PATIENTS' EXPERIENCE ON POSTOPERATIVE PAIN MANAGEMENT IN A RWANDAN HOSPITAL SURGICAL WARD

by

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A dissertation Submitted in Partial Fulfillment of the Requirement for the degree of

Masters of Science in Nursing (Medical surgical Nursing)

in the

Department of Nursing

DIRECTORATE OF POSTGRADUATE STUDIES

COLLEGE OF MEDICINE AND HEALTH SCIENCES

UNIVERSITY OF RWANDA

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Kigali, July 2017
DECLARATION

I, Esperance MUHAWENAYO, hereby declare that this research project entitled “Patients' experience of postoperative pain management in a Rwandan hospital surgical wards” Submitted for partial fulfillment of the requirement for the Degree of Master Sciences in medical, surgical Nursing, is my original work and never been submitted to any other University or for any other degree award. I also declare that a complete list of references is provided indicating all sources of information quoted or cited.

Esperance MUHAWENAYO

June, 2017

Supervisor: Mme Priscille MUSABIREMA
DEDICATION

To the Ministry of health and HRH Faculty for the provision of the scholarship.

To the Centre Hospitalier Universitaire de Kigali (CHUK), for recommending me and release me to study.

To my supervisor for their helpfully and invaluable assistance.

To classmates for their contribution and encouragements.

I dedicate this project to my family for their physical, psychological and morale support.

To my collegues at work who remained responsible and kept the willingness on my absence.
ACKNOWLEDGEMENT

I would like to express my gratitude to Almighty God who continues to give me his blessings of studying. I appreciate and give deepest thanks to many people who assisted me during this hard journey. First, I express cordial thanks to my supervisor Mme MUSABIREMA Priscille for her aspiring guidance, invaluable constructive criticism and friendly advice during this journey of project writing. Secondly, to American Pain Society Authors for developing a tool called American Pain Society –Patient Outcome Questionnaire Revised (APS-POQ) and make it free to public and to Tewodros Eyob who ensured me when was hesitating to use that tool. Third to the Ministry of health for the provision of the scholarship and the Centre Hospitalier Universitaire de Kigali (CHUK), for recommending me and release me for studies. Many thanks go to surgical patients for their kindness and their time to generate the information enrichising this research considerably. I acknowledge so much my husband MBONIMPA Martin for his all support provided, My Son MUCYO M. Darcis for giving me morale all the time when I was discouraged and to my youngest daughter SHEJA M. Darlene for her patience during my absenteeism. I am grateful to my classmates for their contribution and encouragements especially BAGWENEZA Vedaste, LUNKUSE Edith and MUHIMPUNDU R. Diane. To my colleagues at work who stand for me at work during the time I was at school.
ABSTRACT

Introduction: Pain is one of the sources of discomfort among admitted patients, especially those that have had surgery. Effective management of patients' pain has been linked to significant post operative outcomes and overall perception of the quality of care received. Patients are expected to experience pain within reasonable limits and should be able to receive and appreciate care provided towards pain release. Despite of this understanding, available literature continues to indicate that post-operative pain management is still unsatisfactory. The phenomena of pain management are new in our setting. There is limited knowledge of the experience of patients of postoperative pain management in Rwanda. This study assessed patients' experience of postoperative pain management

Methods and Findings: The study was quantitative, descriptive and cross-sectional. It was carried out on 172 postoperative patients admitted in surgical wards of a referral Hospital in Rwanda. At 5% type I error (p<0.05) a systematic random sampling was used to get sample and data was collected using adapted American Pain Society –Patient Outcome Questionnaire Revised(APS-POQ) to which a validity test was made and a reliability of 0.764(Cronbach’s a coefficient) founded .Using descriptive statistics data was analyzed in SPSS version20, interpretation and correlation among variable were performed. The results indicated that majority 96.3%) participants experienced pain postoperatively. Of those who experienced postoperative pain the category falls from moderate to severe respectively 36.1% and 30.2% (3.2±0.62).a big number of 98 (57.0%) experienced pain relief within 24hrs postoperatively, with however 104(60.5%)(1.4±0.49) rating overall pain management as inadequate and 105(61.0%) dissatisfied with pain management.

Conclusion: The patients experience reflects the occurrences and events that happen across continuum of care. The results indicate that most postoperative patients experienced moderate to severe pain and are dissatisfied with pain management rendered. These findings are a signal to the gaps in meeting patients postoperative care needs. The findings provide a practical implication for improved quality of care both at individual healthcare provider and system levels. This calls for further research into organizational readiness and the level of knowledge and skills for effective postoperative pain management.

Keywords: Pain, Postoperative pain, pain management and Experience.
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LIST OF SYMBOL, ACRONYMS AND ABBREVIATIONS

**APS-POQR**: American Pain Society – Patient Outcome Questionnaire Revised

**CHUK**: Centre Hospitalier Universitaire de Kigali

**CMHS**: College of Medicine and Health Sciences

**ENT**: Eyes, Nose Throat

**HRH**: Human Resource for Health

**IASP**: International Association for the Study of Pain

**JCAHO**: Joint Commission on Accreditation of Healthcare Organizations

**MOH**: Ministry Of Health

**PMI**: Pain Management index

**RHAS**: Rwanda Hospital Accreditation Standards

**SPSS**: Statistical Package for the Social Science

**UTHK**: University teaching hospital of Kigali

**UR**: University of Rwanda

**USA**: United States of America

\(\%\) : Percent

\(\pm\) : symbol used to design standard deviation
CHAPTER ONE

1.1. Introduction

This chapter describes the overview or background of the concept under study and how researcher considers that concept. The motivation and objective of the study are shown in this chapter.

Patients’ experience in a hospital setting is shaped by several factors including pain. Pain is one of the sources of discomfort among admitted patients, especially those that have had surgery (Rafati et al., 2016, p. 36; Gupta et al., 2014, p. 370). Effective management of patients' pain could therefore influence not only their post-operative moments but will also impact on their perception of the quality of care received (Gupta et al., 2014, p. 374). This study, therefore expect to assess postoperative patients' experience of the pain management. The introduction part is covered by different study done regarding pain management, patient ‘experience in postoperative moment and their perception on its management in term of satisfaction as background of the study, the aim of the study, research questions, significance of the study, terms definition and structure of the research was also highlighted in this first chapter.

1.2. Definition of Concepts

The concepts involve in patients' experience of postoperative pain management are: Pain, postoperative pain, pain management and patient ‘experience.

Pain

The International Association for the Study of Pain (IASP) defines Pain as ”an unpleasant sensory and emotional/affective and cognitive experience that is associated with actual or potential tissue damage or is described in terms of such damage” (IASP, 1994, p. 249), (IASP, 1986, p. 217) McCaffery defined pain as “what the patient says it is, and exists whenever the patient says it does” (McCaffery, 1977, p. 11). For purpose of this study pain indicated a feeling of discomfort from tissue injury following a surgical operation expressed by a patient in form of pain intensity (sensory) and mood affection or emotional.

Post–operative pain

Postoperative pain has been defined as Acute pain, resulting from surgery, surgical procedures or Trauma it can be physiological or pathological cause and involve inflammatory reactions (Herbert G. Masigati and Kondo S.Chilonga, 2014; Esmat and Kassim, 2016). For the purpose of this study,
postoperative pain was mean any discomfort experienced by the patient resulting from surgery or surgical procedures from day one up to three days of admission in surgical wards.

**Pain management**

Pain management is the relief of pain using different interventions or approaches by health team. These include pharmacological approaches using agents like analgesics and non-pharmacological approaches like distraction, reassurance, massage, etc (Anesthesiologists, 2012, p. 254; Rafati et al., 2016; Gupta A. et al., 2010, p. 14). In this study pain management was mean any intervention (medical and nursing) that is offered to postoperative patients with intention to relieve pain.

**Patient’s experience**

Patient experience has been defined as how a patient feels about what happens in his or her environment (internal or external). It is individualized measurement of services to meet patient’s expectation. Experience (Wolf, 2014, p. 7).

For the purpose of this study patient’s experience was considered as patient’s descriptions of what have made his or her postoperative moment in term of, pain intensity faced during that period, pain management received and their appreciation in form of satisfaction.

**1.3. Background**

Currently a strong consideration has been given to acute post-operative pain and a significant developments or progression have been made (Wu and Raja, 2011, p. 2222; Abdalrahim, Majali, & Bergbom, 2010). Regardless of these achievements, available literature continue to indicate that post-operative pain is still a challenge and frequently inappropriately treated, with consequential effect of patient quality of life and dissatisfaction (Institute of medicine, 2011, pp. 19–23) Uncontrolled pain affects negatively patient care outcome, increased stress, contributing to long stay in the hospital and affect quality care (Masigati H. G. and Chilonga K. S., 2014, p. 1) Moreover according to Oliveira et al., (2012, p.1062). The negative effects of inadequate pain management alter the quality of life, physiological function, patient recovery and may lead to the risk of complication post-surgery and persistent pain.

Reduced post operative pain enhances sleep, lack of which may augment postoperative fatigue and other associated complications (Vadivelu, M. and Narayan, 2010). Contrast when pain is well managed postoperatively helps physiological functions, prevent complications, decrease hospital
cost and patient perception become satisfactory as they have got great comfort (Sarin et al., 2016, p. 1). Apart from individual factors, it is actually widely accepted that reduced postoperative pain, improves patient experience as well as early mobilization and discharge, resulting into a gross reduction of hospital overcrowding (Czarnecki et al., 2011). Unfortunately inappropriate pain management remains a critical problem in hospitalized patients (Oliveira et al., 2012, p. 1508). Pain as expected symptom in postoperative sometimes is ignored by health care providers during surgical care like wound dressing, physiotherapy and mostly assessment and reassessment is not all time remembered by nurse.

Any care is ought to be defined as of high quality by any measure only if the beneficiary perceives it as satisfying. The expectation of patients is to receive the best possible care from a competent professional which facilitates their recovery, comfort and safety (Fero, Laura J., Catherine M. Witsberger, 2009, p. 1). Pain has been defined as “an unpleasant physical, sensory and emotional experience associated with actual or potential tissue damage” (IASP, 1994, p. 209). From that definition none could distrust or underestimate patient’s pain report in order to manage it adequately.

Studies have evidenced the existence of pain and how inadequately it has been managed. According to Gan, Miller and Apfelbaum, (2014, p. 149), in US around 86% of patients who underwent surgery experienced pain postoperatively and 75% of them demonstrate severe or extreme experience. A study conducted in Chinese hospital has stated that current systems in place to manage postoperative alleviate the pain within good effect expected (Lei and Jing, 2013, p. 1160) however 82.8% of participants complain the delay in their postoperative pain relieve and 91.4% experience moderate to severe pain. Investigation of pain management’s quality in 2,252 postoperative patients from 25 German hospitals; show that 29.5% of surgical patients reported moderate to severe pain experience and 55% of them were dissatisfied with it (Maier et al., 2010, p. 607).

In region of sub-Saharan Africa, the patients pain experience postoperatively is not disagree from what have been reported above for example in an Ethiopian Hospital Woldehaimanot, Eshetie and Kerie (2014, p. 6&8), noted that patients undergoing surgery experienced inadequate pain management. In Egypt, only 54.8% of patients studied were adequately contented to their pain management (Elshamy and Ramzy, 2011, p. 383).

The rate of pain management experience and perception varies from different settings and populations studied; depend on the way patients experience their postoperative period. Similar
findings have been found by Herbert G. Masigati and Kondo S. Chilonga (2014, p. 1) in their Tanzania based study where postoperative pain management was noted to be a challenge with more than half of the patients studied experienced pain within first 48 hours; Indeed another study by Pole Pole D & Mwafongo V (2011) report 40% pain complications postoperatively at Muhimbili National Hospital in Tanzania.

In Kenya, postoperatively patients’ experience of pain was 60% study from Kenyatta national hospital on postoperative pain management after major abdominal and thoracic surgery (Ocitti & Adwok, 2000).

A study conducted in Rwanda, show that the modalities treatments of pain are frequently not carried out due to limited resources, deficit in knowledge and cultural attitude and less patients involvement in pain management (Johnson et al., 2015, pp. 255–256). Worldwide, the perception relates to pain management postoperatively is determined by patient’s experience during that moment and are both predict patient’s satisfaction of pain care. The consequences of mismanagement of postoperative pain are direct to patients and can lead to patient’s dissatisfaction of quality of care received.

Despite multiple organizations at national level, counting the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) strong efforts for progress in perceptive of pain and the its quality management, pain management leftovers not at the excellent (Gupta et al., 2009, p. 158). To be able to meet patients’ pain needs, a range of dimensions that include sensory, physiological, socio-cultural, and psychological components that are individually from each patient should be well thought-out (Institute of Medicine, 2011, p. 3). The most critical goal of any surgical care is the successful approach used in pain management postoperatively. Patient’s perception reflects the quality of hospital services and can be affected by patient’s experience with pain management within postoperative period. The most recognized and acknowledged obstacle to successful pain management is to ignore the individual experiences and or patients’ subjectivity surrounding the pain management area.

Therefore, assessment of patient’s pain demands the healthcare providers to become well acquainted with patient’s perception, level of understanding, previous experience and other socio-cultural associations with pain (Wells N, Pasero C, & McCaffery M, 2005). For that the researcher is intend to identify patient’s experience of postoperative pain management in Rwandan hospital.
1.4. Problem statement


Even though postoperative pain management has improved currently, research demonstrates that the way pain is managed is unsatisfactory (Maier et al., 2010). Since 2013, working in surgical department witnessing patients with frustrated face and sometime crying and when trying to advocate for pain killer administration the response received from nurses was “patient already received her or his dose of analgesia”. Available research continues to show that postoperative patients experience extreme pain; for example, in one US study about patients’ experience of postoperative pain, 86% of patients who underwent surgical procedures experienced acute postoperative pain, and about 75% of these demonstrated severe or extreme experience (Gan, Miller and Apfelbaum, 2014).

A similar study done in China indicated that hospitals with appropriate systems in place to manage postoperative pain registered positive outcome among participants (Lei and Jing, 2013, p.1160). The authors further noted that 82.8% of participants experienced a delay in their postoperative pain relief. Investigation of the quality of pain management for 2,252 postoperative patients in 25 German hospitals; Maier et al., (2010, p.607) revealed that 29.5% of surgical patients reported moderate to severe pain, and 55% were dissatisfied. These evidences underscore the current trends in postoperative pain management. Studies in sub-Saharan Africa are not exception to that above literature as released in different studies according to Woldehaimanot, Eshetie and Kerie, (2014, p 6&8); Herbert G.Masigati and Kondo S.Chilonga,(2014, p.1) and Johnson et al., (2015, p. 255–256).

Multiple organizations, counting Joint Commission on Accreditation of Healthcare Organizations (JCAHO) have made strong efforts to advance the perception of pain and the need to improve its quality management (Gupta et al., 2009, p.158). In Rwanda, generally care of patients has improved through several mechanisms including availability of materials to use, access to medications, training of health professionals in range of skills and initiatives to ensure that health facilities are accredited (Rwanda Hospital Accreditation Standards,2014).
This accreditation in particular, is intended to ensure that patient receive the highest expected quality care. Postoperative patients are not exception to this. For example surgical units are provided with policies, protocols, guidelines and staff trainings including those on pain management (Johnson et al., 2015, p.258). With these initiatives in place patient’s experience with care and pain management in particular is expected to be good. However, there is limited information of the experience of patients of postoperative pain management in our setting. This study, therefore intends to assess patients’ experience on postoperative pain management in surgical wards at CHUK.

1.5. The aim of the study

To assess the patient’s experience of postoperative pain management in surgical wards at CHUK

1.6. Research objectives

1. To assess the postoperative pain intensity experienced in surgical wards patients at CHUK.
2. To identify management of postoperative pain in surgical wards patients at CHUK
3. To assess the level of satisfaction of pain management in surgical wards patients at CHUK.

1.7. Research questions

1. What is the pain intensity experienced in surgical wards patients at CHUK?
2. How is the management of postoperative pain in surgical wards patients at CHUK?
3. What is the level of satisfaction to pain management in surgical wards patients at CHUK?

1.8. Significance and purpose of the study

It has for long been accepted as a common understanding that pain is the key underlying reason for many people to look for health care. While substantial advancements have been made in pain management, available research continues to indicate that many postoperative patients experience high levels of pain. When postoperative pain is not relieved can greatly impact negatively on patient’s outcome and expectation; this kind of information justifies the need for intensive postoperative pain management analysis, to underline the gaps that need more expansive investigations so that patient outcome and expectation postoperatively will improved in surgical wards at CHUK. Results from this study will provide an understanding of pain management in the Rwandan context. As a result, this will provide a foundation on which apposite educational
initiatives and strategies will be based to address gaps in knowledge and practice regarding pain management in Rwandan health facilities. As well, since the results of the study will be based on patients perspectives, the results will help not only to understand the needs of postoperative patients with regards to pain management, but will also throw light on issues of quality as perceived by the patient. In addition the findings of this study will be valuable in furthering future research initiatives that are geared to improvements in postoperative pain management.

1.9. Structure/Organization of the study

The study is divided into six main chapters: chapter one Introduction which comprise an overview of concepts under study (postoperative pain management experience) as background and how the researcher consider that concepts in this current study as term of reference and also the motivation of the study with research questions to answer and its significant; then chapter two draws on clinical research as literature review that has investigated to postoperative pain management as well as the framework used for this research. The methodology and methods describing how the journey undertaken to do this research and get results. The findings are presented in chapter four and chapter five is discussing on results and chapter 6 include recommendation and conclusion. Finally the limitations of the study with references were shown and appendix or annex used.

1.10. Conclusion

There is a global concern with regards to how postoperative pain is managed. Based on understanding that patient experience of pain has a profound impact on their level of satisfaction with the quality of care, and the available information about how pain influences the overall outcome of care this study was relevant and critical.
CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

This chapter examine evidences relevant to this study. In particular it endeavour to provide an understanding of what postoperative pain management entails as well as the best practices as evidences by different studies. There has been a challenge to define the concept of pain. However a number of studies carried out have been able to offer understanding on this concept. For example there is huge information about pain that explains the complex nature of the phenomena and how this impacts on its definitions (Melzack and Wall, 2008). Despite, the complex nature of pain and the challenge to offer a definitive definition, a collectively accepted and acknowledged definition of pain has been proposed as:

"An unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage (International Association for the Study of Pain 1979 p.247)". This definition, constitute two aspects whereby pain is viewed in a much more subjective manner when it is described in term of emotional experience and objective when it is examined using the sensory perspective.

2.2. Empirical literature

Traditionally pain was explained based on biomedical model of illness that was later refuted as only way to explain pain (Gatchel et al., 2007). For example the work of Charlton (2005) provided more light on the recognition of pain as bio psychosocial experience with affective, behavioural, sensory, and cognitive as important constituents.

Pain has been categorized into two broad categories: Acute and chronic pain. The two categories demonstrate significant differences, however both categories have been acknowledged to represent a continuum of experience rather than separate and divergent entities (Macintyre et al, 2010). Postoperative pain is normally related to tissue trauma/injury (Swarm, Karan kolas and Kalauokalani, 2001). This kind of pain is usually acute and its serves an important duty to alert the body of potential or actual tissue injury and inflammatory responses that is a critical function for survival (Swarm, Karanukolas and Kalauokalani 2001). The extent to which a person experience pain depends on several factors including the related to patients like anxiety and its associations and prevent the patient to express his or her feeling what mostly interpreted as culture barriers, It could also come from health care providers insufficient knowledge related to pain assessment and management, or inadequacy of pain management system in place (Carr, 2008, p. 59).
Post operative pain has attracted attention from organizations and individuals involved in care of patients that have had surgery (Wu and Raja, 2011, p. 2222; Zarnecki ML et al., 2011; Abdalrahim, Majali, & Bergbom, 2010). Available literature continue to indicate challenges experienced in pain management and how it affects patient experience of care and the overall rating of the quality of care from the patient perspective (Institute of Medicine, 2011, pp. 19–23). This is because uncontrolled pain has been noted to negatively affect patient care outcomes, including long hospital stay and overall experiences of services received (Herbert G. Masigati and Kondo S. Chilonga, 2014, p. 1).

2.2.1. Pain perception & experience
The way people perceive pain is different from one person to another and could be influenced by others factors like previous occurrence, type of disease or surgical interventions, conditions, medications modality used, culture, and psychological issues (Khan et al., 2011; Twycross, 2007; Manias et al., 2002). Patients are accurate to be recognized as experts of their pain experience and to be trusted with their pain in the order to choose an effective type of pain relief. They also need their pain relieve to be considered as reasonable goal of surgical treatment by the health care providers (Vadivelu N, 2010).

Successful pain management requires treatment of the total patient’s pain: physically, psychologically, socio-cultural and spiritually during all process of their management. Postoperative pain can be attributed to different factors which could be socio demographic, psychological and clinical or physiological factors (Hailemariam, 2015). In order to fully understand a person’s perception and response to pain and illness, the interrelationship among biological changes, psychological status, and the socio-cultural sensitive require to be considered. The emotion and cognition are both interact with psychosocial factors. Emotion which is more direct reaction to nociception and is more midbrain based and the cognitions join the connotation to the emotional experience and can then trigger additional emotional reactions and thereby increasing the experience of pain, as results perpetuate various circle of pain effect, like distress, restlessness, disability (Gatchel et al., 2007, p. 582).

The patient’s perception or experience of pain may be influenced by a numerous interrelated factors, including the patient’s arousal and psychological state, previous pain experience, level of understanding of the procedure (Marsac & Funk, 2008).

Studies have shown the individual pain response is influenced by age, gender, and culture; For example the study on patients undergoing wound care, younger patients had more pain before and
after the procedure than older patients (Stotts et al., 2004). Study results differ regarding the effect of gender on procedural pain perception. In one study they report that women had higher pain scores before, during, and after procedures than men while assessing the incidence of pain during invasive procedures (Rawe et al., 2009) In contrast, Stotts et al., (2004) reported no difference in pain intensity between men and women having wound care.

Cultural influences pain experience in behavior manner as reported that individuals from different cultures express their pain in various ways and the variety also is seen in the pain scale reported (Walsh, Davidovitch, & Egol, 2010). However, of cultural influences on pain experience could be considered only if the individually characteristics studied groups are excluded to pass up stereotype people according to their cultural (Brown &Bennett, 2010). Even the purpose of this study is out of factors influencing pain experience the information’s are helpfully for understanding and interpreting the research findings on pain management experience in postoperative period.

Uncontrolled postoperative pain can cause harmful effects to patients in immediate and long-term manner and these complications could happen to any age, gender, race, ethnicity, or socioeconomic status(Damien J. LaPar, MD et al., 2012, p. 5). These include variety of physical, emotional, behavioral, cognitive, and psychological manifestations, including fear, anxiety, anger, aggressive behavior, inability to focus, fear next procedure which can lead to refusal of treatment, and distrust of the health care team, and more consequences are on economical, social, and spiritual well-being and can lead to dissatisfaction on quality of care (Brennan, Carr,& Cousins, 2007; Ferrell, 2005; Gordon et al., 2005;Mertin, Sawatzky, Diehl-Jones, & Lee, 2007).

The immediate physical effects of pain are related to the stress response which can affect functionality of body systems, like cardiopulmonary function, metabolic,inflammatory response(e.g., coagulation, hyperglycemia),and immune competence, including wound healing and tumor growth (Czarnecki et al.,2013;Mertin et al., 2007;Solowiej, Mason, & Upton, 2009).Psychosocial factors, like fear and anxiety are recognized induce these stress response(Mertin et al., 2007), and fear and anxiety are more sensitive when the occurrence of the painful experience is unpredictable. If the patient received pain management education, adaptive responses will help to attenuate the degree of fear and anxiety experienced (Oka et al., 2010).

2.2.2. Quality of Pain Management and patient satisfaction
Pain management is not only the analgesics administration, it involve all mechanism could help pain relief. In postoperative pain manage should start by assessment and come up with pharmacological
and non-pharmacological usage methods to get good outcome and patient satisfaction. This have been evidenced by researchers and who said that High-quality pain management could be defined as having several features (Gordon et al., 2005). These include appropriate ongoing pain assessment (example: identifying the presence of pain, where pain is present, quality of pain and patient responses to treatment) that could involve interdisciplinary, collaborative care planning which includes patient participation and utilizing the appropriate treatment which is beneficial and safety to patients. The American Pain Society considers pain as the fifth vital sign along with temperature, heart rate, blood pressure, and respiratory rate (American Pain Society, 2012). If pain is assessed with the same as the other vital signs, it would have a better chance of being treated appropriately.

In reality the complexity of quality pain management could be understood in all process of surgical care and must be evidenced by good staff behavior, and patient experiences as feedback of quality pain management (Gordon et al., 2010, p. 13). As postoperative pain Management relieve suffering it gives comfort to patient and get to earlier mobilization which leads to shortly discharge, hospital stay and costs of care are reduced consequently patient satisfaction raise. Postoperative management is told to be effective if it is customized to the needs of the individual patient holistically (e.g. physiological, psychological and spiritual) postoperative patients need that all parameters to given attention such as age; level of fear or anxiety; surgical procedure; personal preference; and response to therapeutic agents given (Gupta et al., 2010, p. 97).

The plan of pain management could be a multimodal pharmacologic and non-pharmacologic approach (Czarnecki et al., 2011, p. 100). Both non pharmacologic and pharmacologic methods help to manage post operative pain. The non pharmacologic methods are all non drugs used to relive pain they can be educational care provided in terms of health care information, bed exercise, breathing and coughing touching and assistance of psycho-social (Power, 2005).

Pharmacological treatment of pain includes non-steroidal anti-inflammatory medicines (NSAI), Opioids which are classified in strong moderate and weak and anesthetic procedures according to World Health Organization (WHO) Ladder in 2012 and others authors (Vadivelu, Mitra and Narayan, 2010, pp. 14–16; Chou et al., 2016, pp. 136–138; WHO, 2012). It have been reported by Boström Barbro, (2003) that the higher the intensity of pain the less satisfied the postoperative patients with their pain treatment. Continuity of care and the patient education increase feeling of security, as well as improved their perception to pain control. Pain management consists of: assessment of pain, planning and treatment of pain and Evaluation and reassessment of pain (Woldehaimanot, Eshetie and Kerie, 2014, p. 6).
2.3. Theoretical framework

Available studies have indicated pain as a challenge (Melzack and Wall, 2008). However the study of pain has evolved considerably of recent to an extent that an understanding of the notion of pain can easily be explained in different patient’s situations (Vaajoki, 2013). For example pain was only seen from the sensory component perspective whereby it was assumed to comprise entirely of a solitary sensory component that only changes in intensity (Melzack and Wall, 2008). However, this narrow view has been well expended and the current perspective of pain is that of a physiological manifestation that is considerably influenced by several factors like psychological aspects among others.

There was so many theories explaining pain like Descartes’ model of pain, 1664 where pain have been considered as a linear transmission of input from the periphery through the spinal cord to the brain. Gate Control Theory: Pain involves the spinal cord and other parts of the nervous system as a gating mechanism to inhibit or facilitate a noxious stimulus, Pain occurs when the number of nociceptive impulses arriving at neural levels exceed a critical level Descending/Ascending control, Neuromatrix, Central sensitization, Peripheral sensitization. All of that are the biological models explaining the complex changes in periphery, spinal cord, brain, ascending information, descending modulation to clarify how pain occur and gone. This current study choose to use Neumanís systems Model as this one reflect Bio-psychosocial aspect

This study was guided by Neumanís systems Model. However the study will utilize only two relevant concepts (client and environment) to explain the interaction of variables. Betty Neumanís Systems Model (1995) is the philosophic of system that take a person in wholism, a wellness orientation, client perception and motivation, and a dynamic systems perspective of energy and variable interaction with the environment to mitigate possible harm from internal and external stressors, it call to that caregivers and clients are forming a partnership - relation to set desired outcome goals for optimal health retention, restoration, and maintenance (Neuman, 1995).

Considering a patient as a system made up of five variables: Physiologic, psychologic, developmental, sociocultural and spiritual and keeping in mind that all of these variables interact and relate to each other in very specific ways to each individual. Neuman define them as follow (1) Physiological: Refers to bodily structure and Function. (2) Psychological: Refers to mental processes and relationships. (3) Sociocultural: Refers to combined social and cultural functions. (4) Developmental: Refers to life developmental processes. (5) Spiritual: Refers to spiritual beliefs and influence. The third and fifth variables was not be considered in this study. Surrounding the
patient system, there are three lines of defense which stand for a protective buffer system to help prevent stressor invasion of the client system and protects the normal line of defense. This flexible line was considered as pain management methods used to relieve patient pain (2) Normal line of defense which is a line representing what the client has become over time, or the usual state of wellness. This interaction allows the maintenance of balance in the wellness of client and shapes how the patients experience pain. (3) Lines of resistance (When the normal line of defense is penetrated by environmental stressors, a degree of reaction, or signs and/or symptoms, will occur. This line supports the client’s basic structure and the normal line of defense, resulting in protection of system integrity. For the purpose of this study this line will greatly influence how the patient will experience pain postoperatively.

A second concept of Neuman’s model consider environment. This defines all internal and external factors or influences surrounding the system or client. They may include the relationships and resources of family, friends, or caregivers (Interpersonal factors.) Education, finances, employment, and other resources (Extra personal factors).
2.4. Conceptual Framework

In this study, the aspect of client and environment were used to explain these factors that may influence how the patient experience pain. The client and environment may be positively or negatively affected by each other. There is a tendency within any system to maintain a stable or balance among the various disruptive forces operating within or upon it. Neuman has identified these forces as stressors, and suggests that possible reactions and actual reactions with identifiable signs or symptoms may be mitigated through appropriate early intervention(Parker and Marlaine C. Smith, 2010, p. 182). This relationship has been explained in the diagram below.

![Diagram of Conceptual Framework](image)

*Figure1: Adopted Neuman's Model's Concepts 1995*

Only two concepts (client with three variables and environment) have been considered in this study.

*Figure2. 1. Conceptual frame work of the present study*
CHAPTER THREE: RESEARCH METHODOLOGY

3.1. Introduction

Conducting research implies following a systematic process to discover, interpret and revise theories and/or facts “so that those data become meaningful in the total process of discovering new insights into unsolved problems and revealing new meanings” (Leedy, 1985).

The methods to be used in carrying out this proposed study have been described here. The research setting, Research approach, study design, population, sampling methods, data collection, management and analysis are explained. As well, ethical considerations and limitations for this study are detailed.

3.2. Study design

The study design is expected to outline the critical approaches that the researcher intends to apply to answer the research question at hand (Polit & Beck, 2010). Across-sectional descriptive design, as described by LoBiondo-Wood & Haber (2006) was used in this study. A cross sectional study refers to data collection by surveying many subjects at the same point of time, or without regard to differences in time.

3.3. Research approach

The quantitative research methods emanate from the principle that variables in human behavior and human phenomena can be studied objectively (Parahoo, 2006). It is to this effect that quantitative approach has been selected as the most apposite research method for this particular study. Quantitative research approaches use a controlled design that organizes the research question first and detail the method of data collection and analysis to be employed (Robson, 2007).

3.4. Research settings

The study was conducted in Rwanda at the Kigali University Hospital Center (CHUK). The hospital is located in Nyarugenge district about 1km from city center. It is one of the 5 national referral hospitals, and the biggest. It was built in 1918, from when it served as a health center and became a district hospital in 1965, current as Referral Hospital. CHUK serves the whole country receiving patients from all district hospitals and offers care in all specialties, with both in and Out-patients. It has a capacity of 586 beds the setting has been selected because of its patient population mixture, as
it receives patients all over the country. Indeed it has also the teaching mission and its surgical department is the biggest in Rwanda referral hospital.

3.5. Study population

A population, according to Parahoo (2006) is “the total number of units from which data can potentially be collected”. The population for this study was patients who were admitted in surgical wards at CHUK in Rwanda. Delimitation of the population to a homogenous level group was achieved through inclusion and exclusion criteria. From the records obtained in statistics office at CHUK; 12, 332 postoperative patients were admitted in surgical wards from interventions done by different surgical speciality: urology, orthopaedics, general surgery, Neurosurgery, plastic, ENT, Stomatolgy and ophthalmology in three consecutive years since July 2013. Based on the above number the researcher assumed that 4,111 patients are admitted in the surgical wards yearly from July 2013 to June 2016. Considering the exclusion criteria the neurosurgical unity was excluded resulting in 3631 admitted patients in surgical wards yearly and 303 patients by months.

3.5.1. Inclusion criteria

Post-operative patients admitted in surgical wards from day one to three days.

18 years old and above post-operative patients.

Consenting patients to participate.

3.5.2. Exclusion criteria

This study excluded patient who were unable to talk or write, and patient who were not stable.

3.6. Sampling

3.6.1. Sampling strategy

Sampling is basically a process by which the researcher chooses a fraction of the target population, as the representative study population. Working with samples rather than with large populations offers a more cost-effective and practical strategy in research (Polit & Beck, 2010).

Patients that were meeting the criteria were selected using a systematic random sampling method to get the target population. The researcher questioned the every 3rd patients who attended the surgical wards and has had undergone a surgery, the starting point was randomly chosen between (1, 2, 3).

E.g: For the starting point is 2 the next were be 5, 8, and 11. ...
To take into account the fact that the wards do not have the same capacity of accommodating the patients, the researcher was also used probability proportional to the size of each ward to get the number of participant from each ward. Probability sampling in quantitative research is preferred over other methods because of its capacity in reducing errors and biases in the study (Proctor et al, 2010).

### 3.6.2. Sample size

In quantitative research it is recommended that the sample size calculation should be at the stage of study designing (Proctor et al, 2010). Other scholars recommend selection of such a large sample that it is representative of the target population (Polit & Beck, 2010). It's aligned with this reasoning and by considering that the surgical department receives 303 postoperative patients a month; the following simple formulae for Yamane, (1967, p.886) was used to calculate simple size:

\[
 n = \frac{N}{1 + N (e)^2}
\]

Here, \(n\) is the simple size, \(N\): population size and \(e\): Level of precision or sampling error =+/− 5%

Based on the above formulae, with the proportion of the post-operative patients admitted in surgical ward at desired precision of 5%, the sample size to be used for this study is estimated to be 172 patients

**Sample size: Number of participant from each ward**

<table>
<thead>
<tr>
<th>No</th>
<th>Ward by specialties</th>
<th>Capacity</th>
<th>Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>w1</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>2</td>
<td>w2</td>
<td>24</td>
<td>38</td>
</tr>
<tr>
<td>3</td>
<td>w7orthopedie</td>
<td>32</td>
<td>50</td>
</tr>
<tr>
<td>4</td>
<td>Pav.opht</td>
<td>21</td>
<td>33</td>
</tr>
<tr>
<td>5</td>
<td>W8</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>109</td>
<td>172</td>
</tr>
</tbody>
</table>
3.7. Data Collection

3.7.1. Data Collection instruments

Quantitative data are collected for the purposes of categorizing and describing behaviors attributes, and activities of populations (Parahoo, 2006). The data, however, should be collected using systematic, objective, and repeatable methods. According Robson (2007), collection of data should be through simple mechanisms that allow answers to the research question to be obtained and without unnecessary data collected.

Being aware of these guiding principles the instrument selected for data collection for this study is a questionnaire. The American Pain Society Patient Outcome Questionnaire Revised (APS-POQ-R) was adapted and it is free to public for use. A searcher Tewodros Eyob who also utilizes this tool confirms that tool to be free use. APS-POQ-R was designed for use to assess pain management among hospitalized adult patients. The updated APS-POQ-R was used in this research to understand patient’s experience of pain management in surgical wards at CHUK. It has been found to be adequate psychometrics for quality improvement (QI) with the purpose of measuring the different aspects of the patients experience with pain such as pain severity or intensity and relief; impact of pain on activity, sleep, and negative emotions; side effects of treatment; helpfulness of information about pain treatment; ability to participate in pain treatment decisions; and use of non-pharmacological strategies (Gordon et al., 2010, p. 13). In this research all these aspect was looked in addition the patient’s satisfaction to pain treatment.

The internal consistency reliability and initial construct validity of that tool was tested and found to be good in Medical–surgical inpatient in the United States hospitals (Gordon et al., 2010). As the administered questionnaires are the best way to measure patient-centered care attributes of primary health care (Hudon and Fortin, 2011), the questionnaire was translated from English to Kinyarwanda.

The APS-POQ has 13 questions, 10 questions have been taken as there are Q1, Q2, Q4, Q5, Q6, Q7, Q8, Q12 and Q13), 3 questions have been slightly modified (Q9, Q10 and Q11). The research added 3 questions a part from demographic data for the purpose of responding to all objectives. The formed questionnaire was composed by 16 questions (Q1-Q6) to respond to patient experience of postoperative pain intensity, 6 questions (Q7-Q11 and Q16) to identify postoperative pain management and 4 questions (Q12-15) to assess patient’s satisfaction to pain
management. A pilot study was conducted during one week on the beginning of February to test validity of the tools in Rwandan context.

3.7.2. Reliability and validity of the instruments

3.7.2.1. Validity

Validity of a questionnaire has been defined as the extent to which the research tool measures what it is intended to measure (Polit & Beck, 2010). The instrument should address all features of the problem being studied. Two aspects validity have been continually reported in the literature. These are content validity and face validity (Parahoo, 2006).

Face validity essentially examines whether the concept being tested are being measured in the questionnaire (LoBiondo-Wood & Haber, 2010). This was achieved through having other people supervisor and colleagues to test-run the tool to check whether the questions are clear, relevant, and not ambiguous (Jones & Rattray, 2010). A content validity test on the other hand, ensures that only asked questions are relevant and enough, thus covering all study areas being studied (Parahoo, 2006). To meet this requirement, the table was drown reflecting questions by study objectives and Framework and was been discussed with my supervisor, presented and submitted to a panel to see whether questions indeed reflect the concepts under study as well as the capacity of the questions and adequacy.

3.7.2.2. Reliability

Reliability of a research instrument refers to its ability to generate the same results when used under the same conditions. However, reliability is not easy to achieve particularly when it involves people as study subjects (Robson 2007). In quantitative research Reliability basically focuses on consistency and stability (Polit and Beck 2010). Using cronbach alpha test the reliability was founded to be good at 0.764.

3.7.2.3. Pilot Study

Piloting is an important stage in the design of the study tool. It allows evaluation of the instrument before actual data collection begins (Parahoo 2006). Using a small sample of subjects admitted within of approximately 10% of the sample size a pilot study was done to ensure the intent of measurement data is being maintained.
3.7.3. Data collection procedure

A systematic Random method was used to collect data. As CHUK surgical department has five wards to accommodate postoperative patients the sample size was distributed to the wards by probability to the size the data collection period was one month. Patients were identified from day of admission in surgical wards up to 3days. Even early acute postoperative period could range up to 7days in order to avoid any loose of capturing patient experience of 24hours postoperative moment due to forgotten the time extended to 3days was limit. The researcher used self administration questionnaire and reached patients in their respective wards and explained the purpose of the study for patients’ verbal and written consent. Before the patient filled out the questionnaire, more clarification on questions was provided where needed, then researcher comeback at the agreed time to pick the questionnaire; For the patients who are unable to write the caretaker or a researcher was reading the questionnaire to that patient and fill it with the patient provided responses.

3.8. Data Analysis

The data entry and data analysis was done in SPSS virsion20. The data analysis was done using descriptive Statistic and correlation of dependent variable of interest using bivariate analysis. The description of the findings were provided in the frequency and percentage of the dependent variable, the mean, median and standard deviation were guiding the researcher’s conclusion about dependent variable studied and tables or figures were displayed to represent findings.

3.9. Ethical Consideration

Permission to carry out the study was requested from the University of Rwanda, College of Medicine and Health Sciences institutional review board (IRB).Also the researcher obtained permission from CHUK research committee to be able to access the study setting.

In addition, participants were approached, explained about the study purpose, process, benefits, risks, as well as the role they are expected to play if they consent to participate. Participants’ rights, anonymity and confidentiality were guaranteed during all process of the study. Participants given enough time to understand consent form and consider their participation as possible, then the researcher provided an informed consent form to approve an agreement of participant by their Signature. Initials on consent form and surgical specialty on the questionnaire was used as identification. The specialty name was mentioned to make sure the sample size distribution. Indeed permission from the author has been verified as the tool is seen to be free of use on the web and the
confirmation from another researcher who used it before has been obtained. Participants were reminded that participation in the study is voluntary.

3.10. Data management

All data are kept on password protected computers. Information from this research will be only shared between members of the research group. The researcher, panel members, and the hospital leaders and any participant who wish for.

3.11. Data Dissemination

The final report will be disseminated as well as submission of a manuscript for publication in a peer-reviewed journal within the future. Study results will be shared with partners at the national and global level only for the purpose of improving postoperative management like conducting further research, guideline development and education purpose.

3.12. Limitations and challenges

The limitations of this study was that the time of the data collection was changed from February to March due to the surgical department outreach was conflicting with it, no conflict of interest faced. Some confounded variables were not controlled. The Short time of data collection leads to reduced sample size and was a challenging to reduce bias.
## CHAP4: RESULTS PRESENTATION

### Table 4.1. Participant’s demographic data (n=172)

<table>
<thead>
<tr>
<th>Independent variables</th>
<th>Frequency</th>
<th>Percent</th>
<th>Independent Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-38 ages</td>
<td>100</td>
<td>58.1</td>
<td>Non job</td>
<td>32</td>
<td>18.6</td>
</tr>
<tr>
<td>39-59 ages</td>
<td>47</td>
<td>27.3</td>
<td>Public employee</td>
<td>16</td>
<td>9.3</td>
</tr>
<tr>
<td>60-80 age</td>
<td>25</td>
<td>14.5</td>
<td>self employee</td>
<td>33</td>
<td>19.2</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>58</td>
<td>33.7</td>
<td>Famer</td>
<td>60</td>
<td>34.9</td>
</tr>
<tr>
<td>Male</td>
<td>114</td>
<td>66.3</td>
<td>Student</td>
<td>18</td>
<td>10.5</td>
</tr>
<tr>
<td><strong>Surgical specialty</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orthopedic surgery</td>
<td>63</td>
<td>36.6</td>
<td>Private employee</td>
<td>13</td>
<td>7.6</td>
</tr>
<tr>
<td>General surgery</td>
<td>65</td>
<td>37.8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urology</td>
<td>11</td>
<td>6.4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stomato</td>
<td>9</td>
<td>5.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Opht</td>
<td>7</td>
<td>4.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENT*</td>
<td>17</td>
<td>9.9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Education level</strong></td>
<td></td>
<td></td>
<td><strong>Operation day</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No education level</td>
<td>12</td>
<td>7</td>
<td>Day one</td>
<td>81</td>
<td>47.1</td>
</tr>
<tr>
<td>Primary level</td>
<td>94</td>
<td>54.7</td>
<td>Day two</td>
<td>63</td>
<td>36.6</td>
</tr>
<tr>
<td>Secondary level</td>
<td>45</td>
<td>26.2</td>
<td>Day three</td>
<td>28</td>
<td>16.3</td>
</tr>
<tr>
<td>Diploma level</td>
<td>11</td>
<td>6.4</td>
<td><strong>Frequency of Operation</strong></td>
<td>122</td>
<td>70.9</td>
</tr>
<tr>
<td>Degree level</td>
<td>10</td>
<td>5.8</td>
<td>Third or more</td>
<td>26</td>
<td>15.1</td>
</tr>
</tbody>
</table>

The table 4.1 above shows that majority of participants were under 60 years old 147 (85.4%) and the male were more representative than female 114 (66.3%) vs. 58 (33.7%). Concerning the wards or specialty orthopedics unit and general surgery had more patients 63 (33.6%) / 76 (44.2%) than others specialties or units (Ophthalmology, ENT and Stomatolog) 33 (19.2%). A good number of study participants were famers 60 (34.9%) and mainly interviewed patients were at their day one and two postoperatively 81 (47.1%) / 63 (36.6%) vs 28 (16.3%) at day three and 122 (70.9%) were at the first operation.
Table 4.2. Patients experience on postoperative pain intensity (n=172)

<table>
<thead>
<tr>
<th>1. Pain intensity</th>
<th>Frequency</th>
<th>Percent</th>
<th>3. Mood affection due to pain</th>
<th>Percent</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>The least pain experienced in first 24hrs postoperatively</td>
<td>No pain</td>
<td>2</td>
<td>Anxiety</td>
<td>Not at all anxious (0)</td>
<td>98</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>Mild pain (1-3)</td>
<td>64</td>
<td>37.2</td>
<td>Mild anxious (1-3)</td>
<td>18</td>
<td>10.5</td>
</tr>
<tr>
<td></td>
<td>Moderate (4-6)</td>
<td>68</td>
<td>39.5</td>
<td>Moderately anxious (4-6)</td>
<td>32</td>
<td>18.6</td>
</tr>
<tr>
<td></td>
<td>Severe (7-10)</td>
<td>38</td>
<td>22.1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The moderate pain experienced in first 24hrs postoperatively</td>
<td>No pain(0)</td>
<td>14</td>
<td>8.1</td>
<td>Extremely anxious(7-10)</td>
<td>24</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Mild pain (1-3)</td>
<td>70</td>
<td>40.7</td>
<td>Depression</td>
<td>Not at all depressed =0</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td>Moderate pain (4-6)</td>
<td>70</td>
<td>40.7</td>
<td>Mild depressed=1-3</td>
<td>23</td>
<td>13.4</td>
</tr>
<tr>
<td></td>
<td>Severe pain (7-10)</td>
<td>18</td>
<td>10.5</td>
<td>Moderately depressed=4-6</td>
<td>23</td>
<td>13.4</td>
</tr>
<tr>
<td>The worst pain experienced in first 24hrs postoperatively</td>
<td>No pain(0)</td>
<td>3</td>
<td>1.7</td>
<td>Extremely depressed=7-10</td>
<td>25</td>
<td>14.5</td>
</tr>
<tr>
<td></td>
<td>Mild pain (1-3)</td>
<td>21</td>
<td>12.2</td>
<td>Frightens</td>
<td>Not at all frightened=0</td>
<td>63</td>
</tr>
<tr>
<td></td>
<td>Moderate(4-6)</td>
<td>48</td>
<td>27.9</td>
<td>Mild frightened=1-3</td>
<td>22</td>
<td>12.8</td>
</tr>
<tr>
<td></td>
<td>Severe(7-10)</td>
<td>100</td>
<td>58.1</td>
<td>Moderately frightened=4-6</td>
<td>33</td>
<td>19.2</td>
</tr>
<tr>
<td>2. Frequency time of being in severe pain</td>
<td>Never been in severe pain (0%)</td>
<td>45</td>
<td>26.2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Few time been in severe pain(10%-30%)</td>
<td>61</td>
<td>35.5</td>
<td>Helpless</td>
<td>Not at all helpless=0</td>
<td>66</td>
</tr>
<tr>
<td></td>
<td>Much time been in severe pain (40%-60%)</td>
<td>35</td>
<td>20.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Always in pain (70%-100%)</td>
<td>31</td>
<td>18</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23
Table 4.2 above revealed that majority of participants experienced pain 24hrs postoperatively 96.3%. The worst pain experienced ranged from moderate 48 (27.9%) to severe 100 (58.1%) using numerical rating scale; while least pain experienced ranged from moderate 68 (39.5%) to mild 64 (37.2%) yet the severe pain was expressed with a significant number 38 (22.1%). Considering the time spent in severe pain, a significant number of participants 35 (20.3%), were in severe pain one hour and more equivalent to (40%-60%), 31(18.0%) were always in pain and 61 (35.5%) were little time in pain (10%-30%). Most number of participants did not show mood affection or pain emotion effect. Among four elements evaluated in mood affection the feeling of frightened and helpless were the most experienced at 54 (31.4%) and 50 (29.1%) respectively. From these findings the overall postoperative pain experienced were moderate to severe pain with (3±0.583) using pain management index (PMI)which classify the pain intensity as follows 0 (no pain), 1 (1–3: mild pain), 2 (4–6: moderate pain), and 3 (7–10:severe pain) (Cleeland C.S.et al.,1994).

Table4. 2. Pain interference with activities n= (172)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Does not interfered (0)</th>
<th>( n ) (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setting up, turning in bed,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>repositioning</td>
<td>10(5.8)</td>
<td></td>
</tr>
<tr>
<td>Mild interfere (1-3)</td>
<td>16(9.3)</td>
<td></td>
</tr>
<tr>
<td>Moderately interfere (4-6)</td>
<td>14(8.1)</td>
<td></td>
</tr>
<tr>
<td>Completely interfere(7-10)</td>
<td>132(76.7)</td>
<td></td>
</tr>
<tr>
<td>Walking, sitting in chair.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not interfered (0)</td>
<td>50(29.1)</td>
<td></td>
</tr>
<tr>
<td>Mild interfere (1-3)</td>
<td>25(14.5)</td>
<td></td>
</tr>
<tr>
<td>Moderately interfere (4-6)</td>
<td>34(19.8)</td>
<td></td>
</tr>
<tr>
<td>Completely interfere(7-10)</td>
<td>63(36.6)</td>
<td></td>
</tr>
<tr>
<td>Falling asleep.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not interfered (0)</td>
<td>50(29.1)</td>
<td></td>
</tr>
<tr>
<td>Mild interfere (1-3)</td>
<td>25(14.5)</td>
<td></td>
</tr>
<tr>
<td>Moderately interfere (4-6)</td>
<td>34(19.8)</td>
<td></td>
</tr>
<tr>
<td>Completely interfere (7-10)</td>
<td>63(36.6)</td>
<td></td>
</tr>
<tr>
<td>Staying asleep</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does not interfered (0)</td>
<td>17(9.9)</td>
<td></td>
</tr>
<tr>
<td>Mild interfere (1-3)</td>
<td>14(8.1)</td>
<td></td>
</tr>
<tr>
<td>Moderately interfere (4-6)</td>
<td>13(7.6)</td>
<td></td>
</tr>
<tr>
<td>Completely interfere (7-10)</td>
<td>128(74.4)</td>
<td></td>
</tr>
</tbody>
</table>
The table 4.3. demonstrate that pain impaired participant’s activities of function, where most participants had complete activity interference from pain at average 56.1%. The overall functional activities interference was 85.1%. As all five activities interviewed on responses were “completely interfered”. The Sitting up, turning in bed, repositioning occupied complete interference at 132 (76.7), Walking, sitting in chair equally to falling asleep 63 (36.6) and 50 (29.1) did not interfere activity. While staying asleep was highlighted expressed as much as doing movement (sitting, tuning or repositioning) by 128 (74.4). The mean of all activities interference were (1.69±0.895), (1.43±0.872), (1.53±1.000) and (2.64 ± 1.246). The overall pain interference of activities was completely interfered (7.28±2.726)

Table 4. 3. The Pain management experienced postoperatively (n=172)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiving pain Medication after being admitted in the ward.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>167</td>
<td>97.1</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>2.9</td>
</tr>
<tr>
<td>Much pain reliefs Received in 24hrs from all combined treatment.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No relief =0%</td>
<td>13</td>
<td>7.6</td>
</tr>
<tr>
<td>Mild relief=10%-30%</td>
<td>27</td>
<td>15.7</td>
</tr>
<tr>
<td>Moderate relief=40%-60%</td>
<td>34</td>
<td>19.7</td>
</tr>
<tr>
<td>Complete relief=70%-100%</td>
<td>98</td>
<td>57</td>
</tr>
<tr>
<td>Patient encouragement to use none -medicine methods</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Never</td>
<td>114</td>
<td>66.3</td>
</tr>
<tr>
<td>Sometime</td>
<td>39</td>
<td>22.7</td>
</tr>
<tr>
<td>Always</td>
<td>19</td>
<td>11</td>
</tr>
<tr>
<td>Use of none-medicine methods to relieve pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>cold pack</td>
<td>2</td>
<td>1.2</td>
</tr>
<tr>
<td>listen to music</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Prayer</td>
<td>21</td>
<td>12.2</td>
</tr>
<tr>
<td>distraction(watching TV, reading)</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>Walking</td>
<td>14</td>
<td>8.1</td>
</tr>
<tr>
<td>deep breathing</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Relaxation</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Massage</td>
<td>6</td>
<td>3.6</td>
</tr>
<tr>
<td>others(turning in bed, sitting up)</td>
<td>19</td>
<td>11.1</td>
</tr>
<tr>
<td>None used</td>
<td>95</td>
<td>55.2</td>
</tr>
</tbody>
</table>
The table 4.4 results illustrate that 167(97.1%) received pain medications while admitted in surgical wards however the total pain relief received 24hrs postoperatively was not highly appreciated, only 98 (57.0%) state the complete pain relief (70%-100%) ;others ranged from mild relief (10%-30%) to moderate relief (40%-60%) by 27 (15.7%) and 34 (19.8%) rate respectively while 13 (7.6%) declare no relief (0%) received. As the client involvement in all aspect of care play a role in achieving patient’s expectations and quality of care; for this study, the patient’s encouragement on use of non-medicinal methods to relieve pain by healthcare provider was less practiced at 39(22.7%) and 114(66.3%) were never encouraged as a result 95 (55.2%) did not use non-medicine method in their postoperative period yet these who used were 4.9%. The overall pain management were 104(60.5) poorly managed and 68 (39.5%) adequately managed with (1.4±0.49) according to pain management index (PMI).

Table4. 4. Pain medication side effects experienced

<table>
<thead>
<tr>
<th>Pain medication side effects</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nausea</td>
<td>None=0</td>
<td>120</td>
</tr>
<tr>
<td>Mild nausea=1-3</td>
<td>21</td>
<td>12.2</td>
</tr>
<tr>
<td>Moderate nausea=4-6</td>
<td>18</td>
<td>10.5</td>
</tr>
<tr>
<td>severe nausea=7-10</td>
<td>13</td>
<td>7.6</td>
</tr>
<tr>
<td>Drowsiness</td>
<td>None=0</td>
<td>107</td>
</tr>
<tr>
<td>Mild drowsiness=1-3</td>
<td>21</td>
<td>12.2</td>
</tr>
<tr>
<td>Moderate drowsiness=4-6</td>
<td>27</td>
<td>15.7</td>
</tr>
<tr>
<td>Severe drowsiness=7-10</td>
<td>17</td>
<td>9.9</td>
</tr>
<tr>
<td>Itching</td>
<td>None itching=0</td>
<td>155</td>
</tr>
<tr>
<td>Mild itching=1-3</td>
<td>8</td>
<td>4.7</td>
</tr>
<tr>
<td>Moderate itching=4-6</td>
<td>6</td>
<td>3.5</td>
</tr>
<tr>
<td>Severe itching =7-10</td>
<td>3</td>
<td>1.7</td>
</tr>
<tr>
<td>Dizziness</td>
<td>None dizziness=0</td>
<td>118</td>
</tr>
<tr>
<td>Mild dizziness=1-3</td>
<td>30</td>
<td>17.4</td>
</tr>
<tr>
<td>Moderate dizziness=4-6</td>
<td>16</td>
<td>9.3</td>
</tr>
<tr>
<td>Severe dizziness=7-10</td>
<td>8</td>
<td>4.7</td>
</tr>
</tbody>
</table>

Table 4.5. Show that most participants did not experience side effects of pain medications at 72.6 %. In all the four elements evaluated, sides effects were experienced at 80/688 (11.6%), 67/688 (9.7%), 41/688 (5.9%) which meant mild, moderate and severe respectively. Dizziness was the most side effect experienced at mild level of 30 (17.4%) followed by drowsiness at moderate level of 27 (15.7%) and nausea 21 (12.2%). The last was itching with the percentage less than 4.8% for all levels. 
Figure 4.1. Reassessment of pain after painkiller administration.

![Pie chart showing pain reassessment frequencies](chart.png)

**Figure 4.1.** demonstrate the frequencies of pain reassessment. A big number of 57 (33.1%) were not been assessed after pain killer administration and 53 (30.8%) were reassessed sometime. Only 21 (12.2%) were always reassessed and 41 (23.8%) were usually assessed. The adequate pain management started by assessment and reassessment in order to plan for care in surgical wards and patient’s reassessment was underscored.

**Table 4.6 The Overall pain management postoperatively(n=172)**

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poorly managed</td>
<td>104</td>
<td>60.5</td>
</tr>
<tr>
<td>Adequately managed</td>
<td>68</td>
<td>39.5</td>
</tr>
</tbody>
</table>

The table 4.6 above shows that a big number of participant were poorly managed concerning postoperative pain care 104(60.5%) only 68 (39.5) appreciated the management received.
Table 4.7. The level of participants satisfaction to pain management (n=172)

<table>
<thead>
<tr>
<th>Items</th>
<th>Dissatisfied</th>
<th>Satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allowed to participate in decisions making satisfaction</td>
<td>149(86.7)</td>
<td>23(13.4)</td>
</tr>
<tr>
<td>Satisfaction on information received about pain &amp; its management</td>
<td>140(81.4)</td>
<td>32(18.6)</td>
</tr>
<tr>
<td>Satisfaction with patient-care provider relationship</td>
<td>1(0.6)</td>
<td>171(99.4)</td>
</tr>
<tr>
<td>The overall patient satisfaction to pain management</td>
<td>105(61.0)</td>
<td>67(39.0)</td>
</tr>
</tbody>
</table>

The table 4.7 above demonstrate a high satisfactory of participants-care provider relationship 171 (99.4%) nevertheless there is a significant dissatisfaction on participants allowed to participate in decision making about their pain management at 149 (86.7%) and 140 (81.4%) for information received about pain and its management. The overall participant’s satisfaction level to pain management was dissatisfaction 105 (61.0) only 67 (39.1%) were satisfied with their pain management suitable to mean of and standard deviation of (1.39± 0.489).

Table 4.8. Bivariate analysis for correlation between Pain management and patient satisfaction to pain management

<table>
<thead>
<tr>
<th>Management category</th>
<th>Patient satisfaction to pain management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management category</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>.226**</td>
</tr>
<tr>
<td></td>
<td>.003</td>
</tr>
<tr>
<td>Patient satisfaction to pain management</td>
<td>.226**</td>
</tr>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>.003</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

The table 4.8. Give an idea about a correlation between pain management and patient satisfaction.
Table 4.9. Bivariate analysis for correlation between demographic data and pain intensity

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PAIN</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>INTENSITY EXPERIENCED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>.026</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Sex</td>
<td>-.013</td>
<td>.051</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Wards/specialty</td>
<td>-.092</td>
<td>.041</td>
<td>-.062</td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Job</td>
<td>.126</td>
<td>.044</td>
<td>.073</td>
<td>.046</td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Education</td>
<td>.003</td>
<td>-</td>
<td>.151*</td>
<td>.004</td>
<td>-</td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.274**</td>
<td>.171*</td>
</tr>
<tr>
<td>7</td>
<td>Days after operation</td>
<td>.084</td>
<td>.190*</td>
<td>.021</td>
<td>-.080</td>
<td>-.007</td>
<td>-.118</td>
<td>1.000</td>
</tr>
<tr>
<td>8</td>
<td>Frequency of operation</td>
<td>-.015</td>
<td>.019</td>
<td>-.050</td>
<td>.081</td>
<td>-.052</td>
<td>-.060</td>
<td>.022</td>
</tr>
</tbody>
</table>

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.9. Illustrated not correlation between demographic data with Pain intensity postoperatively.
CHAPTER FIVE : DISCUSSION

In this current study, the findings illustrate the participants’ category of pain experience in postoperative period, the management faced during that period and how satisfied were the patients to pain management.

5.1. Patients experience on postoperative pain intensity

Using numerical rating scale, the participants experienced pain from moderate to severe in first 24hrs postoperatively. The least pain experienced was ranging from mild to moderate however, there was severe pain expressed with a significant number 38(22.1%) even on that level of least pain. From these findings the researcher concluded that the overall postoperative patient’s pain score was moderate to severe (3.2±0.62) using pain scale and PMI.

This was not different from other studies for example Gan, Miller and Apfelbaum, 2014 in their study expressed that postoperative patients in immediate period described pain as moderate, severe, or extreme by 75% . Likewise Lei and Jing, (2013, p. 11) Maier et al., (2010, p. 60) confirmed in their studies 91.4% and 29.5% respectively experienced moderate to severe pain. Woldehaimanot, Eshetie and Kerie, (2014, pp. 6&8); Herbert g. Masigati and Kondo s. Chilonga (2014, p. 1) and Murthy S.,(2013,p.104) also showed that patients experienced pain postoperatively from moderate to severe; however the rate of percentage varied from this study to others possibly due to different aspects like background of participants, patients expectation and culture differences

Pain is a commonly experienced symptom after surgery, however it is a human right to prevent and/or relieve pain in postoperative patients and it is a professional responsibility (Brennan, Carr, & Cousins, 2007, p 205) so health care providers should make sure that patients feel pain within a reasonable limit. About time spent or being in severe pain the participants in this study expressed much time (40%-60%) and were always in pain. Lei and Jing, (2013) also highlighted a delay in postoperative pain relief at 82.8% of participants in Chinese on postoperative pain management study. In other study conducted in Ethiopian in 2014 found that only few patients (2.5%) reported that they received pain medication within 15 minutes of complain of pain.

The important number of participants did not show mood affection related to pain experienced. Frightens and helplessness were the most experienced at 54(31.4%) and 50(29.1%) respectively. Contradictions and similarities were highlighted in others studies like GanJ.T.et, al., (2013) and

Pain interferes or prevents functioning. The findings demonstrate that participant’s activities were impaired by pain significantly. All five activities interviewed on such as ( sitting up, turning in bed, repositioning, walking, sitting in chair, falling asleep and staying asleep) the response was “completely interfered” at average rate of 56.1% and (7.28±2.726). According to Gordon B., (2010, p.12) pain control facilitates physical function and emotions during hospitalization but pain interference is greater seen in postoperative patients. According to Woldehaimanot. E (2014) study high interference was reported.

5.2. The Pain management experienced postoperatively

Postoperative management is notified to be effective if it is customized to the needs of the individual patient holistically (Gupta *et al.*, 2010, p. 97, Hailemariam, 2015).Results from this study shows 97.1% participants have received painkillers (medications) however the total pain relief received 24hrs postoperatively was not highly appreciated, only 98 slightly half percent of participants state the complete pain relieve (70%-100% of the scale) were receive and 13(7.6%) declare no relief (0%) received others were in mild to moderate range; Tong G. *et al.*, (2013) revealed 88% received analgesic medications but continue to experience pain at 80%. As Czarnecki *et al.*, (2011, p. 100) and zarnecki *et al.*, (2011, p. 100) stated the plan of pain management could be a multimodal pharmacologic and non-pharmacologic approach. In this current study the non-pharmacological is ignore only 4.9% used non-pharmacological methods.

In pain management, the use of analgesia primarily targets the sensory dimension of pain while non-pharmacological methods, such as music, relaxation, and guided imagery, targets the emotional and psychological dimension of pain,

The discrepancy between painkiller received and total pain relief for this study were probably due to less use of non-pharmacological approach at 95(55.2%), lower patient’s involvement in pain management like encouragement on use of non-medicinal methods to relieve pain which was less and or never practiced and the reassessment which was not consistently performed. Despite the recommendation1, 6 made in American Pain Society guideline in Chou R., 2016 study; similar findings from Ahmad I., (2016) study revealed that 80% of participants never used non-pharmacological interventions and 80% of care providers do not believe the effectiveness of these non-pharmacological interventions even 7% believe that patients on morphine are not allowed to use
non-pharmacological approach. Vaajoki, (2013) also confirms that non-pharmacological approach was not systematically used. Many evidence-based studies provide moderate to strong support for the effects of non-pharmacological for pain alleviation (Chou MF, et al., 2006), (Caffrey R., 2008).

Contrary, the findings from Tong J.G, et al., 2014 60% of participants reported the non-pharmacological pain management strategies used. Thomas et al. (2010), WHO, (2012), MOH, 2012 guidelines recommend the non-pharmacological measures for pain management. The overall pain management were 104(60.5%) poorly managed and 68(39.5%) adequately managed with (1.4±0.49). Similar study revealed that the majority of patients were inadequately and inappropriately treated only (19.9%) received adequate pain management (Woldehaimanot T. E., et al., 2014). Contrarily to the study conducted in Chinese hospital stated alleviation of the pain within good effect expected (Lei and Jing, 2013, p. 1160). Despite the effort made by many organizations to pain management there is a little improvement (Ribeiro S.B, et al, 2012).

A big number did not experience side effect at 72.6%. Contrarily to study conducted in US in 2013 by Tong J. and colleagues where adverse effects were experienced at 80% and overall, 79% of those who received pain medications at least one adverse effect was felt. The most frequently reported adverse effects were drowsiness, constipation, and nausea while in this study dizziness was the most felt at mild level followed by drowsiness and nausea at moderate level, the last was itching with the percentage less than 4.8% for all levels.

5.3. Level of satisfaction to pain management postoperatively.

A sufficient number of participants were dissatisfied with their pain management this was not surprising as over all pain relief was not appreciated enough and similarity and difference were heightened in others studies. In the current study majority of patients reported 88% and (90%) of satisfaction with their postoperative pain management (Apfelbaum et al., 2003), (Gan T. et al., 2013) respectively. Lorentzen V. and Hermansen IL. (2011), Helfard M. and Freeman, (2009) also highlighted a differences in pain management satisfaction rate. Nearing to this findings study conducted in Ethiopia showed that only 50% of the patients were adequately satisfied with their pain management and the exception were on the counseling about pain before and after surgery the respondents received at 75%. In this study the lower rate of satisfaction to pain management could be attributed to many factors such less involvement of patients in pain treatment decisions and ignorance of non-pharmacological.
CHAPTER SIX . CONCLUSION AND RECOMMENDATION

6.1. Conclusion
The patient’s experience reflects the occurrences and events that happen across the continuum of care. The results indicate that most postoperative patients experienced moderate to severe pain and are dissatisfied with pain management rendered. These findings are a signal to the gaps in meeting patients postoperative care needs.

The patient experience reflects the occurrences and events that happen across the continuum of care. CHUK surgical postoperative patients experienced severe pain and the pain management was found to be inadequate as evidenced by lower patient satisfaction. Further studies are needed to rule out the appropriateness of postoperative pain assessment and effectiveness of the treatment used.

6.2. Recommendation
The recommendations for practical, education and research were made to address the gap founded. The findings provide a practical implication for improved quality of care both at individual healthcare provider and system levels. This calls for institution clinical audit to rule out the appropriateness of postoperative pain assessment and management or organizational readiness and the level of knowledge and skills for effective postoperative pain management. From the findings the research recommends further research on assessment of pain management, factors associated with postoperative patient’s pain experience. Another study to assess patient’s outcome to early mobilization postoperatively is recommended and the researcher recommends also an observation study to examine the context of practice and their limitation for postoperative pain management as poor management of post-operative pain can contribute to severe complications including pneumonia, deep vein thrombosis, infection, delayed healing, as well as the development of chronic pain.
REFERENCES


35


Vila H, Smith R, Augustyniak M,(2005). The efficacy and safety of pain management before and


APPENDICES

APPENDICE1: CONTENT VALIDITY

<table>
<thead>
<tr>
<th>FRAMEWORK ASPECT</th>
<th>QUESTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Objective1</td>
<td></td>
</tr>
<tr>
<td>To assess the postoperative pain experience in surgical wards patients at CHUK</td>
<td></td>
</tr>
<tr>
<td>Experience variables</td>
<td>1. On this scale, please indicate the least pain you had in the first 24 hours:</td>
</tr>
<tr>
<td>(physiological, psychological factors)</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>No pain</td>
<td>wrist pain</td>
</tr>
<tr>
<td>Possible</td>
<td></td>
</tr>
<tr>
<td>2. On this scale, please indicate the worst pain you had in the first 24 hours</td>
<td></td>
</tr>
<tr>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>no pain</td>
<td>worst pain</td>
</tr>
<tr>
<td>possible</td>
<td></td>
</tr>
<tr>
<td>3. On this scale, please indicate the moderate pain you had in the first 24 hours:</td>
<td></td>
</tr>
<tr>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td></td>
</tr>
<tr>
<td>no pain</td>
<td>worst pain</td>
</tr>
<tr>
<td>possible</td>
<td></td>
</tr>
<tr>
<td>4. How often were you in severe pain in the first 24 hours? Please mark your best estimate of the percentage of time you experienced severe pain</td>
<td></td>
</tr>
</tbody>
</table>
Never in severe pain | Always in severe pain

5. **Circle the one number below that best describes how much pain interfered or prevented you from:**

   a. Doing activities in bed such as turning, sitting up, repositioning.
      
      | Does not interfere | Completely interferes |
      |-------------------|----------------------|
      | 0 1 2 3 4 5 6 7 8 9 10 |

   b. Doing activities out of bed such as walking, sitting in a chair,
      
      | Does not interfere | Completely interferes |
      |-------------------|----------------------|
      | 0 1 2 3 4 5 6 7 9 10 |

   c. Falling asleep: 0 1 2 3 4 5 6 7 8 9 10

      | Does not interfere | Completely interferes |
      |-------------------|----------------------|
      | 0 1 2 3 4 5 6 7 8 |

   d. Staying asleep: 0 1 2 3 4 5 6 7 8 9 10

      | Does not interfere | Completely interferes |
      |-------------------|----------------------|
      | 0 1 2 3 4 5 6 7 8 |

   Completely interferes

6. **Pain can affect our mood and emotions. On this scale, please circle the one number that best shows how much the pain caused you to feel**

   a. Anxious 0 1 2 3 4 5 6 7 8 9 10

      | Not at all | Extremely |
      |-------------|-----------|
### Experience variables

#### Pain Management variables

<table>
<thead>
<tr>
<th>Pain Management variable</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Depressed</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Extremely</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Frightened</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Extremely</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Helpless</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not at all</td>
<td>Extremely</td>
<td></td>
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<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Objective 2: To identify the management of postoperative pain in surgical wards patients at CHUK

7. **Did you receive any medication for your pain after being admitted in this ward?** Yes  

8. **Have you had any of the following side effects?** Please circle “0” if no; if yes, please circle the one number that best shows the severity of each:

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Nausea</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Drowsiness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Itching</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>Severe</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
d. Dizziness 0 1 2 3 4 5 6 7 8 9 10

None Severe

11. In the first 24 hours, how much pain reliefs have you received? Please circle the one percentage that best shows how much relief you have received from all of your pain treatments combined (medicine and non-medicine treatments):

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Relief

No relief

Complete

9. How often did a nurse or doctor encourage you to use non-medicine methods?

Never ○ some time ○ Often ○

10. Did you use any non-medicine methods to relieve your pain?

Yes ○ No ○

a. If yes, mark all that apply:

○ cold pack ○ meditation

○ listen to music ○ deep breathing

○ prayer

○ distraction (watching TV, reading)

○ heat
Objective 3: To assess the level of satisfaction to pain management in surgical wards patients at CHUK.

12. After receiving pain treatment how often health care providers come back to you to ask if your pain is relieved or reduced.
   Never   sometime   usually   always

14. How were you satisfied to be allowed to participate in decisions making about your pain treatment as much you wanted?
   Satisfied   Neutral   dissatisfied

13. How satisfied were you with information received about pain and its management before or after operation?
   Dissatisfied   Neutral   Satisfied

15. Indicate how satisfied are you with the pain management while in being this ward:
   Extremely   Dissatisfied   Satisfied   Extremely dissatisfied

16. How are you satisfied with your relationship with health care provider in this postoperative period?
   Dissatisfied   Neutral   Satisfied
APPENDICE2: QUESTIONAIRE ENGLISH VERSION

Qo. Background data
a. Age: 18-38 ○ 39-59 ○ 60-80 ○ 81- above ○
b. Sex: female ○ male ○
d. Education level:
   Primary level ○ Secondary level ○ Diploma level ○ Degree Level ○
e. What is your job: No job ○ public employee ○ Private employee ○ Self employee ○ Farmer ○ student ○
d. At which day of operation are you? Day one ○ day two ○ day three ○
f. How frequency of operation did you had: first one ○ second ○ third or more ○

I. SPECIFIC QUESTIONS
A. Postoperative pain experience

1. On this scale, please indicate the least pain you had in the first 24 hours:

0 1 2 3 4 5 6 7 8 9 10
no pain worst pain possible

2. On this scale, please indicate the worst pain you had in the first 24 hours

0 1 2 3 4 5 6 7 8 9 10
no pain worst pain possible

3. On this scale, please indicate the moderate pain you had in the first 24 hours:

0 1 2 3 4 5 6 7 8 9 10
4. How often were you in severe pain in the first 24 hours? Please mark your best estimate of the percentage of time you experienced severe pain

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Never in severe pain Always in severe pain

5. Circle the one number below that best describes how much pain interfered or prevented you from:

   a. Doing activities in bed such as turning, sitting up, repositioning.

      0 1 2 3 4 5 6 7 8 9 10

      Does not interfere Completely interferes

   b. Doing activities out of bed such as walking, sitting in a chair, standing at the sink.

      0 1 2 3 4 5 6 7 8 9 10

      Does not interfere Completely interferes

   c. Falling asleep:

      0 1 2 3 4 5 6 7 8 9 10

      Does not interfere Completely interferes

   d. Staying asleep:

      0 1 2 3 4 5 6 7 8 9 10

      Does not interfere Completely interfere

6. Pain can affect our mood and emotions. On this scale, please circle the one number that best shows how much the pain caused you to feel:

   a. Anxious

      0 1 2 3 4 5 6 7 8 9 10
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Scores</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Depressed</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>Not at all</td>
</tr>
<tr>
<td>c. Frightened</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>Not at all</td>
</tr>
<tr>
<td>d. Helpless</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>Not at all</td>
</tr>
</tbody>
</table>

**B. POSTOPERATIVE PAIN MANAGEMENT**

7. Did you receive any medication for your pain after being admitted in this ward?

Yes ☐ No ☐

8. Have you had any of the following side effects while taking painkiller? Please circle “0” if no; if yes, please circle the one number that best shows the severity of each:

<table>
<thead>
<tr>
<th>Side Effect</th>
<th>Scores</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Nausea</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>None Severe</td>
</tr>
<tr>
<td>b. Drowsiness</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>None Severe</td>
</tr>
<tr>
<td>c. Itching</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>None Severe</td>
</tr>
<tr>
<td>d. Dizziness</td>
<td>0 1 2 3 4 5 6 7 8 9 10</td>
<td>None Severe Fatigue</td>
</tr>
</tbody>
</table>

9. How often did a nurse or doctor encourage you to use non-medicine methods?

☐ ☐ ☐
10. **Did you use any non-medicine methods to relieve your pain?**

Yes ☐ No ☐

a. If yes, mark the most used:

- ☐ cold pack
- ☐ meditation
- ☐ listen to music
- ☐ deep breathing
- ☐ prayer
- ☐ distraction (watching TV, reading)
- ☐ heat
- ☐ imagery or visualization
- ☐ relaxation
- ☐ walking
- ☐ massage
- ☐ other (please describe)……………..

11. **In the first 24 hours, how much pain relief have you received?** Please circle the one percentage that best shows how much relief you have received from all of your pain treatments combined (medicine and non-medicine treatments):

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

No relief ☐ Complete ☐ Relief ☐

12. **After receiving pain treatment how often the health care provider come back to you to ask if you to assess if your pain is relieved?**

Never ☐ sometime ☐ often ☐ always ☐
C. PATIENT ‘S SATISFACTION TO PAIN MANAGEMENT

13. How satisfied were you with information received about pain and its management before or after operation?

Dissatisfied  ☐ Neutral  ☐ Satisfied  ☐

14. How were you satisfied to be allowed to participate in decisions making about your pain treatment as much you wanted?
15. **Indicate how satisfied are you with the pain management while in being this ward:**

- Extremely
- Dissatisfied
- Satisfied

16. **How are you satisfied with your relationship with health care provider in this postoperative period?**

- Dissatisfied
- Neutral
- Satisfied
APPENDICE3: IBIBAZO KUBUSHAKASHATSI
UMWIRONDO

a. Imyaka yawe: 18-38 ○ 39-58 ○ 59-78 ○ ○ above

b. Ikieyiro cy’amashuri wize:
   Amashuli babanza ○ ayisumbuye ○ ikiciro cyambere cy a kaminuza ○
   Icyiciro cy a kabiri cy a kaminuza ○ ikindicy’kiciro kivuge ……………..

c. Izina ry’ikiciro cy’imbagwa urwariyemo
   Imbagwa z’amagupfa ○ Imbagwa rusange ○ Imiyoboro ˈinkari ○
   imbagwa z’ameno ○ imbagwa z’amaso ○ amazuru, amatwi n’umuhogo ○

d. Umurimo ukora…………………………………………………………………………………………………

It. Uri ku munsi wakangahe wanyuma yo kubagwa? Wambere wakiri wagat ○
f. N inshuro ○ wakangahe ubazwe: Imwe ○ Ebyiri ○ Eshatu zirenga ○

I. Ibibazo byihariye bijyanye n’ubushakashatsi

1. Kuri yingano y’imibare erekana umubare ugaragaza ububabare buke wagize ku munsi wawe wambere wa nyuma yo kubagwa.

0 1 2 3 4 5 6 7 8 9 10

Nta
Bubabare ububabare bukabije

2. Kuri yingano y’imibare erekana umubare ugaragaza ububabare bukabije wagize ku munsi wawe wambere wa nyuma yo kubagwa

0 1 2 3 4 5 6 7 8 9 10

Nta
3. Kuri y'ingano y'imibare erekana umubare ugaragaza ububabare bugereranyije wagize ku munsi wawe wambere wa nyuma yo kubagwa.

: 

0 1 2 3 4 5 6 7 8 9 10

Nta

Bubabare       ububabare bukabije

4. Ni mu igihe kinganiki wamaze mububabare bukabije ku munsi wawe wambere wa nyuma yo kubagwa? Hitamo ingano kwi jana igaragaza igihe wamaze muri ubwo bubabare bukabije.

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Ntabwo

nabayemo  Igihe cyose

5. Hitamo umubare umwe ugaragaza uko Ububabare bwa kubujije gukora ibi bintu bikurikira.

a. Kugira icyo nkora muburiri nko kwicara, guhindukira,

0 1 2 3 4 5 6 7 8 9 10

Ntibwambujije

kubikora  Bwamujije kubikora cyane

b. Kugira icyo nkora mvuye muburiri nko kugendagenda, kwicara mu igare.

0 1 2 3 4 5 6 7 8 9 10

Ntibwambujije
kubikora Bwamujije kubikora cyane
c. Gusinzira

0 1 2 3 4 5 6 7 8 9 10

Ntibwambujije
kubikora Bwamujije kubikora cyane
d. Staying asleep

0 1 2 3 4 5 6 7 8 9 10

Ntibwambujije
kubikora Bwamujije kubikora cyane

6. Kubabara bishobora gukora kubyiyumviro byawe.ukoresheje iyi mibare hitamo umubare umwe ugaragaza urugerowagizemo ibyiyumviro bikurikira:

a. Agahinda 0 1 2 3 4 5 6 7 8 9 10

Ntako nagize narakagizegakabije

b. Akababarogakabije

0 1 2 3 4 5 6 7 8 9 10

Ntako nagize narakagizegakabije

c. impungenge 0 1 2 3 4 5 6 7 8 9 10

Ntazo nagize narazigizegakabije

d. kumva ntacyo ushoboye

0 1 2 3 4 5 6 7 8 9 10

Nabwo nabyumvise narabyumvise cyane

7. Waba warahawe umuti wububabare kuva wakwinjizwa muri iyinzu?
8. Waba waragine bimwe muri ibi bimenyetso mugihe wafataga umuti wo kubara? Hitamo zero“0” niba ntabyo niba warabigize shyira mukaziga umubare ugaragaza uko byari bikabije

a. Isetemis 0 1 2 3 4 5 6 7 8 9 10

ntayo ikabije

b. Gucika intege /kunanirwa

0 1 2 3 4 5 6 7 8 9 10

ntako bikabije

a) Uburyaryate bwo kwishimagura

0 1 2 3 4 5 6 7 8 9 10

ntabwo bukabije

d. Isereri 0 1 2 3 4 5 6 7 8 9 10

ntayo ikabije

9. Ni kuruhe rugero umuganga cyu umuforomo(kazi)yagukanguriye gukoresha ubundi buryo butari imiti kugirango vivure ububabare.
10. *Waba warakoresheje uburyo bundi butari imiti mukugabanya ububabare?*

**Yego**  ○  **Oya**  ○

**Niba ari yego garagaza ubwo aribwo :**  ○

- cold pack  ○  meditation
- listen to music  ○  deep breathing
- prayer
- distraction (watching TV, reading)
- heat
- imagery or visualization  ○  relaxation
- walking  ○  massage
- other (please describe)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

Ntabwo

nagabanyirijwe

narabugabanyirijwe

bihagijecyane

12. Nyuma yo kuguha umuti ikugabanyiriza kubabara. ni kuruhe rugero ukuvuye yagarukaga kukubaza niba ububabare bwawe bwagabanutse cyangwa bwagiye?

Ntaranimwe ○ rimwe narimwe ○ igihe kinini ○ burigihe ○

13. Garagaza uko wanyunzwe n’amakuru wahawe arebana n’uko ububabare bwawe buzavurwa mbere yo na nyuma yo kubagwa?

Sinanyuzwe ○ naranyunzwe ○ Naranyujwe cyane birenze ○ Naranyujwe biraho ○

14. Nikuruhe rugero wishimiye uko wemerewe kugira uruhare uko wabyifuje mwifatwa ry’ibyemezo kuburyo buri bukoreshwe ku mivurire y’ububabare bwawe?

Sinabyishimiye nagato ○ hagati nahagati ○ narabyishimiye ○ narabyishimiye cyane ○
15. **Garagaza uko wanyunzwe n’uko ububabare bwawe bwavuwe muri iyi nzu urwariyemo.**

Sinanyuzwe ○ naranyunzwe ○ Naranyujwe cyane birenze ○ Naranyujwe biraho ○

16. **Ni kuruhe rugero wishimiye imibanire yawe nabakuvura ?**

sinyishimiye nagake ○ sinyanze sinanayishimiye ○ Ndayishimiye ○
CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Title of Study: PATIENTS’ EXPERIENCE OF POSTOPERATIVE PAIN MANAGEMENT IN A RWANDAN HOSPITAL, SURGICAL WARDS

Researcher’s Name: MUHAWENAYO Esperance.

Phone number: +250788721918

INTRODUCTION

I, MUHAWENAYO Esperance, a student at the University of Rwanda College of Medicine and Health Science in the masters program. I would like to request for Participation in this study Entitled” patients' experience of postoperative pain management in rwandan hospital, surgical wards” supervised by Mrs MUSABIREMA Priscille and Prof. BUSISIWE Bhengu.

This consent is addressed to postoperative patients admitted in surgical wards from 1 to 3 days postoperatively whose age above 15 years. Your agreement will confirmed with your Signature at the end of this paper after having more explanations.

PURPOSE OF STUDY

The general purpose of the study is to assess the patient’s experience of postoperative pain management in surgical wards at CHUK. This study has to answer these research questions:

(1) what is the patient’s experience of postoperative pain management in surgical wards at CHUK?

(2) What is the level of patient satisfaction to pain management in surgical wards at CHUK?

(3) What are factors associated with pain management in surgical wards at CHUK?

DESCRIPTION OF THE STUDY PROCEDURES

When you agree to participate in this study, you will be given a details explanation about the study and asked to sign a consent form, then you will be given a questionnaire to fill within 5-10 minutes. You are allowed to read the questionnaire and ask any question for clarification and then stay with that questionnaire to fill it and you will be required to tell the researcher which time...
convey at the same day to come to pick it back. A copy of consent or other needed document could be given to you if you want.

**RISKS/DISCOMFORTS OF BEING IN THIS STUDY**

There no known risks or expected to participants of this study. I assure you that your care provider’s team will treat you in the same way whether or not you choose to participate in our survey.

**BENEFITS OF BEING IN THE STUDY**

This study has the benefit to know the patient’s experience of postoperative pain management as a result, being participant in this study will help in evaluation of pain management system in surgical wards and could impact more on the quality of pain care postoperatively. Indeed the educational and practical strategies related to postoperative pain management could rise from these data and provided to surgical staff to improve quality of postoperative patient’s pain care.

**CONFIDENTIALITY**

I guarantee confidentiality of your voluntary participation and the information you provide will be made anonymous once you hand in this questionnaire. This means that your form of identification will not be included in any records presentation and your answers in this questionnaire will not be shared with your medical or nursing team except the general view of the study results. You will only asked to use your age, sex, level of education, surgery admission specially as demographic data. After handling the questionnaire the researcher will be kept strictly confidential research records in a locked area and all electronic information will be coded and secured to her computer using a password.

**PAYMENTS**

This study has academic purpose no any founds so there will be no payment to participate in this study.

**RIGHT TO REFUSE OR WITHDRAW**

The decision to participate in this study is completely voluntary. You may refuse to take part in the study safely, without affecting you. You have the right not to answer any question you think is disclosing your secret or dignity.
RIGHT TO ASK QUESTIONS AND REPORT CONCERNS

You have the right to ask questions about this research study before, during answering or after the research. If you have any further questions about the study, at any time feel free to contact me, MUHAWENAYO Esperance at E-mail: esperancemuhawenayo@yahoo.fr or call me at 0788721918.

If you prefer, you could have copy of a results summary of the study at the end of this study. If any concern about your rights and dignity abuse any problems or concerns that occur as a result of your participation, you can report them to the MBARUSHIMANA Valens assistance researcher postgraduate officer of the College of medicine and health science University of Rwanda at +250 788 231 816 or to the CHUK Ethical committee via Dr RUSINGIZA Emmanuel the chairperson of this committee at........... . Alternatively, concerns can be reported to the IRB /University of Rwanda, Chairperson of the CMHS IRB at +250788 490 522 or the Deputy Chairperson at +250783 340 040.
CONSENT

I,……………………………………………………. have been explained about the purpose of this research that has to assess patients’ experience of postoperative pain management in Rwandan hospital surgical wards I have been understood all information provided about the researcher include my right to refuse to participate or to not answered any question disclosing my secretor dignity, and I understood that there are no known risk, no any payment any no physical benefit except to give my contribution to reveal patient’s experience of postoperative pain management in order to improve pain care postoperatively. I assured to feel free to contact a researcher any time when I have concerns or to contact IRB officer if any violation of my rights.

I have been understood that the confidentiality will be taking cruel in this study where on the questionnaire will not appear my name or other particular identity; And that I have a right to refuse or to withdraw my participation in this study.

After reading, been explained and understood all the information provided above about the purpose of study and their rules. Deliberately, I decided to participate in this research my

Participant's Signature: …………….. Date: ……………………………

Researcher’s Signature: ……………………….. Date :……………………………

AMASEZERANO YO KUGIRA URUHARE MU BUSHAKASHATSXI

Izina ry’ubushakashatsi: IMIBONERE Y’ABARWAYI KUBUVUZI BW’UBUBABARE BAHABWA NYUMA YO KUBAGWA MU BYUMBA BY’IMBAGWA.

Izina ry’umushakashatsi: MUHAWENAYO Esperance

Numero za telefone: 0788721918

IRI BURIRO

Nitwa MUHAWENAYO Esperance nkaba ndi umunyeshuri muri Kaminuza y’urwanda muri Koreje y’ubuvuzi, ndetse n’ubumenyi bw’ubuzima rya kaminuza mu ishami ry’ubuforomo n’ububyaza. Nkaba ndi kuminuza mubijyaanye n’indwara z;umubiri no kubagwa. Nkaba ndi gukora ubushakashatsi bujyanye n’uko abarwayi babona ubuvuzi bahabwa bujyanye n ububabare cga uburibwe bagira nyuma yo kubagwa.”. Nkaba nifuza kubasaba kumfasha muri ubu bushakashatsi
muzuza urupapuro ry’ibibazo ndi bubahe nyuma yo gusobanurirwa uko ubushakashatsi buteye .Ubu bushashakashatsi buhagarariwe na Madamu MUSABIREMA Priscille na Prof BUSISIWE Bhengu

**INTEGO Y’UBUSHAKASHATSI**

Ubu bushakashatsi bugamije kureba.uko abarwayi babona ubuvuzi bahabwa bujyanye n ububabare cga uburibwe bagira nyuma yo kubagwa. Bukaba buzareba impamvu zituma abarwayi babona imivurirwe yabo kuburibwe bwanyuma yo kubagwa itandukana ndetse bukanareba urwego abarwayi banyuzweho n’ubuvuzi bahabwa bujyanye nububabare bwanyuma yo kubagwa.

**IBIZAKORWA MURI UBUBUSHAKASHATSI**

Mu gihe wemeye kugira uruhare muri ubu bushakatsi, bwambere usabwa kuzuza amasezerano yemera kugira uruhare mu bushakashatsi ndetse ugasobanurirwa ibibazo binyuranye bibazwa kuri ubwo bushakashatsi, unahabwe urupapuro rw’ibibazo bibazwa ku bushakashatsi ukabisoma hagati y’iminota itanu n’icumi kugira ngo ubyumve ughahabwa umwanya wo kubaza ibyo udasobanukiwe nyuma ukarwuzuza. Nyuma yo kurwuzuza ukarubwiza umushakashatsi mu gihe uraba wamwemereye kugarukira kurutora .Kopi y’urupapuro rw’amasezerano urayihabwa n’izindi kopi zakenerwa mu bushakashatsi mugihe ubwifuje.

**INGARUKA/ KUTAGUBWANEZA ZO KUBA MURI BUSHAKASHATSI**

Nta ngaruka zizwi, nta niziteganywa muri ubu bushakashatsi nkwiyeje ko uza gumya kuvurwa uko bisanzwe haba ubu uri mubitaro n’ikindi gihe uzabigana;Kugira uruhare muri ubu bushakashatsi ntacyo bizangiza kumivurirwe yawe.

**INYUNGU ZO KUBA MURI UBU BUSHAKASHATSI**

Ubu bushakashatsi bufite inyungo ku kaba hamenyekana uko abarwayi babona ubuvuzi bahabwa kububabare cga uburibwe bwanyuma yo kubagwa.Bukaba buzafasha mukunoza imivurire y’ububabare bwanyuma yo kubagwa hanozwa imihugurirwe y;abakozí ndetse hashyirwaho ingamba nshya.nimuri urwo rwego kugira uruhare muri ubu bushakashatsi ari umusanzu ukomeye mu kudufasha gutegura ivurirey’ububabare inoze.nta ndishyi cyangwa ikiguzi giteganyirijwe uzemera kwinjira muri ubu bushakashatsi.
**KUGIRA IBANGA**

Amakuru yose tuzakura muri ubu bushakashatsi azaguma ari ibanga haba muri ikigihe ndetse nikizaza, ntabwo ibyo usubiza bizasangiwa abakuvura keretse ishusho rusange yibyavuye mubushakashatsi kandi nta zina rizagara ku rupapuro ruriho ibibazo n’ibisubizo. Nta makuru namwe akwerekeyebo tuzakubaza muri ubu bushakashatsi, amakuru yose azabikwa ahantu hizewe kandi ntawundi muntu usibye abari muri ubu bushakashatsi wemerewe kuyabona.

**AGAHIMBAZAMUSYI**

Ubu bushakashatsi bufite intego kubijyanye n’amashuri nta nkunga y’amafaranga cyangwa indi ntego ifite inyungu bityo rero nta mafaranga cyangwa impano duteganya gutanga ku kwemera kugira uruhare muri ubu busakahashatsi.

**UBURENGANZIRA BWO KWANGA CYANGWA KUVA MU BUSHAKASHATSI**

Kugira uruhare muri ubu bushakashatsi bishingiye kubushake bwawe, Ufite uburenganzira ubwo aribwo bwose bwo kutabugiramo uruhare kandi ntibigire icyo aricyo cyose ukampamagara umushakashatsi MUHAWENAYO. Ufite uburenganzira bwo kutagira ikibazo na kimwe usubiza cyangwa ikibazo waba wumva kirebena n’ubusugire cyawe.

**UBURENGANZIRA BW’UWO WABAZA IKIBAZO NO GUTANGA RAPORO Y’IBYO WUMVA BITAMEZE NEZA**

Ufite uburenganzira bwo kubaza ibibazo bijyanye n’ubu bushakashatsi no kuba cya subizwa n’umushakashatsi mbere. Haramutse hari ikibazo ushobora kwifuza kuzabaza nyuma ushobora kukibaza wisanzuye igihe icyo aricyo cyose ukampamagara umushakashatsi MUHAWENAYO Esperance kuri telephone 0788721918 cyangwa ukaba wanyandikira kuri esperancemuhawenayo@yahoo.fr Uramutse wifuza kumenya incamake y’amakuru yavuye muri ubu bushakashatsi wazayahabwa.

Kandi Uramutse ufite ikintu cy’umwihariko cyo kubaza cyangwa uburenganzira bwawe butubahirije nkuwagize uruhare mu bushakashatsi kitabashije gusubizwa n’umushakashatsi wakigeza kuwitwa MBARUSHIMANA Valens kuri telephone +250 788 231 816 ukorera mu biro
bishinzwe ubushakashatsi kuri koleji y’ubuzima kaminuza y’u Rwanda cyanwa ukareba uhagarariye comite itanga impushya mubushakashatsi bukorewe CHUK Dr RUSINGIZA Emmanuel kuri tel+250785466254

AMASEZERANO


Njye nanumvise neza ko muri ubu bushakashatsi harimo kubika ibanga kuko kurupapuro rw’ibibazo nta mwirondoro wanjye uzagaragaraho. Kandi ko mfite uburenganzira bwo guhagarika kugira uruhare mu bushakashatsi igihe mbishakiye.

Nyuma yo kubyisomera, gusobanurirwa no kumva amakuru yose nahawe yavuzwe haruguru, Nemeye kugira uruhare muri ubu bushakashatsi kugiti cyanjye bikemezwa n’umukono wanjye.

Umukono w’umushakashatsi............................................................Italiki…../……/2017

Umukono w’umushakashatsi............................................................Italiki…../……/2017

RESEARCH SETTING APROVAL
Dear Muhwenayo Esperance,

Your research project: "Patients' Experience of Postoperative Pain Management in Rwandan Hospital Surgical wards."

During the meeting of the Ethics Committee of University Teaching Hospital of Kigali (CHUK) that was held on 3/02/2017 to evaluate your protocol of the above mentioned research project, we are pleased to inform you that the Ethics Committee/CHUK has approved your protocol.

You are required to present the results of your study to CHUK Ethics Committee before publication.

PS: Please note that the present approval is valid for 12 months.

Yours sincerely,

John Nyiriringa
The Secretary, Ethics Committee.
University Teaching Hospital of Kigali

<<University teaching hospital of Kigali Ethics committee operates according to standard operating procedures (Sops) which are updated on an annual basis and in compliance with GCP and Ethics guidelines and regulations>>.

B.P. 565 Kigali-RWANDA www.chuk.rw Tel. Fax : 00 (250) 576658 E-mail :chuk.hospital@chukigali.rw

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ETHICAL APPROVAL FROM UR

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled “Patients’ Experience Of Postoperative Pain Management In Rwandan Hospital Surgical Wards.”

Having reviewed your protocol and found it satisfying the ethical requirements, your study is hereby granted ethical clearance. The ethical clearance is valid for one year starting from the date it is issued and shall be renewed on request. You will be required to submit the progress report and any major changes made in the proposal during the implementation stage. In addition, at the end, the IRB shall need to be given the final report of your study.

We wish you success in this important study.

Professor Kato J. NJUNWA
Chairperson Institutional Review Board,
College of Medicine and Health Sciences, UR

Cc:
- Principal, College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR
TO WHOM IT MAY CONCERN

Dear Sir/Madam,

Re: Request to collect data

Referring to the above subject, I am requesting for permission for MUHAWENAYO Esperance, a final year student in the Masters of Science in Nursing at the University of Rwanda/College of Medicine and Health Science to collect data for his/her research dissertation entitled Patients’ Experience Of Postoperative Pain Management In Rwandan Hospital Surgical Wards.

This exercise that is going to take a period of 2 months starting from 13th February 2017 to 12th April 2017 will be done at University Teaching Hospital, Kigali.

We are looking forward for your usual cooperation.

Sincerely,

Dr. Donatilla MUKAMANA, RN, PhD
Dean, School of Nursing and Midwifery
College of Medicine and Health Sciences

Email: schoolofnursingandmidwifery@ur.ac.rw, P.O.Box: 3286 Kigali-Rwanda, Website: www.ur.ac.rw