sample population (N=373)

Distribution of respondents by their demographic characteristics

Variable		Frequency (N) (N= 373)	Percentage (%) (100%)
Sex	Male	119	31.9
	Female	254	68.1
Age (Years)	20-30	152	40.8
	30-40	141	37.8
	41-50	66	17.7
	>50	14	3.7
Level of education	Certificate	58	15.6
	Diploma	207	55.5
	Degree	99	26.5
	Master	09	2.4
Place of work	IHK	90	24.1
	Rubaga hospital	193	51.8
	Naguru hospital	90	24.1
Experience in the nursing profession	<1year	41	11.0
	1-5 years	201	53.9
	6-10 years	109	29.2
	>10 years	22	5.9
Experience in the department	<1 year	82	22.0
	1-5 years	179	48.0
	6-10 years	98	26.3
	>10 years	14	3.7

Majority of the respondents were female (68.1%) belonged to the 20-40 age bracket and had attained a diploma level of education. More than half (53.9) had between 1-5 year(s) experience in the nursing profession and 48% in the department of surgery.

4.2 The level of nurses' knowledge related to pain assessment and management among post-operative patients

Table 3: The knowledge of nurses related to pain assessment and management among post-operative patients

Variable		Frequency (n)	Percentage (%)
Indicators of pain	Correct answer	343	92.0
	Wrong answer	30	8.0
Sensitivity of children below 2 years to pain	Correct answer	321	86.1
	Wrong answer	52	13.9
Occurrence of respiratory depression for patients on opioids	Correct answer	302	81.0
	Wrong answer	71	19.0
Use of combination of analgesics with different mechanisms	Correct answer	254	68.1
	Wrong answer	119	31.9
Morphine given intravenously usually lasts between 4 to 5 hours	Correct answer	268	71.8
	Wrong answer	105	28.2
Promethazine and hydroxyzine are dependable potentiators of opioid analgesics	Correct answer	261	70.0
	Wrong answer	112	30.0
Morphine has a dose ceiling	Correct answer	328	87.9
	Wrong answer	45	12.1
When cause of patient's pain is not known, opioid analgesics should not be given	Correct answer	339	90.9
	Wrong answer	34	9.1
When a single dose of an anticonvulsant is given, an optimum pain relief is achieved	Correct answer	358	96.0
	Wrong answer	15	4.0
Peak effect duration of morphine administered intravenously	Correct answer	283	75.9
	Wrong answer	90	24.1
Peak effect duration of morphine administered orally	Correct answer	268	71.8
	Wrong answer	105	28.2
Manifestation of dependence when opioid analgesic is stopped abruptly	Correct answer	227	60.9
	Wrong answer	146	39.1

Majority of the respondents were able to give correct answers on the different aspects of pain management as shown in table 2 above. However, the level of knowledge of the individual respondents was further grouped into 3 different categories as high, moderate and low on a score of 1-12, where by 1-4= low knowledge; 5-8= moderate and 9-12 = high; as indicated in Figure 1 below.

Figure 2: The level of knowledge of the respondent on different aspects of pain management among post-operative patients

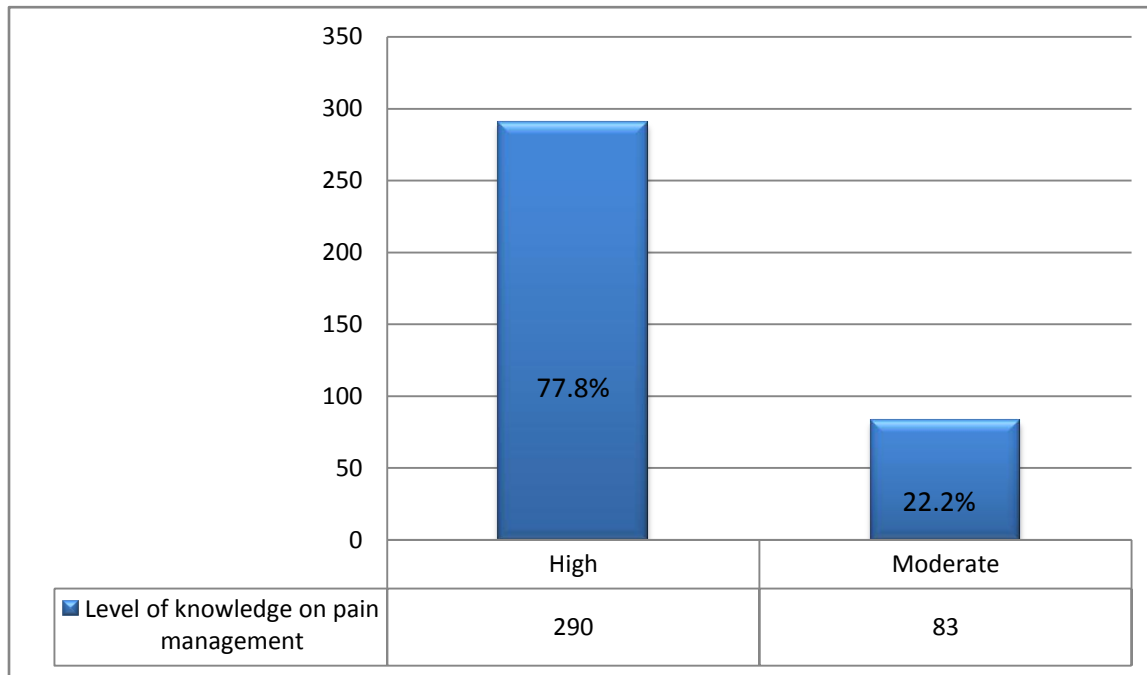


Figure 1 above shows the level of knowledge of the respondents on pain management among post-operative patients. Majority of the respondents, 290 (77.8%) had a high level of knowledge on pain management among post-operative patients while 83 (22.2%) were found to have a moderate level of knowledge.

4.3 The attitude of nurses towards pain management among post-operative patients

Table 4: Attitude of nurses towards pain management among post-operative patients

Variable		Frequency (n)	Percentage (%)
Patients self-report of pain	Right attitude	171	45.8
	Wrong attitude	202	54.2
Importance of pain assessment tool	Right attitude	305	81.8
	Wrong attitude	68	18.2
Distraction of patients thoughts from pain	Right attitude	166	44.5
	Wrong attitude	207	55.5
Administration of opioids to substance abuse patients	Right attitude	134	35.9
	Wrong attitude	239	64.1
Administration of opioids to elderly patients	Right attitude	246	66.0
	Wrong attitude	127	34.0
Determining of pain among children below eleven years of age	Right attitude	294	78.8
	Wrong attitude	79	21.2
Spiritual beliefs and pain among patients	Right attitude	167	44.8
	Wrong attitude	206	55.2
Narcotic (tranquilizer) and opioid addiction among patients	Right attitude	164	44.0
	Wrong attitude	209	56.0
Accurate judgment of pain among patients	Right attitude	283	75.9
	Wrong attitude	90	24.1
Patients' request on increment of pain medication doses	Right attitude	126	33.8
	Wrong attitude	247	66.2
Cultural beliefs and values when caring for patients in pain	Right attitude	152	40.8
	Wrong attitude	221	59.2

Majority of the respondents had the right attitude towards different aspects of pain management among post-operative patients. The attitude of the patients was further grouped into three groups as positive, neutral and negative as shown in figure 2 below.

Figure 3: Attitude of respondents towards pain management among post-operative patients

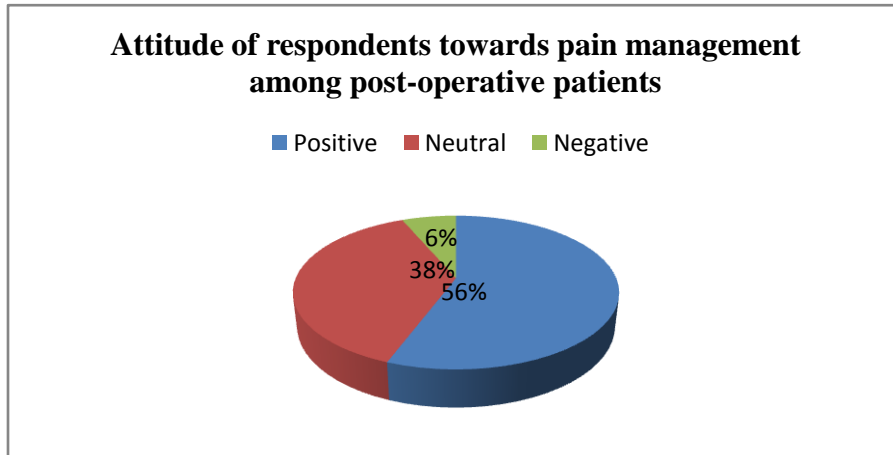


Figure 3 above shows the attitude of the respondents towards pain management among post-operative patients. Majority of the respondents, 208 (56%) had a positive attitude towards pain management among post-operative patients followed by 141 (38%) who had a neutral attitude and only 24 (6%) had a negative attitude towards pain management among post-operative patients.

4.4 The practices of nurses on pain management among post-operative patients

Figure 4: Use of pain assessment tools among the respondents

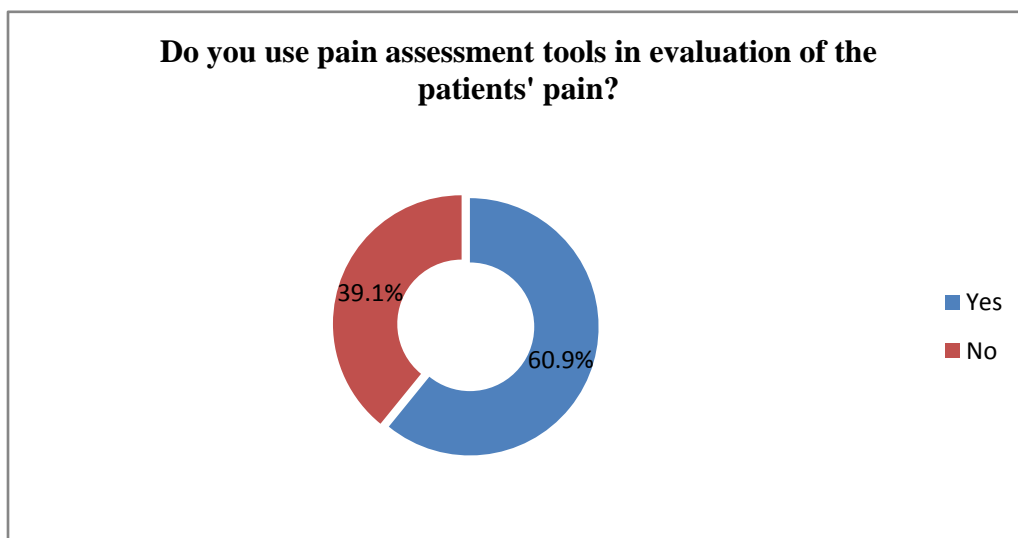


Figure 1 above shows the proportion of the respondents who used pain assessment tools in the evaluation of the patients' pain. Majority of the respondents, 227 (60.9%) reported to use pain assessment tools in the evaluation of pain while 146 (39.1%) did not use such tools.

Table 5: Practices of nurses on pain management among post-operative patients

Variable		Frequency (n)	Percentage (%)
Use a pain assessment tool to evaluate patients' pain	Yes	227	60.9
	No	146	39.1
How often	Always	174	76.7
	Frequently	39	17.2
	Occasionally	14	6.1
*Type of tool used	Universal pain assessment tool	127	55.9
	Lego facial expression tool	141	62.1
	Verbal rating scale	156	68.7
	Visual analogue scale	129	56.8
*If you don't use a tool, what method is used to assess pain	Observing the patient	49	33.6
	Estimation	70	47.9
	By experience	19	13.0
	Use of water for injection	8	5.5
Document outcomes after assessing patients' pain	Yes	190	50.9
	No	183	49.1
If yes, how often	Whenever necessary	88	46.3
	1 – 4 hourly	36	18.9
	Once every shift	41	21.6
	Less than one hourly	6	3.2
	More than 4 – 8 hourly	19	10.0
Discussion of pain assessment and management among nurses	Yes	268	71.8
	No	105	28.2
How is the administration of analgesics given to post-operative patients	On a fixed schedule	320	85.8
	On patients' pain demands	53	14.2

(*multi-response variable)

Majority of the respondents, 227 (60.9%) reported to use a pain assessment tool to evaluate pain among patients while 146 (39.1%) did not use a pain assessment tool. Of those that had used tools; majority of the respondents, 174 (76.7%) always used a pain assessment tool and 14 (6.1%) occasionally used the pain assessment tools. Majority of the respondents, 156 (68.7%) used the verbal rating scale as a pain assessment tool followed by 141 (62.1%) who used the

legofacial expression tool. Majority of the respondents who reported not to use pain assessment tools, 83 (56.8%) used their estimation to assess the patients' pain.

CHAPTER FIVE: DISCUSSION OF RESULTS

5.0 Introduction

This chapter presents the discussion of the findings of the study in comparison with other similar studies and support from relevant literature. The findings of the study will be discussed according to the specific objectives.

5.1 Knowledge of nurses on pain management among post-operative patients

Majority of the nurses were found to have high level of knowledge on different aspects of pain management among post-operative patients and overall, all nurses had adequate knowledge on pain management. The in-depth knowledge of the concept of pain required includes; types and causes of pain, the pathophysiology of pain, and individual differences in pain perception in relation to age, gender and cultural or spiritual aspects of patients. The knowledge of assessment of pain includes clear concepts and use of different tools as appropriate for an individual patient. However in a similar study done by Garfinkel et al, 2001, nurses were found to have inadequate knowledge on pain and pain management. The difference between the two studies could have been due to the difference in the level of education among the nurses involved in the two studies where by this study involved nurses with higher levels of education (diploma,55.5% and degree, 26.5%) than those of the latter study.

This is consistent with another study by Rose et al (2011) that showed that education level and various topics taught in continuous professional education increased knowledge of nurses on pain management although it did not influence perceptions on how pain assessment is essential among the nurses. Formal education and training of nurses provides the necessary knowledge on pain management but continuous health education and discussions among nurses on pain management are necessary to revise and improve pain management procedures.

The level of knowledge on pain management among nurses also influences their practices in assessing and evaluating pain among the patients. According to Lui et al., (2008), in a study done in Hong Kong, the level of knowledge of nurses was associated with educational level, post-qualification education and years of experience. Consequently, this is seen in practice, as the knowledge attained is applied differently and knowledge if not put into practice it can easily be forgotten. For instance outcomes of a the research done in Hong Kong disclosed that nurses who

had worked for several years, had more experience, could apply the knowledge they had of pain assessment and management in their day to day practice (Lui et al., 2008). Therefore, high level of knowledge on pain management can contribute to better pain assessment and management for post-operative patients.

5.2 Attitude of nurses on pain management among post-operative patients

Majority of the respondents 208 (58%) had a positive attitude towards pain management. The level of knowledge was found to have a significant effect on the attitude of the respondents. Increase in knowledge on pain management indicated a positive attitude of nurses towards pain management among post-operative patients. This is consistent with a similar study by Watt-Watson et al, (2005) that indicated that knowledge on pain assessment and management significantly influenced the attitude of nurses. This suggested that nurses who had a positive attitude were more likely to properly assess the patients' pain condition than those with a negative attitude who may be unable to appropriately assess and manage patients' pain efficiently and are likely to give pain medication inadequately such as wrong dose or wrong frequency.

The attitude of the nurses influences their perceptions and judgments of the pain being experienced by the patients as well as the nurses' course of action to mitigate such pain. This is in agreement with Schafheutle et al (2008) who confirmed that the fundamental reason for not openly asking pain-related questions was based on nurses' attitude, perceptions and judgments of the patients' non-verbal behavior. Certainly, patients may illustrate pain through changes in vital signs for example increase in heart rate, blood pressure, respiratory rate and through behavioral responses like moaning and changes in facial expression. Without doubt, physiological and behavioral responses can provide a brilliant sign that pain is present especially in those who are unable to verbally express themselves. However, if a patient does not express pain, it does not mean that pain is absent and the nurses' attitude could determine whether or not such as patient receives the required pain management and care. Pain after surgery arises not only from sensory components, but also from psychological components. Factors which are personal for example gender, age, past experience of pain or social-cultural group also make a contribution to the expression of and coping up with pain. Anxiety is also a chief factor which contributes to the psychological component of post-operative pain (Jacob, 2007). Therefore, the nurse's attitude

could determine the amount of pain medication and care a specific patient receives despite the amount and expression of pain by the patient.

5.3 Practices of nurses on pain management among post-operative patients

Although majority of the nurses (61%) reported to use the pain assessment tools, the proportion of those who do not use such tools was as well as large (39%). Despite the fact that standard pain management requires consistent use of pain assessment tools so as to generate accurate information and evaluation of the patient's pain, a large proportion of nurses do not use these tools. This could result into misjudgment of the patient's pains as well as administering of inappropriate pain medication which affects the wellbeing of the patient. Proper management of pain starts with a systematic assessment of the patient and documentation which facilitate treatment and is also helpful in communication among medical personnel (Arif & Grap, 2009). Pain assessment techniques available to the nurse are observation, physiological responses, self-report from the patient using pain scales, location and intensity of the pain and assessing pain at rest and during movement. In order to accomplish optimum pain management as an organizational aim for health facilities, majority of the hospitals recognize and have written measurable standards of care, pain assessment and management. This done to eliminate and resolve the fundamental causes of existing problems, therefore it is an important element for quality management of pain to use pain assessment tools. This is in line with Kituyi et al, (2011) who indicated that nonexistence and limited use of organizational procedures as well as strategies on assessment of pain has been quoted to impede appropriate management of pain among patients. Therefore, it is imperative that health facilities ensure that all nurses attending to post-operative patients use pain assessment tools in the evaluation of patient's pain and prior to administering of pain medication.

Effective pain management begins with proper pain assessment by use of standardized tools, this aid in evaluation of efficiency of the intercessions directed towards individualized patients' needs in relation to relief from pain. However, according to Kaasalainen, et al, (2007) who indicated that inadequacy in the use of the tools resulted into misjudgment of patient's pain.

The patient's self-report is considered to be the "golden standard" to assess the existence and intensity of pain (McCaffery & Pasero, 2011) Although, the patient's report of pain, it is not always believed by the nurses, as they depend on their own judgment about the presence of pain

and the associated behavior of the patient. Although the nurses may not be certain of the self-report from the patients on pain, they should accept the report, assess the patient for pain and offer appropriate management (Pasero & McCaffery, 2001). If the tools are not used, nurses depend solely on their clinical judgment and this is possibly prejudiced by several notions and attitudes about the pain that the patients are in. In sequence this affects the outcomes of the patients as almost all the managements are centered on the nurses' pain ratings. Other studies Idvall & Berg, (2008) found some nurses do not use a pain scale. Nurses have also expressed distrust of the pain rating chosen by the patient as a true reflection of the pain level experienced by the patient. Even when pain rating tools are used, nurses have a tendency to underestimate the pain intensity experienced by the patient in relation to the patient's own pain rating. Therefore, cooperation between nurses and patients is mainly required to generate accurate pain assessment since both parties have a role to play in determining the actual level of pain such that the nurse can identify and administer the most appropriate pain medication.

CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

This chapter draws the overall conclusions of the study basing on the findings and make feasible recommendations to policy makers, implementers and the general community.

6.2 Conclusions

The level of knowledge of the respondents was high with majority of the respondents having adequate knowledge on different aspects of pain management among post-operative patients. The nurses had adequate information on the different indicators of pain among different age groups of the patients as well as the administration of different analgesics for mitigating varying levels of pain among the patients.

The attitude of the nurses towards pain management among post-operative patients was mainly positive. Most of the nurses had a positive attitude towards pain management among patients and only a small proportion had a negative attitude. Those with a positive attitude towards pain management were more likely to respond positively to pain management among patients than those with a negative attitude. Those who were found to have a neutral attitude could be easily influenced to improve their attitude so as to have a positive attitude with more knowledge on self-reported pain among patients, administration of opioids to substance abusers, Narcotic (tranquilizer) and opioid addiction among patients and consideration of cultural beliefs when caring for post-operative patients.

Although the proportion of nurses who used pain assessment tools was high with majority (61%) using the different tools of pain assessment, the proportion of those who do not use such tools large (39%). This indicated a lower level of use of pain assessment tools among nurses since such tools are recommended to be used at all time in the process of pain evaluation among post-operative patients. The use of estimation among nurses who do not use the pain assessment tools does not provide the accurate pain assessment and there is an increased likelihood of misjudgment of the correct pain levels and administration of required analgesics.

6.3 Recommendations

Health facilities need to conduct routine and continuous health education and seminars for nurses to discuss different pain management issues so as to have constant reminders on the pain management guidelines and procedures.

Health facilities should set up strict guidelines, policies and routine supervision for all nurses attending to post-operative patients so as to ensure all nurses adhere to pain management guidelines and the use of pain management tools in the evaluation of patients' pain.

Health facilities need to motivate nurses with update information which can inform nurses and influence their decisions and attitude towards different pain management aspects especially on self-reported pain among patients and administration of analgesics among substance abusers.

Post-operative patients need to cooperate with nurses by providing the most correct information about the pain situation so as to enable nurses to conduct accurate pain evaluation and administer the right pain management measures.

There is need for further research studies to investigate the factors influencing the practices and use of pain assessment tools among nurses attending to post-operative patients. This will generate information on what motivates nurses to use pain assessment tools.

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APPENDICES

APPENDIX I: Participant Information Leaflet

Dear Sir/Madam,

Re: Request for participation in research study “Nurses Knowledge, Attitude and Practices related to Pain Assessment among Post-operative Patients”

You are being requested to kindly participate in a research study which will be conducted by an undergraduate student, Jane June Otieno, supervised by Judith Allsaints Apio from IHSU. This study will be carried out in three hospitals in Kampala.

Purpose of the study

The reason for conducting the research is to determine nurses’ knowledge, attitude and practices related to assessment of pain among post-operative patients by utilizing a pre-validated survey, NKAS. Your participation will be highly appreciated.

Participants Rights

More information about the study will be discussed with you. After you understand the study and accept to take part, you will be asked to sign a consent form. Taking part in this study is totally voluntary. You have the right to opt out at any given point. Opting out from the study will not affect you in any way.

Procedure of the Study

The research will take about one month although you will be required to take part only once. This will involve filling in the NKAS questionnaire. If you choose to take part, a questionnaire with questions related to pain assessment and management for post-operative patients will be given to you.

Confidentiality

Confidentiality and anonymity of each participant data collected will be maintained. The questionnaires have no names in them, individual or any other information about you will not be

released to anyone. You will not be personally identified in any publication or presentation about the study.

Compensation

No costs or payments will be made to the participant for taking part in the research.

Potential Risks

There are no potential risks associated with participating in the study.

Benefits

The benefits of this study are not immediate, though the results of the study will be used to develop/ improve strategies of the services delivered to post-operative patients. This may be of benefit to you, your patients and the entire nursing profession.

Inquiries/ Questions

In case of any questions or inquiry on more information related to this study, you can contact the researcher:

Jane June Otieno

IHSU

Email: junesulle@gmail.com

Phone : 0789353542

OR

IHSU REC Chair

UNCST Contact

Dr. Samuel Kabwigu

Julius Ecuru

0779610100

0772595233

Yours sincerely,

Jane June Otieno

APPENDIX II: Informed Consent Form for Potential Respondents

Consent form for participation in the Nurses Knowledge and Attitude Survey regarding Pain

A study conducted by Jane June Otieno

I have read and understood the information in this form. I recognize that my decision to take part in the study will not alter my usual work. Information obtained from the study such as publications and presentations will keep my identity anonymous.

I understand that by putting a signature/thumbprint on this consent form, I voluntarily agree to participate in the study.

Volunteer's signature/ Thumb print: _____

Date: _____

APPENDIX III: Questionnaire

RESPONDENT NO. _____

SECTION A: PART 1 DEMOGRAPHIC DATA

Date: _____

Hospital: _____

Unit: _____

Age

20-30 years

41-50 years

31-40 years

51-65 years

Gender

Male

Female

Level of education

Certificate

Masters

Diploma

Doctorate

Degree

Others (specify) _____

Years of experience

Less than 1 year

11 – 15 years

1 – 5 years

16 – 20 years

6 – 10 years

More than 20 years

Years of experience in the department

Less than 1 year

11 – 15 years

1 – 5 years

16 – 20 years

6 – 10 years

More than 20 years

Have you had any formal training on pain assessment and management?

No

Yes _____

Have you had any informal training on pain assessment and management?

No

Yes

What is your usual shift rotation?

Days only

Nights only

Evenings only

Rotating shifts

Questions related to nurses' knowledge

Read the question cautiously and tick (✓) beside the alternative that best suits your answer

1. How do you evaluate your level of knowledge in pain assessment and management?

Excellent

Good

Average

Indicate whether True (T) or False (F)

2. Pulse rate, temperature, respiration rate and blood pressure are usually reliable indicators of patient's pain intensity. _____
3. Since children's (under 2 years old) nervous system is not fully developed, they are less sensitive to pain and have limited memory of painful experiences. _____
4. Patients who have been receiving stable doses of opioids for several months can hardly get respiratory depression. _____
5. Giving together analgesics that different mechanism of action (e.g. an opioid and NSAID) can bring about better relief of pain with less side effects than using one type. _____
6. 1 to 2 mg of morphine given intravenously usually lasts between 4 to 5 hours. _____

7. Recent studies show that promethazine and hydroxyzine are dependable potentiators of opioid analgesics. _____
8. Morphine has a dose ceiling, that is, a dose above which no greater pain relief can be achieved. _____
9. If the cause of patient's pain is not known, opioid analgesics should not be given during pain management as this could lead to the inability to correctly diagnose patient's pain
10. After a single dose of an anticonvulsant is given, an optimum pain relief is achieved_____

Circle the most appropriate answer

11. Morphine administered intravenously has a time peak effect of
 - A. Fifteen minutes
 - B. Forty five minutes
 - C. An hour
 - D. Two hours
12. Morphine administered orally has a time peak effect of
 - A. Five minutes
 - B. Thirty minutes
 - C. One to two hours
 - D. Three hours
13. If an opioid analgesic is stopped abruptly, a patient's physical dependence would be manifested by:
 - A. Sweating, yawning, diarrhea and agitation
 - B. Impaired control over drug use, compulsive use, and craving
 - C. The patient's need for higher doses to achieve the same effect.

D. a and b

Questions related to nurses' attitude

Read the question cautiously and tick (✓) beside the alternative that best suits your answer

1. **Do you at all times agree with patients self-report of pain?**

Yes

No

2. **How important is a pain assessment tool?**

Not that important

Minimally important

Moderately important

Extremely important

Indicate whether True (T) or False (F)

3. If patients' thoughts are distracted from pain, they usually do not suffer from severe pain. _____
4. Patients who have a history of substance abuse shouldn't be given opioids. _____
5. Old patients are unable to put up with opioids analgesics for pain relief. _____
6. Before using an opioid analgesic, patients ought to be encouraged to withstand as much pain as possible. _____
7. Nurses should rely exclusively on the guardians/ parents assessment to determine a child's pain intensity for children who are below eleven years of age. _____
8. Spiritual beliefs of a patient may determine how they respond to pain. _____
9. Narcotic (tranquilizer) and opioid addiction is well-defined as a chronic neuro-biological disease, characterized by behaviors that include one or more of the following: impaired control over drug use, compulsive use, continued use despite harm, and craving. _____

Circle the most appropriate answer

10. Patient's pain is most accurate judged by

- A. The patient's physician
 - B. The patient's nurse
 - C. The patient
 - D. The pharmacist
 - E. The patient's attendant
11. What reason would make a patient in pain to ask for an increase in doses of the prescribed pain medication?
- A. If the patient is experiencing an increase in pain.
 - B. If the patient is becoming increasingly anxious and depressed.
 - C. If the patient requires more staff attention
 - D. If the patients requests for the pain medication is related to drug addiction.
12. Which statement describes the best approach for considering cultural beliefs and values when caring for patients who are in pain?
- A. Because of cultural diversity, cultural influences do not exist anymore.
 - B. An individual ethnic group (such as, Itesot, Baganda, Acholi and Basoga) can determine their cultural influences.
 - C. Every patient should be assessed independently to be able to determine their cultural influences.
 - D. Socio-economic status of an individual can help tell his/her cultural influences

Questions related to nurses' practice

Read the question cautiously and tick (√) beside the alternative that best suits your answer

1. Do you use pain assessment tool when evaluating patients' pain?

No

Yes (specify)

If no, go to question 3

2. How often do you use pain assessment tools?

Always

Frequently

Occasionally

Never

3. **Please name the tool you use** _____

4. **If you DO NOT use a pain assessment tool, describe your method of assessing patients' pain for those able to report pain** _____

5. **Do you document outcomes after assessing patients' pain?**

No

Yes

6. **If yes, how often do you assess and document pain for a patient who is able to report pain**

Whenever necessary

1 – 4 hourly

Once every shift

Less than one hourly

More than 4 – 8 hourly

Others (Specify)

7. **Are pain ratings and management discussed during nurse to nurse report?**

Yes

No

Indicate whether True (T) or False (F)

8. After administering the first dose of opioid, the following doses should be adjusted according to the specific patient's response. _____
9. Administering water for injection is a useful test to determine if the patient is in real pain. _____
10. Assessing pain before initiating management is very important _____

Circle the most appropriate answer

11. Analgesics given to post-operative patients to relieve their pain initially ought to be given
 - A. On a fixed schedule
 - B. According to the patient's demand
 - C. Only when the patient the patient has moderate to severe pain/ discomfort
12. Opioid analgesics given to patients with severe pain of abrupt onset such as trauma or pain following surgery should be best administered
 - A. Intravenously
 - B. Intramuscularly
 - C. Subcutaneously
 - D. Orally
 - E. Rectally
13. How many mg of IV Morphine administered for a period of 4 hours would be the same as thirty mg of morphine given orally every four hours?
 - A. Five mg
 - B. Ten mg
 - C. Thirty mg
 - D. Sixty mg

APPENDIX IV: Introductory letters



making a difference in health care

Office of the Dean, School of Nursing

Kampala, 21st July 2015

The Hospital Director,
China-Uganda Friendship Hospital,
P.O. Box 20145,
Nakawa, Uganda

Proposal reviewed correction
were done by the student.
It's an important study she
can proceed with data

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Otieno Jane June**, Reg. No. 2011-BNS-FT-022 who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research in partial fulfillment of her award.

Her topic of research is: **Nurses' knowledge, attitude and practices related to pain assessment among post-operative patients; A case study of 3 Hospitals in Kampala**

This therefore is to kindly request you to render the student assistance as may be necessary for her research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours
★ 21 JUL 2015 ★
E. Wafula
SCHOOL OF NURSING
P.O. Box 7782 Kampala - Uganda
Mrs. Wafula Elizabeth
Dean

The International Health Sciences University
P.O. Box 7782 Kampala - Uganda
(+256) 0312 307400 email: ewafula@ihsu.ac.ug
web: www.ihsu.ac.ug

DR. MARYAMA
CLINICAL
17/9/15
Date: _____
Signature: _____
CHINA-UGANDA FRIENDSHIP HOSPITAL
P.O. BOX 20145
NAKAWA UGANDA



making a difference in health care

Director Education & Research

Office of the Dean, School of Nursing

Kampala, 21st July 2015

International Hospital Kampala
P.O. Box 8177
Kampala, Uganda

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Otiemo Jane June**, Reg. No. **2011-BNS-FT-022** who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research in partial fulfillment of her award.

Her topic of research is: **Nurses' knowledge, attitude and practices related to pain assessment among post-operative patients; A case study of 3 Hospitals in Kampala**

This therefore is to kindly request you to render the student assistance as may be necessary for her research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours

E. Wafula
SCHOOL OF NURSING
P.O. Box 7782 Kampala - Uganda
Mrs. Wafula Elizabeth
Dean

The International Health Sciences University
P.O. Box 7782 Kampala - Uganda
(+256) 0312 307400 email: ewafula@ihsu.ac.ug
web: www.ihsu.ac.ug

Office of the Dean, School of Nursing

Kampala, 21st July 2015

Hospital Director
Lubaga Hospital
P.O. Box 14130
Kampala, Uganda

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

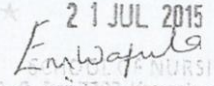
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This is to introduce to you **Otieno Jane June**, Reg. No. **2011-BNS-FT-022** who is a student of our University. As part of the requirements for the award of a Bachelors degree in Nursing of our University, the student is required to carry out research in partial fulfillment of her award.

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This therefore is to kindly request you to render the student assistance as may be necessary for her research.

I, and indeed the entire University are grateful in advance for all assistance that will be accorded to our student.

Sincerely Yours,

Mrs. Wafula Elizabeth
Dean

The International Health Sciences University
P.O. Box 7782 Kampala - Uganda
(+256) 0312 307400 email: ewafula@ihsu.ac.ug
web: www.ihsu.ac.ug

APPENDIX V: Correspondences



FOR ANY CORRESPONDENCE ON
THIS SUBJECT PLEASE QUOTE NO.

CHINA-UGANDA FRIENDSHIP HOSPITAL, NAGURU
P. O. Box 20145,
Nakawa, Uganda
Tel: Hospital Director: +256-41289741
General Line: +256-414289740



16th September 2015
Otieno Jane June
International Health Sciences University
P.O Box 7782
Kampala - Uganda

Permission to Conduct Research

This is to introduce to you **Otieno Jane June**, telephone number 078789353542 is a student of Nursing at the above mentioned institution.

She is required to conduct a research study as a requirement for the award of Bachelor's Degree in Nursing. Her research topic is

‘NURSES’ KNOWLEDGE, ATTITUDE AND PRACTICES RELATED TO PAIN ASSESSMENT AMONG POST – OPERATIVE PATIENTS; A CASE STUDY OF 3 HOSPITALS IN KAMPALA’.

She has been granted permission to collect data in China Uganda Friendship Hospital Naguru. The student must share her research findings with the hospital by providing a copy of her dissertation to the research committee after her research.

Please co-operate with her during the exercise of data collection.

Thank you.

CHINA - UGANDA FRIENDSHIP
HOSPITAL NAGURU
P.O. BOX 20145,
NAKAWA UGANDA

John Wanyama
Date:.....
Sign:.....
Dr. Wanyama John
Chair Person Research Committee

Plot 4686 St Barnabas Road Kisugu - Namuwongo
P.O.Box 8177 Kampala Uganda
Tel: +256 312 200 400 / +256 414 200 400
email: ihk@img.co.ug



Otieno Jane June

International Health Sciences University

22nd Sept 2015

Dear Jane

Re: permission to carry out study entitled "Knowledge, Attitude and Practices Of Nurses Related To Pain Assessment Among Post-Operative Patients In Three Hospitals in Kampala"

We congratulate you upon putting together this protocol.

I am pleased to inform you that, you have been granted permission to collect data from International Hospital Kampala for your study.

You are however required to submit a report of your findings at the end of your study.

We wish you well in your endeavors

Moses Galukande *MBChB, MSc, M.MED, FCS*

Director Education & Research

c.c DMS

c.c HoN

c.c IPD1 in charge

c.c IPD2 in charge

www.img.co.ug

Part of the International Medical Group



LUBAGA HOSPITAL

P.O. Box 14130, Kampala, Uganda
Tel: 256-414-270203/4, 273 692/3/4 / 0312-234800
Fax: 256-414-234226, E-mail: lubaga@ucmb.co.ug

14 August 2015

REF: LHRRC/2015/97

Ms. Otieno Jane June,
International Health Sciences University
School of Nursing
P.O. Box 7782
Kampala

Dear Jane,

Re: LHRRC Protocol 2015/97 Nurses' Knowledge, Attitude and Practices related to Pain assessment among Post-operative patients; A Case Study of 3 Hospitals in Kampala.

This is to inform you that the Lubaga Hospital Research Review Committee (LHRRC) has approved the above research study. The approval period is from 13/08/2015 to 12/08/2016. Your study number is LHRRC/2015/97 **Nurses' Knowledge, Attitude and Practices related to Pain assessment among Post-operative patients; A Case Study of 3 Hospitals in Kampala.**

Continued approval is conditional upon your compliance with the following requirements:

- 1) A copy of the **Informed Consent Document**, approved as 12 August 2016 is enclosed. No other consent form should be used. It must be signed by each subject prior to initiation of any protocol procedures. In addition, each subject must be given a copy of the signed consent form.
- 2) All protocol amendments and changes to approved research must be submitted to the LHRRC and not be implemented until approved by the LHRRC except where necessary to eliminate apparent immediate hazards to the study subjects.
- 3) Significant changes to the study site and significant deviations from the research protocol and all unanticipated problems that may involve risks or affect the safety or welfare of subjects or others, or that may affect the integrity of the research must be promptly reported to the LHRRC.

Please complete and submit reports to the LHRRC as follows:

- a) Renewal of the study - completes and returns the Continuing Review Report-Renewal Request (Form 404A) at least 8 weeks prior to the expiration of the approval period. The study cannot continue after 12 August 2016 until re-approved by the LHRRC.
- b) Completion, termination, or if not renewing the project- send the report upon completion of the study.

Please call me if you have any questions about the terms of this approval.

Yours sincerely,

Dr. Kibuka Peter
CHAIRMAN LHRRC



Medical Care, Nursing Care, Primary Health Care, AIDS Counselling and Home Care.