KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING PAIN ASSESSMENT IN CANCER PATIENTS AMONG NURSES AT UGANDA CANCER INSTITUTE-MULAGO

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DECLARATION

I, Masaba Ronald hereby declare that this is entirely my original work and it has never been presented for an award of degree in any other university.

Signature: ……..

Masaba Ronald

Date: …….

APPROVAL

The research report by Masaba Ronald on "**Knowledge, Attitude and Practices of Nurses regarding to Pain Assessment among cancer Patients at Uganda Cancer Institute**" has been done under my supervision and is now ready for submission to International Health Sciences University.

Signature: ……

Mrs. Kimara Agnes Lukoosi

SUPERVISOR

Date …….

DEDICATION

With gratitude, I would like to dedicate this piece of work to my loving parents, Mr. & Mrs. Sakwa and Harriet Masaba, who sponsored my studies and have supported me thus far. I am forever grateful and will always love you.

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I thank the Lord Jesus Christ for the life, knowledge, good health and grace bestowed unto me through which I have been able to develop this piece of work.

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OPERATIONAL DEFINITIONS

Pain	Is an unpleasant sensory and emotional experience, associated with actual, or potential, tissue damage, or described in terms of such damage (IASP, 1979).
Pain Assessment:	Is a systematic intervention of evaluating patients' magnitude of pain through determining the nature, duration, intensity and location of pain.
Knowledge	In this study, this refers to the nurse's awareness on key principles related to pain assessment among cancer patients.
Attitude	In this study, this refers to a response, understanding and skills that a nurse has in relation to pain assessment and management which is gained through education and experience. (Walter, 2005).
Practice	For purposes of this study refers to interventions performed by a nurse and are based on principles related to pain assessment and management among cancer patients.

LIST OF ABBREVIATIONS AND ACRONYMS

APCA	Africa, the African Palliative Care Association
ICN	International Council of Nurses
IHSU	International Health Sciences University
MOH	Ministry of Health
NKAS	Nurses Knowledge and Attitude Survey Regarding Pain
PAT	Pain Assessment Tool
POS	Palliative Outcome Scale
TPMI	Toronto Pain Management Inventory ()
UCI	Uganda Cancer Institute
VAS	Visual Analogue Scale
VRS	Verbal Rating Scale
WHO	World Health Organization

ABSTRACT

Background: Cancer patients often experience moderate to severe pain, therefore effective pain assessment is required by nurses. Optimum management of pain among cancer patients requires proper assessment of the intensity, location and nature of pain. This ensures comfort to the patient and their care givers. It was therefore essential to assess the knowledge, attitude and practices associated with pain assessment among nurses.

Methods: The study used a descriptive cross-sectional research design to study 67 participants, comprising of nurses who were directly handling cancer patients at Uganda cancer Institute. The participants were selected using simple random sampling methods. A self-administered questionnaire was used to collect data. Data was then analyzed using SPSS, and presented in form of frequency tables, graphs and pie-chats.

Results: The study revealed that; the majority of the respondents (85%) had a high level of knowledge on pain assessment while 13% and 2% had moderate and low level of knowledge respectively. In addition, majority of the respondents had a positive attitude towards pain assessment, while a third of them had a neutral attitude towards pain assessment. Furthermore, the study indicated that there were good practices regarding pain assessment among the nurses.

Conclusion and Recommendation: The findings highlight the need to continuously improve nurses knowledge, attitude and practices through continuous professional development on pain assessment to keep them up to date with current information on assessment of pain among cancer patients.

CHAPTER ONE
INTRODUCTION

1.0 Introduction

This chapter addresses the background of study, the problem statement, study research objectives, research questions, the significance of the study and the conceptual frame work.

1.1 Background of the study

Cancer pain is a very significant public health problem throughout the world today. Cancer patients often experience pain at diagnosis, during treatment and after treatment. Pain is a subjective, legitimately personal experience associated with either actual or potential tissue damage. (Carvalho et al., 2009). Therefore pain assessment and proper management ought to have the highest priority in the care of such patients. In addition, when assessing pain each patient should be treated in his or her individual way because pain perception and causes vary from one patient to another.

Although, pain is a major health care concern in patients with cancer (European Society for Medical oncology, 2008), the important barriers that leads to under treatment of cancer pain is inadequate assessment and measurement of pain, This is despite the fact that the management of pain is an important aspect of patients care and nurses play an essential role in providing this pain assessment and management. (Courtenay & Carey, (2008); Luiso & Fong, (2008)). Since assessing pain is the first step in ensuring that the patient's pain is relieved and a significant goal in care (Gelinas et al, 2006), it is therefore an essential part of the practice of nursing.

Pain assessment involves assessment of the aetiology of pain, comprehensive nursing assessment combined with medical evaluation of the pain aetiology (Ferrell et al., 2008).

In practice nurses are responsible for assessing pain by obtaining subjective responses from the patient using verbal set of questions to the patient and objectively by observing nonverbal actions like facial expressions from the patients face (Wolfert et al., 2010). Nurses are also responsible for administering drugs that relieve the patient's pain to a level that is bearable to the patient. Nurses should therefore have adequate knowledge, right attitudes and practices to assess whether a patient is going through physical, psychological and spiritual pain.

Globally, many nurses in general practice as well as those in palliative care settings, lack the knowledge about basic pain assessment and management principles; which also applies to the attitudes that nurses have towards pain and its assessment (Miller, 2012).

In a study conducted in the United States of America on hospice nurses' attitudes and knowledge about pain assessment and management, findings indicated that the overall mean knowledge score for the nurses fell below the recommended standard and the attitude towards pain management was only slightly positive (Miller, 2012). This study highlighted that a positive attitude does not translate into knowledge on pain assessment and management. Another systematic review of fifty two studies on prevalence of pain in patients with cancer in Europe showed that more than 50% of patients with any of the cancer types experience pain with the highest prevalence in head and neck cancer patients (European Society for Medical oncology, 2008). However despite the clear World Health Organisation pain assessment recommendations, pain due to cancer was still a major problem (European Society for Medical oncology, 2008). In addition, studies have noted that there is lack of training on pain assessment and management among nursing academics and faculty. Indeed, according to Plaisance & Logan, (2007), there is need to introduce it as part of the curricula. Though studies show that education programs on pain increases nurses' knowledge and improve their attitudes towards assessment of pain, other studies have shown that there are gaps on the subject of pain assessment and management regardless of training (Lui So & Fong, 2008). There still remains a problem with the management of cancer pain by the nurses (Goodrich, 2006). Nonetheless, inadequate education and training of nurses are amongst the issues that lead to poor pain assessment and management of cancer pain (Dalton et al., 2005; De Rond et al., 2004).

In India, it has been reported that cancer pain is often sub optimally managed, primarily because of inadequate pain assessment or lack of aggressive treatment. In India, 2-2.5 million new cases of cancer are added every year, of these patients, 60–80% present in advanced stage of the disease and about 60% patients require only pain and palliative care but, unfortunately, only 28% of the patients get palliative care and pain relief which results from poor pain assessment. (Rahul et al, Indian journal of palliative care, April 2011).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 cancer wards; this contributes to inadequate pain treatment (Breivik et al., 2009).

In Africa, several similar studies conducted have reported that experts in pain management have estimated that a significant number of all cancer patients die without adequate pain relief, despite the fact that the tools for adequate pain assessment and control are available. Several

factors considered to be barriers to cancer pain management have already been reported, and the health worker's knowledge of cancer pain assessment and management has been rated highly among those factors **(**Makama et al, 2013). In Ghana, for instance, studies have reported that nurses oftentimes underestimate pain due to improper assessment and hence management of pain (Rejeh et al., 2009; Aziato & Adejumo, 2013).

A study conducted among nurses in a Nigerian tertiary health institution, showed that half of respondents had inadequate knowledge on pain assessment and management, additional formal training in pain management, gave correct definition of pain and out of these, could give a good account on the management of cancer pain, could use Visual Analogue Scale (VAS) for pain assessment (Elumelu et al., 2014). This study revealed inadequate knowledge in cancer pain management among the nurses.

In Ethiopia, negative attitude of nurses regarding cancer pain management were observed and the practice of nurses' was also poor. The main barriers which hindered good cancer pain management were lack of motivation including salary, role confusion, and lack of continuing training. In Zimbabwe, Manwere et al (2015) reported that Registered nurses at Bindura Hospital had low knowledge levels and poor attitude regarding pain management of adult medical patients. Curricular changes aiming to promote pain management in medical patients and correcting the ingrained misconceptions are needed (Manwere et al., 2015).

In Uganda, like other places highlighted above, cancer patients still experience a lot of pain ranging from moderate pain to severe pain most probably due to inadequate pain assessment. Inadequate pain assessment and the resulting inadequate management among cancer patients have been found to have serious physiological and psychological sequelae (Turina et al., 2006). On the other hand, the WHO pain management protocol that involves the use assessment and use of the analgesic ladder (WHO, 2015), has been adopted by Ministry of Health (MOH). As a result, it has developed a guideline on pain assessment and management through the Uganda Clinical Guidelines (MOH, 2016). There are also various in-service training and workshops aimed at improving the skills, attitudes and practices on palliative care for nurses and other clinicians.

Regardless of the studies and above interventions, many patients in hospitals Uganda still experience pain. In most of these situations as the above literature has shown elsewhere, the nurse's knowledge, attitude and practice related to assessment of pain among cancer patients

has been noted to be the core and an essential element and the first step in controlling the complex experience (Breivik et al., 2009.

1.2 Problem statement

The management of pain is an important aspect of patients care and nurses play an essential role in providing pain assessment and management. According to Uganda's Ministry of Health, pain management by nurses is guided by the Uganda Clinical guidelines and WHO protocols for pain management, which involves clinical investigation of pain and treatment (MOH, 2016). However, at Uganda Cancer Institute (UCI), regardless of technological advances, extensive research, evidence-based practice and the most recent WHO pain management protocol that involves the use assessment and use of the analgesic ladder (WHO, 2015), the problem of pain in patients seems not to be adequately addressed. Cancer patients still experience a lot of pain ranging from moderate pain to severe pain most probably due to inadequate pain assessment. Many cancer patients at UCI complain of having pain as the major health problem they are facing during their stay at UCI.

Inadequate pain assessment and the resulting inadequate management among cancer patients have serious physiological and psychological sequelae (Turina et al., 2006). Unrelieved or inadequately managed pain interferes with sleep, increases levels of anxiety, difficulties with mobility, as much as causes psychosocial distress; namely anxiety and depression and may result in premature death. Cancer pain also makes the patients unable to return home and to work as they remain admitted for longer duration, thus increasing financial costs to the patient and family as well as the hospital not being able to admit other patients due to lack of bed-space. This phenomenon seems to be related to nurse-related barriers, such as knowledge deficits regarding pain assessment and management principles, personal nurse attitudes and poor practices attributed to inadequate pain assessment that result into failure to assess and acknowledge the existence of pain.

Despite the increased awareness of the significance of pain and the above poor patient outcomes, there has so far not been any documented study in Uganda reporting nurse's knowledge, attitudes and practices related to pain assessment among cancer patients. There is also scanty literature which has been published on pain assessment and its management at UCI, hence calling for this study to assess knowledge, attitude and practice regarding pain assessment in cancer patients among nurses in Uganda Cancer Institute, Mulago.

1.3 General objective

To assess knowledge, attitude and practice regarding pain assessment in cancer patients among nurses at Uganda Cancer Institute Mulago in June, 2017.

1.4 Specific objectives

i) To assess the level of knowledge related to pain assessment in cancer patients among nurses at Uganda Cancer Institute Mulago in June, 2017.

ii) To determine the attitudes related to pain assessment in cancer patients among nurses at Uganda Cancer Institute Mulago in June, 2017.

iii)To identify practices related to pain assessment in cancer patients among nurses at Uganda Cancer Institute Mulago in June, 2017.

1.5 Research questions

i) What is the level of knowledge related to pain assessment among nurses at Uganda Cancer Institute in June, 2017**?**

ii) What are the attitudes related to pain assessment in cancer patients among nurses at Uganda Cancer Institute in June, 2017?

iii) What are practices related to pain assessment in cancer patients among nurses at Uganda Cancer Institute during in June, 2017?

1.6 Significance of the study

Based on the findings, strategies to improve the knowledge and practices of pain assessment among nurses may be designed, implemented and evaluated untimely reducing or preventing patients suffering through improved nursing practice.

To policy makers, through identifying the knowledge gaps with regards to assessment which is the aim of this study, protocols and policy guidelines may be formulated to improve nursing practice. .

This study will act as a baseline for nursing management to provide more continuous medical education about pain assessment and management to nurses and other medical personal in the hospital.

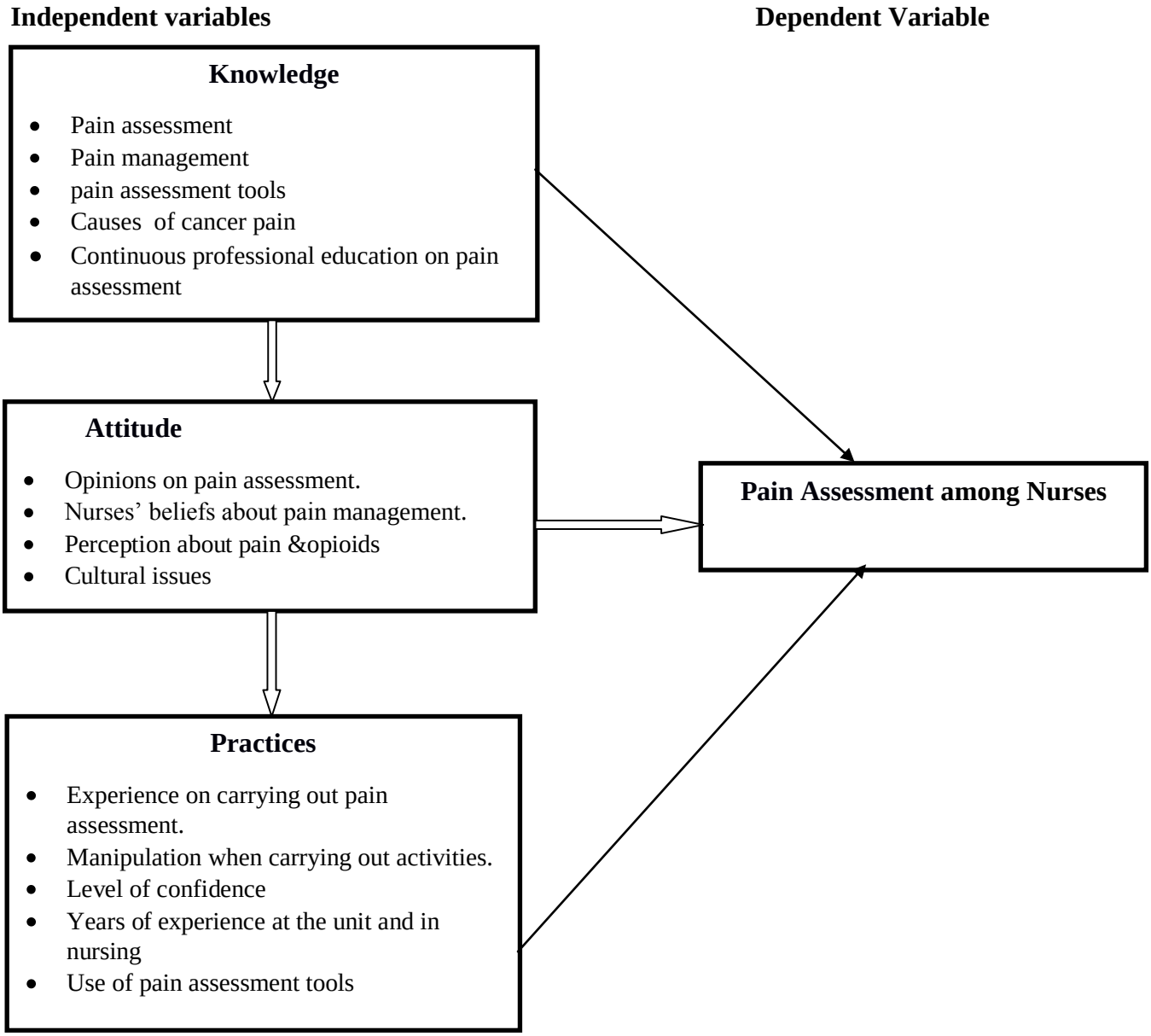
This study will also act as baseline for policy makers as Uganda reaffirms its commitment to deliver optimal health care services to patients of any kind, hence develop national training program for nurses and midwives, as a tool to disseminate information to the general population for awareness and management of pain in cancer patients.

To scholars, the study will also contribute to the little existing literature in Uganda concerning pain assessment knowledge and practices among nurses.

The study is a requirement for researcher's attainment of a Bachelor's degree in Nursing Science of International Health Sciences University.

1.7 Conceptual frame work.

Figure 1: Conceptual frame work.



Description of the conceptual framework

Figure 1 above, shows how the dependent variable that is Pain assessment among nurses interacts with the independent variable that is knowledge, attitude and practice regarding pain assessment. Knowledge aspects on pain assessment such as knowledge on: pain assessment, management, tools used in pain assessment, etiology of pain and knowledge from continuous professional development program have an impact on how a nurse can do pain assessment.

Likewise the nurse's attitude on pain assessment and control impacts on ones practice of assessing pain and managing among cancer patients in a way that positive attitudes towards

effective pain assessment and management will influence a nurse to carryout pain assessment and thereafter manage it to bearable levels among cancer patients.

Additionally, nursing practices such as experience in assessing and managing pain, experience of the unit and level of confidence in assessing and managing pain in cancer patients' influence the nurse's practice of pain assessment and management.

CHAPTER TWO
LITERATURE REVIEW

This chapter presents review of existing literature from previous studies conducted on pain assessment in relation to the study objectives namely: pain assessment among cancer patients, and the knowledge, attitude and practices among nurses.

2.1 Overview of Pain Assessment among Cancer Patients

Cancer pain is a very significant public health problem throughout the world today (WHO, 2012). Cancer patients may always experience pain at diagnosis, during treatment and after treatment. In fact, pain is one of the most important negative factors affecting their quality of life, interfering with their daily activities, reducing their enjoyment of everyday pleasures, and preventing them from relaxing, sleeping, ends up precipitating anxiety, depression, stress and fatigue. Pain is a subjective, legitimately personal experience associated with either actual or potential tissue damage. (Carvalho et al., 2009). Each individual perceives, interprets, and reacts to pain in his or her own singular and particular manner. According to Carvalho.et al, (2009), pain poses a serious problem and must be dealt with and expounded in a correct manner. Therefore pain assessment and proper management ought to have the highest priority in the care of such patients. In addition, when assessing pain each patient should be treated in his or her individual way because pain perception differs from one patient to another.

Nurses have four fundamental responsibilities: to promote health, to prevent illness, to restore health and to alleviate suffering. (I.C.N, code of conduct for nurses, 2013). Although, pain is a major health care concern in patients with cancer (European Society for Medical oncology, 2008), the important barriers that leads to under treatment of cancer pain is inadequate assessment and measurement of pain. This is despite the fact that the management of pain is an important aspect of patients' care and nurses play an essential role in providing this pain assessment and management. (Courtenay & Carey, 2008; Luiso & Fong, 2008) This due to the fact that nurses contribute the largest health worker force and spend the largest portion of time with the patients. This implies that they need adequate knowledge, a positive attitude and good practice of pain assessment.

Assessing pain is the first step in ensuring that the patient's pain is relieved and a significant goal in care (Gelinas et al, 2006), it is therefore an essential part of the practice of nursing.

Indeed, assessment is the first step in the nursing process that guides the nursing practices. Inadequate assessment leads to poor management and subsequently leads to poorly controlled pain among patients

According to Ferrell et al., (2008), pain assessment comprises a critical component of chronic pain classification; and involves assessment of the aetiology of pain, comprehensive nursing assessment combined with medical evaluation of the pain aetiology. Multiple domains of pain should be assessed which include, pain severity, pain qualities, bodily distribution of pain and temporal characteristics of pain (Fillingim et al., 2015). Therefore good knowledge on assessment of these domains is needed for proper management of pain.

In practice, nurses are responsible for assessing pain by obtaining subjective responses from the patient using verbal set of questions to the patient and objectively by observing nonverbal actions like facial expressions from the patients face (Wolfert et al., 2010). They are also responsible for administering drugs that relieve the patient's pain to a level that is bearable to the patient. Nurses should therefore have adequate knowledge, right attitudes and practices to assess whether a patient is going through physical, psychological and/or spiritual pain.

In Africa, the African Palliative Care Association has developed the African Palliative Outcome scale (APCA African POS) to be used by the health care providers and patients (Blum et al., 2014). The tool is now widely used in Africa and is available in many African languages. It consists of ten Items addressed to the patient and the family care providers. The tool is however hindered due to illiteracy.

Among the principles recommended for effective pain management is routine pain assessment and assessment of the effectiveness of interventions (Watt-Watson, Clacrk, Finley, & Watson, 1999). Assessment of acute pain refers to the comprehensive clinical process of describing pain and its effect on patient function in sufficient detail to achieve: assistance in diagnosis and extent of injury or disease, selection of appropriate therapy and evaluation of response to therapy. It requires the practitioner to use a particular type of pain assessment tool (Brown, 2008).

Pain assessment in cancer patients however is more difficult, and conventional pain assessment tools, not always appropriate. Because pain is first recognized as a subjective experience, the patients self-report of pain represents the most valid measure of pain and must be obtained

whenever possible. Standardized tools promote consistency among care providers and care settings; enhance communication between patients and practitioners by making a subjective experience measurable, and facilitate evaluation of pain management decisions (Herr, et al., 2006).

Other tools are available to ensure that appropriate pain assessment is done well. One of the methods used in assessing the patient's pain is the mnemonic PQRSTU. It helps in conducting a comprehensive interview about pain (Arif & Grap, 2009). The letters standing for provocation or position, quality, radiation, severity of pain and other symptoms associated with pain, timing or triggers and understanding of pain by the patient respectively monitors the intensity of pain, which can be measured by various scales. Numerical rating scales (NRS; 0-10), faces pain scale and Visual Analog scale (VAS) are among the commonly used scales for subjective pain measurement with a patient who can self-report pain either verbally or other means like pointing or nodding the head once shown the scale (Arif & Grap, 2009).
Frequency of observation of pain as the 5th vital sign should depend on the intensity of the pain, the type of therapy used to treat it and the need to evaluate that therapy. Dynamic pain should be assessed, mostly the patient's ability to cough and move the affected body part. Pain at rest is also relevant as this can give an indication about how well a patient will be able to sleep (McMain, 2008).

The inability to communicate verbally does not negate the possibility that an individual is experiencing pain and in need of suitable pain relieving treatment. This emphasizes the need for appropriate assessment of pain among non-verbal patients (Macintyre et al, 2010). To date, there is no a universal pain assessment tool that is suitable for all cancer patients (Shannon & Bucknall, 2003; Rose, et al., 2011). Therefore the appropriateness of a scale must be assessed patient by patient and no one scale should be institutional mandate for all patients in certain group. Elements of a variety of different tools may be required according to the condition of the patient (Shannon & Bucknall, 2003). A simple tool, which is straightforward and no too time consuming, is valuable in the patient care environment (Shannon & Bucknall, 2003). The American pain society guidelines also mandate evaluation of both physiological and behavioral response to pain in patients who are unable to communicate (Herr, et al, 2006).
As seen from the scholarly discussion above, in most of these situations, the nurse's knowledge, attitude and practice related to assessment of pain among cancer patients has been noted to be the core and an essential element and the first step in controlling the complex experience (Breivik et al., 2009; WHO, 2014).

2.2 Knowledge regarding pain assessment among Nurses

Clinicians need a wide base of knowledge about pain, its assessment and management principles, and consequences of inadequately assessed pain among other concepts about pain. However, studies show that nurses and other health workers lack adequate knowledge about pain, underestimate pain, provide inadequate analgesia and document pain infrequently (Watt-Watson et al., 2001). This subsequently leads to poorly controlled pin among cancer pains since they oftentimes suffer pain.

Nurses in particular, should have adequate knowledge, right attitude and practices to assess whether a patient is going through inner, emotional, psychological and physical pain. The nurse should remain calm, tactful and confident. (Breivik et al., 2009). This is attributed to the fact that nurses spend the biggest portion of the time with patients as compared to other health care providers.

Globally however, many nurses in general practice settings lack the knowledge about basic pain assessment and management principles, this also applies to the attitudes that nurses have towards pain and its assessment (Miller, 2012). Knowledge deficits regarding pain assessment principles has been cited as one of the barriers to optimal pain management among cancer patients and oncology nurses recognition that they have inadequate pain assessment knowledge has been considered as a key step towards improvement of pain management (Pasero et al., 2009). Knowledge on assessing pain has a great impact on the subsequent management of pain, therefore inadequate knowledge could lead to insufficient quantification of the magnitude, location and cause of the pain hence uncontrolled pain among patients.

It is therefore recommended that nurses and other health professionals engage in continuous professional development programs on pan assessment and use of pain assessment tools.

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).

The results of a related study done in Turkey amongst 91 nurses to assess their practices in relation to pain practices among patients 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 patient's 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 assessment (Riemanet al. 2007) and also the gap between theory and practice as reported by Stellenberg and Bruce (2007).

Literature also 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 respondent's 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).

Another study done to determine pain assessment and management among nurses in Nigeria demonstrated inadequate knowledge in 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 assessment and management. In a study aimed at determining the knowledge and practices amongst 200 clinicians (170, 87% nurses) in Kenya, only 41% of nurses indicated they had adequate knowledge to recognize and manage pain (Kituyi et al., 2011). In another study that was designed to examine the relationship between nurses' knowledge and beliefs about patients outcomes related to pain and analgesic intake, findings showed that among 80 nurses for cancer patients, the level of knowledge was moderate for majority. About 53% of the nurses scored 69% or less with the Toronto Pain Management Inventory (TPMI) tool with only 15% scoring 75% or greater (Watt-Watson, et al., 2001). No significant differences were evident between the groups of nurses with high and low scores for nurse's characteristics like age, nurse's work and unit experience, education level or pain during the previous 3-hous period of their assignment.

In conclusion, generally literature has vividly indicated 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, et al, 2001).

However, some studies have indicated that in some settings nurses have got adequate knowledge on assessing and managing pain. For instance, a 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 collegues, 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).

Other statistics of a study conducted in Kenya, in relation to managing pain amongst clinicians of which, 41% of the nurses showed they had enough knowledge to identify, assess and manage pain appropriately (Kuremu et al, 2011). Of these, 21% of the respondents had never gone through formal teaching on the subject of pain assessment and management. Additionally, outcomes of the study discovered that the respondent's knowledge wasn't influenced by their working experience (Kituyi et al, 2011). This study does not clearly show how the level of knowledge was evaluated.

2.3 Attitude regarding pain assessment among Nurses

Attitude always determines ones motivation to do an action. Indeed a positive attitude towards a given action will often times lead to action. This has been reported in regards to pain assessment among nurses across various studies.

In Nigeria, majority of respondents in a study done to determine the respondents attitude to pain assessment and management, 66 out of 95 0f the participants (66%) demonstrated negative attitude this is according to a study done to determine pain assessment and management among in Nigeria (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, et al, 2011; Thomas, 2008; Rampanjoto et al., 2007). According to them, patients should be able to bear their pain.

Personal factors contribute to nurse's 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)

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 patient's 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 nurses appreciate the importance accurately assessing patient's pain. A study done to investigate nurse's 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).

In 2006, 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, 2012).

2.4 Practices regarding pain assessment among Nurses

The key principles in pain assessment are the use of standardized tools to assess pain and evaluate the effectiveness of intervention targeted to individual patients needs as regards pain relief. However, literature highlights the inadequate or no use of these tools. Without these tools, nursing staff can only rely on their clinical judgment, which may be influenced by many of the preconceptions and attitudes about patients in pain. This in turn affects patient's outcomes on pain relief because most of the prescriptions are based on nurses rating of pain. (Kaasalainen et al., (2007)) found that half of all nursing staff used informal screening approaches rather than the Numerical Rating Scale to assess patient's pain. Similar findings have been reported even in the presence of protocols (Shugarman et al, 2010).

A study in Hong Kong among 143 nurses working on medical units reported that the majority of participants had either never or only seldom used objective tools for pain assessment and only 19% of them had ever attended courses related to pain assessment and management (Lui, et al., 2008).). Training increases on the knowledge and skills needed to carryout pain assessment.

In the contrary, findings of a study conducted in Canada among oncology nurse reported better use of assessment tools. Of the140 participants, 98.6% and 45.7% used one or more pain assessment tools for patients able and un-able to self-report pain respectively (Rose et al., 2011). This improves on the nurse's skills and up to date tools and practices on assessing pain among cancer patients.

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).

However, Globally due to the multi-factorial nature of pain, the development of a valid and reliable assessment tool of pain assessment remains a mystery. However there have been commonly used scales which include the verbal rating scale (VRS), Visual Analog Scale (VAS), and the numerical rating scale (NRS) (Gentile et al., 2011).

This difference in the use of pain assessment tools could be explained by the difference in the support that nurses receive through continuing professional education on pain and its management.

The findings of the study in Canada showed that majority of the nurses reported attending some form of ongoing professional development education on topics related to pain (Rose et al., 2011). Other approaches that were used for pain assessment among nurses who did not use a formal tool for patients unable to self-report pain included vital signs and various pain behaviors (Rose, et al, 2011). Behaviors that were most frequently considered routinely indicated of pain by nurses were grimacing, vocalization and wincing (Rose, et al., 2011). Behavioral signs can be used in conjunction with other methods of assessing pain and should not be substituted for a self-report as long as the patient can communicate in any way (Odhner et al., 2003).

A study in Kenya among clinicians reported more than 57% of the participants indicated that they had inadequate knowledge regarding tools that may be engaged for pain assessment and measurement and only 12% of the health care providers had ever used any tools (Kituyi et al., 2011. However, the percentage was contributed by nurses wasn't indicated. Tools that were commonly used by the participants included Visual Analogue Scale, Numerical Rating Scale, verbal description, Categorical Scale and McGill scale (Kituyi et al, 2011). The inadequacy of knowledge about pain evaluation tools was attributed to lack of formal teaching about pain assessment and management for some participants. Lack of formal training either pre or in-service has been continuously reported by different studies (Rampanjoto et al., 2007; Lui, So, & Fong, 2008). This does not only affect the knowledge about tools but also their use.

Absence of organizational procedures as well as strategies on assessment of pain has been quoted to hinder 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 nurse's pain ratings.

A study done by Kaasalainen 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; Schafheutleet 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; Klopperet al., 2006). Though, following a pain management program, it was found that the nurses showed slight improvement in their pain assessments in accordance with those of the patients. (Eneet al. 2008)

Many studies have been done to assess how nurses who work on cancer units assess patient's pain. A study conducted by Buknall among 52 nurses working on cancer patients 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. (Buknall, Botti & Manias, 2006). A study conducted in Mulago Hospital, Kampala among 170 nurses, 90% revealed to assess patients' pain in adults who communicate while 10% didn't. Reports on open questions reveal that 53% of those who did not see the need to assess patients' pain, the common reason was that patients were able to report their pain. Much nursing staff work load and lack of tools for assessing pain and lack of strategies to assess pain were among the reasons nurses didn't assess for pain. Majority 96% of the respondents who said they assessed patient's pain didn't use formal pain assessment tools. (Kizza, 2002)

Conclusion

Pain assessment with ultimate effective management is one of the most important aspects of patient care. Since much of the responsibility for the patients' comfort rests with the nurses, there is need to have solid foundation of knowledge and skills about pain assessment as well as positive attitude towards that aspect of care. This enables them to assess patient's condition and deliver individualized care to each patient so as to reduce discomfort and enhance the quality of life. However, regardless of the studies and up-to-date interventions, many patients at UCI still experience severe pain. To improve both the quality of care and quality of life of cancer patients, there is need to investigate the level of knowledge, attitudes, and practices related to pain assessment among the nurses.

CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter presents the study design, study area, study population, determination of the sample size, eligibility criteria of participants, study variables, sources of data, techniques of data collection, data analysis plan, quality control issues, ethical considerations and plan for dissemination of findings.

3.1 Research design

The study employed a descriptive, cross-sectional study design which involved both quantitative and qualitative methods of data collection to determine the level knowledge, attitude and practices of nurses related to pain assessment among cancer patients at Uganda Cancer Institute Mulago. The study design was chosen because, it is the best to enable the research to conduct research studies at a point in time. The qualitative methods involved in-depth interviews with Key informants.

3.2 Study Area

This study was conducted at Uganda Cancer Institute (UCI) located at Mulago National Referral Hospital, Kampala District. UCI is a Centre of Excellence for tertiary cancer treatment and research. It provides care for cancer patients guided by results of treatment research and also provides training in cancer care for a broad range of health care professionals as models of cancer management in East Africa. The Uganda Cancer institute was selected because of the unique condition of patients that present at UCI in large numbers within the country and out of the country.

3.3 Study Population

This comprised of several cadres of professional nurses at diploma level, degree level and masters level working at Uganda Cancer Institute Mulago who had been directly handling cancer patients during the time of data collection and had worked at the unit for at least the last 6 months.

3.4 Inclusion and Exclusion Criteria

3.4.1 Inclusion Criteria

- Nurses who were officially employed at Uganda Cancer Institute Mulago.
- Nurses who were working the Uganda Cancer institute wards directly taking care of patients at the institute for more than 6 months.
- The nurses who consented to participate in the study.
- Nurses who were be present at the time of study.

3.4.2 Exclusion Criteria

a) Nurses who were officially employed by the hospital but had worked at UCI for less than 6 months.
b) Nurses who consented but decided to leave in the middle of the study.
c) Nurses who were absent at the time of study.

3.5 Sample Size determination

The researcher used a simplified formula that was put forward by Taro Yamane (1967) to estimate the sample size (n) of the respondents in UCI. A 95% confidence level and P = 0.05 was assumed for the equation. The researcher employed Taro Yamane because the population of UCI is finite and it is known. UCI had a total of 80 employees that constituted the nurses in different departments. The sample size was determined as below:

$n=N/ 1+N (e)^2$

Where:

N= total number of respondents

e= level of precision (0.05)

n= sample size

The total population of the respondents (N) is 80 hospital staff according to the statistics that were obtained from the Senior Hospital Administrator of UCI. Therefore, the sample size was calculated using the formula as shown below:

$n=N/ 1+N (e)^2$

$n=80/ 1+80 (0.05)^2$

$n=80/1.2=66.66$

$\mathbf{n} \approx 67$

Therefore, 67 nurses were be studied.

3.6 Sampling technique

The researcher used purposive and simple random sampling methods to select the nurses from the different wards. The wards were purposively selected then a simple random sampling technique was used to select the nurses. The simple random sampling was used because it minimizes selection bias thereby reducing the margin of error in the study. The participants from the different wards were selected proportionately according to the number of nurses working on a given ward.

3.7 Study Variables

3.7.1 Dependent Variable

The dependent variable in this study is pain assessment among nurses.

3.7.2 Independent Variable

a) Knowledge: which included knowledge on causes of cancer pain, Signs and symptoms of cancer pain; Pain assessment, pain assessment tools, Pain management, and continuous professional education on pain assessment.
b) Attitude: included attitude on opinions towards pain assessment, nurses' beliefs about pain management, perception of pain & opioids and cultural issues.
c) Practices: included experience on carrying out pain assessment, manipulation when carrying out activities, level of confidence and years of experience.

3.8 Sources of Data

The study utilized both primary and secondary sources of data. Primary data was obtained from researcher-administered questionnaire to the nurses giving care to cancer patients at Uganda Cancer Institute. Secondary data was obtained published books, journals and other resources of similar studies done.

3.9 Data collection tool.

A self-administered questionnaire was developed from the relevant literatures to capture data from the nurses. The other tool used was the nurse's knowledge and attitude survey regarding pain (NKAS) tool. The tool was established in 1987, and is used broadly to date, was modified to soot the study. In addition, a Key Informant interview guide was used to get in depth information about the study variables.

3.9.1 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 been modified severally; this study utilized the most recent version available on: htt://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 had been confirmed (Ferrell and McCaffery, 2008). The revised version of the NKAS tool consisted 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 had 3 parts**.**

3.10 Data Collection Procedure

After obtaining ethical clearance from the relevant authorities, the researcher went ahead and collected data. The researcher first liaised with area managers and nurse in charges at the study area. This was followed by explanation of the objectives of the study to both the participants and the ward in charges. Participants were then assessed to ascertain that they met the inclusion criteria before being administered with a questionnaire. Each participant was given time to read and fill the questionnaire forms. At the end of the exercise, the researcher thanked the participants and checked the questionnaire for completeness. As for the Key Informant interviews, these took place by getting appointments with the respective officers, according to their convenient times within the period of data collection. The researcher carried out the process of data collection for a period of two weeks.

3.11 Data management

At the end of every interview, the researcher always checked questionnaires brought back by the participants for the errors and completeness and for mistakes or incompleteness found, they

were retrieved form the participating nurse. The researcher entered collected data in the computer file to create a data set.

3.12 Data analysis plan

The collected data concerning knowledge, attitude and practices of pain assessment of nurses among cancer patients after being checked for completeness, mistakes and after retrieval from participants, was analyzed and conclusions were drawn. The data collected was analyzed using statistical computer package SPSS version 20.

Descriptive statistics were presented using graphs, frequency tables and pie charts. The overall knowledge of the participants were graded as high, moderate or low on a score of **1-12, where by 1-4= low knowledge; 5-8= moderate and 9-12 = high**; as indicated in figure 2 below. The attitude was also be categorized as positive, neutral and negative.

3.13 Quality Control

The questionnaire was pre-tested among ten nurses working at Kiruddu/Mulago Hospital. This gave the researcher an insight on how much time was needed to administer to the instruments, also on clarity, validity of the instruments and sequencing then adjustments was done depending on the results. Furthermore the research-assistant was trained by the chief investigator to ensure they were competent in data collection skills. The questionnaires were self-administered which minimized misinterpretation of data associated with a second person. In addition they always checked for completeness every after the interview and similarly, the coding, entering, verifying and cleaning of the data was performed with a lot of care.

3.14 Ethical Considerations

Ethical clearance was obtained from the Research Ethical Committee of International Health Sciences University (IHSU) and at Uganda Cancer Institute Mulago. In addition, participants were requested to sign a written informed consent prior to their participation. The consent was written in simple clear English and stated the purpose and benefit of the study.

The researcher also assured the participating nurses that their participation were purely voluntarily, and would chose not to participate and won't be affected any way for not participation. Participants were clearly be informed about their rights, such as withdrawing from the study at free will at any time they felt like and that the study was entirely for academic purposes. In addition, the information obtained was treated with high confidentiality, no identifiers like names, the forms only had numbers and date of data collection.

3.15 Plan for dissemination

The results were presented in report form to the School of Nursing at International Health Sciences University. The results will also be presented to the management and staff of Uganda Cancer Institute Mulago, Efforts are also to be made to publish the results in reviewed scientific journal, presented at seminars, workshops and scientific conferences.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

This chapter presents findings from the study. The study involved 67 participants who fully completed the survey making 100% response rate. The results are presented in line with the study objectives here below.

4.1 Demographic characteristics of the respondents

Table 1: Demographic characteristics of the sample population (N=67)

Variable		Frequency (n)	Percentage (%)
Age	20-40 years	45	67.2
	41-65 years	22	32.8
Gender	Male	26	38.8
	Female	41	61.2
Level of education	Certificate	13	19.4
	Diploma	19	28.3
	Degree	15	22.4
	Masters	14	20.9
	Doctorate	4	5.9
	Others	2	2.98
Years of experience	Less than 1	13	19.4
	1 –10 years	15	22.4
	11 –20 years	26	38.8
	More than 20	13	19.4
Usual shift rotation	Day only	23	34.3
	Evening only	5	7.6
	Night only Rotating shifts	17 22	25.3 32.8
Formal training on pain assessment	Yes	60	89.6
	No	7	10.4

Table 1 above reveals that the majority of the respondents (67.2%) were aged between 20 - 40 years; females constituted a significant 61.2% and 28.3% had attained at least a diploma.

With regards to years of experience, a considerable 38.8% of the respondents had 11 - 20 years while those who normally worked rotating shifts of duty were 32.8%.

An overwhelming majority (89.6%) of the respondents reported that they had ever received formal training on pain assessment while only 10.4% had never received the formal training.

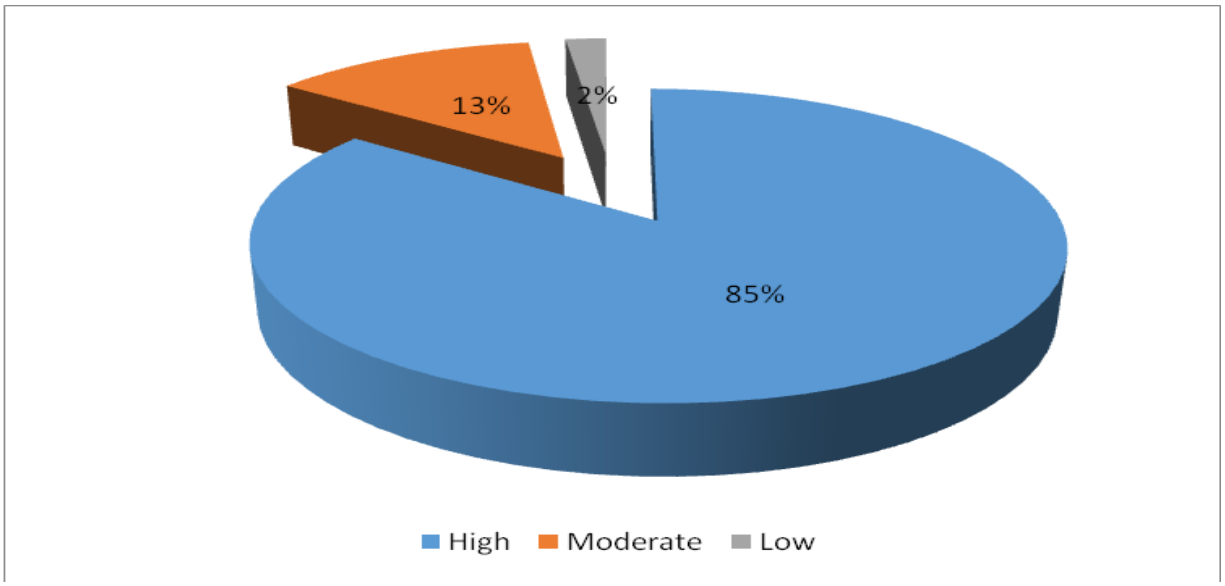
4.2 Level of knowledge related to pain assessment among the respondents.

Table 2: Knowledge related to nurses assessment of pain in cancer patients (N=67)

Variable		Frequency (n)	Percentage (%)
Indicators of patient's pain intensity	Correct answer Wrong answer	45 22	67.2 32.8
Children have limited memory of painful experiences	Correct answer Wrong answer	12 55	17.9 82.1
Patients who have been receiving stable doses of opioid for several months can hardly get respiratory depression	Correct answer Wrong answer	34 33	50.7 49.3
Giving together analgesics that different mechanism of action can bring about better relief of pain	Correct answer Wrong answer	17 50	23.9 76.1
1 to 2 mg of morphine given intravenously usually lasts between 4 to 5 hours.	Correct answer Wrong answer	32 35	47.8 52.2
Recent studies show that promethazine and hydroxyzine are dependable potentiators of opioid analgesics.	Correct answer Wrong answer	32 35	47.8 52.2
Morphine has a dose ceiling	Correct answer Wrong answer	49 18	73.1 26.9
If the cause of patient's pain is not known, opioid analgesics should not be given during pain management	Correct answer Wrong answer	34 33	50.7 49.3
After a single dose of an anticonvulsant is given, an optimum pain relief is achieved	Correct answer Wrong answer	13 54	19.4 80.6
Morphine administered intravenously has a time peak effect	Correct answer Wrong answer	17 50	25.4 74.6
Morphine administered orally has a time peak effect	Correct answer Wrong answer	45 22	67.2 32.8
If an opioid analgesic is stopped abruptly, a patient's physical dependence would be manifested by:	Correct answer Wrong answer	37 30	55.2 44.8
Which group of symptoms are more related to chronic pain	Correct answer Wrong answer	48 18	71.6 28.4

Table 3 shows that the majority of the respondents were able to give correct answers on different attributes about knowledge on pain assessment. The level of knowledge of the individual respondent was further grouped into 3 different categories that high, moderate and low on a scale of 1 to 10 where; 1 to 4 represented low knowledge, 5 to 7 moderate and 8 to 10 high knowledge on pain assessment as illustrated below.

Figure 2: Level of knowledge of the respondents



As shown in Figure 2, the majority of the respondents (85%) were found to have a high level of knowledge on pain assessment. There were only 13% of the respondents who had moderate and 2% had low level of knowledge.

4.3. Attitudes related to pain assessment in cancer patients among nurses

Table 3: Attitudes related to pain assessment in cancer patients among nurses (N=67)

Variable		Frequency (n)	Percentage (%)
Do you at all times agree with patients self-report of pain	Right attitude Wrong attitude	17 50	25.4 74.6
How important is a pain assessment tool	Right attitude Wrong attitude	49 18	73.1 26.9
If patient's thoughts are distracted from pain, they usually do not suffer from severe pain	Right attitude Wrong attitude	32 35	47.8 52.2
Patients who have a history of substance abuse shouldn't be given opioid	Right attitude Wrong attitude	47.8 52.2	23.9 76.1
Old patients are unable to put up with opioid analgesics for pain relief	Right attitude Wrong attitude	15 52	22.4 77.6
Before using an opioid analgesic, patients ought to be encouraged to withstand as much pain as possible	Right attitude Wrong attitude	65 2	97.0 3.0
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	Right attitude Wrong attitude	63 4	94.02 5.98
Spiritual beliefs of a patient may determine how they respond to pain.	Right attitude Wrong attitude	37 30	55.2 44.8
Addiction is 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	Right attitude Wrong attitude	34 33	50.7 49.3

According to Table 5, the majority of the respondents had the right attitude towards pain assessment among cancer patients. However, wrong attitudes of the nurses were observed in regard to pain assessment in patients who have a history of substance abuse, old patients who were unable to put up with opiod analgesics and patients' self report of pain. When attitudes were analyzed on key aspects such as spiritual beliefs of a patient may determining how they respond to pain and patients not suffering pain when their thoughts were distracted, the respondents had almost similar percentages.

Individual attitudes were quantified and the attitude was further sub grouped into three categories that is positive, neutral and negative as shown in the figure below.

Figure 3: Attitude of respondents towards pain assessment

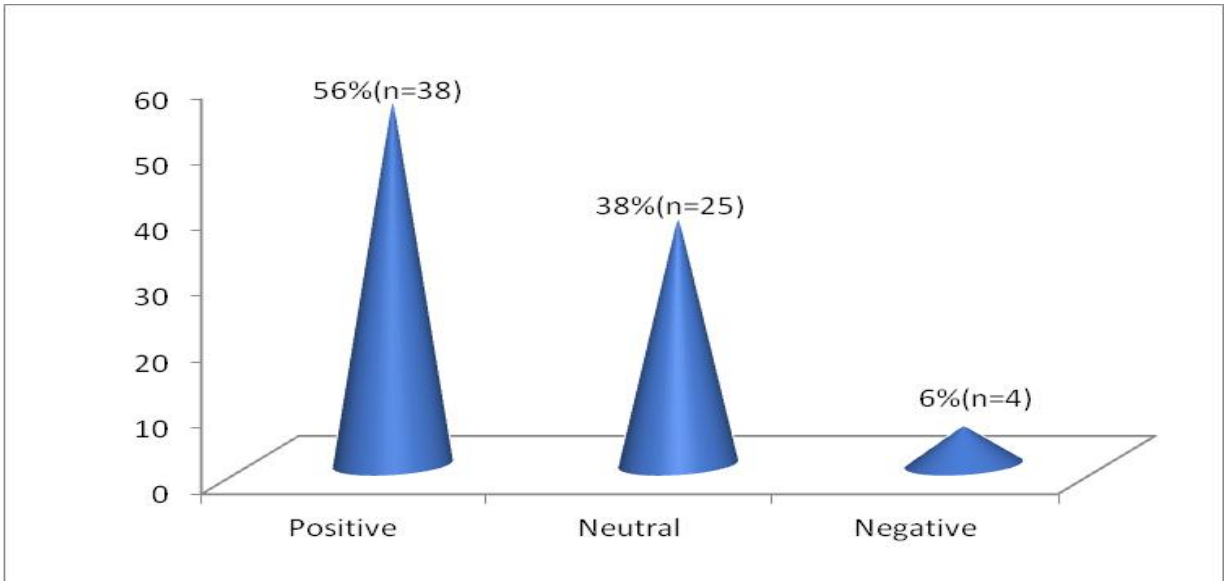


Figure 3 above shows that slight over half of the respondents (56%) had a positive attitude towards pain assessment, while a third of them had a neutral attitude towards pain assessment. Only 6% of nurses had a negative attitude.

4.4 Practices related to pain assessment in cancer patients among nurses

Table 4: Practices related to pain assessment in cancer patients among nurses (N=67)

Variable		Frequency (n)	Percentage (%)
Do you use pain assessment tool	Yes	41	61.2
	No	26	38.8
How often do you use pain assessment tools	Always	12	17.9
	Frequently	13	19.4
	Occasionally	15	22.3
	Never	26	40.2
Please name the tool you use	Universal pain assessment tool	15	22.4
		12	17.9
	Facial expression tool	22	32.8
	Verbal rating scale Visual analogue scale	18	26.9
If no which measures do you use to assess pain	Observing the patient	28	41.8
	Estimation By experience	17	25.4
	Use of water for injection	22	32.8
Do you document outcomes after assessing patients' pain	**Yes**	63	94.02
	No	4	5.98
If yes, how often do you assess and document pain for a patient who is able to report pain	Whenever necessary	13	19.4
	1 – 4 hourly	15	22.3
	Once every shift	24	35.8
	Less than one hourly	11	16.4
	More than 4 – 8	7	10.4
Are pain ratings and management discussed during nurse to nurse report	Yes	32	47.8
	No	35	52.2
Assessing pain before initiating management is very important	Yes	49	73.1
	No	18	26.9
Analgesics given to cancer patients to relieve their pain initially ought to be given	On a fixed schedule	13	19.4
	Patient's demand	16	23.9
	Moderate/severe pain/discomfort	38	56.7
Opioid analgesics given to patients with severe pain of abrupt onset such as trauma or pain following surgery should be best administered	Intravenously	13	19.4
	Intramuscularly	19	28.3
	Subcutaneously	15	22.4
	Orally	14	20.9
	Rectally	6	8.9
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?	Five mg	22	32.8
	Ten mg	5	7.6
	Thirty mg	17	25.3
	Sixty mg	**23**	34.3

According to Table 6, the majority of the respondents (61.2%) reported that they used pain assessment tools to evaluate pain among patients, although when quizzed further on how often they used the tools, only 17.9% always used them. This could be due to nurse work overload. The most common assessment tool used was the verbal rating scale (32.2%).

Almost all the respondents (94.02%) reported that they document outcomes after pain assessment and also that 35.8% commonly assess whether a patient experiences pain once every shift. However, 52.2% indicated to be rarely discussed during nurses reports as reported by majority of the respondents. Furthermore, a considerable majority (73.1%) of the respondents reported that they find it important to assess pain before initiating management.

CHAPTER FIVE: DISCUSSION OF RESULTS

5.1 Level of knowledge on pain assessment

Pain is a major health care concern in patients with cancer therefore knowledge on assessment of cancer pain is paramount.

The findings of this study clearly indicate that the majority of the nurses at Uganda Cancer Institute had a high level of knowledge on pain assessment while only 13% and 2% had moderate and low level of knowledge respectively. These findings are similar to some studies that have indicated that nurses have got adequate knowledge on assessing and managing pain. (Shurgarman & collegues, 2010; Tanabe et al, 2005; Kuremu, et al, 2011; Kituyi, 2011). This could have been due to the fact that UCI is a specialist Unit and Centre of excellence for cancer treatment and training therefore specialized training in pain assessment is likely to be either a requirement for recruitment of nurses or/and is a post recruitment strategy for equipping those nurses in direct care of patients. This implies that contrary to the researcher's speculation for continued uncontrolled pain being lack of knowledge, there are other factors beyond the scope of this study that are at play.

According to Marriner-Tomey & Allgood (2006), assessment is the first step in the nursing process that guides the nursing practices. Assessing pain in particular, is the first step in ensuring that the patient's pain is relieved and a significant goal in care, and is therefore an essential part of the practice of nursing. Indeed, nurses play an essential role in providing this pain assessment and management. This due to the fact that nurses contribute the largest health worker force and spend the largest portion of time with the patients.

On the other hand, the findings are not only contrary to the researcher's speculation for continued uncontrolled pain being lack of knowledge, the findings are also contrary to other studies carried out by Pasero et al., (2009); Miller, (2012) and Breivik et al., (2009) that indicated that nurses and other health workers lack adequate knowledge about pain, underestimate pain, provide inadequate analgesia and document pain infrequently. This subsequently led to poorly controlled pin among cancer pains. From the current study, there is good knowledge, and only 13% and 2% had moderate and low level of knowledge respectively and yet the patients continue to have uncontrolled pain. This could be due to work overload, or other factors beyond the researcher's scope of study that are at play. .

Knowledge deficits regarding pain assessment principles however, has been cited as one of the barriers to optimal pain management among cancer patients and oncology nurses; and recognition that they have inadequate pain assessment knowledge has been considered as a key step towards improvement of pain management (Rose et al, 2011; Lui et al, 2008). . Inadequate knowledge on assessing pain has a great impact on the subsequent management of pain, therefore inadequate knowledge could lead to insufficient quantification of the magnitude, location and cause of the pain. Inadequate assessment in turn leads to poor management and subsequently leads to poorly controlled or uncontrolled pain among patients.

To improve service delivery, it is therefore recommended that the nurses and other health professionals at UCI and other health-care training institutions, engage in continuous professional development programs or CMEs on updated pain assessment and use of pain assessment tools. There is also need to have should be a policies in place to ensure that nurses use the pain assessment tools if possible with supervision to ensure they are being used. In addition, nurses could educate care givers on how to assess pain and report pain at all times when the patients experience the pain.

5.2 Attitude towards pain assessment

In this study, the majority of the respondents had a positive attitude towards pain assessment, while a third of them had a neutral attitude towards pain assessment. The findings of this study are contrary to those indicated in various studies that demonstrated negative attitude (Taylor 2010). However, wrong attitudes of the nurses were observed in regard to pain assessment in patients who had a history of substance abuse, old patients who were unable to put up with opiod analgesics and patients' self-report of pain. When attitudes were analyzed on key aspects such as spiritual beliefs of a patient may determining how they respond to pain and patients not suffering pain when their thoughts were distracted, the respondents had almost similar percentages. Negative attitudes could attributed to understaffing and excess workload which does not give opportunity for quality nursing care. Likewise, effective assessment and management of pain can be limited by cultural beliefs and social attitudes (Ashley, 2009).

Attitude always determines ones motivation to do an action. Indeed a positive attitude towards a given action will often times lead to action. Personal factors however, can contribute to nurse's 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. 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).

This suggests that nurses may be unable to appropriately assess and manage patient's pain efficiently since they are probably to give pain medication inadequately such as wrong dose or wrong frequency. The findings are similar to a study by Watt-Watson et al., (2005) that revealed that only 47% of the prescribed analgesics were given to patients who complained of moderate to severe pain.

5.3 Practices associated with pain assessment

In this study findings indicated that the majority of the respondents (61.2%) reported that they used pain assessment tools to evaluate pain among patients, although when quizzed further on how often they used the tools, only 17.9% always used them. This concurs with Buknall, Botti & Manias, (2006). This could be due to nurse work overload. Those that use pain assessment tool used them occasionally while those that reported not to use pain assessment tools reported that they often use patient observation to evaluate pain experienced by a patient. In similarity to Rose, et al, (2011), other approaches that were used for pain assessment among nurses who did not use a formal tool for patients unable to self-report pain included vital signs and various pain behaviors.

The key principles in pain assessment are the use of standardized tools to assess pain and evaluate the effectiveness of intervention targeted to individual patients needs as regards pain relief. According to Rose, et al., (2011), behaviors that were most frequently considered routinely indicated of pain by nurses were grimacing, vocalization and wincing. Behavioral signs can be used in conjunction with other methods of assessing pain and should not be substituted for a self-report as long as the patient can communicate in any way (Odhner et al., 2003). The most common assessment tool used was the verbal rating scale in this study. Likewise, commonly used scales which include the verbal rating scale (VRS), Visual Analog Scale (VAS), and the numerical rating scale (NRS) (Gentile et al., 2011 (Rose et al., 2011).

This difference in the use of pain assessment tools could be explained by the difference in the support that nurses receive through continuing professional education on pain and its management. (Rose, et al., 2011). A good observation was that almost all the respondents

reported that they document outcomes after pain assessment (94.02%) and they commonly assess whether a patient experiences pain once every shift (35.8%). However, pain assessment findings are rarely discussed during nurses reports as reported by majority of the respondents.

Majority of the respondents reported that they find it important to assess pain before initiating management, and they commonly administer analgesics on moderate to severe pain experiences by the patient. However, literature highlights the inadequate or no use of these tools. Without these tools, nursing staff can only rely on their clinical judgment, which may be influenced by many of the preconceptions and attitudes about patients in pain. This in turn affects patient's outcomes on pain relief because most of the prescriptions are based on nurses rating of pain. Similar findings have been reported even in the presence of protocols (Shugarman et al, 2010).

Absence of organizational procedures as well as strategies on assessment of pain has been quoted to hinder appropriate management. 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. 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. 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 nurse's pain ratings.

CHAPTER SIX
CONCLUSION AND RECOMMENDATIONS

6.0 Introduction

Overall conclusions are drawn in this chapter; these are based on findings of the study. The recommendations have been proposed here as well.

6.1 Conclusions

The level of knowledge of the respondents was high with majority of respondents having adequate knowledge on different aspects of pain assessment regarding cancer pain among the study participants. The nurses had adequate knowledge on different indicators of pain as well as administering analgesics for mitigating varying level of pain among cancer patients.

Concerning attitude, the study found out that most nurses at UCI had a positive attitude towards pain assessment, only a small portion of respondents had a negative attitude in certain aspects of pain assessment.

Practices associated with pain assessment included use pain assessment tools to evaluate pain among patients while those that reported not to use pain assessment tools reported that they often use patient observation to evaluate pain experienced by a patient. The most common assessment tool used was the verbal rating scale; most nurses reported that they document outcomes after pain assessment and they commonly assessed whether a patient experiences pain once every shift. Further still, the nurses reported that they find it important to assess pain before initiating management and administered analgesics on moderate to severe pain experiences by the patient.

6.2 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 cancer 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.

Cancer patients need to be sensitized so as 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 utilization of pain assessment tools among nurses attending to cancer patients. This will generate information on what motivates nurses to use pain assessment tools.

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APPENDIX I

CONSENT FORM

KNOWLEDGE, ATTITUDE AND PRACTICE OF PAIN ASSESSMENT IN CANCER PATIENTS AMONG NURSES AT UGANDA CANCER INSTITUTE

Principal Investigator: Masaba Ronald

You are hereby voluntarily requested to take part in a research study entitled Knowledge, attitude and practice of pain assessment in cancer patients attending Uganda cancer institute. The study is entirely for academic purposes.

Purpose of the study

The purpose of this study is to:

1. To assess the level of knowledge related to pain assessment in cancer patients among nurses in Uganda Cancer Institute.
2. To determine the attitudes related to pain assessment in cancer patients among nurses in Uganda Cancer Institute.
3. To identify practices related to pain assessment in cancer patients among nurses in Uganda Cancer Institute.

Risks and discomfort: there are no physical known risks to those who chose to participate in this study.

Benefits: there are no financial benefits entitled to participants however findings from this study will have a positive implication on hospital policies associate with pain assessment and management.

Alternatives: you may choose not to participate in study.

Privacy and confidentiality: the researcher will keep your study records private and confidential. However bylaw, anyone who looks at your records must keep them

Completely confidential. The only people who will be allowed to see these records are:

The research team, including the Principal Investigator and the study coordinator

We may publish what we learn from this study. If we do, we will not include your name.

We will not publish anything that would let people know who you are.

Voluntary Participation / Withdrawal:

You should only take part in this study if you want to volunteer. You should not feel that there is any pressure to take part in the study. You are free to participate in this research or withdraw at any time. There will be no penalty or loss of benefits you are entitled to receive if you stop taking part in this study.

You can get the answers to your questions, concerns, or complaints

If you have any questions, concerns or complaints about this study, or experience an adverse event or unanticipated problem, call the principal investigator on **+256775238118**.

If you have questions about your rights as a participant in this study, general questions, or have complaints, concerns or issues you want to discuss with someone outside the research, call the researcher on **+256775238118/+256701679568**.

For information about your rights to this study please contact the chairperson of IHSU - Research Ethics Committee. (REC) on **+256 779 610 100.**

Consent to Take Part in this Research Study

It is up to you to decide whether you want to take part in this study. If you decide to Participate, please complete the attached surveys. Your return of this survey is implied consent.

Your Initials……..

Signature…….Date…….

APPENDIX II

QUESTIONNAIRE

Serial number……..

SECTION A: Socio-demographic data

1. **Age: ……**
2. **Gender**
   - **a.** Male [ ]
   - **b.** Female [ ]
3. **Level of professional education**
   - **a.** Certificate [ ]
   - **b.** Diploma [ ]
   - **c.** Degree [ ]
   - **d.** Masters [ ]
   - **e.** Doctorate [ ]
   - **f.** Others (specify) [ ] _____
4. **Years of experience in caring for patients with cancer.**
   - **a.** Less than 1 year [ ]
   - **b.** 1 – 5 years [ ]
   - **c.** 6 – 10 years [ ]
   - **d.** 11 – 15 years [ ]
   - **e.** 16 – 20 years [ ]
   - **f.** More than 20 years [ ]
5. **Years of experience in the department**
   - **a.** Less than 1 year [ ]
   - **b.** 1 – 5 years [ ]
   - **c.** 6 – 10 years [ ]
   - **d.** 11 – 15 years [ ]
   - **e.** 16 – 20 years [ ]
   - **f.** More than 20 years [ ]

Section B: Knowledge on pain assessment.

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

1. **Have you had any formal training on pain assessment and management?**
   - **a.** No [ ]
   - **b.** Yes [ ] _____

2. **Have you had any informal training on pain assessment and management?**
   a. No [ ]
   b. Yes [ ]
3. Training received in palliative care
   a) Workshop [ ]
   b) Certificate [ ]
   c) Diploma [ ]
   d) Others (specify) [ ] _____
4. **What is your usual shift rotation?**
   a. Days only [ ]
   b. Evenings only [ ]
   c. Nights only [ ]
   d. Rotating shifts [ ]
5. How do you evaluate your level of knowledge in pain assessment and management?
   a. Excellent [ ]
   b. Good [ ]
   c. Average [ ]

For the following questions, Indicate whether True (T) or False (F)

6. Morphine has a dose ceiling, that is, a dose above which no greater pain relief can be achieved. _____

7. 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 _____

8. After a single dose of an anticonvulsant is given, an optimum pain relief is achieved_____

Circle the most appropriate response according to you.

9. Morphine administered intravenously has a time peak effect of

A. Fifteen minutes

B. Forty five minutes

C. An hour

D. Two hours

10. Morphine administered orally has a time peak effect of

A. Five minutes [ ]

B. Thirty minutes [ ]

C. One to two hours [ ]

D. Three hours [ ]

11 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 [ ]

12. Which group of symptoms are more related to chronic pain?

A. Decreased appetite, decreased energy, sleep disturbances, apathy, and decreased blood pressure. [ ]
B. Grimacing, fast heart rate, fast respiratory rate, elevated blood pressure, sweating. [ ]
C. Thrashing, grimacing, elevated heart rate, cold and clammy extremities. [ ]
D. Groaning, elevated blood pressure, irritability, sweating. [ ]

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?**

a. Yes [ ]

b. No [ ]

2. **How important is a pain assessment tool?**
    a. Not that important [ ]
    b. Minimally important [ ]
    c. Moderately important [ ]
    d. Extremely important []

Indicate whether True (T) or False (F)

3. If patient's 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, Itesots, 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 influence [ ]

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?

i. No [ ]
ii. Yes [ ]

(Specify) **If no, go to question 3**

2. How often do you use pain assessment tools?

i. Always [ ]
ii. Frequently [ ]
iii. Occasionally [ ]

iv. 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?

i. No [ ]

ii. Yes [ ]

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

i. Whenever necessary [ ]

ii. 1 – 4 hourly [ ] Once every shift [ ]

iii. Less than one hourly [ ]

iv. More than 4 – 8 hourly [ ]

v. Others (Specify) [ ] _____

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

i. Yes [ ]

ii. 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 cancer 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 III

INTRODUCTORY LETTER

IHSU INTERNATIONAL HEALTH SCIENCES UNIVERSITY
sanitas per scientiam

making a difference in health care

Office of the Dean, School of Nursing

Kampala, 02nd June 2017

UGANDA CANCER INSTITUTE-
MULAGO
.....
.....

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Masaba Ronald** Reg. No. **2013-BNS-FT-031** 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 his award.

His topic of research is: **Knowledge, Attitude and Practice Regarding pain Assessment among Nurses at Uganda Cancer Institute, Mulago.**

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

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

Sincerely Yours,

Ms. Agwang Agnes
Dean

IHSU INTERNATIONAL HEALTH SCIENCES UNIVERSITY
★ 02 JUN 2017 ★
SCHOOL OF NURSING
P. O. Box 7782, Kampala - Uganda

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

APPENDIX IV

CORRESPONDENCE LETTERS

Uganda Cancer Institute

Upper Mulago Road P.O. Box 3935 , Kampala - Uganda. **Tel**: + 256 414 540 410 **Fax** : +256 414 530 729 **Website**: uci.or.ug

Ref: REO/AC/ 002

08th June 2017

To: Masaba Ronald,
Bachelor of Nursing Science
International Health Sciences University.

RE: Permission to Conduct Research at Uganda Cancer Institute (SR: 075)

Reference is made to your letter of request dated 22nd May 2017concerning your intent to conduct a research at the Uganda Cancer Institute (UCI) with a protocol entitled "**Knowledge, Attitude and Practice regarding pain assessment in Cancer Patients Among Nurse At Uganda Cancer Institute – Mulago**". Permission to conduct the research at UCI was granted. Please take note of the following issues as you conduct research at UCI:

i) You and other study staff will be governed by the rules that govern the conduct and discipline of Public Officers.
ii) Abide by the National Council for Science and Technology (UNCST) regulations for conducting research involving human participants and all relevant regulations.
iii) Provide copies of your research assistants training on human subject protection to the Research and Ethics Review Office before you begin data collection.
iv) Ethical code and participant confidentiality are very pertinent so should be maintained at all times.
v) Your contact person or Supervisor (s) at UCI is Mrs. **Allen Mayanja** at **0782115359** .You are expected to work closely with her throughout your conduct of research at UCI.
vi) Provide a copy of your report at the end of the study to the Research and Ethics Review office.

This offer can be terminated in case you do not adhere to research ethics during your study conduct.

By copy of this letter, the UCI Clinical Head, and the Head Nursing are informed about your study and strongly urged to take action in case any malpractices are observed as you conduct research at UCI.

Sincerely,

Annet Nakaganda
Research Administrator at UCI.

UGANDA CANCER INSTITUTE
★ 08 JUN 2017 ★
RESEARCH & ETHICS REVIEW OFFICE
P.O. BOX 3935, KAMPALA

RESEARCH IS OUR RESOURCE

C.C The Director, Uganda Cancer Institute

C.C. The Head Research and Training, UCI

" The Hospital Administrator, U.C.I.

" UCI Clinical Head

" Head Nursing (Supervisor) .

IHSU INTERNATIONAL HEALTH SCIENCES UNIVERSITY
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making a difference in health care

Office of the Dean, School of Nursing

Kampala, 02nd June 2017

UGANDA CANCER INSTITUTE - MULAGO

UGANDA CANCER INSTITUTE RECEIVED 06 JUN 2017 SIGN: P. O. BOX 3935, KAMPALA

Dear Sir/Madam,

RE: ASSISTANCE FOR RESEARCH

Greetings from International Health Sciences University.

This is to introduce to you **Masaba Ronald** Reg. No. **2013-BNS-FT-031** 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 his award.

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Sincerely Yours,

Ms. Agwang Agnes
Dean

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