PERCEIVED LEVEL OF SATISFACTION ON PAIN MANAGEMENT AMONG POST OPERATIVE PATIENTS AT MAWENZI REGIONAL REFERRAL HOSPITAL MOSHI KILIMANJARO.

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By

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A Dissertation Submitted in (partial) Fulfilment of the Requirements for the Degree of Master of Science in Critical care and trauma of Muhimbili University of Health and Allied Sciences

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CERTIFICATION

The undersigned certifies that he has read and hereby recommends for examination by Muhimbili University of Health and Allied Sciences a dissertation entitled **— PERCEIVED LEVEL OF SATISFACTION ON PAIN MANAGEMENT AMONG POST OPERATIVE PATIENTS AT MAWENZI REGIONAL REFFERAL HOSPITAL MOSHI KILIMANJARO**.

In fulfillment of the requirements for the degree of Master in Critical care and trauma of Muhimbili University of Health and Allied Sciences.

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Date. ----------

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(Co- supervisor)

Date…….

DECLARATION

I, Angela Alexander Mwakalile, declare that this dissertation is my own original work and that it has not been presented and will not be presented to any other University for a similar or any other degree award.

Signature: ---------- **Date: ----------**

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DEDICATION

This dissertation is dedicated to my son Jonathan A. Msuya and all Mawenzi hospital health care workers

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LIST OF ABBREVIATIONS

APS-POQR…… American Pain Society Patient Outcome Questionnaire

BSCN……..Bachelor of Science in Nursing

IASP……International Association for the Study of Pain

MRRH……Mawenzi Regional Referral Hospital

MUHAS…….Muhimbili University of Health and Allied Sciences

POP…… Post Operated Pain

RN……..….Register Nurse

SPSS……Statistical Package for the Social Sciences

WHO…….World Health Organization

DEFINITIONS OF TERMS

Pain

The international association for the study of pain (IASP) define pain as unpleasant sensory or experience related to actual or possible tissue damage (Rafati *et al.*, 2016)

In this study acute pain is defined as pain of short duration (maximum of 30 days) that usually decides as the body heals, such as surgical pain.

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 consist of inflammatory reactions. (Esperance, 2017). Post-operative pain in this study means nociceptive pain which results from inflammation or through damage to tissues. any discomfort experienced by the patient resulting from surgery from day one up to three days of post-surgery in wards.

Pain control satisfaction

Patient satisfaction is the subjective, personal valuation of treatment success, health service and health care providers. Satisfaction includes accessibility/suitability, accessibility of resources, continuity of care, effectiveness, finances, humaneness, information gathering, information giving, pleasurableness of surroundings and quality/capability(Evans *et al.*, 2004) in this study satisfaction refers to a personal evaluation of the outcome resulting from healthcare service and the care providers collectively.

Pain management

These include Pharmacological approaches using agents like analgesics and Non-pharmacologic approaches like distraction and reassurance. Postoperative pain management is an essential care component in surgical wards. (Rafati *et al.*, 2016)

In this study pain management was measured in terms of any ant pain given to pain as required following the recommended guideline.

ABSTRACT

INTRODUCTION

Pain is the most common reason for seeking medical care and it is one of the sources of discomfort among admitted patients, Patient satisfaction is commonly used to evaluate the quality of care, including quality of pain management,

Objective: This study aimed to assess the perceived level of satisfaction of pain management among post operated patient admitted at Mawenzi regional Referral Hospital.

Method: A descriptive cross sectional quantitative research design was conducted. Simple random sampling technique was used to select sample size of 112 patient aged 18 years and above, who were operated within 24 and 72 hours. An American Pain Society –Patient Outcome Questionnaire (APS-POQ) was adapted and used to collect data. The data entry and data analysis was done in SPSS version 20. Data obtained from this study was analyzed through descriptive statistics where frequencies, mean, standard deviation (SD), proportion and percentage were presented in tables. The association between dependent and independent variables was tested using chi square test and odds ratio. A p-value of < 0.05 was considered significant.

Result: A total of 112 post operated patients were recruited most of them were female, age ranges from 30-39.the mean score of severe pain post operatively was (7.83 ± 0.88) within 24 to 48 hours. Pain relief received were 57.23(13.3%) and the time spent in severe pain 58 (51.8%), were in moderate pain, Most number of participants were interfered with pain at (7.25 ± 1.17) and a sleep (8.09 ± 01.28). 94 (83.9%) reported that they were not assessed prior to medication. And overall perceived level of satisfactions with pain management participant were satisfied.

Conclusion: Postoperative patients' experience severe pain and their satisfaction level with pain management was at satisfied level.

Key words: pain satisfaction, post-operative patient, pain management

CHAPTER ONE

1.0 Introduction

Pain is explained to be subjective, unfriendly experience that individual can explain and vary in nature and intensity as a results from tissue injury during surgical procedure like skin incision, tissue operation and traction (Cadoy, et al, 2018). Untreated or undertreated post-surgical pain can lead to prolonged hospital stay, persistent postoperative pain, deep vein thrombosis, respiratory and cardiovascular complications, anxiety, depression and even premature death. (Eshete *et al.*, 2019)

The American Pain Society (APS) in 1995 indicate that Pain is among the known fifth vital signs, therefore, must be assessed, Measured and treated in the same way as other vital signs (Ribeiro *et al.*, 2012). The Universal Declaration of Human Rights in 1948 states that the highest realistic standard of health is a fundamental right of every human being and that relief from pain is part of that basic human right to health (Patel, 2017).

Pain after surgery decreases the quality of life of the patients and have emotional impact on patient comfort level. Pain is defined as an unpleasant sensory and multidimensional experience linked with actual or potential tissue damage. Even if pain is a predictable part of the postoperative experience, insufficient management of pain is common and may result in clinical and psychological changes that increase morbidity, mortality, and costs and decrease the quality of life (Karabulut *et al.*, 2015)

Acute postoperative pain is common. Nearly 20% of patients experience severe pain in the first 24 h after surgery, a figure that has remained largely unchanged in the past 30 years.(Gordon *et al.*, 2016). In US around 86% of patients who underwent surgery experienced pain postoperatively and 75% of them demonstrate severe or extreme experience.(Gan *et al.*, 2014) In sub-Saharan Africa there are an estimated 70–500 operations per 100 000 population compared with 5000–9000 per 100 000 in high income, industrialized countries (Saini and Bhatnagar, 2016).

The impact of inadequate pain relief is well known and can result in delayed mobilization and related complications as well as psychological distress and anxiety. Information of POP

management and patient satisfaction in Tanzania is unknown. Therefore there is a need to explore more postoperative pain management and level of satisfactions of patients.

1.2 Problem statement

Postoperative pain management and level of satisfaction continues to be a major challenge in healthcare system worldwide for both developed and developing countries. Pain can be untreated or undertreated this has dangerous consequence, ranging from prolonged duration of hospital stay to more complication like deep vein thrombosis, increase in myocardial oxygen consumption, respiratory infection, muscle spasms, increase post-operative stress, anxiety, fear, sleeplessness, and possible chronic pain leading to increased morbidity and mortality.(Eshete *et al.*, 2019)

A patient satisfaction tool was developed by the Quality Assurance Committee of the APS in 1991 and used in a variety of settings, The American Society for Pain Management in Nursing (ASPMN) states that appropriate pain management and patient satisfaction is a primary nursing duty for any post operated patient experiencing pain. (Karabulut *et al.*, 2015)

A study conducted in Tanzania on management practices and satisfaction among operated cases at a regional referral hospital in Dar es Salaam demonstrated that moderate to worst pain was reported in 95.6% of cases among 136 patients (Mwashambwa *et al.*, 2018). Also a descriptive prospective hospital based study carried out to evaluate postoperative pain management and patient satisfaction with care given at Kilimanjaro Christian Medical Centre (KCMC) Moshi revere the postoperative pain management is still a challenge in center (Masigati, 2014), Despite various pain management measures being carried out, However, no study was found to use the American Pain Society (APS) Patient Outcome Questionnaire survey tool in Tanzania for the extent and nature of the postoperative pain. Little is known on how patients feel about it and to what extent are satisfied with pain management measures, therefore this study by using the APS tool assesse the perceived level of satisfaction on pain management among post-operative patients.

1.3 Conceptual framework

This study adopted the Donabedian Model (2005) which has been widely recognized and applied in many health care related fields When the health system and the providers meet the individual's expectations, it ensures increased satisfaction, Patient satisfaction is an interplay of service quality, expectations, emotions experienced at time of service delivery and many other unobservable factors. The Donabedian framework allows insight into patient satisfaction at the various level of Pain management. Some studies have shown a clear link between patient satisfaction and a variety of explanatory factors, the influence of individual characteristics such age, gender and education, religious, on patient satisfaction have been included as possible explanatory variables.

The framework divides factors impacting quality and satisfaction into structures, processes and outcomes,

Structure

On the structure dimension, researcher hypothesis that surgery characteristics (type of surgery, duration of surgeries and type of Anesthesia) and the availability of medicines (Analgesia) improve overall satisfaction with quality of care. (Rao, Peters and Bandeen-Roche, 2006) Studies show evidence on Patient satisfaction with availability, quantity and quality of drugs. Balthusen and Yaomeze (2006) report dissatisfaction among users and non-users with regards to the availability of drugs. Management of a postoperative patient includes pain treatment and if postoperative pain is controlled, patient gets relief and subsequently satisfied (Masigati, 2014).

Process

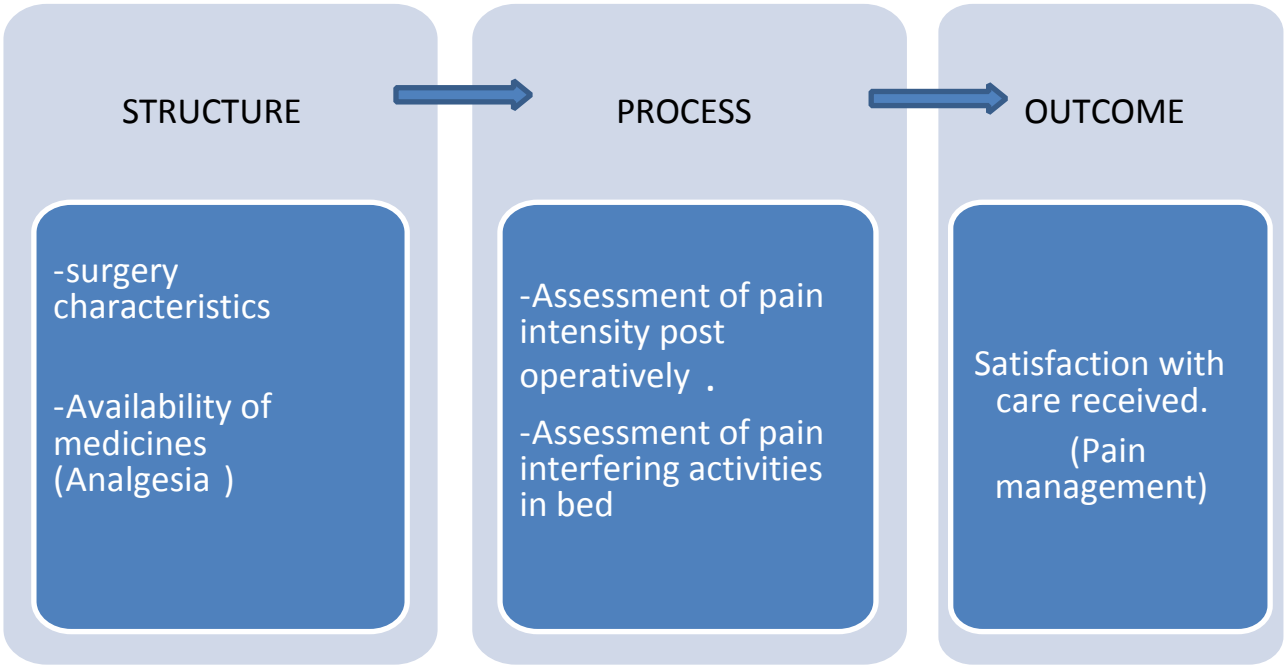
The process dimension includes procedure provided to patient in first 24 hours, Assessment of pain intensity post operatively and assessment of pain interfering activities in bed. Researcher hypothesis that good support from personnel in these areas of service will improve satisfaction with care. Also, patient satisfaction with pain assessment will influence positively their overall satisfaction with care

Outcome

Outcomes denote how the care affects the patient (Donabedian, 1988). Were by in this research Patient reports satisfaction in Participation in decision making,

(Deliberative decision making), Satisfaction in Information on treatment options. Usage of any non- medicine method to relieve pain. Encouraged and Advice to use non- medicine method.

Patient participation is, therefore, encouraged as a mean to achieve adequate treatment (Gordon *et al.*, 2002), (Zoëga, 2014) identified three major reasons for why patient participation is particularly important in pain management. Firstly, pain is inherently a subjective phenomenon and only the person experiencing pain can truly describe how he or she is feeling, and how severe the pain is. Secondly, patients may harbor various beliefs and views that may act as barriers to pain management. Thirdly, no single intervention for pain is available that will fit most and, therefore, treatment must be individualized. These factors require open communication and active participation from both the health-care professional and the patient, termed deliberative decision making (Zoëga, 2014).



Source: adopted from Donabedian model(Amaral, Ferreira and Vidinha, 2014) **.**

: **Figure 1: conceptual framework of perceived level of satisfaction on pain management among post operated patient.**

1.4. Rationale and significance of the study

Pain is the key underlying reason for many people to look for health care worldwide. While substantial advancements have been made in pain management, available research continues to indicate that many postoperative patients experience high levels of pain.

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 perceived lever of satisfaction postoperatively will improved in Mawenzi regional referral. Results from this study will provide an understanding of pain management and will provide a foundation on which appropriate educational initiatives and strategies will be based to address gaps in knowledge and practice regarding pain management in 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 post operatively 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.

1.5 Broad research questions

What is perceived level of satisfaction on pain management among post operated patient at Mawenzi Regional Referral Hospital (MRRH).

1.6 Research questions.

i. What is the pain intensity experienced by post operated patient at Mawenzi Regional Referral Hospital?

ii. What are Approaches used in pain management among post operated patient at Mawenzi Regional Referral Hospital?

iii. What is perceived level of satisfaction on pain management among post operated patient at Mawenzi Regional Referral Hospital?

1.7. Main objective

The main objective of this study was to assess perceived level of satisfaction on pain management among post operated patient at Mawenzi Regional Referral Hospital (MRRH).

1.8 Specific objectives

i. To assess the pain intensity experienced by post operated patient at Mawenzi Regional Referral Hospital.
ii. To identify approaches used in pain management among post operated patient at Mawenzi Regional Referral Hospital.
iii. To determine perceived level of satisfaction on pain management among post operated patient at Mawenzi Regional Referral Hospital

CHAPTER TWO

2:0 Literature review

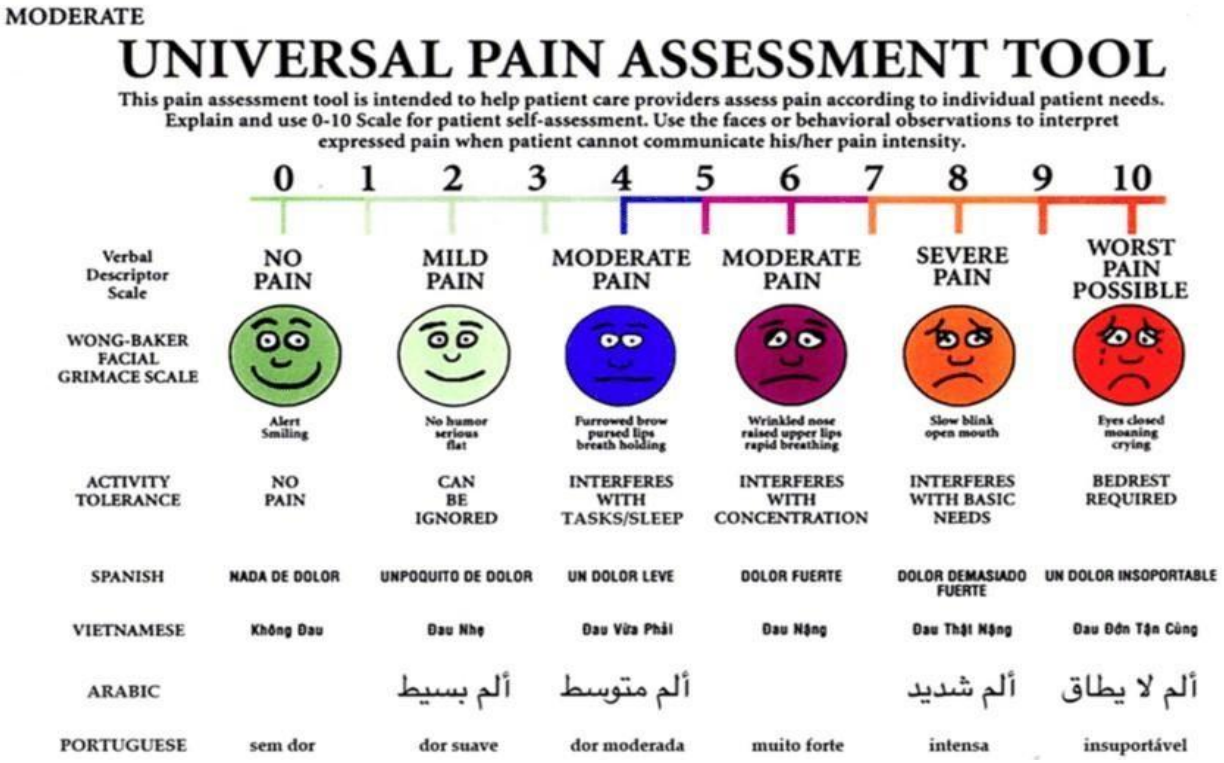
The definition of pain by the International Association for the study of pain has remained unchanged through three updates on taxonomy in 1986, 1994 and 2011, although the accompanying notes have been expanded. These notes develop the definition adding that the inability to verbalize pain does not mean the patient does not have pain or require pain management interventions (Ofori, 2016)

2.1 Pain assessment

Before prescribing pain medications, it is critical to conduct a thorough assessment of pain This should start with knowledge of the past medical history and a detailed description of the pain in terms of location, duration, radiation, intensity and, is most importantly, Knowing the medical history and character of symptoms helps one assess which type of pain a patient has, which will help determine what pain treatment modality to choose, Pain is likely to cause adverse effects on more than one body system, particularly in high-risk surgical patients. It can also lead to chronic pain, may cause reductions in arterial inflow and venous emptying.(Haonga *et al.*, 2011)

Characterization of pain intensity is a common challenge for all clinicians, especially in the postoperative setting. Single-dimension scales are the most commonly used measures. Two common options of these are the standard numerical rating scale from 0 to 10 with zero representing “no pain at all” and 10 representing “the worst pain of your life. And the verbal descriptor scale representing “no pain” to “worst pain imaginable. (Ansari, 2017)

In this study the international scale for pain assessment was used in order to answer the question of pain intensity patient experience.



: **Figure 2: Universal Pain Assessment Tool.**

Table 1: Pain rating scale (1) interpretation

0	1-3	4-7	8-10
NO PAIN	**MILD PAIN**	**MODERATE PAIN**	**SEVERE PAIN**

Study to describe strategies used in postoperative pain assessment among a group of nurses in South Africa reveal Pain and its management as one of the major clinical problems confronting health care professionals in general and specifically in acute-care settings.(Klopper *et al.*, 2006) Pain assessment during immediate postoperative period, providing regular based analgesia before patient request and to promote the practice of post-operative nerve block are important to increase the level of satisfaction (Sciences *et al.*, 2018)

2.2 Post-operative pain

Acute pain is the most commonly experienced type of pain throughout the world.(Vijayan, 2011) Controlling acute pain after surgery is important not only in the immediate postoperative phase but also to prevent chronic postsurgical pain, which can develop in as many as 10% of patients (Lancet, 2019)

Nociceptive or acute pain is a sign or signal of actual or potential injury or irritation of the tissues. Nociceptors located in the affected area are activated and then signals are transmitted and send through the spinal cord to the brain. This activates the complex reflex action (known as withdrawal) which follows the sequence of perception, cognitive and affective response and possible voluntary action. This type of pain is usually time limited and responds well to opiates treatment (Ofori, 2016)).

The World Health Organization (WHO) produces data on the global burden of disease, leading causes of death, life expectancy, adult and child mortality risks, but no data on the quality of health care or measures of suffering, including that from acute pain ((Saini and Bhatnagar, 2016)

According to a recent CDC report using data from the National Violent Death Reporting System (NVDRS), the percentage of people who died by suicide and had evidence of chronic pain increased from 7.4% in 2003 to 10.2% in 2014.23 Numbers from this data set beyond 2014 are not yet available. These findings are made more concerning when one considers the rising trend of health care professionals opting out of treating pain, thus exacerbating an existing shortage of pain management (Singh, Vanila M., 2019)

Health staffs like nurses are supposed to deliver analgesia to patients on time as prescribed. The existing problems of shortage of health staff may result in delay in giving analgesia to patient hence interfere with patient pain control (Rafati *et al.*, 2016)

A study performed on postoperative craniotomy pain found an incidence of pain in 93% of the population studied, with moderate to severe intensity pain being higher between the first and third postoperative day((Jong *et al.*, 2013),((Masigati, 2014)

In Tanzania, the pain following surgery accounted for 40% of all postoperative complications at Muhimbili National Hospital (Polepole D et al., 2011)

2.3 Pain control satisfaction

The role of assessing patient satisfaction in modern healthcare has been gaining importance in recent years, being considered an index of medical service(Liu and Fang, 2019)Patient satisfaction has also been described by Donabedian as an "ultimate validator of the quality of care ((Farooq *et al.*, 2020)

A cross-sectional survey was carried out among 107 respondents who had undergone abdominal surgery in the surgical ward of an urban hospital Malaysia, When asked about satisfaction with the overall pain management, the majority of patients in obstetric and orthopedic services reported to be satisfied but 5.8% of the obstetric patients and 10.7% of the orthopedic patients were dissatisfied (dissatisfied and strongly dissatisfied) with the overall pain management they received (Subramanian *et al.*, 2016)

Acute postoperative pain continues to be a problem, although patients continue reporting moderate satisfaction levels this was according to in a study done at Scotland to asses' pain management and satisfaction in post-surgical patients (Tocher *et al.*, 2012).

A study focuses on the assessment of patients' satisfaction regarding pain therapy and defining patient-related barriers for its implication in two tertiary care hospitals Lebanon Pain remains a prevalent problem that requires more efforts for improvement (Tawil, 2018).

Patient satisfaction and participation in decision making were related to better outcomes this was reported in a study done at Regional Hospital Poland to assess the quality of postoperative pain management in patients with maxillofacial injury ((Zoëga, 2014)

2.3 Post-operative pain management

The goal for postoperative pain management is to reduce or eliminate pain(Tocher *et al.*, 2012) and discomfort with a minimum of side effects as cheaply as possible and Postoperative pain relief must reflect the needs of each patient and this can be achieved only

if factors like clinical factors, patient related factors, and local factors are taken into account (Aziz, 2011)

In Jordan, the topic of Pain Management in the hospital settings remains an area of limited knowledge, nurses' roles in managing patients' pain were hindered by contextually complex barriers of a challenging nature of nurses' knowledge and attitudes which limit the ability to assess pain accurately and facilitate its treatment accordingly (Shoqirat, *et al.*, 2019)

Postoperative management is told to be effective if it is customized to the needs of the individual patient holistically. Example physiological, psychological and spiritual (Esperance, 2017)
A Study done in Kenyatta national hospital Overall, 60% of the patients did not achieve adequate Pain relief during the first 72 hours after surgery. Age, sex, weight, drug and type of operation did not influence pain score significantly. Over 97% received pethidine while 2.8% had morphine.

The drugs were prescribed and administered with too little attention to the patient's response and too much concern about adverse effects and narcotic addiction(Ocitti and Adwok, 2000) (Tesfaye *et al.*, 2019)

The study by Jans, (2014) on Quality Pain Management in the Hospital Setting showed that pain management processes were equitable, and in many ways in line with recommendations in guidelines and pain management standards. However, many patients did not receive adequate analgesics to match their pain severity, and documented pain assessment was relatively unstructured. Patient outcomes in relation to pain showed that pain was both prevalent and severe. The results from Department of Anesthesia and Critical Care at University Chicago Hospital study show increment in relevant attention to pain management in the hospital setting. Changes in medical practice patterns, continued research, development of newer analgesics with potent efficacy and minimal adverse effects, and use of balanced analgesia should enhance the potential to treat postoperative pain more successfully (Apfelbaum, 2003)

Post-operative pain prevalence, predictors, management practices and satisfaction among operated cases at a Regional Referral Hospital in Dar as Salaam, Tanzania by Mwashambwa

et al., (2018) reveals that the prevalence of early post-operative pain is very high. Male sex and orthopedics procedures are associated with severe pain. Surgeons therefore need to prioritize analgesic prescription at early hours following operation to minimize pain and suffering to patients focusing on orthopedic procedures.

A prospective study was conducted to assess Pain Management and Factors Associated with Its Severity among Post-Surgical Patients Admitted in the Intensive Care Unit at Muhimbili National Hospital, Tanzania the magnitude of post-operative pain was high. Pre-operative uses of analgesia, abdominal and thoracic surgery were the factors associated with severe pain. Pethidine and paracetamol were the most prescribed drugs (Samwel, 2019)

Study done at Kilimanjaro Christian medical center (KCMC)Concerning Postoperative pain management outcomes among adults by (Masigati, 2014)findings have shown that, among the patients involved in the study, 85.5% and 77.4% of patient experienced POP ranging from mild to severe in 24 and by 48 hours post-operative respectively.

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 ((Mckay *et al.*, 2019)

The International Pain Summit and the Declaration of Montreal Finding that pain management is inadequate in most parts of the world, IASP convene an International Pain Summit in September 2010, which was attended by more than 260 pain specialists from 62 countries. The summit was an advocacy event intended to emphasize the importance of pain management as a human right and to create guidelines for national strategies to help implement improved pain management worldwide.

The outcome of the summit was the Declaration of Montreal, which holds that “access to pain management is a fundamental human right.” It “recognizes the intrinsic dignity of all persons and that withholding of pain treatment is profoundly wrong, leading to unnecessary suffering which is harmful.

The three articles of this declaration support (1) the right of all people to have access to pain management without discrimination; (2) the right of people in pain to have their pain acknowledged and to be informed about how it can be assessed and managed; and (3) the right of all people with pain to have access to appropriate assessment and treatment of pain by adequately trained health care professionals. It is hoped that this declaration will inspire health care professionals along with their governments to give priority to pain management in their own countries (Vijayan, 2011)

CHAPTER THREE
3.0. Research methodology

3.1 Introduction.

This chapter explains methods used in carrying out this study, the research setting, Research design, population, sampling, data collection, management and analysis. As well, ethical considerations and limitations for this study are detailed.

3.2. Research design

The descriptive cross-sectional research design using a quantitative approach was used from May – June 2021 to asses perceived level of satisfaction on pain management among post-operative patient at Mawenzi Regional Referral Hospital. Therefore, the rationale for using this study design was based on its scientific method which involves observing and describing the behavior of a subject. Usefulness in answering and collect data that are used in a wide range of what, when, and how question pertaining to a particular population or group.

3.3 Study area and setting

The study was conducted in surgical, obstetrics and gynecology departments at Mawenzi regional referral hospital located in Moshi Kilimanjaro. Mawenzi hospital is in Moshi municipal council, situated in northern Tanzania. Moshi municipal is one of the seven districts of Kilimanjaro region. According to the Tanzania Census of 2012, Kilimanjaro region had a total population of about 1.64 million people by the end of 2017, Moshi municipal had 21 wards, 51 health facilities. The facilities are four hospitals, eight health centers, and rest dispensaries, owned by government, religious organizations and Non-Governmental Organization (NGOs). Mawenzi was selected as the study area because it receives the patients from all district hospitals as it's still the second largest hospital of the Kilimanjaro area. It provides a range of services across several departments most common departments in Mawenzi are medical wards, surgical wards, pediatric ward, physiotherapy unit, gynecological and prenatal ward where there is also labor ward, HIV--unit, tuberculosis clinic, X--ray unit and a laboratory. The hospital also caters for about 300 outpatients each

day. Overall, it receives about 250-350 inpatients and 800 outpatients each day. About 50 of them will be admitted to the hospital daily and a 24 operating theatre with specialist.

3.4. Study population

The population for this study included post-operative patient of both sexes aged from 18 years and above. The post-operative patients refer to those patient who are hospitalized in the surgical, obstetrics and gynecology departments at Mawenzi regional referral hospital after the period of operation or surgical procedure. Therefore, the targeted study population was all patient who received healthcare within 24 to 72 hours after operation or surgical procedure during the data collection

3.5 Inclusion and excluding criteria

3.5.1 Inclusion criteria

All postoperative patients admitted in surgical, obstetrical and Gynecology wards after 24 hours and within three days post –operatively with 18 years old and above postoperative patients and consenting to participate.

3.5.2 Exclusion criteria

This study excludes patient who had difficulty in communicating, unconscious and clients with documented psychiatric illness.

3.6 Sampling and sample size

3.6.1 Sample size

Sample size consisted of post operated patient who operated during the time of data collection at Mawenzi Regional Referral Hospital**.** The following formulae for Yamane, (1967) was used to determining optimum sample size. The formula for sample size estimation for finite population are articulated as follows. **n=N/ 1+N (e) 2** Where; n = minimum required simple size

N :(known) population size

E: Level of precision or sampling error = 5% (0.05)

The average number of post operated patient admitted at MRRH year 2020 was 1614 it's approximated to be 135 per month. (1614/12month).

Thus; n= N/ [1+N (e) 2]

n=135/ [1+135(0.5)2]

n=135/1+135(0.0025) =135/1+0.3375

n=135/1.3375

n=101

Therefore, the minimum numbers of patient who participated in the study was 101. This sample size was adjusted for a 10% non-response rate:

n =101 x 100%/100%-10%

n =101 x1/0.90 = 112

n=112

3.6.2 Sampling method

Proportional sampling was used to get patients from required wards. Simple random sampling was applied to get required numbers in respective wards. The two department /wards did not have the same capacity of accommodating the patients, probability proportional to the size of each ward was used 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).

The probability proportionally formula n =Number in selected unit capacity/total number of all capacity *Total sample size calculated. = (n/57*112)

Table 2: Sample size: Number of participant from each ward

S/No.	Ward/unit	Capacity (n)	Sample
1	Surgical male (WD 3)	25	49
2	Surgical female (WD 7)	14	27
3	Obstetrics unit (WD 5)	10	20
4	Gynecology unit (WD5)	8	16
TOTAL		**57**	**112**

3.6. Data collection procedure and tools

3.6.1. Instrument for data collection

The researcher used a questionnaire as a tool for data collection which was the adapted from American Pain Society Patient Outcome Questionnaire Revised (APS-POQ-R). APS-POQ-R has been found to be adequate tool for quality improvement (QI) with the purpose of measuring patient's satisfaction level, pain intensity and 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;; helpfulness of information about pain treatment; ability to participate in pain treatment decisions and Patient satisfaction to pain treatment. APS-POQ-R questionnaire was translated from English to Swahili version which was used, to assess pain at 24, 48 and 72 hours post operatively. Universal pain score was used to measure the intensity of pain from the patients. The pain score consisted pain intensity level scale ranging from no pain to worst possible. Patients indicate a particular type of pain experienced according to the scale 0-10 pain in pictorial format. The level of patient satisfaction on pain management in this study was assessed by using a 5- point Likert scale whereby patient indicate by circling 1= Satisfied, 2=Very Satisfied, 3=Neutral, 4= Dissatisfied, 5=Very dissatisfied with pain management provided.

3.6.2 Data collection procedure

After the permission has been granted for data collection, the researcher visit various ward with the nurse in charge who was familiar with the environment. Nurse in charge of the ward introduce the researcher to the participant of the study. The researcher introduce herself and describe the aim, benefit, and risk of conducting the study. Thereafter informed consent was provided for the participants to fill. For those who agreed to participate, the researcher used the simple randomly method in selecting the study participants a ticket written YES or NO from the box was used and those who drew YES were invited to participate in the study

During data collection, the researcher distributed questionnaires. Participants were given an ample time to fill the questionnaire and requested to submit them to the researcher after the completion. However for the patients who were unable to write the researcher read the questionnaire to those patients and filled their responses.

3.7. Reliability

(APS-POQ) The American Pain Society Patient Outcome Questionnaire it has been widely used to assess pain. the questionnaire translated and used in several studies, the tool has shown to have good internal consistence and acceptable psychometric properties which measures six aspects of quality including: (1) pain severity and relief; (2) impact of pain on activity, sleep, and negative emotions; (3) side effects of treatment; (4) helpfulness of information about pain treatment; (5) ability to participate in pain treatment decisions; and (6) use of non-pharmacological strategies.

3.8. Validity

The Acute Pain Society Patient Outcome Questionnaire (APS-POQ) was first developed in 1991 and was subsequently revised in the years 1995 and 2010 by the American Pain Society, The APS-POQ-R is easy to administer and is useful for quality evaluation in postoperative pain management. The present study demonstrates that a five-factor structure

of the APS-POQ-R is the best fitting model in our patient sample. Several results provide further evidence to support the use of APS-POQ-R as a measurement tool for pain management evaluation in acute postoperative patients with a multi-cultural background.

In order to ensure validity in this study a pilot study was done by supervisor and student doing their master's degree in critical and trauma then followed with discussion to examine the questionnaire issues for more clarification and specificity and length. Were requested to fill the questionnaires thereafter discussion was held after they have completed filling the questionnaires, items which were not clear were removed and some items were modified so that they can be understood by the participants in a consistent way. The participants of the pilot study were not included in the actual study and the filled pilot questionnaires were not included in the analysis.

3.10. Data management

During the study control quality of data was done through the review of data collected in the field and all incomplete and missing data was identified and corrected accordingly. For the reason of confidentiality, names of respondents was not written down in the research instrument that used for data collection and consent from every participant under the study.

3.12. Data analysis

The data entry and data analysis was done in SPSS virsion20. The patient characteristic variables were evaluated using the percentage distribution, Descriptive statistics (i.e., mean, range, standard deviation, frequency) were used to address study questions. These included patients' pain experience of post operated in 24 hours, its intensity, severity, interference and its management approaches, subsequent satisfaction levels with pain management involvement in decision making, healthcare provider relationship and information receive on pain management. The association between dependent and independent variables was tested using chi square test and odds ratio. A p-value of < 0.05 was considered significant.

3.13. Ethical consideration

Ethical clearance was obtained from Muhimbili University of Health and Allied Sciences (MUHAS) Institutional Review Board (IRB).permission to proceed to conduct the research was asked from hospital administration and principle nursing in charge of Mawenzi regional Referral hospital. Written consent were provided to participant including adequate information concerning the research, reason for conducting the research and type of data to be collected, and procedure that were used to collect data. Participant was informed that participation is voluntary and anyone can be withdrawn at any time during the research progression if they wish. Participant questionnaire was coded using identification numbers instead of names to maintain confidentiality and gathering information was well protected so that no one can have access to it or know the person who provided the information.

The principle of beneficence, justice, and protection of human rights was followed during the study.

3.14. Data dissemination

The final report will be disseminated to university 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

3.15. Limitations and mitigation

3.15.1 Limitation of the study

The limitations of this study was, a risk of participants sharing responses during filling of the questionnaires.

3.15.2. Mitigation.

The participants were instructed and insisted to fill the questionnaire individually without sharing with other colleagues for the right and good analysis of the topic results.

CHAPTER FOUR

RESULT

4.0 Introduction

This chapter presents the results of the study produced by the statistical software "statistical package for the social sciences" (SPSS). Results are presented in the form of simple descriptive statistics; frequencies, mean and percentages. Table 1 starts by describing socio-demographic characteristics of study participants. This is followed by the substantive findings of the study, presented according to the research objectives. These findings have been used to provide the foundation for the conclusions and implications outlined in chapter five.

4.1 Demographic characteristics.

A total of 112 participants were enrolled in the study whereby majority of patients were female 72(64.3%). Most participants were in the age range of 30-39 (25%). Of all participants majority of them completed secondary school education 65(58%).Majority of participant 87(77.7%) had surgery involving spinal anesthesia.

Table 3: Demographic characteristic of respondent (N=112)

Variable	Frequency	Percentage n (%)
Age		
Below 19	3	2.7
20-29	26	23.2
30-39	**28**	**25.0**
40-49	19	17.0
50-59	18	16.1
Above 60		
Sex		
Male	40	35.7
Female	**72**	**64.3**
Education level		
Primary education	33	29.5
Secondary education	**65**	**58.0**
College	14	12.5
Type of surgery		
Caesarian section	17	15.2
Hernia repair	8	7.1
Hysterectomy or myomectomy	13	11.6
Laparotomy		
Thyroidectomy	28	25.0
Other	7	6.3
	39	**34.8**
Type of anesthesia		
General anesthesia	25	22.3
Spinal anesthesia	**87**	**77.7**
Surgical wards		
Labor ward (wd5)	40	35.7
Surgical female wards (wd7)	32	28.6
Surgical male wards (wd3)	40	35.7
Day/time of anesthesia since surgery		
24hours	**94**	**83.9**
48hours		
	18	16.1

4.2Pain experiences of post operated patients in first 24hrs

Majority of Participants Experienced severe pain with Mean score of (7.83 ± 0.88) in 24hrs to 48 postoperatively. Pain relief received after given pain management treatment the respondents (13.3%) received pain relief during the postoperative phase.

Considering the time spent in severe pain, a significant number of participants 58 (51.8%), were in pain (moderate pain) equivalent to (50%-70%), most number of participants performing Activity outside the bed were interfered at mean score of (7.25 ± 1.17) and a sleep (8.09 ± 01.28). Among three elements evaluated in mood affection the feeling of anxious were the most experienced at mean score (6.72 ± 1.15).

Table 4: shows pain experience of post operated patient in 24 hours

Pain intensity experience (0 -10) in first 24 hours		**Mean (SD)**
Worst pain		5.58 (1.14)
Least pain		6.75 (0.94)
Severe pain		7.83 (0.88)
Percentage that best shows how much pain relief patient have received		57.23 (13.3)
Pain severity (10-100%) in first 24hours.	**n**	**Percentage**
Mild (10-40)	44	39.3
Moderate (50-70)	**58**	**51.8**
Severe (80-100)	10	8.9
Pain interference (0-10)		
Doing activity out of bed e.g. walking, sitting, standing		**7.25 (1.17)**
Falling asleep		**8.09 (1.28**)
In bed activity like turning, sitting and sleep		6.48 (1.51)
Depressed		6.71 (1.27)
Anxious		**6.72 (1.15)**
Helpless		6.74 (1.23)

4.3 Approaches used in pain management among post operated patient.

Different approaches were assessed on pain management, Findings show that 105(93.8%) were not involved in the decision concerning their pain management. only seven 7(6.3%) respondents said they were involved in decision making concerning their pain management.

Assessment on Previously history of used medications for pain management 110 (98.2%) were not asked while is recommended in Guidelines of management of acute post-operative pain to improve treatment outcomes

The use of non-medication methods for pain relieve more than a half use non-medication (doing exercise) as a way of relieve pain 74(66.1%).

Regarding pain assessment prior to administered medication, 94 (83.9%) reported that they were not assessed prior to medication.

4.4 Perceived level of satisfaction on pain management among post operated patient

Table: Shows the overall participants satisfaction level to pain management were satisfied 55.3% while 77(68.7%) were satisfied with information received on pain management, 69(61.6%) were satisfied with health care provider relationship while overall satisfactions on pain management and involvement being 65(58%).

Table 5: Perceived level of satisfaction on pain management among post operated patient

	Very satisfied n (%)	**Satisfied n (%)**	**Neutral n (%)**	**Dissatisfied n (%)**	**Mean score**
The overall Satisfaction on Ward pain management.	11(9.8)	**51(45.5)**	47(42.0)	3(2.7)	2.37
Satisfaction on involvement on Decision making in pain management.	13(11.6)	**52(46.4)**	44(39.3)	3(2.7)	2.33
Satisfaction on Information received on pain management.	18(16.0)	**59(52.7)**	35(31.3)	0(0.0)	2.15
Satisfaction with Health care provider relationship.	14(12.5)	**55(49.1)**	42(37.5	1(0.9)	2.26

4.5: Association between pain management satisfactions with patient characteristics.

Table 6: Association between pain management satisfaction and social demographic

Association were explored using chi –square test. Pain management satisfaction with Hernia repair, Caesarian section, and laparotomy were show significant association (p-value **< 0.05**).

Variable	**Level of satisfaction**		Odds ratio (95% CI)	p-value
	Satisfied	Dissatisfied		
Age(years)				
20-29	11(57.7)	15(42.3)	0.682 (0.55– 8.503)	0.766
30-39	11(39.3)	17(60.7)	0.773 (0.062 – 9.579)	0.741
40-59	11(29.7)	26(70.3)	1.182 (0.097- 14.424)	0.896
Above 60	7(38.9)	11(61.1)	0.786 (0.059 – 10.377)	0.855
Below 19	1(33.3)	2(66.7)	1	1
Sex				
Male	15(37.5)	25(62.5)	0.942 (0.432 – 2.098)	0.884
Female	26(36.1)	46(63.9)	1	1
Level of education				
Primary education	12(36.4)	21(63.6)	1.16 (0.180 – 2.725)	0.607
Secondary education	25(38.5)	40(61.5)	0.640(0181 – 2.262)	0.488
College education	4(28.6)	10(71.4)	1	1
Problem type				
Caesarian section	8(47.1)	9(52.9)	0.29 (0.085 – 0.993)	**0.049**
Hernia repair	6(75.0)	2(25.0)	0.086 (0.015.– 0.510)	**0.007**
Hysterectomy or myomectomy	5(38.5)	8(61.5)	0.413(0.106 – 1.611)	0.203
Laparotomy	12(42.9)	16(57.1)	0.344(0.117 – 1.012)	**0.053**
Thyroidectomy	2(28.6)	31(79.5)	0.645(0.105 – 3.961)	0.636
Others	8(20.5)	1	1	1

CHAPTER FIVE

5.0 DISCUSSION

This chapter focuses on discussion of the results. It highlighted the implication of the findings and where appropriate relate them with the existing literature review.

5.2 Pain intensity experienced by post-operative patients

In this study it was found that patients experience severe pain intensity in the first 24 h post-operatively this can be linked to low number of participant who reported to gets relief after being receiving pain management and majority spent time in severe pain. Several studies Highlighted that high pain output scores might indicate that inadequate doses of analgesics were given to the patients after surgery.(Subramanian *et al.*, 2016),(Tawil, 2018),(Ramia *et al.*, 2017),(Mwashambwa *et al.*, 2018)

The study reported on doing activities in bed, participant experience interference, whereas others experienced severe disruption with activities while out of bed. Therefore, it is important to continue to assess patients' pain when they are sleeping. Furthermore, it was reported that patients feels Anxious on first 24 hours after surgery and patients' severe pain was experienced during first ambulation in this study. Since the patients experience severe pain during mobilization, the pain should be assessed before activities, during activities and again when the patient returns to bed. Teaching the patients turning exercises in bed, supporting the patient during ambulation and using analgesics before mobilization may help to manage pain episodes This is supported by another study done in Rwanda by (Esperance, 2017) which indicates pain intensity positively correlates with functional interference. Most of the respondents in the study reported that they were severely anxious and depressed due to pain. This is probably nurses responded to their reports of pain and pain assessment. Pain control facilitates physical function and emotions during hospitalization but pain interference is greater seen in postoperative patients according to (Chou *et al.*, 2016).

5.3 Approaches used in pain management among post operated.

All participant received pain medications post-operative however the total pain relief received 24hrs were low this was not highly appreciated. Effective pain management is an integral part of modern surgical practices. Postoperative pain should be prevented and controlled. The goal of acute pain management is to inhibit postoperative complications, to speed up healing, to prevent acute pain from becoming chronic pain, and to reduce the incidence and severity of pain (Zoëga, 2014)

This study report shows Previously used medications for pain management participant were not asked while is recommended in Guidelines of management of acute post-operative pain to improve treatment outcomes(Chou *et al.*, 2016) also more than half were not involved in the decision concerning their pain management Only six % respondents said they were involved in decision making concerning their pain management this were similar to a study done in university of Gondar by (Belay Bizuneh *et al.*, 2020)

The use of non-medication methods for pain relieve more than a half use non-medication as a way of relieve pain this was different in a highlighted study done by (Esperance, 2017) were patients involved in encouragement on use of non-medicinal methods to relieve pain less and or never practiced.

Regarding pain assessment prior to administered medication, reports showed that they were not assessed prior to medication this were a high number have been reported compare to several studies done,(Ozga *et al.*, 2017), Before prescribing pain medications, it is critical to conduct a thorough assessment of pain, helps one assess which type of pain a patient has, which will help determine what pain treatment modality to choose.(Ansari, 2017)

5.4 Perceived level of satisfaction on pain management among post operated patient

Patient satisfaction to pain management

Post-operative pain management effectiveness can be assessed using the level of satisfaction a patient has. In our study findings, patient satisfied with Pain management were low compare to

other study, a relatively slightly lower satisfaction rate has been reported from several studies,(Esperance, 2017),(Tesfaye *et al.*, 2019) The methodological difference between our study and other accounted for the differences 83% reported being "very satisfied,((Sciences *et al.*, 2018)), also highlighted a differences in pain management satisfaction rate. In this study the lower rate of satisfaction to pain management could be attributed to many factors such less involvement of patients in pain management and ignorance of pain relief given within 24 hours.

Patient satisfaction when involved on decision making

Majority of patients were given the opportunity to participate in decision making concerning their post-operative pain management.

Satisfaction on information received about pain and its management

The level of patient's satisfaction with information postoperative was considerably low as compared with other studies. As definition of "pain says is a sensation that can be described by the patient experiencing it." Therefore, the communication between the nurse and the patients is very important for optimal pain management this is supported by study done at Lebanon were 80.7% and 74% of patients were informed when pain medications were administered. Accordingly, such favorable practices involving communication and patient engagement in the care process could explain our positive findings of patient satisfaction with the delivered care despite the substantial pain that was still being experienced.

Satisfaction with health care provider relationship

A high satisfactory to satisfied was demonstrated on participants-health care provider relationship. However, our finding was high compared with the recent study of Jimma (Ethiopia),

Additionally, it is considered that effective pain management, effective communication with the patients and giving information about pain management after surgery are influential in increasing satisfaction levels. Since the pain experienced by the patient affects the satisfaction

level, assessment of the pain and comfort level can also increase the nursing quality and patient satisfaction in the presence of pain.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATION

6.1 CONCLUSION

It was found the pain intensity of Postoperative patients was severe pain. And their satisfaction lever with pain management was at satisfied level. Assessing patients' pain intensity, pain assessment before anti pain and involvement in decision making may be important to monitor and manage in the early post‐ operative period.

6.2. RECOMMENDATION

The findings provide a practical implication for improved quality of care both at individual healthcare provider and system levels. From the findings the research recommends;

1. Post-operative pain management should be individualized and this is because of the subjective nature of pain.
2. Written material should be given to patients and the use of non‐ pharmacological interventions in pain management; patients should be encouraged to understand they need to report their pain. Nurses should also understand how difficult patients find this, but by having an understanding of this, they can encourage patients through open communication and compassion. Nurses should assess pain regularly and respond to this by providing appropriate treatments and assessing their effects.

3. Further studies on post-operative pain management and satisfaction should be done with emphasis on the type of surgery and satisfaction level, post-operative analgesics and satisfaction and type of anesthesia and hospital environment satisfaction.

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Appendix I: Informed Consent (English version)

MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES (MUHAS)

DIRECTORATE OF RESEARCH AND PUBLICATIONS
MUHAS INFORMED CONSENT FORM

ID NO: HD/MUH/T.508/2019

Consent to participate in a study: Title: **Perceived Level of Satisfaction on Pain Management among Post Operated Patient at Mawenzi Regional Referrals Hospital Moshi Kilimanjaro.**

Name: ANGELA ALEXANDER MWAKALILE

Purpose of the Study

The purpose of the study is to assess Perceived Level of Satisfaction on Pain Management among Post Operated Patient

What Participation Involves

If you agree to join the study, you will be interviewed in order to answer a series of questions in the interview guide prepared for the study.

Confidentiality

The information from the study will be kept in a safe place with access to authorized personnel only and will be used for research purposes only. No names will be used instead identification number will be used to represent the participants.

Risks

For this study we do not expect any risk while participating in this study.

Rights to Withdraw and Alternatives

To participate in this study is completely your choice. You are free to choose either to participate in this study or not. You can decide to stop participating in this study at any time you wish even if you have already given your consent.

Refusal to participate or withdrawal from the study will not involve penalty or loss of any benefits to which you are otherwise entitled.

Benefits

If you agree to take part in this study there are no direct benefits that you will get from this study but we believe the information you will provide good information on the gap on the Pain management and satisfaction to post operated patient however, the information we gather from this study will help Mawenzi regional referral hospital to improve pain care provision to patient who will be operated and the policy maker to think on the best way to address the issue. **Compensation**

There will be no compensation of any kind for participating in this study.

Whom to contact:

In case of any questions about this study, don't hesitate to contact the principal investigator **Angela A. Mwakalile Muhimbili** University of Health and Allied Sciences School of Nursing P.O. Box. 65004 Dares Salaam, **Mobile +255 754 517416.** or research supervisor **MENTINDILE** Muhimbili University of Health and Allied Sciences School of Nursing P.O. Box. 65004 Dares Salaam, **Mobile Number +255 714 890015** If you ever have questions about your rights as a participant, you may contact the Director of Research and Publications Committee **Bruno Sunguya** Muhimbili University of Health and Allied Sciences P.O. Box 65001 Dar es Salaam **Tel Tel + 255 222150302 -6/ 2152489** Do you agree?

Participant agrees…… Participant does not agree…….

I……. have read the content in this form. My questions have been answered. I agree to participate in this study.

Signature of participant ……

Signature of principal investigator ……..

Date of signed consent…….

Appendix II: Informed Consent (Swahili version)

Fomu ya Ridhaa kushiriki katika utafiti ya kiswahili

CHUO KIKUU CHA AFYA CHA MUHIMBILI NA SHULE YA SAYANSI NA TIBA

SHIRIKISHI.

Idhini ya kushiriki katika utafiti: **UNAOHUSU: KUPIMA KIWANGO CHA KURIDHISHWA NA MATIBABU NA UCHUNGUZI WA MAUMIVU KATI YA WAGONJWA WALIOFANYIWA UPASUAJI KATIKA HOSPITALI YA RUFAA YA MKOA YA MAWENZI MOSHI KILIMANJARO.**

Jina: **ANGELA ALEXANDER MWAKALILE**

DHUMUNI LA UTAFITI

Madhumuni ya utafiti ni kutathmini Kiwango kinachoonekana cha Kuridhishwa na matibabu ya Maumivu kati ya wagonjwa waaliofanyiwa upasuaji.

Ikiwa unakubali kujiunga na utafiti, utahojiwa ili kujibu maswali kadhaa kwenye mwongozo wa mahojiano ulioandaliwa kwa ajili ya utafiti.

Usiri

Habari zote zitakazo kusanywa kwa ajili utafiti huu zitahifadhiwa mahali salama na ufikiaji wa wafanyikazi walioidhinishwa tu na itatumika kwa sababu za utafiti tu. Hakuna majina yatakayotumiwa badala yake nambari ya kitambulisho itatumika kuwakilisha washiriki.

Hatari

Kwa utafiti huu hatutarajii hatari yoyote wakati tunashiriki katika utafiti huu.

Haki za Kujiondoa na Mbadala
Kushiriki katika utafiti huu ni chaguo lako kabisa. Uko huru kuchagua kushiriki katika utafiti huu au la. Unaweza kuamua kuacha kushiriki katika utafiti huu wakati wowote unapotaka hata ikiwa tayari umeshatoa idhini yako. Kukataa kushiriki au kujiondoa kutoka kwa utafiti hautahusisha adhabu au kupoteza faida yoyote ambayo unastahili vinginevyo.

Faida
Ikiwa unakubali kushiriki katika utafiti huu hakuna faida ya moja kwa moja ambayo utapata kutoka kwa utafiti huu lakini tunaamini habari utakayotoa habari nzuri juu ya pengo juu ya usimamizi na matibabu Maumivu na kuridhika kutuma mgonjwa aliyehudumiwa hata hivyo, habari tunayokusanya kutoka kwa utafiti huu itasaidia hospitali ya rufaa ya mkoa wa Mawenzi kuboresha utoaji wa huduma ya maumivu kwa mgonjwa atakayefanyiwa upasuaji na mtunga sera kufikiria njia bora ya kushughulikia suala hilo.

Fidia
Hakutakuwa na fidia ya aina yoyote kwa kushiriki katika utafiti huu.

Kwa mawasiliano Wasiliana nasi:
Ikiwa kuna maswali yoyote kuhusu utafiti huu, usisite kuwasiliana na mtafiti mkuu **Angela A. Mwakalile** Chuo Kikuu cha Afya cha Muhimbili na Shule ya Sayansi na Tiba P.O. S.L.P. 65004 Dares Salaam, Simu +255 754 517416. Au msimamizi wa utafiti **Dr. MENTINDILE** Chuo Kikuu cha Afya cha Muhimbili na Shule ya Sayansi Shirikishi P.O.S.L.P. 65004 Dares Salaam, Nambari ya Simu +255 714 890015 Ikiwa umewahi kuwa na maswali juu ya haki zako kama mshiriki, unaweza kuwasiliana na Mkurugenzi wa Kamati ya Utafiti na Uchapishaji**DR. BRUNO SUNGUYA** Chuo Kikuu cha Afya na Sayansi Shirikishi P.O. Box 65001 Dar es Salaam Tel Tel + 255 222150302 -6 / 2152489

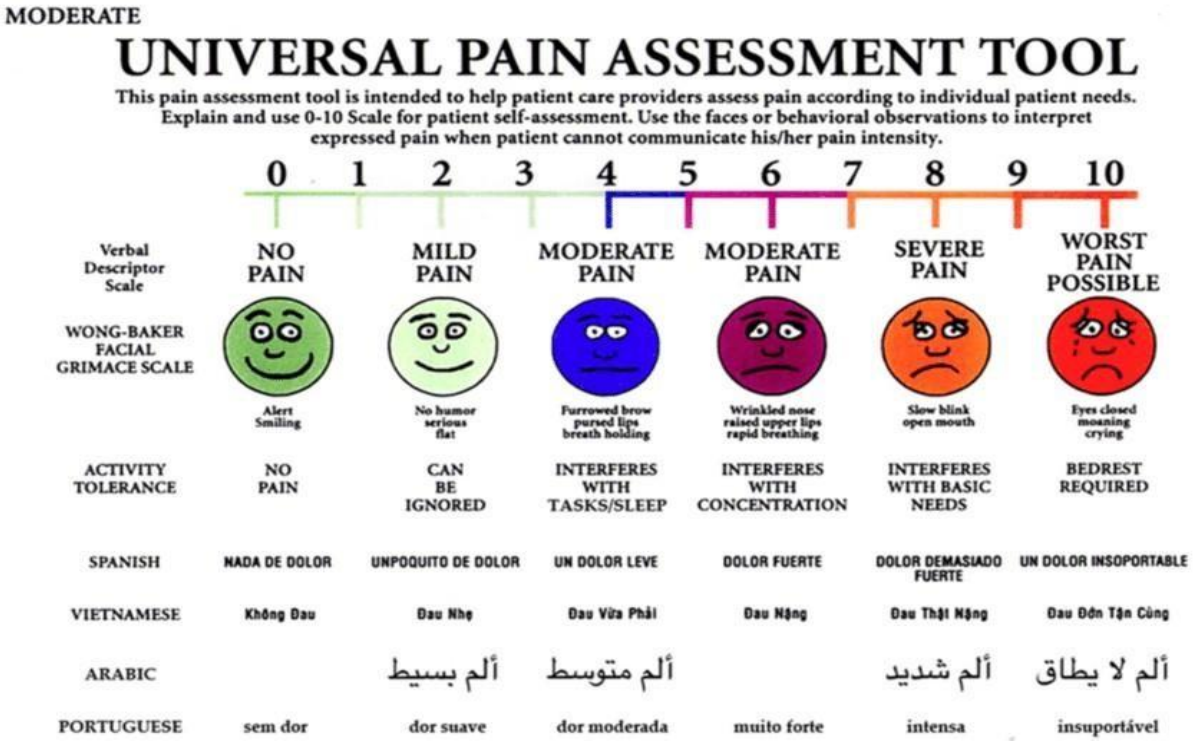
UTASHIRIKI?
Mshiriki anakubali …… .....Mshiriki hakubali …….
Mimi ……. umesoma yaliyomo katika fomu hii. Maswali yangu yamejibiwa. Ninakubali kushiriki katika utafiti huu.

Saini ya mshiriki ……

Saini ya mchunguzi mkuu ……..

Tarehe ya idhini iliyosainiwa ……

Appendix III: Pain scale



Appendix IV: Study questionnaire English version

Name of the study Perceived Level of Satisfaction on Pain Management among Post Operated Patient at Mawenzi Regional Referrals Hospital Moshi Kilimanjaro.

DEMOGRAPHIC CHARACTERISTIC

Questionnaire number…….date…….

Kindly respond by writing on space provided.

INTRODUCTION;

Age.....

Sex..... Religion.....

Education level……..

Duration of surgery.....

Type of Anaesthesia.....

Prescribed post-operative Analgesia.....

Specify the Department of Special Surgery:

1) labor ward (wd 5)

2) Surgical female Ward (wd 7)

3) Surgical male Ward (wd 3)

Mention Problem / Type of Surgery.

1. **Caesarian section**
2. **Hernia repair**
3. **Hysterectomy / myomectomy**
4. **Laparotomy**
5. **Thyroidectomy**
6. **Other specify…….**

TO ASSESS POST OPERATED PAIN INTENSITY EXPERIENCE OF PATIENT IN SURGICAL AND LABOR WARDS.

Use the picture below questions as a guide to find the right answer from question 1-3.

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

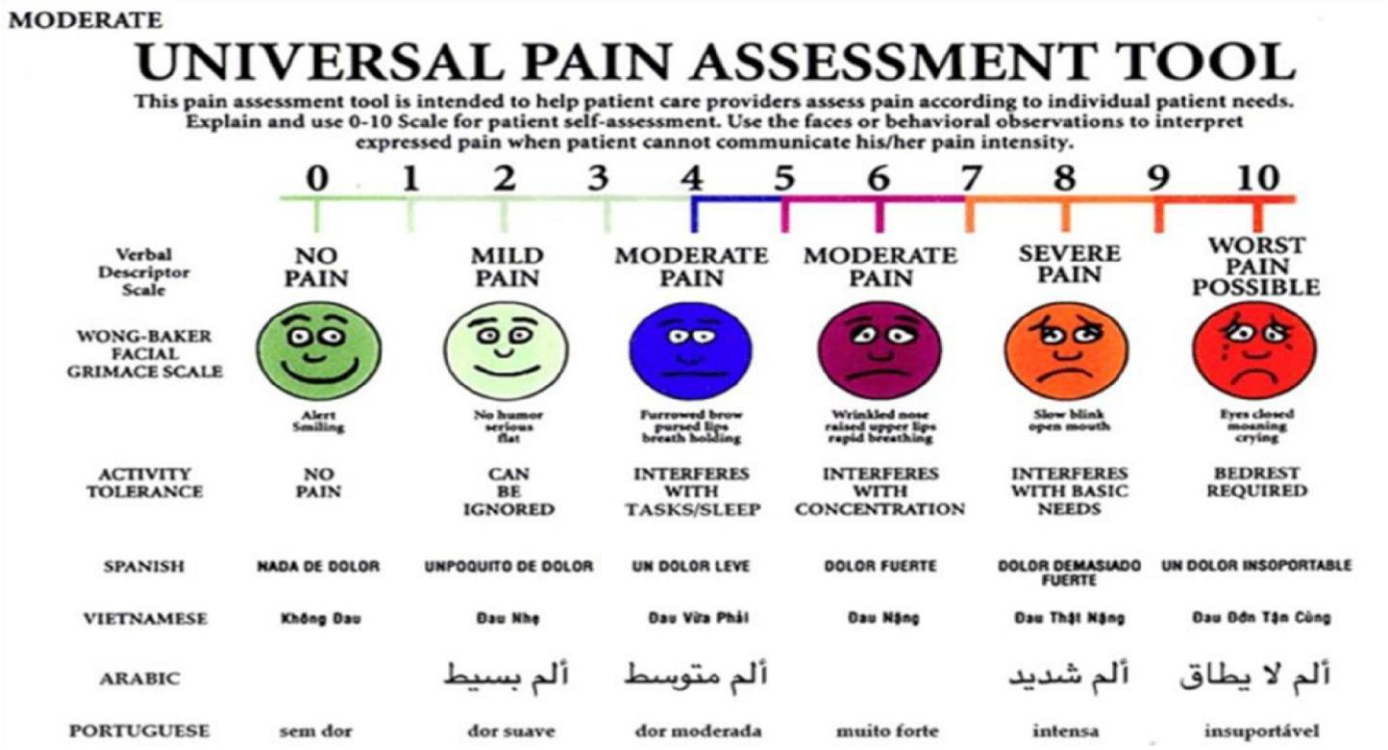
   0 1 2 3 4 5 6 7 8 9 10.

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.

3. **How often were you in severe pain in the first 24 hours?**

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



Pain Rating scale (interpretation).

0	1-3	4-7	8-10
NO PAIN	**MILD PAIN**	**MODERATE PAIN**	**SEVERE PAIN**

4. How often were you in severe pain in the first 24hours?

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%

A) Never in severe pain B) 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, asleep:**

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.**

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

Does not interfere completely interferes

6. falling asleep

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

Does not interfere completely interferes

7. 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? b. Depressed? c. Helpless?

0 1 2 3 4 5 6 7 8 9 10

Not at all Extremely

B) Identify strategies used in pain management among post operated patient at Mawenzi Regional Referral Hospital?

8. 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

9. Were you allowed to participate in decisions about your pain treatment as much as you wanted to?

a) Yes
b) No

10. Were you asked about previously used medications for pain management? a) Yes

b) No

11. Was your pain assessed prior to pain medication administration?

a) Yes

No

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

a) Yes
b) No

If yes, check all that apply:

Such as. Cold pack, deep breathing, hot tea, exercise, watching TV, etc

C. TO DETERMINE PERCEIVED LEVEL OF SATISFACTION OF CARE PROVIDED

13. Indicate how satisfied you are with the pain management while in being this ward**:** a) Very Satisfied

b) Satisfied neutral
c) Neutral
d) Dissatisfied
e) Very dissatisfied

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

a) Very Satisfied
b) Satisfied neutral
c) Neutral
d) Dissatisfied
e) Very dissatisfied

How satisfied were you with information received about pain and its management after operation? a) Very Satisfied

b) Satisfied neutral
c) Neutral
d) Dissatisfied
e) Very dissatisfied

15. How are you satisfied with your relationship with health care provider in this postoperative period? a) Very Satisfied

b) Satisfied neutral
c) Neutral
d) Dissatisfied
e) Very dissatisfied

Appendix V: Study questionnaire Swahili version
DODOSO (TOLEO LA KISWAHILI)

TAREHE..... NAMBA.....

KUPIMA KIWANGO CHA KURIDHISHWA NA MATIBABU NA UCHUNGUZI WA MAUMIVU KATI YA WAGONJWA WALIOFANYIWA UPASUAJI KATIKA HOSPITALI YA RUFAA YA MKOA YA MAWENZI MOSHI KILIMANJARO.

UTANGULIZI;

Tafadhali jibu kwa kuandika kwenye nafasi iliyotolewa.

Umri .....

Jinsia .....

Dini .....

Siku/Muda tangu kufanyiwa upasuaji .....

Aina ya dawa ya usingizi(Ganzi) kabla ya upasuaji.....

Muda wa kuanza kwa Dawa ya kuzuia maumivu baada ya upasuaji
.....

Taja Idara ya upasuaji maalum:

1) **Wodi ya wazazi (wd 5)**
2) **Wodi ya upasuaji wanawake(wd 7)**
3) **Wodi ya upasuaji wanaume (wd 3)**

Taja Tatizo /Aina ya upasuaji .....

1. **Caesarian section**
2. **Hernia repair**
3. **Hysterectomy/myomectomy**
4. **Laporatomy**
5. **Thyriodectomy**
6. **Taja…….**

Onesha kiwango chako cha elimu kwa kuzungushia jibu sahihi

1) shule ya msingi 2). Shule ya sekondari 3). chuo

MASWALI A. KIWANGO CHA MAUMIVU

TUMIA PICHA ILIYOPO CHINI YA MASWALI KAMA MWONGOZO WA KUPATA JIBU SAHIHI KUANZIA SWALI LA 1-3.

1. **Tafadhali onyesha Kwa kiwango kipi ulisikia maumivu kidogo uliyokuwa nayo katika masaa 24 ya kwanza baada ya kufanyiwa upasuaji.**

0 1 2 3 4 5 6 7 8 9 10

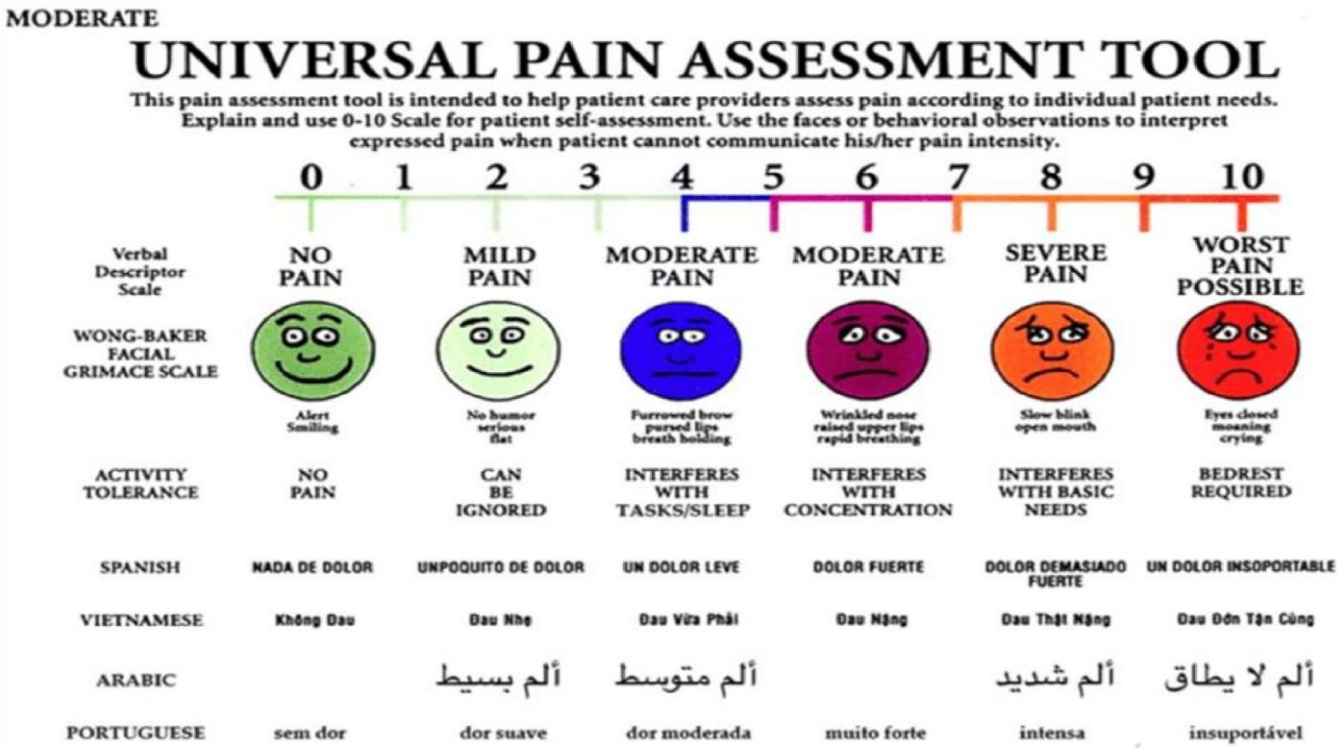
2. **Tafadhali onyesha Kwa kiwango kipi ulisikia maumivu makali kiasi uliyokuwa nayo katika masaa 24 ya kwanza:**

0 1 2 3 4 5 6 7 8 9 10

3. **Tafadhali onyesha maumivu Kwa kiwango kipi, makali zaidi uliyokuwa nayo katika masaa 24 ya kwanza:**

0 1 2 3 4 5 6 7 8 9 10

0= HAKUNA MAUMIVU. 1-3= MAUMIVU KIASI. 4-7= MAUMIVU MAKALI. 8-10 MAUMIVU MAKALI SANA



4. Ulikuwa unasikia maumivu makali mara ngapi katika masaa 24 ya kwanza?

Tafadhali zunguka kadirio lako la asilimia kulingana na ulivyopata maumivu makali 0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100% kamwe sikuwa namaumivu muda wote maumivu makali

5. Zungusha nambari moja hapa chini inayoelezea vizuri ni maumivu kiasi gani yaliyoingiliana

HAYAINGILIANI KABISA (0) YANAINGILIANA (1-4) YANAINGILIANA KIDOGO (5-7) YANAINGILIANA KABISA(8-10)

5A) kukuzuia kuto Kufanya shughuli kitandani kama vile:

KUGEUKA 0 1 2 3 4 5 6 7 8 9 10
KUKAA 0 1 2 3 4 5 6 7 8 9 10
KULALA. 0 1 2 3 4 5 6 7 8 9 10

5B) Kufanya shughuli nje ya kitanda kama vile;

A) KUTEMBEA: 0 1 2 3 4 5 6 7 8 9 10
B) KUKAA KWENYE KITI: 0 1 2 3 4 5 6 7 8 9 10
C) KUSIMAMA: 0 1 2 3 4 5 6 7 8 9 10

6. Zungushia namba inayoonesha maumivu Ukiwa katika hali ya usingizi.

0 1 2 3 4 5 6 7 8 9 10

7. Maumivu yanaweza kuathiri mhemko na hisia zetu. Kwa kiwango hiki, tafadhali zungusha nambari moja inayoonyesha vizuri ni jinsi gani maumivu yalikusababisha ujisikie:

HISIA	KIWANGO
	HAYAINGILIANI KABISA (0) YANAINGILIANA (1-4) **YANAINGILIANA KIDOGO (5-7) YANAINGILIANA KABISA(8-10)**
a)Wasiwasi	**0 1 2 3 4 5 6 7 8 9 10**
b) Unyonge	**0 1 2 3 4 5 6 7 8 9 10**
c) Udhaifu	**0 1 2 3 4 5 6 7 8 9 10**

B. MATIBABU YA DAWA ZA MAUMIVU AU MBADALA WA KUTIBU MAUMIVU.

8. Katika masaa 24 ya kwanza, Umepata msaada uliopelekeauna nafuu Ya maumivu? Tafadhali zungusha asilimia ambayo inaonyesha umepata nafuu baada yakupokea dawa za matibabu yako, (matibabu na matibabu yasiyo ya dawa):

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

Hakuna misaada kuna msaada kabisa

9. Je! Uliruhusiwa kushiriki katika maamuzi juu ya matibabu yako ya maumivu kama vile unavyotaka? Kama vile kujua madhara au faida ya kuwa kwenye maumivu.

A. Ndio

B. Hapana

10 je. Ulitoa taarifa yoyote inayohusu uzoefu wako kwenye matumizi ya dawa za maumivu?

A. Ndio

B. Hapana

11. kabla ya kupewa dawa ya maumivu ulifanyiwa uchunguzi wowote na mtoa huduma kujua unamaumivu kiwango gani?

A. Ndio

B. Hapana

Je! Ulitumia njia yoyote isiyo ya dawa kupunguza maumivu yako?

C. Hapana

D. Ndio.

Kama ndio: Ni mara ngapi muuguzi au daktari alikutia moyo utumie njia zisizo za dawa? Mfano; kushauriwa kunywa maji /chai, kufanya zoezi, kuangalia TV,

A. Kamwe

B. Wakati mwingine

C. Mara nyingi

C. KUPIMA KIWANGO CHA KURIDHISHWA NA MATIBABU NA USIMAMIZI WA MAUMIVU.

13. Onyesha umeridhika vipi na matibabu na uchunguzi wa maumivu wakati ukiwa wodini

A. Sijaridhika Sana

B. Nimeridhika sana

C. Kawaida

D. Nimeridhika

E. sijaridhika

14. Je! Uliridhikaje kuruhusiwa kushiriki katika maamuzi kuhusu matibabu yako ya maumivu Kama vile unavyotaka?

A. Sijaridhika Sana

B. Nimeridhika sana

C. Kawaida

D. Nimeridhika

E. sijaridhika

15. Uliridhika vipi na habari uliyopokea juu ya maumivu na usimamizi wake baada ya operesheni?

A. Sijaridhika Sana

B. Nimeridhika sana

C. Kawaida

D. Nimeridhika

E. sijaridhika

16. Je! Umeridhika vipi na uhusiano wako na mtoa huduma ya afya katika kipindi hiki cha baada ya kupasuliwa?

A. Sijaridhika Sana

B. Nimeridhika sana

C. Kawaida

D. Nimeridhika

E. Sijaridhika

ASANTE KWA KUSHIRIKI

ETHICAL CLEARANCE

ANGELA A. MWAKALILE
P.O BOX 3054
29TH March, 2021.
Phone: +255754517416

DIRECTOR OF POSTGRADUATE STUDIES
MUHAS,
DAR ES SALAAM

UFS:
DEAN SCHOOL OF NURSING,
MUHAS

Fwd 29/03/2021

UFS:
HEAD OF DEPARTMENT, CLINICAL NURSING
SCHOOL OF NURSING
MUHAS

Fowd Ref 29/03/2021

UFS:
RESEARCH SUPERVISOR,
SCHOOL OF NURSING,
MUHAS

Fowd Ref 29/03/2021

Dear Director,

RE: SUBMISSION OF RESEARCH PROPOSAL FOR ETHICAL CLEARANCE

With reference to the heading above, I am a second year Postgraduate student, pursuing M.Sc. Critical Care & Trauma Nursing at the School of Nursing – MUHAS.

Following the completion of the development of my research proposal titled: ***PERCEIVED LEVEL OF SATISFACTION ON PAIN MANAGEMENT AMONG POST OPERATED PATIENT AT MAWENZI REGIONAL REFERRAL HOSPITAL, MOSHI –KILIMANJARO;***

I would like to submit my proposal for ethical clearance. Data will be collected by me, the researcher using prepared investigation tools.

I agree to abide by the MUHAS research guidelines and not to deviate from the research study protocols.

The total estimated budget for the proposed research is *1,758,500/- Tshs* which will be provided by the Ministry of Health ,community development, Gender, Elderly and Children (MoHCDGEC) Tanzania.

Attached are copies of my completed research proposal.

Sincerely yours,

Angela A. Mwakalile
HD/MUH/T.508/2019

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR - RESEARCH AND PUBLICATIONS

Ref. No.DA.282/298/01.C/

Date: 07/05/2021

MUHAS-REC-05-2021-599

Angela Alexander Mwakalile,
MSc. in Critical Care and Trauma,
School of Nursing,
MUHAS

RE: APPROVAL FOR ETHICAL CLEARANCE FOR A STUDY TITLED: PERCEIVED LEVEL OF SATISFACTION ON PAIN MANAGEMENT AMONG POST OPERATIVE PATIENTS AT MAWENZI REGIONAL REFERRAL HOSPITAL MOSHI KILIMANJARO.

Reference is made to the above heading.

I am pleased to inform you that the Chairman has on behalf of the University Senate, approved ethical clearance of the above-mentioned study, on recommendations of the Senate Research and Publications Committee meeting accordance with MUHAS research policy and Tanzania regulations governing human and animal subjects research.

APPROVAL DATE: 07/05/2021
EXPIRATION DATE OF APPROVAL: 06/05/2022

STUDY DESCRIPTION:
Purpose:
The purpose of this observation cross section study is to assess the perceived level of satisfaction of pain management to post op patient .

The approved protocol and procedures for this study is attached and stamped with this letter, and can be found in the link provided: https://irb.muhas.ac.tz/storage/Certificates/Certificate%20-%20650.pdf and in the MUHAS archives.

The PI is required to:

1. Submit bi-annual progress reports and final report upon completion of the study.
2. Report to the IRB any unanticipated problem involving risks to subjects or others including adverse events where applicable.
3. Apply for renewal of approval of ethical clearance one (1) month prior its expiration if the study is not completed at the end of this ethical approval. You may not continue with any research activity beyond the expiration date without the approval of the IRB. Failure to receive approval for continuation before the expiration date will result in automatic termination of the approval for this study on the expiration date.
4. Obtain IRB amendment (s) approval for any changes to any aspect of this study before they can be implemented.
5. Data security is ultimately the responsibility of the investigator.
6. Apply for and obtain data transfer agreement (DTA) from NIMR if data will be transferred to a foreign country.
7. Apply for and obtain material transfer agreement (MTA) from NIMR, if research materials (samples) will be shipped to a foreign country,
8. Any researcher, who contravenes or fail to comply with these conditions, shall be guilty of an offence and shall be liable on conviction to a fine as per NIMR Act No. 23 of 1979, PART III section 10 (2)
9. The PI is required to ensure that the findings of the study are disseminated to relevant stake holders.
10. PI is required to be versed with necessary laws and regulatory policies that govern research in Tanzania. Some guidance is available on our website https://drp.muhas.ac.tz/.

Dr. Bruno Sunguya
Chairman, MUHAS Research and Ethics Committee

Muhimbili University of Health and Allied Sciences
DIRECTOR
Research & Publications
Box 65001

Cc: Director of Postgraduate Studies

UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
MUHIMBILI UNIVERSITY OF HEALTH AND ALLIED SCIENCES
OFFICE OF THE DIRECTOR – POSTGRADUATE STUDIES

Ref. No. HD/MUH/T.508/2019 11th May, 2021

MEDICAL OFFICER INCHARGE,
MAWENZI REGIONAL REFERRAL HOSPITAL,
P.O BOX 3054,
MOSHI-TANZANIA.

Re: INTRODUCTION LETTER

The bearer of this letter is Angela Alexander Mwakalile (HD/MUH/T.508/2019), a student at Muhimbili University of Health and Allied Sciences (MUHAS) pursuing MSc. Nursing In Critical Care And Trauma.

As part of her studies she intends to do a study titled: **"Perceived Level Of Satisfaction On Pain Management among Post-Operative Patients At Mawenzi Regional Referral Hospital Moshi, Kilimamjaro".**

The research has been approved by the Chairman of University Senate.

Kindly provide her with the necessary assistance to facilitate the conduct of her research.

We thank you for your cooperation.

Ms. Victoria Mwanilwa
For: DIRECTOR, POSTGRADUATE STUDIES

cc: Dean, School Nursing, **MUHAS**
cc: Angela Alexander Mwakalile

9 United Nations Road; Upanga West; P.O. Box 65001, Dar Es Salaam: Tel. G/Line: +255-22-2150302/6; Ext. 1015;
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