ASSESSMENT OF MORAL DISTRESS AND ITS INSTITUTIONAL FACTORS AMONG NURSES WORKING IN SELECTED DEPARTMENTS AT UNIVERSITY TEACHING HOSPITAL OF KIGALI, RWANDA.

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A dissertation Submitted in Partial Fulfillment of the Requirements for the degree of Master of Nursing in Critical Care and Trauma at the College of Medicine and Health Sciences

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1. DECLARATION

I, MANIRAHO Emmanuel, declare that dissertation entitled **"assessment of moral distress and its institutional factors among nurses working in selected departments at university teaching hospital of Kigali, Rwanda."** I do here declare that this dissertation submitted in partial fulfillment of the requirement of master's degree in critical and trauma nursing at University of Rwanda College of medicine and health sciences in nursing department at Remera Campus is my original work and has not previously been submitted elsewhere. I also declare that a complete reference list is provided indicating all the sources of information quoted or cited.

Signature

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Panelist Chairperson: **Signature**

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Pamela Meharry
21 August 2023

2. DEDICATIONS

I dedicate this dissertation to my God, for giving me the strength and guiding me in the period of study. I dedicated also this study to my supervisor Associate prof KANAZAYIRE Clementine and my coo-supervisor Mrs. NIYONSENGA Gaudence their endless support and scientific advice that helped me to perform this dissertation, God bless them. I dedicated this study to my wife MUTUYIMANA Cartine and my girl IGIHOZO KURWA Audrey Ashley. I dedicated also this study to the nurses who work every day in vulnerable environment in order to provide quality care of the patient.

God bless you all.

3. ACKNOWLEDGEMENT

I would like to thank all persons who gave me their comments and advice for making this dissertation good. I extend special thanks to my supervisor Associate prof KANAZAYIRE Clementine, my co-supervisor NIYONSENGA Gaudence who reviewed several times the draft of this study and gave me the advice of how I could improve it. I would also thank almighty God for showing me the way of study and still keeping me moving forward and safe in doing this dissertation.

I wish to express my acknowledgement to my colleague's critical care students for constructive advice and mental support in my everyday life during this research writing. Finally, I want to express my acknowledgment to my family, my wife MUTUYIMANA Cartine for their help and encouragement in this journey of master's study in the university of Rwanda.

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4. ABSTRACTS

Background: Moral distress has been evidenced as an element that compromised the ability of nurses to deliver the optimum patient care and may lead to job turnover. However, little is known about the moral distress among nurses and its association factors in Rwanda.

Aim: The present research aims to assess the level of moral distress and its institutional factors among nurses working in selected departments at CHUK, Rwanda.

Methods: A cross sectional quantitative questionnaire survey of 167 registered nurses was conducted to evaluate the level of moral distress and its institutional factors. A revised version of the Moral distress scale (MDS-R) was used. A proportional randomly sampling strategy was used in this research. The data were analyzed using SPSS version 21.

Results: The majority of participants in this research were female married with bachelor degree. The level of moral distress of the participants in this research was moderate. The maximum moral distress score was 303 and minimum was 73, the standard deviation of moral distress score was 43.12 and the moral distress score mean was 152. The data analysis of this research on the relationship of factors and moral distress level by calculating p- value for each demographic variables and institutional factors showed that the only shortage of nursing staff with p value of 0.022 and lack of institutional support with p value of 0.029 were linked with the highest moral distress. No significance of demographic characteristics on level of moral distress.

Conclusion and recommendation: The present study indicates that nurses experienced an overall moderate level of moral distress. The shortage of nursing staff and lack of institutional support were most frequently causing higher level moral distress. This research will inform policy makers in the development of strategies that can reduce moral distress and fostering nurses' satisfaction and subsequently, patient care.

Key words: *Moral distress, risk factors and nurses*

5. DEFINITION OF KEY CONCEPTS

Intensive care unit: Intensive care unit is department where critically ill patients (patients with life-threatening condition or illness) are hospitalized for better monitoring and treatment. But according to task force of WFSICCM (Word Federation of societies of intensive and critical care medicine define intensive care unit as a multidisciplinary specialty department which provide comprehensive management of patient with or at risk of developing acute , life-threatening illness or organ dysfunction(1)

Moral distress: Moral distress is distressing feeling and emotional imbalance that occurs when health care provider knows ethically correct action but S/he cannot do it because of some obstacles such as personal, institutional(2).

Nurse characteristics: In this study nurse characteristics referred to the demographic data of nurse participant in this research including social demographic data such as age, sex, marital status and educational level and work-related data including department work in, nurse patient ratio, shift working, and working experience.

Risk factors: It is a something that could cause or increased the likelihood of a particular event or phenomenon to occur. In this research, risk factor can be defined as anything that can cause or increase the chance of moral destress development for nurses working at university teaching hospital of Kigali.

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9. LIST OF ACRONYMS AND ABBREVIATIONS

CHUB: University Teaching Hospital of Butare

CHUK: University Teaching Hospital of Kigali

CMHS: College of Medicine and Health Sciences

HDU: High Depend Unit

ICU: intensive Care Unit

KFHR: King Faisal Hospital Rwanda

MD: Moral Distress

MDS: Moral Distress Scale

MDS-R: Moral Distress Scale Revised

NICU: Neonatology Intensive Care Unit

PICU: Pediatric Intensive Care Unit

RMH: Rwanda Military Hospital

USA: United State of America

WFSICCM: Word Federation of societies of intensive and critical care medicin

CHAPTER ONE

1 .1. INTRODUCTION

This study aimed on assessment of moral distress levels and its institutional factors among nurses working selected departments at university teaching hospital of Kigali, Rwanda. Moral distress occurs when health care professionals know ethically correct intervention or procedure but they cannot do it due to some constraints either institutional, personal or legal (2). Nurses develop moral distress mostly because even thought, they are professionally knowledgeable to do the right nursing intervention for the safety of the patient but they can restrained by patient's family members, workplace policies or culture and supervisor preference (3). Moral distress affected nurse's biopsychological, cognitive and behavioral stability because of violation of their beliefs and values which was finally results to unable to delivered the desired care to the patients(4). Also Moral distress for the nurses cause burnout, decrease job satisfaction and increase turnover(2) In Rwanda as developing country, we need to tackle this issue of moral distress among nurses to maintain our nurses' health and improve our patient quality health care.

1.2. STUDY BACKGROUND

Moral distress in nursing was first defined by Jameton in 1984 as a phenomena that occur in nursing practice and make difficult or impossible for nurses to carry out ethically approved action in patient care delivery because of institutional, and patient's family member constrains(5). Moral distress among nurses also was considered as cognitive , emotional disturbance that occurs when a nurses obliged to act against their moral requirement(6)(7). Nurses can experience stress due to many responsibilities and care demand(8). Caring is core responsibility of nurse; thus, a nurse should be able to assess physical mental emotional status of the patient and able to respond to the basic needs and provide appropriate intervention(9). Family care preference and institutional regulations and policies may sometimes cause negative effects on nurse's practice because it results to moral distress for nurses (10). Also, nurses are exposed to suffering and potentially providing futile medical treatment and this may result to ethical challenges which lead to moral distress among them(11). There are different source of moral distress and its association factors among healthcare workers in general which including

inadequate resources in healthcare, shortage of staff, poor communication, futile patient care, disagreement in the patient care plan, and not involved in decision making (6). Excessive workload and several orders from supervisors and doctors contribute more moral distress development for nurses(12).

Worldwide, moral distress is considered as one of challenged problem nurses faced in their career(13). Moral distress is nurse's critical problems that occur in the healthcare setting that is very neglected and which can limit the quality nursing care in health system(8). Worldwide problem of shortage of nurses is a leading cause of moral distress among nurses (14). It was reported that more than 50% of worldwide nurses experienced moral distress in their working health care setting(15).

Study done in United State of America in Philadelphia reported that an estimated 880000 nurses and one in three nurses develop moral distress (4). Around 60% to 80% of health care providers have experienced at least one situation that generate moral distress in the hospital but associated with low severity of moral distress among health care providers(16).

Another research done in USA on health care workers working in united states net safety practice revealed 44.8% of nurses participants had mild and uncomfortable moral distress level(17). In addition to a research done in Brazil on moral distress among nursing personnel revealed 47.4% nursing personnel has moderate level of moral distress and identify openness dialog discussion of institution leaders to decrease considerably moral distress among nursing personnel (18). Also research done in Colorado state of southwest of America revealed that more than 80% of nurse's participants had higher level of moral distress among nurses working in intensive care units(19).

In Asia, research done on level of moral distress among ICU nurse of Iran revealed low level at 33.8%(8). Another research done on hospital nurses at Saudi Arabia in Asia reported frequency and intensity of moral distress which were estimated as 52.28% and 51.54%, respectively and this indicate moderate moral distress level among nurses (20). Research done in developing counties of Asian continent revealed that the nurses experience moderate moral distress level of 47.09% in general (12). Finally a research done in Nepal, a south Asia country revealed 82.5 % of nurses participant had moderate moral distress level(21).

In Europe, A study done in Suede one of Europe country reported low level of moral distress among nurses working in hospital (19). The research done in Lithuania revealed that 33.9 % of nurses in Lithuania had moderate moral distress level and 33.8% of them had higher level and 32.8 % had low moral distress level(22). The research done in Belgium reported moderate level of moral distress among nurses and were associated with poor working condition(23). Another research done in Italy reported higher level of moral distress among nurses working in surgical, medical and intensive care units and it was associated with nurse job turnover (24)

In African, A qualitative research done on intensive neonatal and pediatric nurses in north of Ghana reported higher level of moral distress among neonatal nurses (25). Similar findings reported in the research done in Ethiopia on moral distress among health care professionals in a health system where proportion of moral distress among nurses was high to 83.7%. and association factors that results to moral distress among nurses were poor communication, poor decision making, shortage of staff, and inappropriate care provision(6). Findings from study done in south Africa scored a moderate moral distress level of 73.1% among critical care nurses working in private hospital in KwaZulu natal (26).

A study done in one of eastern African country of Uganda on moral distress among Ugandan nurses providing HIV care reported that the moral distress among nurses in Uganda was generally moderate (27).

In Rwanda, the existing published documents on moral distress was still few but most of the published documents in Rwanda focused on workplace stressors, coping mechanism and burnout for ICU nurses. A research done in Rwanda at Butaro district hospital in 2021 highlighting the moral distress and resilience associated with cancer care priority in limited resources countries, this research identifies three sources of moral distress according to resources prioritization which are witnessing program-level resource constraints drive cancer disparities, implementing priority setting decisions into care of individual patients, and communicating with patients directly about resource prioritization implications(28). Another research done on workplace stress and coping strategies in ICU nurses at CHUK , Rwanda revealed that 80% of nurses participants experienced moderate to higher workplace stress (29)

In general, we had few studies done in Rwanda on this topic among health care providers especially nurses. This dissertation aimed on assessing the level of moral distress and its

institutional factors among nurses working in selected departments at university teaching hospital of Kigali (CHUK) in Rwanda.

1.3. PROBLEM STATEMENT

Moral distress was defined by Jameton in 1984 as painful emotional imbalance that results from understanding ethically correct intervention or action but not able to do it due to some obstacles such as time, supervisor preference, inhibiting medical power structure , institutional or legal consideration (3). Study done in United State of America revealed that around 31% nurses prefer to leave nursing job due to moral distress (30). Moral distress can affect negatively not only nurse's health but also health institutional and patient outcomes and nurses are the one affected more with moral distress among health care providers due to long period stay with the patient and family (3). If moral distress left unresolved may cause psychological disequilibrium, negative feeling and affect negatively decisional making of the nurses (31). Also, moral distress among nurses can results to burnout, job turnover, and clients dissatisfaction (4).
Moral distress also affects health institutional negatively and patient outcome because its contribute to team conflict, miscommunication among health care workers, lower quality of health care and finally compromise patient safety(32). In Rwanda, there were few studies done on this topic to show decisional makers the moral distress level among nurses working in Rwandan health system. Rwanda as one of fast developing country need evidence-based practice in nursing career. Thus, this study aimed to assess the level of moral distress and its institutional factors among nurses working in selected departments at university teaching hospital of Kigali. Therefore, it was essential to conduct this study in our country to inform the decision makers the way they could prevent moral distress among Rwandan nurses in order to maintain the standard of quality health care for the patient in our country.

1.4. AIM OF STUDY

To assess the level of moral distress and its institutional factors lead to moral distress development among nurses working in selected department at university teaching hospital of Kigali, Rwanda.

1. 4.1. SPECIFIC OBJECTIVES

1. To determine the level of moral distress among nurses working in selected departments at CHUK.
2. To assess the institutional factors of moral distress development among nurses working in selected departments at CHUK.
3. To determine the relationships of nurse's demographic characteristics and institutional factors on moral distress development among nurses working in selected departments at CHUK.

1.5. RESEARCH QUESTIONS

1) What is the level of moral distress among nurses working in selected departments at CHUK?
2) What are the institutional risk factors of moral distress development among nurses working in selected departments at CHUK?
3) Is there any the relationship of nurse's demographic characteristic and institutional factors on moral distress development among nurses working in selected departments at CHUK?

1.6. SIGNIFICANCE OF STUDY

This dissertation was beneficial for nursing profession, in nursing education and research. In terms of nursing professional, this research determined the level of moral distress and the institutional factors which lead to development of moral distress development among nurses working in selected departments at university teaching hospital of Kigali. This study may inform the policy makers of hospital to use moral distress scale for measuring our nurse's moral distress in order to address this issue as early as possible for better life of our Rwandan nurses and preserve quality care of the patients.

For nursing education this study may inform the health institutions hospital leaders and nursing schools the level of moral distress among nurses. Nursing schools will integrate this study topic in academic curriculum and hospitals will used this research in preparation of in-service traing preparation for hospital nursing staff. This research will used by other researchers as reference in the future.

1.7. CONCLUSION

This chapter one was an introduction of the research which composed by the introduction of the chapter, problem statement, study background, aim of study, general and specific objectives, research questions, significance of study, definition of key concepts used in this research, structure of the study and finally the conclusion of the chapter.

CHAPTER TWO LITURATURE REVIEW

2.1. INTRODUCTION

In this chapter two, Different researches related to moral distress among nurses was reviewed as references to known many things related to research topic. This currently research aimed to assess moral distress among nurses working in selected departments at CHUK, Rwanda. Researcher use PubMed, CINAHL and manual search from Google scholar as databases to search articles and journals for literature review. The researcher used the following key words: Moral distress, risk factors, institutional factors, nurses and health care professionals and the following combination was used: moral distress and risk factors or institutional factors and nurses or health care providers. The search found 4460 documents in total and only 66 articles and journals were selected to be reviewed by researcher using the following criteria: Article or journal written in English, years of publication from 2018-2023, peer reviewed, full text with abstract, related to the topic and answer the research questions.

2.2 THEORETICAL LITERATURE REVIEW

2.2.1. MORAL DISTRESS OVERVIEW

The term moral distress was introduced by American researcher called Andrew Jameton in the years of around 1984(33). Moral distress was defined by Jameton in 1984 as painful emotional imbalance that results from understanding ethically correct intervention or action but not able to do it due to some obstacles such as time, supervisor preference, inhibiting medical power structure , institutional or legal consideration (3). In nursing, moral distress make the nurses unable to provide quality health care to the patient in order to achieve better outcome and nurse with moral distress may eventually result to burnout and job turnover (24). Also moral distress may affect mental stability, quality of care delivered to the patient negatively (34). Even though it was originally identified as concept to address nursing ethical problems but it might occur for all health care professionals when they faced with morally relevant problem affecting rightness or wrongness of procedure or treatment decision which may lead to feeling powerlessness to change intervention they perceive as morally wrong (35).

Moral distress differs from other stress including emotional distress which is also common in nursing because it rises when a person faced with distressing situation or problem while moral

distress develop when a person acts against his /her ethical core values and believes(3). Moral distress also differ from moral dilemma, because moral dilemma was described as not knowing the correct ethical moral choice and need to choose between two justifiable choice while moral distress occur when health care providers know the right choice but they are not able to do it (36).

2.2.2. FACTORS THAT LEAD TO MORAL DISTRESS DEVELOPMENT AMONG NURSES

Several factors may increase the likelihood of developing moral distress, including specific aspects of patient care, internal constraints, and external constraints(37). The factors that lead to moral distress was divided in three main categories: the first category of risk factors is related to patient and family including patient centered care conflict, preferring non beneficial treatment; second category is related to department care unit and work staff which including ethical conflict in team, poor decision making sharing; and the last category is health care related factors which including poor communication, institutional policies and procedures (38). Studies also highlight that being forced to violate patient care and quality of care because of lack of time and resources were factors of developing moral distress for health care providers especially nurses (34). Factors affecting moral distress in nurses including shortage of nursing staff, inadequate experiences of nurses, lack of organizational support, poor collaboration of the health care provider, poor quality care and moral violence (39).

Provision of futile care, nurse perception of pain and suffering of the patient has been mentioned as crucial factor contributing to moral distress among nurses(40). Researcher define futile care as providing care to patient but your personal judgment turned down by the client because of patient believes culture and emotional(23). Poor communication and collaboration between nurses and Doctors was also identified as contributing factors of moral distress among nurses(41). Other researchers identified that excluding nurses in decision making in the care provided to the patient while they are among the care team but they put into practice the decision made by someone else contribute more to the development of moral distress among nurses (42).

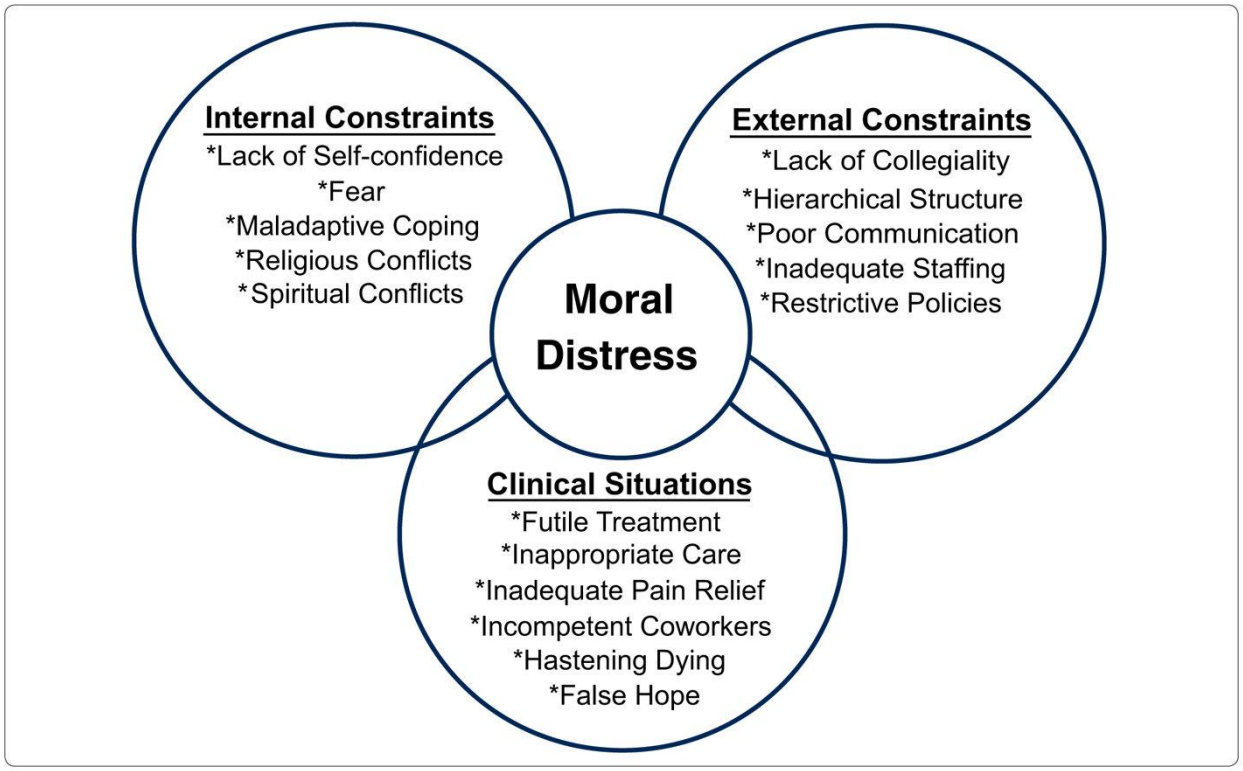


Figure 1 Diagram showing the factors which lead to moral distress (37)

2.2.3. INSTITUTIONAL FACTORS THAT LEAD TO MORAL DISTRESS DEVELOPMENT.

Organizational or institutional factors are among factors contributing to moral distress and they refer as factors which are not managed by the nurses or department but the institution(36). The most institutional factors lead to moral distress development including poor communication and collaboration among the team members, lack of institutional policies, regulations to guide practice, shortage of staff wich lead to increase in workload, limited resources and negative ethical climate(42). Other research identify lack of team work, inadequate communication, designing institutional policies and regulation that conflict with nurses beliefs, and compromising care due to high cost as the most common institutional factors of moral distress devilment among nurses(37).

However, level of moral distress of health care workers especially the nurses increased by lack of adaptation of institutional to the new political context, poor allocation of resources(43). Another research mentioned job stress and time pressure were institutional key factors which lead to moral distress development among nurses. Those factors decrease the ability of health care worker especially the nurses and make difficult for them to find time of enjoying with his friend

and family which lead to burnout (44). But organizational support is condition where organization place the employee in first in terms of values and needs(45). Organizational support is one of the important indices of nursing work environment , and can be considered an influential moral factor(46). Institutional factors and constrains play a major role in development of moral distress among nurses, it was found that factors such as administration leading private hospital; insufficient supervision support for nurses, lack of documented regulation and policies to support health care provision increase the tension stress related to working environment and moral distress intensity(47).

2.2.4. IMPACT OF MORAL DISTRESS ON PATIENT AND NURSE's HEALTH

For individual mora distress may result to severe frustration, anger and guilt for not doing right thing as you known (48). Moral distress also lead to feeling helplessness, lack of self-worth, depression and physical problems including headache and heart palpitation and burnout for health care provider which may result to poor quality of care for the patient and affect negatively the organizational performance(49). Because moral distress affect nurses in wide range, it is why affect quality care, teamwork and result to poor patient outcome (48). Because of moral distress nurses can develop avoidance behaviors, which may cause job dissatisfaction and affect negatively the working environment of nurses finally lead to decrease in quality care of the patient(40). Related effects of moral distress can cause the performance of nurses to decline and it can be also effective in achieving health goals(50).

Moral distress has negative impacts such as anger, frustration, emotional distress, insecurity, poor quality of patient care, decreased job satisfaction, and even slacking in nursing care(39). If the cause of moral distress become constant nurses should become desensitized to moral distress and excluded from perceiving the source of harm(23) several researchers mentioned the following negative effects of moral distress which are frustration, helplessness, anger, malaise, crying, sleep and fatigue associated with sleep disturbance or disorder(51). Professionally, a reluctance to interact with patients' families, limiting care, and absenteeism or leaving the unit, the hospital or even the profession have been noted as a result of moral distress(50).

2.3 EMPIRICAL LITERATURE REVIEW

There are different studies done on moral distress for nurse which is mostly done in developed country of Europe, Asia and American. Those studies highlight moral distress as serious problem which can result to poor quality of care of the patients and cause emotional problem for nurses. This literature Empirical review will focus on results obtained by different researchers on the level of moral distress and its associated factor nurses.

2.3.1. MORAL DISTRESS AMONG NURSES

Research done in Iran among ICU nurse in COVID-19 reported 33.34% low level of moral distress among ICU nurses (8). Contrary to the study done in Canada among ICU nurse reported 65% as moderate level of moral distress among ICU nurses, one in 3 participant preferred leaving the position because of moral distress and 1 in 3 participant also met the criteria of developing burnout syndrome and similar proportion also reported compassion fatigue(52) closer similar result was found in study done in Brazil among ICU nurses 73.6% nurses reported that they experienced moral distress 2 times and more in their professional and 23.8% of the participants reported experiencing moral distress once and 35% of participants preferred to leave nursing professional and 33.7% had already leave the nursing career due to moral distress(53).

Another result found in research done in brasil on risk factors of moral distress among nurses working in the hospital reported that the risk factors of developing moral distress among nurses was moderate but more than half of the participants in this research showed the intension of quiet their current job as health care nurses(53). A study done in Thailand on moral distress among non- western nurses reported that there was inconsistency moral distress level and its relationship with demographic characteristics or variables and this study also report common cause of moral distress which was providing futile care for end of life patient, and identified unit or team constraint, and organization constraints as moral distress stimulators (36).

Results found in one study done in Asia highlight negative effect and positive effects of moral distress among the negative effects including insufficient care provision, ignoring the patient, violating patient's and family right and increase the duration of hospitalization of the patient and some positive effects identified in this research including personal and professional growth,

increased self-awareness, stronger oral determination and increase moral determination(54). Another research done in Iran reported that intensity and frequency of moral distress were high among nurses and the highest and lowest level of moral distress were reported in ICU nurses with mean 3.29 and in surgical wards with means of 1.81(55). A research done also in Iran on effective communication skills training on nurse's moral distress found that communication training skills program reduce considerably the level of moral distress among nurses(32) For the research done Ethiopia 2022 on moral distress and its associated factors among nurses working in northwest Amhara regional referral hospital reported that the proportional of moral distress among nurses was 83.7% which is considered as, moderate level(6).

A research done in south Africa on moral distress experienced by intensive care nurses reported that the frequently reported types of moral distress for those nurses are resource problem, issues od end of life, communication and negotiation with family members and inexperience and incompetence(50). Also the research done in Nigeria entitled moral distress, a challenge to job satisfaction and quality nursing care, reported that nurses experience moral distress in different intensity, more than 40.8% experience MD frequently, while 25.5% of participant experienced moral distress once(56). Little information has been reported on moral distress in eastern African and in Rwanda but only research done in Uganda on moral distress among Ugandan nurses providing HIV patient care reported that they experience moral distress due to lack of resources either human and equipment which can put a patient's health at risk (57).

2.3.2. FACTORS ASSOCIATED WITH MORAL DISTRESS DEVELOPMENT AMONG NURSES

Research done on moral distress of nursing professionals in Brazil have showed that among the main causes of moral distress among nurses are the lack of resources either material or human, poor interpersonal relationship at work, violation of patient's right, low salary, workload and death(45). Also research done in Thailand on moral distress experienced by nonwestern nurses identify most factors which caused moral distress development which are providing futile care to the patient, poor communication and collaboration of the team, incompetent workers, practice error witnessing, limited resources, conflict within hospital policy, and lack of support from administration(36). Similar study done in Iran reported that the most cause of moral distress among nurses are nurses staff shortage, nurses' inadequate experiences, lack of organization

support and colleague, lack of knowledge and educational level, poor collaboration of nurses and physicians, lack of team work, heavy workload, and poor quality of care(39).

Research done in Iran reported on moral distress and the contributing factors among nurses in different work environment demonstrated that demographic variables, feeling supported by the head nurse, age of nurses had correlation with level of moral distress (55). However, the research done in Egypt on moral distress related factors affecting critical care among critical care nurses reported that physician category practice is found to be the highest moral distress factors then nursing practice category factors followed and the last was institutional category factors (58).

Research done in Ethiopia on factors which lead to moral distress showed that poor communication, perceived powerlessness in decisional making, inadequate staffing and provision inappropriate care were associated with moral distress (6). For the research done in Nigeria on moral distress, a challenge to job satisfaction and quality nursing care reported that there several factors related to moral distress development among nurses but the major one was few nurses allocated to many patients. The same research identified effects of moral distress on nursing professional which were job dissatisfaction, burnout, headache, and fatigue and preventive measures identified in this research were increasing salary for nurses and employing more staff nurses(56).

The research done in Uganda reports that constrains caused by inability to implement skills and knowledge, lack of resources, infrastructure, and poor environmental conditions are among the cause of moral distress among nurses in Uganda(57). Majority research done on moral distress were done on ICU nurses and they accumulated in developed countries. Few research was done in developing countries including Rwanda. Also, study done in developing countries focused on workplace stressors, coping mechanisms and level of burnout among nurses. In addition to Rwanda, we have few research done on this topic and the one available was done on patient. This current study aimed to assess moral distress and its institutional factors among nurses working at CHUK Rwanda and it may inform the level of moral distress and its institutional factors among nurses working at CHUK, Rwanda.

2.5. CONCEPTUAL FRAMEWORK

A conceptual framework is the end result of bringing together a number of related concepts to explain and give a broader understanding of the phenomenon under research(59) There were many theories and models in nursing which guide the research and practice in developing nursing career. This present study was guided by the framework which bring out the variable under study. These variables were the followings demographic characteristics of nurses including: Experience in department, level of education, age, marital status of nurse and institutional factors as independent variables to influence level of moral distress among nurses. The model used to guide in the measurement of the variables of this study and determine possible relationship between them. Researcher used concept model adapted from original concept model of moral distress theory for nurses proposed and developed by Corley in 2002(14).

This theory explains that when a nurses fail to advocate for the patient or known the correct intervention but some constraints make them impossible to do it, result to moral distress for nurse (14). This nurse moral distress theory define moral distress as psychological disequilibrium, sorrowful state and hardship experienced by nurses when identify moral decision for the patient but they cannot follow the decision due to institution constraints(60). This moral distress theory for nurses developed by Corley holds institutional constraints as major focus in justification of medical ethical decision making(14). This theory also had different concepts that related to moral distress which were illustrated and their progression in the development of moral competency. Those related concepts of moral distress identified in this theory were: Moral sense making, moral judgment, moral intension and moral competency(61).

Theory of moral distress for nurses define moral distress as the consequences of the effort to maintain moral integrity when a person act against moral principles(14). This theory also explain moral integrity which refer to adherence to moral principles influencing the sense of nobility and self-esteem(60). Also define moral residue as what a person's carried from the time they faced with moral distress and the moral distress can't resolved completely and continue to compromises person's feeling(62). Another concept defined in this theory is moral sensitivity which is the ability to identify moral conflict and show innate understanding of the patient unsafe condition and understand into the ethical consequences of decision in place of the patient(14).

In this theory also six aspects of moral sensitivity were identified as interpersonal orientation, expressing benevolence, modifying autonomy, experiencing conflict, structuring moral meaning, and reliance on physician's knowledge(63). All of those identified concepts of moral distress were the one made the moral distress theory for nurse as illustrated on the figure 2

I was inspired by this conceptual framework, because it explained all constraints leading to moral distress among nurses and institutional constraint as measure constraints lead to moral distress. The theory developer was not identifying the institutional factors but recognizes the role of them to lead to moral distress. This theory shows the impact of moral distress on nurses, institutional and on patient but this current study only focused on assessing level of moral distress and relationship of moral distress with institutional factors and demographic characteristics among nurses. This conceptual framework helped to link all cause of moral distress including demographic variable and institutional factors as it was interested in this current research to assess the relationship of moral distress and demographic and its institutional factors among nurses.

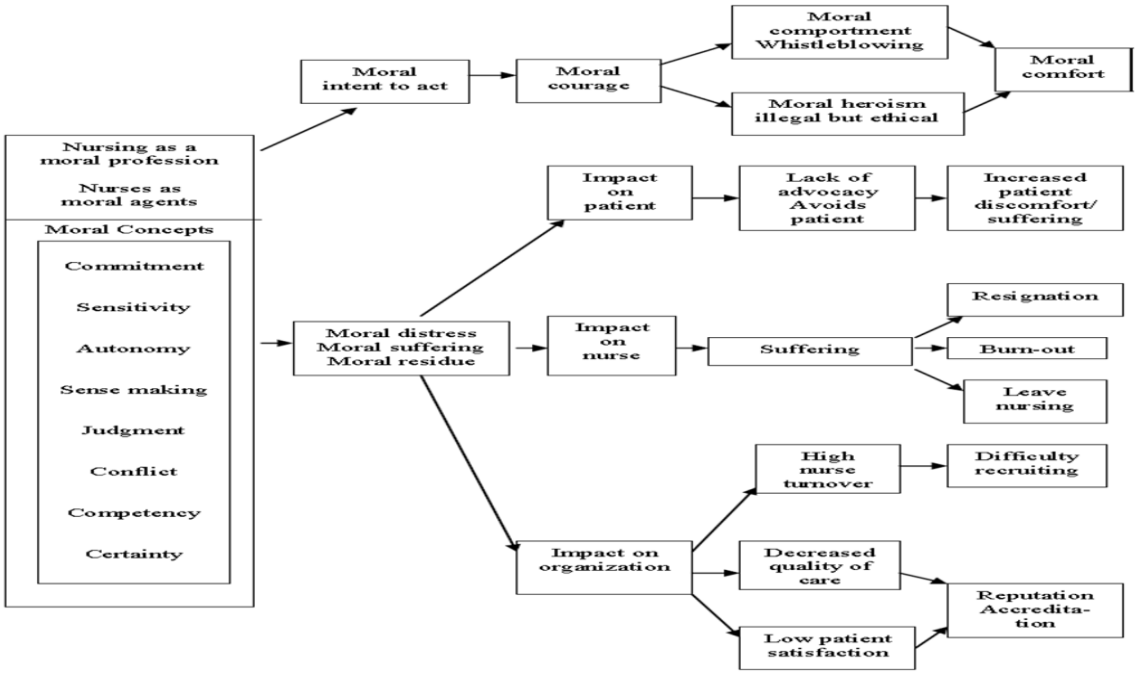


Figure 2 Moral distress theory for nurses as developed by Carley (14).

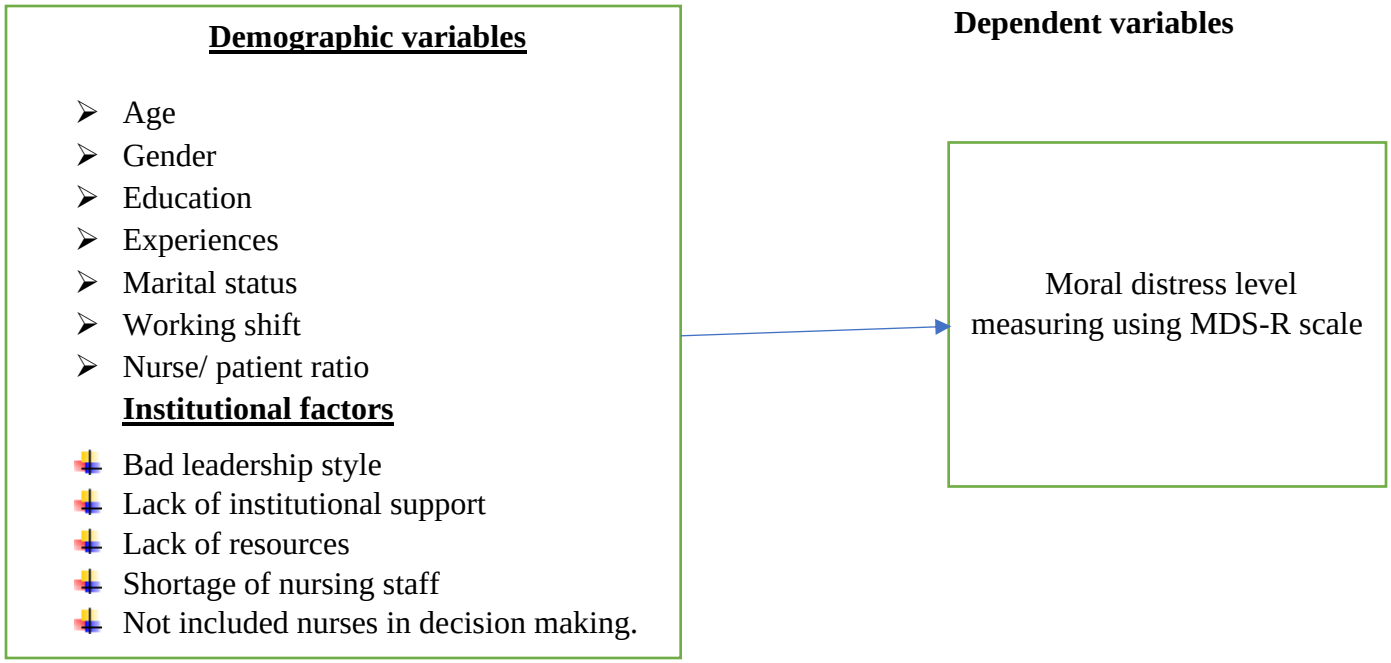


Figure 3 Schematic diagram of adapted conceptual framework from moral distress theory for nurses developed by Carley (44)**.**

This is the adopted conceptual framework, it mentioned demographic variables and institutional factors lead to moral distress development. Moral distress level was calculated using revised moral distress scale developed Hamric. This conceptual framework helped to assess the level of moral distress and relationship of demographic characteristics and institutional factors.

2. 6 CONCLUSIONS

Moral distress among nurses was still a challenge. There was gap of not having a policy and procedure guide health care providers in the assessment and management of moral distress in health care setting. More research done on this topic were only in developed countries of Asia and American. There were a few studies done sub-Saharan Africa and in Rwanda on this topic which increase the occurrence of moral distress among our Rwandan nurses. In addition, little was known in Rwanda about measurement and factors of moral distress on nurses. This research used as reference for other research and informed leaders how they could improve nurse's life.

CHAPTER 3 METHODOLOGY

3.1. INTRODUCTION

This study methodology contained the way or method and principals used to conduct this study. It described the study setting, design, population, targeted population, sample size, sampling strategy, instrument of data collection, data collection procedure, data analysis process, and ethical consideration in this study.

3.2. STUDY SETTING

This study was conducted at university teaching hospital of Kigali (CHUK), Rwanda.

3.2.1. BACKGROUND OF UNIVERSITY TEACHING HOSPITAL OF KIGALI.

University teaching hospital of Kigali is one of referral hospital in Rwanda which received different patient from different district hospital of Rwanda and even patient from outside countries near Rwanda such as Burundi and Republic democratic of Congo (DRC). CHUK is considered as biggest referral hospital in Rwandan with bed capacity of 519. CHUK is located in Kigali city capital of Rwanda Nyarugenge district and sector Nyarugenge. This hospital was celebrated centenary in 2019 because it opened the door in 1918 working as health center and become teaching hospital in 2001. CHUK has a vision to be leading hospital in providing higher quality healthcare services, education and conducting research to become excellence hospital in Africa.

CHUK provide a wide range of medical services through its different medical departments including accident and emergency, internal medicine, pediatrics and pediatric intensive care unit (PICU), neonatology genal and neonatal intensive care unit (NICU) department, obstetrics and gynecology, laboratory, imaging or radiology department, anesthesia, pharmacy, physiotherapy, surgical department, and intensive care unit (ICU). CHUK has around 800 staff, 87 among them are doctors including 51 specialists' doctors, 470 nurses, 200 of them are paramedical and 100 are working in the administration(64).

3.3. STUDY DESIGN

In this study of moral distress and its institutional factors among nurses working in selected departments at university teaching hospital of Kigali Rwanda, descriptive cross-sectional design was used. A cross sectional research is type of study that analyze the data from a population collected in single point in time (65).

3.4. RESEARCH APPROACH

In this study, quantitative approach was adopted to be used.

3.5. STUDY POPULATION

Population in this study was nurses working in 6 hospitalization departments at University Teaching Hospital of Kigali Rwanda which were: Surgical, Medical, ICU/HDU, Accident and emergency, Pediatric/PICU, and Neonatology/ NICU department. 102 nurses working in surgical, 57 nurses working in internal medicine, 31 nurses in ICU/HDU, 53 nurses working in pediatric/ PICU (Pediatric Intensive Care Unit), 52 nurses working in accident and emergency and 39 nurses working in neonatology/ NICU(Neonatology Intensive Care Unit) (64). 334 nurses working in these 6 concerned hospitalization departments of CHUK was employed in this study.

3.6. SAMPLING

Sampling is the way used by researcher to choose the sample representing all population(66). The researchers adopted the correct sampling strategy to obtain a sample in order maximize the generalization of the research findings. Proportional randomly sampling strategy was used in the research. Proportional sampling strategy is also referred as stratified sampling where the population was divided in sub group called strata and randomly sample was taken in each sub group and the number of participants in the research was determined by the population in each sub group compare with entire population of the research (67).

3.6.1. SAMPLE SIZE

It is one of the important steps in research methodology. Sample size is a number of population chosen by the researchers to be in a statistical sample of a research(66). Researcher used simplified Yamane formula in sample size calculation. Yamane's equation is $n = \frac{N}{1+N(e)^2}$

Where **n** stand for sample size, **N**: Stand for population and **e:** stand for the level of precision. Yamane formula confidence interval assumed as 95% and p as 0.05 (66).

Then sample size is: n=$\frac{334}{1+397(0.05)^2} = \frac{334}{1.9925} = 167\ nurses$

3.6.1. 1. INCLUSION CRITERIA

Staff nurses registered by Rwanda Nurse and Midwifery Council

Staff nurses working in the selected departments in university teaching hospital of Kigali.

Staff nurses working in selected department willing to participate voluntarily in the study.

3.6.1.2. EXCLUSION CRITERIA

Staff nurses refused to participate voluntarily in the study.

Staff nurses who were on leave during data collection.

Staff nurses working in non-selected departments

3.6.2. SAMPLING STRATEGY

In this study proportional randomly sampling was used to obtain nurses participants from selected departments of CHUK.

Table 1 Sampling strategy table

Hospital	Services	Total population in a service	Target population in service	Total
CHUK	Surgical	103	167*103/334	51
	Internal Medicine	60	167*60/334	30
	HDU/ICU	31	167*31/334	15
	Pediatric /PICU	52	167*52/334	26
	Accident and Emergency	53	167*53/334	26
	Neonatology/NICU	39	167*39/334	19
Total	334			167

3.7. DATA COLLECTION

3.7. 1. DATA COLLECTION INSTRUMENT

Research instrument refers to all manner that a researcher(s) used to obtain the data, researchers more frequently use survey, checklist, questionnaires and/or interviews(68). In this study, researcher used questionnaire in data collection. Questionnaire had 30 questions. In this study, data collection instrument had 3 sections which helped researcher to answer the research questions.

Section one had 8 questions, Q1-Q8 which were demographic data of study participants and working related information which included: Age in year, gender, experience of working as nurse, marital status, education level, working shift, and patient nurse ratio.

Section two contained moral distress scale which was developed by Carley 2001 and his colleagues the original had 37 questions but it was modified from 37 to 21 questions revised by Hamric and his colleagues in their study entitled Development and testing of an Instrument to measure moral distress in healthcare Professionals as version three of moral distress scale. It contained Q9-Q29 (69).

This modified moral distress scale used to assess the level of moral distress for nurses working in selected departments at university teaching hospital of Kigali, Rwanda. Research participant asked to rate each question in the scale of how frequently they had come across the situation in their working shift and at which level or intensity disturbing and cause moral distress issue. The frequency of the item (situation) rates from 0 (never) to 4 (very frequently) and the intensity of moral distress rates from 0 (none) to 4 (great extent). Items or situations that were encountered frequently and were more distressing had higher scores. The composite score for moral distress (overall severity of moral distress) is obtained by adding the composite scores of each item and ranges from 0 - 336. Researcher received the email of permission to use the tool in this research.

Total composite scores for the scale may be broken down into three categories:

- With low levels of moral distress ranging from 0 - 84,
- Moderate levels of moral distress ranging from 85 - 168, and
- High levels of moral distress ranging from 169 - 336.

The total moral distress score is obtained by summing frequency multiplying by intensity score.

The Cronbach α or reliability test of the tool was 0.89 for this version three of moral distress assessment scale in assessing moral distress level for health care professionals means the reliability was assured(69).
Section C contained Q30-Q41 Related to institutional factors lead to moral distress development.

The researcher collected the data from professional nurses working in hospitalization department at university teaching hospital of Kigali through self-administer questionnaire. The questionnaire was adopted to be used in this research. researcher received a written email for the tool developer a permission to use this questionnaire in this research. The questionnaire was in English as original language and as most nurses in Rwandan country used it in their everyday activities but researcher was there to assist every one if needed during data collection process. The tool was used in Ethiopia and Cronbach α was calculated equal to 0.8 mean the reliability of the tool was ensured.

3.7.2. RELIABILITY AND VALIDITY OF RESEARCH INSTRUMENT TOOL.

The researcher adopted the questionnaire used in Ethiopia culture context in the research entitled moral distress and its association factors among nurses working northwest Amhara regional state referral hospital, northwest Ethiopia. Researcher wrote an email to the author of above research for asking a permission to use that questionnaire. The tool was used in different countries culture context including Italia, Ethiopian and united state of America due to it high and significant Cronbach coefficient.

TABLE 2 Content validity of the tool

Objective	**Framework**	**Data collection tool**
To determine the level of moral distress among nurses working at CHUK, Rwanda	Level of moral distress	Section B Q9-29
To determine institutional factors which lead to moral distress development among nurses working at CHUK, Rwanda	Institutional factors lead to moral distress development	Section C Q30-Q41
To determine any possible relationship of demographic characteristics which lead to moral distress among nurses working at CHUK, Rwanda	Relationship of demographic data and moral distress.	Section A of the questionnaire Q1-Q8

3.7.3. DATA COLLECTION PROCEDURE

The researchers collected data from nurses working in hospitalization department at university teaching hospitals of Kigali.

Data collections started after getting ethical clearance from Institution Review board of CMHS (IRB) and university teaching hospital of Kigali ethical committee. The participant signed the consent form for voluntary participation prior data collection. Researcher collected data from nurse working in mentioned services at CHUK by administering questionnaire. Researcher

preferred to use time of shift change meeting, morning and evening for research introduction and data collection. Researcher provided 20 to 30 minutes to the participant to complete the questionnaire. Researcher collected all completed questionnaires and kept in closed bag for the safety of the participant's data. Researcher collected data in one month to maximize the participants data. Researcher provided information related to the research purpose and other instruction to be followed in responding the questionnaire. The participants were participating voluntarily and confidentiality was ensured to them.

3.8. DATA ANALYSIS

After data collection, researcher checked the questionnaire at the scene to see if the questionnaire was well completed and mark the score of moral distress to be able for analysis then after data analysis started. The researcher analyzed the data using SPSS version 21. In data analysis, researcher used frequency, means, percentage and standard deviation. Graph and tables were also used to display the findings and to determine the level of moral distress and its institutional factors among nurses working in selected department at university teaching hospital of Kigali, Rwanda.

3.9. ETHICAL CONSIDERATION

Prior data collections, Ethical clearance was obtained from Institution review board, CMHS (IRB) and then from university teaching hospital of Kigali, Rwanda ethical committee. Ethical principles of respect, beneficences, and justice were assured to the research participants before data collection process. Participant had had the right participate voluntarily and to withdraw from the research any time without condemnation or penalties. The participant signed the consent form before participating in the study. Researcher assured the confidentiality to the research participants in all process and each step of research following data collection. Names and addresses of participants were not be used on the questionnaire to keep the participants safe, and only the researcher and their supervisors were the one only to access on the participant's information for the research purpose only.

3.10 DATA MANAGEMENT

Data management is an important step in research to maintain the confidentiality of participant's information. After data analysis, the data was stored by researcher in his locked computer and kept those data on his email which had unique password for researcher only.

3.11 DATA DISSEMINATION

After data analysis, the results findings will be presented in university of Rwanda, college of medicine and health sciences. The results also will be presented at CHUK and finally results findings will be published in scientific journals and in different conference.

3.12 PROBLEMS AND LIMITATIONS OF THE STUDY

This study conducted in only one teaching hospital, this reduced the generalizability of the study result in Rwandan health settings. Researchers also met a challenge to find similar study done in sub-Saharan African countries and Rwanda specifically as references.

3.13 CONCLUSION

This chapter described all method researcher used in the study. It highlighted research method, design, research population, sample size, inclusion and exclusion criteria to participate in this study, it was also explaining the data collection process, data collection tool, data management, and analysis, ethical consideration, and limitation of this study also was described in this chapter.

CHAPTER 4 RESULTS AND INTERPRETATION

4.1 INTRODUCTION

This chapter presented the study results obtained after data collection and it presented in terms of figures and tables for analysis according to the study objectives. The aim of this study was to assess the moral distress and its institutional factors among nurses working in selected departments at CHUK. The researcher interested in assessing the level of moral distress among nurses working in selected departments at CHUK, assessment of institutional factors which lead to development of moral distress among nurses working in selected departments at CHUK and assessment of any relationship of demographic characteristics, institutional factors and level of moral distress among nurses working in selected departments at CHUK. In this research 167 registered nurses were participated. Cross-tabulation tables and chi-square tables were used to determine the relationships of demographic variables, institutional factors and moral distress levels among nurses working in selected departments at CHUK, Rwanda.

4.2 PARTICIPANT'S DEMOGRAPHIC DATA RESULTS

Table 3 showed demographic results. More than half of participant were female 70.1% while 29.9 % were male. The majority of participants were married 70.1% while 13.98% were single, 10.8 % were divorced and 5.4% were widowed. Majority of participants were nurse with bachelor degree 53.9%, 40.1% had diploma degree and 6% were master's holder nurses. Majority of study participant were in middle age 56.3% had age range of 31-50 years old, 32.9% had less than 30 years old and 10.8% had greater than 50 years old. Most of the nurse participants were working in surgical department with 30.5% and internal medicine with 18%, accident and emergency 15.5% and 15.5% were pediatric and PICU nurses, 11.4% were nurses working in Neonatology/ NICU. The number of participants was chosen according the total number of nurses working in the department. 94% nurses' participants worked day and night shift, 6% of the participant nurses worked day shift only. 91% of nurse participant cared more than 4 patients on their shift. Other important findings were displayed in the **table 3** of demographic data.

Table 3: Demographic data table results.

DEMOGRAPHIC CHARACTERISTIC		FREQUENCY	PERCENT
Gender	Female	117	70.1%
	Male	50	29.9%
Age	<=30 years	55	32.9%
	31 – 50 years	95	56.3%
	Greater than 50 years	18	10.8%
Marital status	Single	23	13.98%
	Married	117	70.1%
	Divorced	18	10.8%
	Widowed	9	5.4%
Educational level:	Advanced diploma nurse	67	40.1%
	Bachelor holder nurse	90	53.9%
	Masters' holder nurse	10	6%
Department	Surgical	51	30.5%
	Internal medicine	30	18%
	ICU/HDU	15	9%
	Pediatric	26	15.5%
	Accident and emergency	26	15.5%
	Neonatology/NICU	19	11.4%
years of experience	Less than 1 year	6	3.6%
	1-5	73	43.7%
	6-10	70	41.9%
	11-15	17	10.2%
	16-20	1	0.6%
Nurse working shift	Day time	10	6%
	Day/night	157	94%
Nurse to patient ratio	1/2 ratio	6	3.6%
	1/3 ratio	9	5.6%
	More than 1/4	152	91%

4.3 LEVEL OF MORAL DISTRESS RESULTS

Figure 4: Participant's level of moral distress

Table 4 Level of moral distress among nurses

		Frequency	Percent (%)
Valid	Nurses with low level of moral distress	4	2.4
	Nurses with Moderate level of moral distress	114	68.3
	Nurses with High level of moral distress	49	29.3
	Total	167	100.0

This **table 4** and **Figure 4** presented the level of moral distress of nurse's participant. Each nurse participant's level of moral distress was assessed using moral distress scale composed by 21 items or questions. Each item was evaluated in terms of frequency and intensity. Frequency score multiplied by intensity score to get overall score for each item. Then after the total moral distress score of an individual was calculated which was equal to the summation of scores for all 21 items. An individual with score between 0- 84 had low level of moral distress, the one with score between 84-167 had moderate score and then an individual with score of 168-336 had higher moral distress. This research finding showed that the majority of nurses participant equal to 114 (68.26%) had moderate level of moral distress, while 49 (29.34%) of participants had higher

level of moral distress and 4 (2.40%) of participants had low level of moral distress. These results showed that moral distress was big issue for nurses due to greater than 97% of nurse participants in the study had moral distress moderate to higher level and less than 3% of them had low level of moral distress. Nurse with maximum moral distress score had 303 and minimum was 78, moral distress score means was 152 and standard deviation score was 43.4.

4.4. RESULTS OF INSTITUTIONAL FACTORS LEAD TO MORAL DISTRESS

Table 5: Results of institutional factors that lead to moral distress among nurses.

NO	Items considered as institutional risk factor for moral distress development among nurses	Frequency and percentage (%) of respond identified this factor as moral distress cause or not.	
		YES	NO
1	Lack of effective leadership	**95(56.9%)**	**72(43.1%)**
2	Lack of organization health system	**96(57.5%)**	**70(41.9%)**
3	Lack of support from institution	**120(71.9%)**	**47(28.1%)**
4	Nursing shortage in health system	**133(79.6%)**	**47(20.4%)**
5	Lack of discussion of ethical issue in health system	**78(46.7%)**	**89(53.3%)**
6	Lack of ethics committees	**78(46.7%)**	**89(53.3%)**
7	Lack of equipment/resources	**134(80.2%)**	**33(19.8%)**
8	Problems in the physical structure of the institution	**78(51.9%)**	**89(48.1%)**
9	Lack of consideration for nurse's knowledge	**78(46.7%)**	**89(19.8%)**
10	Excessive number of patients assigned to each nurse	**115(68.9%)**	**52(31.1%)**
11	Low autonomy at work	**87(52.1%)**	**80(47.9%)**
12	Being excluded from decision-making of nurses	**108(64.7%)**	**59(35.3%)**

Table 5 displaying the results related to institutional factors lead to moral distress among participant's nurses. According to the findings of this research, the leading institutional factor caused moral distress development for nurses in selected department at CHUK was lack of equipment followed by nursing shortage with 80% and 79.6% respectively. Lack of support from institution with 71.9% and excessive number of patients assigned to each nurse or higher patient to nurses ratio with 68.9%. Being excluded from decision making of nurse resulted to moral distress at 64.7%. Lack of organization health system with 57.5% and lack of institution support with 56.9% Other important findings were present in the table 5.

4.5 RESULTS OF RELATIONSHIPS OF INSTITUTIONAL AND DEMOGRAPHIC FACTORS ON MORAL DISTRESS DEVELOPMENT.

Table 6: Cross tabulation of moral distress level among nurses and institutional factors

Cross tabulation between moral distress level among nurses and institutional factors lead to moral distress			
Variable	Nurse's Level of moral distress		
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress
	N0 (%)	N0 (%)	N0 (%)
Lack of effective leadership			
Yes	2 (1.2%)	67(40.12%)	26(15.57%)
No	2(1.2%)	47(28.14%)	23(13.77%)
Lack of organization health system			
Yes	2(1.2%)	66(39.52%)	28(16.77%)
No	2(1.2%)	48(28.74%)	21(12.57%)
Lack of support from institution			
Yes	1(0.6%)	79(47.3%)	40(23.95%)
No	3(1.8%)	35(20.96%)	9(5.39%)
Nursing shortage in health system			
Yes	1(0.6%)	93(55.69%)	39(23.35%)
No	3(1.8%)	21(12.57%)	10(5.99%)
Lack of discussion of ethical issues in health system			
Yes	2(1.2%)	52(31.14%)	24(14.37%)
No	2(1.2%)	62(37.12%)	25(14.97%)
Lack of ethics committee			
Yes	3(1.8%)	51(30.54%)	24(14.37%)
No	1(0.6%)	63(37.72%)	25(14.97%)
Lack of equipment or resources			
Yes	3(1.8%)	90(53.89%)	41(24.55%)
No	1(0.6%)	24(14.37%)	8(4.79%)
Problems in the physical structure of the institution			
Yes	1(0.6%)	52(31.14%)	25(14.97%)
No	3(1.8%)	62(37.12%)	24(14.37%)
Lack of consideration for nurses' knowledge			
Yes	2(1.2%)	74(44.31%)	39(23.35%)
No	2(1.2%)	40(23.95%)	10(5.99%)
Excessive number of patients assigned to each nurse			
Yes	2(1.2%)	90(53.89%)	41(24.55%)
No	2(1.2%)	24(14.37%)	8(4.79%)
Low autonomy at work			
Yes	1(0.6%)	59(35.33%)	27(16.17%)
No	3(1.8%)	55(32.93%)	22(13.17%)
Being excluded from decision making of nurses			
Yes	1(0.6%)	70(41.92%)	37(22.16%)
No	3(1.8%)	44(26.35%)	12(7.19%)

Table 7: The chi-square of cross-tabulation of nurse's level of moral distress and institutional factors.

Association between moral distress level among nurses and institutional factors leads to moral distress					
Variable	Nurse's Level of moral distress			Chi-square value	P-value
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress		
	N0 (%) and chi-square value	N0(%) and chi-square value	N0(%) and chi-square value		
Lack of effective leadership					
Yes	2 (2.28) [0.03]	67 (64.85) [0.07]	26 (27.87) [0.13]	0.53	0.76
No	2 (1.72) [0.04]	47 (49.15) [0.09]	23 (21.13) [0.17]		
Lack of organization health system					
Yes	2 (2.30) [0.04]	66 (65.53) [0.00]	28 (28.17) [0.00]	0.10	0.95
No	2 (1.70) [0.05]	48 (48.47) [0.00]	21 (20.83) [0.00]		
lack of institutional support					
Yes	1 (2.87) [1.22]	79 (81.92) [0.10]	40 (35.21) [0.65]	7.03	0.03
No	3 (1.13) [3.12]	35 (32.08) [0.27]	9 (13.79) [1.66]		
Nursing shortage in health system					
Yes	1 (3.19) [1.50]	93 (90.79) [0.05]	39 (39.02) [0.00]	7.63	0.022
No	3 (0.81) [5.87]	21 (23.21) [0.21]	10 (9.98) [0.00]		
Lack of discussion of ethical issues in health system					
Yes	2 (1.87) [0.01]	52 (53.25) [0.03]	24 (22.89) [0.05]	0.17	0.91
No	2 (2.13) [0.01]	62 (60.75) [0.03]	25 (26.11) [0.05]		
Lack of ethics committee					
Yes	3 (1.87) [0.69]	51 (53.25) [0.09]	24 (22.89) [0.05]	1.56	0.46
No	1 (2.13) [0.60]	63 (60.75) [0.08]	25 (26.11) [0.05]		
Lack of equipment or resources					
Yes	3 (3.21) [0.01]	90 (91.47) [0.02]	41 (39.32) [0.07]	0.55	0.76
No	1 (0.79) [0.06]	24 (22.53) [0.10]	8 (9.68) [0.29]		
Problems in the physical structure of the institution					
Yes	1 (1.84) [0.39]	52 (52.56) [0.01]	24 (22.59) [0.09]	0.89	0.64
No	3 (2.16) [0.33]	62 (61.44) [0.01]	25 (26.41) [0.07]		
Lack of consideration for nurses' knowledge					
Yes	2 (2.75) [0.21]	74(78.50) [0.26]	39(33.74) [0.82]	4.12	1.27
No	2 (1.25) [0.46]	40 (35.50) [0.57]	10 (15.26) [1.81]		
Excessive number of patients assigned to each nurse					
Yes	2 (3.19) [0.44]	90 (90.79) [0.01]	41 (39.02) [0.10]	2.69	0. 26
No	2 (0.81) [1.73]	24 (23.21) [0.03]	8 (9.98) [0.39]		
Low autonomy at work					
Yes	1 (2.08) [0.56]	59 (59.39) [0.00]	27 (25.53) [0.09]	1.36	0.51
No	3 (1.92) [0.61]	55 (54.61) [0.00]	22 (23.47) [0.09]		
Being excluded from decision making of nurses					
Yes	1 (2.59) [0.97]	70 (73.72) [0.19]	37 (31.69) [0.89]	5.81	0.55
No	3 (1.41) [1.78]	44 (40.28) [0.34]	12 (17.31) [1.63]		

4.6 INTERPRETATION OF RELATIONSHIP OF INSTITUTIONAL FACTORS AND MORAL DISTRESS.

The overall results from table 6 and table 7, crosstabulation was done of each risk factor identified on the questionnaire which cause moral distress with nurses' moral distress level according to the participant's response and then chi-square of each cross-tabulation results was done to identified the significance of each risk factor on moral distress development by calculating p value of each risk factor on significance level of p value equal to 0.05. The only 2 institutional factors were significantly resulted to moral distress developments among nurses working in selected department at CHUK. Those two factors were lack of institutional support and shortage of nursing staff with p values of 0.022 and 0.03 respectively. Other findings were presented in the table 6 and 7.

Table 8: Cross tabulation of moral distress level among nurses and demographic factors

Cross tabulation between moral distress level among nurses and nurse's demographic factors			
variable	Nurse's Level of moral distress		
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress
	N0 (%)	N0 (%)	N0 (%)
Gender			
Female	3(1.8%)	77(66.4%)	36(31%)
Male	1(0.6%)	37(22.2%)	13(7.8%)
Educational level			
Advanced Diploma holder	1(0.6%)	48(28.7%)	18(10.8%)
Bachelor holder	2(1.2%)	60(35.9%)	28(16.8%)
Masters' holder	1(0.6%)	6(3.6%)	3(1.8%)
Age			
<30 years	2(1.2%)	37(22.2%)	16(9.6%)
31-50 years	1(0.6%)	68(40.7%)	24(14.4%)
Greater than 50 years	1(0.6%)	9(5.4%)	9(5.4%)
Day/Night shift			
Day	1(0.6%)	4(2.4%)	5(3.0%)
Night	3(1.8%)	110(65.9%)	44(26.3%)
Nurse/patient ration			
½ ratio	0(0.00%)	5(3.0%)	1(0.6%)
1/3 ratio	0(0.00%)	7(4.2%)	2(1.2%)
More than ¼ ratio	4(2.4%)	102(61.1%)	46(27.5%)
Marital status			
Single	0(0.00%)	16(9.6%)	7(4.2%)
Married	3(1.8%)	79(47.3%)	35(21.0%)

Divorced	0(0.00%)	13(7.8%)	5(3.0%)
Widowed	1(0.6%)	6(3.6%)	2(1.2%)
Years of experience			
Less than 1 year	0(0.00%)	3(1.8%)	3 (1.8%)
1-5 years	3(1.8%)	50(29.9%)	20(12.0%)
6-10 years	0 (0.00%)	49(29.3%)	21(12.6%)
11-15 years	1(0.6%)	12(7.2%)	4(2.4%)
16-20	0(0.00%)	0(0.00%)	1(0.6%)

Table 9: The chi-square of cross-tabulation of nurse's level of moral distress and nurse's demographic factors.

Association between moral distress level among nurses and nurse's demographic factors					
Variable	Nurse's Level of moral distress			Chi-square value	P-value
	Low level of moral distress	Moderate level of moral distress	Severe level of moral distress		
	N0 (%)	N0 (%)	N0 (%)		
Gender					
Female	3 (2.78) [0.02]	77 (79.19) [0.06]	36 (34.04) [0.11]	0.63	0.73
Male	1 (1.22) [0.04]	37 (34.81) [0.14]	13 (14.96) [0.26]		
Nurse's educational level					
Diploma degree	1 (1.60) [0.23]	48 (45.74) [0.11]	18 (19.66) [0.14]	3.13	0. 53
Bachelor degree	2 (2.16) [0.01]	60 (61.44) [0.03]	28 (26.41) [0.10]		
Master's degree	1 (0.24) [2.41]	6 (6.83) [0.10]	3 (2.93) [0.00]		
Age					
<=30 years	2 (1.32) [0.35]	37 (37.54) [0.01]	16 (16.14) [0.00]	5.73	0.22
31-50 years	1 (2.23) [0.68]	68 (63.49) [0.32]	24 (27.29) [0.40]		
>50 years	1 (0.46) [0.65]	9 (12.97) [1.22]	9 (5.57) [2.10]		
Nurse's shift					
Day shift	1 (0.24) [2.41]	4 (6.83) [1.17]	5 (2.93) [1.45]	5.36	0. 68
Day and night shift	3 (3.76) [0.15]	110 (107.17) [0.07]	44 (46.07) [0.09]		
Patient and nurse ratio				1.27	0.32
½ ratio	0 (0.00%) [0.00]	5 (4.72) [0.02]	1 (2.03) [0.52]		
1/3 ratio	0(0.00%) [0.00]	7 (6.75) [0.01]	2 (2.90) [0.28]		
More than ¼ ratio	4 (5.40) [0.36]	102 (102.53) [0.00]	46 (44.07) [0.08]		
Marital status					
Single	0(0.00%) [0.00]	16 (16.19) [0.00]	7 (6.96) [0.00]	1.99	0.90
Married	3 (4.15) [0.32]	79 (78.92) [0.00]	35 (33.92) [0.03]		
Divorced	0(0.00%) [0.00]	13 (12.82) [0.00]	5 (5.51) [0.05]		
Widowed	1 (0.32) [1.45]	6 (6.07) [0.00]	2 (2.61) [0.14]		
Years of experiences					
Less than 1 year	0(0.00%) [0.00]	3 (4.71) [0.62]	3 (2.01) [0.49]	1.56	0.18
1-5 years	3 (2.99) [0.00]	50 (49.09) [0.02]	20 (20.92) [0.04]		
6-10 years	0(0.00%) [0.00]	49 (47.75) [0.03]	21 (20.35) [0.02]		
11-15 years	1 (0.70) [0.13]	12 (11.43) [0.03]	4 (4.87) [0.16]		
16-20 years	0(0.00%) [0.00]	0(0.00%) [0.00]	1 (0.86) [0.02]		

4.7. INTERPRETATION OF RELATIONSHIP OF NURSE'S DEMOGRAPHIC FACTORS AND MORAL DISTRESS LEVEL.

The relationship of nurse's demographic data and moral distress level results were presented in the table 8 and 9. Crosstabulation was done for each demographic variable with moral distress level among nurses and then chi-square of crosstabulation results for each variable was done to calculate p value of each variable in relationship of moral distress on significance level of p value equal to 0.05. The results showed that no demographic variable which had significance on moral distress development among nurses working in selected department at CHUK. The chi-square of demographic variable was done to calculate their p values (Gender, educational level, nurse's working shift, years of experiences, marital status, patient and nurse's ratio and nurses' age,). All of them they had p value greater than 0.05 which showed that they were not significantly led to moral distress development among nurse working in selected departments at CHUK.

4.8 CONCLUSION

This study results were analyzed using SPSS version 21and social sciences statistics, presented in the tables and figures in term of frequencies, percentages. The majority of nurses participants were female and 68.08 % nurses' participants had moderate level of moral distress. Chi-square was used in analysis by calculating p value for each demographic variables and institutional factors. The only shortage of nursing staff and lack of institutional support were the factors with significant p value of 0.022 and 0.029 respectively in chi-square.

CHAPTER 5. DISCUSSION

5.1. INTRODUCTION

A cross sectional quantitative and questionnaire survey on 167 registered nurses from selected departments was conducted at CHUK, Rwanda. The main objective of this research was to assess moral distress and its institutional factors among nurses working in selected department at university teaching hospital of Kigali, Rwanda.

In this chapter, researcher discussed on the results findings after data analysis to answer the study objectives. The key findings of this study were the following: the overall moral distress level among nurses working in selected department at CHUK was moderate. The leading factors which cause moral distress development were lack of equipment followed by nursing shortage with 80% and 79.6% respectively. Lack of support from institution with 71.9% and excessive number of patients assigned to each nurse or higher patient to nurses ratio with 68.9%. No significance relationships of moral distress and demographic factors but nursing staff shortage and lack of institutional support factors were the institutional factors which significantly increase the level of moral distress among nurses working in selected department at CHUK.

5.2. Level of moral distress

Majority of nurses working at CHUK had moderate moral distress 68.4%, while 29.4% had severe moral distress and 2.4% of participants had low level of moral distress. This study findings were similar to the study results conducted in south Africa on title intitled exploring moral distress among critical care nurses at private institutional in KwaZulu Natal showed that the overall level of moral distress was moderate on participants(26). The same result also reported in study done in Saudi Arabia on title entitled moral distress among health care workers in intensive care unit: systematic review and metanalysis reported that they were a moderate level of moral distress among participants of the study(13). But different result reported in the research done in Iran on moral distress among nurses showed that the overall level of moral distress among nurses was low with 57.6%(8). And also similar results also reported in Saudi Arabia on another research entitled prevalence of moral distress among health care provider showed that 75.1% of health care providers had moderate moral distress and 24.5% of health care providers had higher level of moral distress(70).

Another research done in united state of American on topic entitle developmental and evaluation of moral distress scale found different results with the current study because the overall moral distress among health care providers was moderate to higher with standard deviation of 5.47 (71). Also different results found in Iran for the research entitled relationship between resilience and moral distress among Iranian nurses revealed that the overall moral distress among participant were low with mean score of 95.3%(72). Another different results findings revealed in research done in Iran entitled by perceived organization support and moral distress among nurses revealed the overall moral distress level of nurses were higher with mean moral distress score 2.39 (46).

5.3. Institutional factors of moral distress

This study results showed that the leading factors which contribute to moral distress for nurses working in selected department at CHUK were lack of equipment 80% followed by nursing shortage with 79.6%, Lack of support from institution followed with 71.9%, excessive number of patients assigned to each nurse 68.9%, being excluded from decision making of nurse with 57.5% and organization system followed those five with 56.9%. Those results were different with those found in study done in Brazil on moral distress among nurses: description of the risks for the professionals where the leading factors caused moral distress among nurses were problem related to the physical structure of the institutional with 65.5%, lack of organizational health system 64.2%, followed by lack of equipment with 59.5%, excessive number of patient assigned to each nurse followed with 55.4% and then nursing shortage with 54.3%(53).

Another different results found in turkey on research entitled moral distress among nurses in turkey, the findings showed that factor that cause moral distress were lack of system organization and working with incompetent workers(42). Another different findings reported in research done in Thailand showed that factors which significantly led to moral distress development including lack of institutional support, limited resources, excessive administrative work, conflict with hospital policy (36). But the similar result reported in the study done in Croatia on factors affecting moral distress among nurses working in critical care unit showed that the factors significantly led to moral distress including lack of institutional support, heavy workload, lack of team work(39).

5.4. Relationships of moral distress with demographic characteristics and institutional factors.

The study findings showed that only shortage of nursing staff and lack of institutional support were the one significantly caused moral distress and among demographic variable no one were significantly led to moral distress. Different results found in the study done in south Africa on moral distress experienced by nurses showed that nurse to patient ration and lack of equipment or resources were significantly caused moral distress among nurses (36). But closer similar results found in study done in south Africa in Jonesburg city on the study entitled moral distress experienced by nurses reported that lack of admiration support, nursing staff shortage, limit resources were significantly led to moral distress among nurses(71).

Also different results found in Iran on research entitled moral distress among health care nurses showed that moral distress was significantly with marital status and nurse's shift type with p value of 0.001 and 0.01 respectively(8). Also different results was found in study done in Saudi Arabia on prevalence of moral distress among health care providers reported that age as demographic variable had significant value 0.015 to led to moral distress among health care providers in Saudi Arabia (70)

Different results was found in study done in unites state of America where exploratory analysis of factors revealed that number of patient cared by nurse, department worked in and were significantly led to moral distress(63). In the research done in Iran for the research entitled relationship between resilience and moral distress among Iranian nurses reported working experiences significantly led to moral distress development(72). Another research done in Iran entitled perceived organization support and moral distress revealed different findings with this current study, showed that no significant relationship of organization support and moral distress development(46).

CHAPTER 6 RECOMMENDATION AND CONCLUSION

6.1 RECOMMENDATION

From the study results, the followings were recommendations

Recommendation for nurses

Nurses who experience moral distress or other work-related stress encouraged to seek a support from psychologist or other experienced health care worker in order to help them to continue providing quality nursing care.

Nurses have to be encouraged to consult ethical committee of the hospital to discuss on ethical issue when happened.

Recommendation to the CHUK leaders

As study result showed that shortage of nursing staff was significantly resulted to moral distress, CHUK leaders recommended to recruit more nurses to decrease the workload of the nurse for their betterment.

CHUK as health institution recommended to support their nurses in a very day activity to know their problems and challenges and try to find the solution for preserving the health of nurses.

Recommendation to the nursing schools.

Nursing school recommended to continue teaching moral distress related course in undergraduate academic curriculum to give nurses the basic information on moral distress measurement and prevention.

Recommendation to the future researchers

This current research was conducted in referral hospital and for only nurses. The researchers are recommended to extend their research in district hospital more than one hospital and conduct the research to the other health care providers including physician, anesthesiologist and midwifery.

6. 2 CONCLUSIONS

A cross sectional quantitative and questionnaire survey on 167 registered nurses from selected departments was conducted at CHUK, Rwanda. Proportional randomly sampling strategy was used to research sample. The main objective of this research was to assess moral distress and its institutional factors among nurses working in selected departments at university teaching hospital of Kigali, Rwanda.

The overall moral distress level of nurses working in selected departments at university teaching hospital of Kigali was moderate. The maximum moral distress score was 303 and minimum score was 73. The moral distress score mean was 152.

Lack of institutional support and shortage of nursing staff cause the increase of moral distress level among nurses. Health care institutional support and recruiting more nurses in health care system will be a key element not only for prevention of moral distress among nurses but also for the improvement of quality care.

REFERENCES

1. Marshall JC, Bosco L, Adhikari NK, Connolly B, Diaz J V., Dorman T, et al. What is an intensive care unit? A report of the task force of the World Federation of Societies of Intensive and Critical Care Medicine. J Crit Care [Internet]. 2017;37:270–6. Available from: http://dx.doi.org/10.1016/j.jcrc.2016.07.015
2. Houston S, Casanova MA, Leveille M, Schmidt KL, Barnes SA, Trungale KR, et al. The Intensity and Frequency of Moral Distress Among Different Healthcare Disciplines. 2018;98–112.
3. Karakachian BA, Colbert A. Moral distress : A case study. 2018;
4. Beyaffers HA, Woldetsadik MT, Gizaw AB. Predictors of moral distress among nurses working in Jimma University Medical Center, South West Ethiopia. Front Nurs. 2021;7(4):369–77.
5. Clark L. Moral Distress Among Healthcare Professionals at a Health System. 2018;(November 2017).
6. Berhie AY, Tezera ZB, Azagew AW. Moral distress and its associated factors among nurses in northwest amhara regional state referral hospitals, northwest ethiopia. Psychol Res Behav Manag. 2020;13:161–7.
7. Management B, Berhie AY, Tezera ZB, Azagew AW. Moral Distress and Its Associated Factors Among Nurses in Northwest Amhara Regional State Referral Hospitals , Northwest Ethiopia. 2020;
8. Asadi N, Salmani F, Asgari N, Salmani M. Alarm fatigue and moral distress in ICU nurses in COVID - 19 pandemic. BMC Nurs [Internet]. 2022;1–7. Available from: https://doi.org/10.1186/s12912-022-00909-y
9. Alqahtani RM, Al Saadon A, Alarifi MI, Muaygil R, Altaymani YKM, Elsaid MAM, et al. Moral distress among health care workers in the intensive care unit; a systematic review and meta-analysis. Signa Vitae. 2021;17(4):192–202.
10. Storm J, Chen NSH. The relationships among alarm fatigue , compassion fatigue , burnout and compassion satisfaction in critical care and step- down nurses. 2020;(October):1–11.
11. Browning ED, Cruz JS. Reflective Debriefing : A Social Work Intervention Addressing Moral Distress among ICU Nurses Reflective Debriefing : A Social Work Intervention Addressing Moral Distress among ICU Nurses ABSTRACT. J Soc Work End Life Palliat Care [Internet]. 2018;0(0):1–29. Available from: https://doi.org/10.1080/15524256.2018.1437588
12. Joseph S, Tunio HK, Shahzad S, Abbass E, Nagrejo R. Moral distress among nurses in developing countries of Asia : A Systematic review. 2022;
13. Salari N, Shohaimi S, Paveh BK, Kazeminia M. The severity of moral distress in nurses : a systematic review and meta - analysis. Philos Ethics, Humanit Med [Internet]. 2022;0:1–14. Available from: https://doi.org/10.1186/s13010-022-00126-0
14. Corley MC. NURSE M ORAL D ISTRESS : A PROPOSED THEORY AND

RESEARCH AGENDA. 2018;9(6).

15. Maysa Abdalla Hassan HIA and NAR. Moral Distress Related Factors Affecting Critical Care Nurses. J Am Sci. 2019;9(6):184–96.

16. Id JS, Id DEP, Read S, Gaynes BN. A national study of moral distress among U . S . internal medicine physicians during the COVID-19 pandemic. 2022;1–14. Available from: http://dx.doi.org/10.1371/journal.pone.0268375

17. Pathman DE, Sonis J, Rauner TE, Alton K, Headlee AS, Harrison JN. Moral distress among clinicians working in US safety net practices during the 19 pandemic : a mixed methods study. 2022;1–14.

18. Luiz E, Barlem D, Lunardi GL, Tomaschewski-barlem JG, Silva R. Moral distress in nursing personnel. 2019;21:79–87.

19. Fard ZR, Azadi A, Veisani Y, Jamshidbeigi A. distress and sleep quality and their influencing factor in private and public hospitals in Iran. 2020;

20. Pooresmaeil M. Moral distress among nurses working in Covid-19 wards : a cross-sectional study in 2021. 2021;1–16.

21. Ale A, Subba R, Ghimire A. Journal of Medicine and Medical Sciences Moral Distress among Nurses Working in a Teaching Hospital. 2022;5–10.

22. Laurs L, Blaževičienė A, Capezuti E, Milonas D. Moral Distress and Intention to Leave the Profession: Lithuanian Nurses in Municipal Hospitals. J Nurs Scholarsh. 2020;52(2):201–9.

23. Oh Y, Gastmans C. Moral distress experienced by nurses : A quantitative literature review. 2018;22(1):15–31.

24. Lusignani M, Giannì ML, Re LG, Buffon ML. Moral distress among nurses in medical, surgical and intensive-care units. J Nurs Manag. 2019;25(6):477–85.

25. Afoko V, Hewison A, Neilson S, Newham R. Moral distress experienced by neonatal intensive and paediatric care nurses in Northern Ghana : a qualitative study. 2022;

26. Emmamally W, Nursing B, Nursing M. Exploring moral distress among critical care nurses at a private hospital in Kwa-Zulu Natal , South Africa. 2020;36(2):104–7.

27. Harrowing JN, Mill J. International Journal of Nursing Studies Moral distress among Ugandan nurses providing HIV care : A critical ethnography. Int J Nurs Stud [Internet]. 2020;47(6):723–31. Available from: http://dx.doi.org/10.1016/j.ijnurstu.2009.11.010

28. REBECCA J. DEBOER, ESPÉRANCE MUTONIWASE, CAM NGUYEN, EUGENE NKUSI, FIDELE SEBAHUNGU LNS and CS. Moral Distress and Resilience Associated with Cancer Care Priority Setting in a Resource-Limited Context. 2021;

29. Munyanziza T, Bhengu B, Cishahayo EU. Workplace Stressors and Coping Strategies of Intensive Care Unit Nurses at University Teaching Hospitals , in Rwanda. 2021;4(1).

30. Booth AT. ThinkIR : The University of Louisville ' s Institutional Repository Moral distress and moral residue among nurses working in the surgical intensive care unit : a descriptive qualitative approach . 2020;

31. Ramos FR, Barth PO, Maria A, Schneider M, Cabral AS, Reinaldo S. Effects of Moral Distress on Nurses : Integrative Literature Review. cogitare Enferm. 2019;21(2):1–13.

32. Dehghani A, Sobhanian M, Faseleh Jahromi M. The effect of communication skills training on nurses' moral distress: A randomized controlled trial. Electron J Gen Med. 2022;19(6):em404.

33. Lerkiatbundit S, Borry P. Moral Distress Part I: Critical Literature Review on Definition, Magnitude, Antecedents and Consequences. He01Tci-ThaijoOrg [Internet]. 2019;(January). Available from: http://portal.in.th/tjpp

34. Andersson M, Nordin A, Engström Å. Critical care nurses' perception of moral distress in intensive care during the COVID-19 pandemic – A pilot study. Intensive Crit Care Nurs. 2022;72.

35. Fumis RRL, Junqueira Amarante GA, de Fátima Nascimento A, Vieira Junior JM. Moral distress and its contribution to the development of burnout syndrome among critical care providers. Ann Intensive Care. 2018;7(1):1–8.

36. Prompahakul C, Epstein EG. Moral distress experienced by non-Western nurses: An integrative review. Nurs Ethics. 2020;27(3):778–95.

37. Mealer M, Moss M. Moral distress in ICU nurses. Intensive Care Med. 2019;42(10):1615–7.

38. Romero-García M, Delgado-Hito P, Gálvez-Herrer M, Ángel-Sesmero JA, Velasco-Sanz TR, Benito-Aracil L, et al. Moral distress, emotional impact and coping in intensive care unit staff during the outbreak of COVID-19. Intensive Crit Care Nurs. 2022;70(September 2021).

39. Atashzadeh-Shoorideh F, Tayyar-Iravanlou F, Chashmi ZA, Abdi F, Cisic RS. Factors affecting moral distress in nurses working in intensive care units: A systematic review. Clin Ethics. 2021;16(1):25–36.

40. Bressler T, Hanna DR, Smith E. Making Sense of Moral Distress Within Cultural Complexity. 2019;10029.

41. Piers RD, Eynde M Van Den, Steeman E, Vlerick P. End-of-Life Care of the Geriatric Patient and Nurses ' Moral Distress End-of-Life Care of the Geriatric Patient and Nurses ' Moral Distress. J Am Med Dir Assoc [Internet]. 2018;13(1):80.e7-80.e13. Available from: http://dx.doi.org/10.1016/j.jamda.2010.12.014

42. Karagozoglu S, Yildirim G. Moral distress in Turkish intensive care nurses. 2019;

43. Gustavsson ME, Arnberg FK, Juth N, Von Schreeb J. Moral Distress among Disaster Responders: What is it? Prehosp Disaster Med. 2020;35(2):212–9.

44. He AS, Lizano EL, Stahlschmidt MJ. When doing the right thing feels wrong: Moral distress among child welfare caseworkers. Child Youth Serv Rev [Internet]. 2021;122(September 2020):105914. Available from: https://doi.org/10.1016/j.childyouth.2020.105914

45. Souza Ramos FR, da Silva Caram C, Cozer Montenegro L, Santana Caçador B, Devos Barlem EL, Menezes Brito MJ. Experiences Of Moral Distress In Nurses' Daily Work. Int

Arch Med. 2019;(December).

46. Robaee N, Atashzadeh-Shoorideh F, Ashktorab T, Baghestani A, Barkhordari-Sharifabad M. Perceived organizational support and moral distress among nurses. BMC Nurs. 2018;17(1):1–7.

47. Vaziri MH. Moral Distress among Iranian Nurses. 2018;32–6.

48. Rushton CH, Caldwell M, Kurtz M. CE: Moral Distress: A Catalyst in Building Moral Resilience. Am J Nurs. 2018;116(7):40–9.

49. Lizarondo L. Moral Distress (Nurses): Interventions in Critical Care. JBI Evid Summ. 2020;

50. Langley GC, Kisorio L, Schmollgruber S. Moral distress experienced by intensive care nurses. South African J Crit Care. 2018;31(2):36–41.

51. Schaefer R, Lourdes E, Pavone C, Margarida Z. Identification of risk factors for moral distress in nurses : basis for the development of a new assessment tool. 2020;(July):1–12.

52. Dodek PM, Cheung EO, Burns KEA, Martin CM, Archambault PM, Lauzier F, et al. Moral distress and other wellness measures in canadian critical care nurses. Ann Am Thorac Soc. 2021;18(8):1343–51.

53. Rafaela Schaefer2, Elma Lourdes Campos Pavone Zoboli3 MV. Moral Distress in Nurses : a Description of the Risks for Sofrimento Moral Em Enfermeiros : Descrição Do Risco Para. Texto Context Enferm [Internet]. 2019;27(4):1–10. Available from: https://www.scielo.br/j/tce/a/ZZZyqPqxYBZL3mLrq3R8xzt/?lang=en&format=pdf

54. Nassehi A, Cheraghi MA, Hosseini AS, Pashaeypoor S, Mahmoudi N. Moral distress in nursing: A concept analysis. Drug Invent Today. 2019;11(5):1047–54.

55. Ameri M, Mirhashemi B, Hosseini SS. Moral distress and the contributing factors among nurses in different work environments. 2015;2(3):44–9.

56. Ay M, Cs L, Mk Y. Moral distress , a challenge to job satisfaction and quality nursing care among nurses in a tertiary institution in northern Nigeria. 2019;98–102.

57. Jean N. Moral distress among Ugandan nurses providing HIV care : a critical ethnography. 2019;47(6):723–31.

58. Abd H, Hamid E, Reda A. Moral Distress Related Factors Affecting Critical Care Nurses. 2019;(August).

59. Shikalepo EE. Defining a Conceptual Framework in Educational Research Defining a Conceptual Framework in Educational Research. Namibia Univ Sci Technol. 2020;1(2):1–8.

60. Wilson MA. Analysis and evaluation of the moral distress theory. 2018;1–8.

61. Zuzelo PR. E XPLORING THE M ORAL D ISTRESS OF R EGISTERED N URSES. 2017;14(3).

62. Pauly BM, Varcoe C, Storch J. Framing the Issues : Moral Distress in Health Care. 2019;(March):1–11.

63. Epstein EG, Whitehead PB, Prompahakul C, Thacker R, Hamric AB, Epstein EG, et al. Enhancing Understanding of Moral Distress : The Measure of Moral Distress for Health Care Professionals Enhancing Understanding of Moral Distress : The Measure of Moral Distress for Health Care Professionals. AJOB Empir Bioeth [Internet]. 2019;0(0):1–12. Available from: https://doi.org/10.1080/23294515.2019.1586008

64. Ministry of Health Rwanda and Center RB. Rwanda Annual Health Statistics Booklet 2020. 2020;

65. Wang X, Cheng Z. Cross-Sectional Studies: Strengths, Weaknesses, and Recommendations. Chest [Internet]. 2020;158(1):S65–71. Available from: https://doi.org/10.1016/j.chest.2020.03.012

66. Kaur S. REVIEW ARTICLE SAMPLE SIZE DETERMINATION (FOR DESCRIPTIVE STUDIES) Simarjeet Kaur. Int J Curr Res. 2019;9(3):48365–7.

67. Taherdoost H. Sampling Methods in Research Methodology ; How to Choose a Sampling Sampling Methods in Research Methodology ; How to Choose a Sampling Technique for. 2019;(September).

68. Columbia University. Research Instrument Examples. Columbia Univ [Internet]. 2021; Available from: https://www.tc.columbia.edu/media/administration/institutional-review-board-/irb-submission---documents/Published_Study-Material-Examples.pdf

69. Taylor P, Hamric AB, Borchers CT, Epstein EG. Development and Testing of an Instrument to Measure Moral Distress in Healthcare Professionals Development and Testing of an Instrument to Measure Moral Distress in Healthcare Professionals. (December 2019):37–41.

70. Salam M, Adlan AA, Alturki AS. Prevalence of severe moral distress among healthcare providers in Saudi Arabia. 2019;107–15.

71. Langley GC, Kisorio L, Schmollgruber S. Moral distress experienced by intensive care nurses. 2020;31(2):36–41.

72. Talebian F, Talebian F, Hosseinnataj A, Yaghoubi T. The Relationship between Resilience and Moral Distress among Iranian Critical Care Nurses : A Cross-sectional Correlational Study. 2022;

APPENDIX

1. **QUESTIONNAIRE**

Topic: ASSESSMENT OF MORAL DISTRESS AND ITS ASSOCIATION FACTORS AMONG NURSES WORKING AT UNIVERSITY TEACHING HOSPITAL OF KIGALI, RWANDA.

SECTION ONE DEMOGRAPHIC CHARACTERISTIC OF NURSE'S PARTICIPANT: CIRCLE THE ANSWER

1. What is your gender?

A. Female

B. Male

2. What is your marital status?

1. Single

2.Married

3.Divorsed

4. Widowed

3. What is your educational level?

1. Advanced diploma holder nurse

2. Bachelor holder nurse

3. Masters holder nurse (cert./spec.)

4. PhD holder nurse

4. How old are you? (In years)

1.<30 years

2. 31 – 60

3. >50 years

5. Which department are you working in?

1. Surgical

2. Internal medicine

3. ICU/HDU

4. Pediatric

5. Accident and emergency

6. Neonatology/NICU

6. How many your years/experience in your department?

1. Less than 1 year

2. 1-5

3. 6-10

4. 11-15

5. 16-20

6. >20 years

7. What is your working shift (time)?

1. Day time

2. Night time

3. Day/night

8. How many patients and nurse ration in your department?

1. 1/1 ratio

2. 1/2 ratio

3. 1/3 ratio

4. 1/4 ratio

5. More than 1/4

SECTION 2 REVISED MORAL DISTRESS SCALE

This section B, comprised the moral distress scale-revised (MDS-R) questions, consisted of 21-items or questions of clinical situations believed to be morally distressing to healthcare professionals.

Put the sign of v on correct response on both frequency and intensity of items you believed it cause moral distress development for nurses in your department.

REVISED MORAL DISTRESS SCALE FOR HEALTH CARE PROVIDERS.

NO	**Situation**	**Frequency**					**Intensity**				
		Never	**Rarely**	**Sometimes**	**Often**	**Always**	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
9	Provide less than optimal care due to pressures from administrators or insurers to reduce costs.										
10	Witness healthcare providers giving false hope to a patient or family.										
11	Follow the family's wishes to continue life support even though I believe it is not in the best interest of the patient.										
12	Initiate extensive life-saving actions when I think they only prolong death.										
13	Follow the family's request not to discuss death with a dying patient who asks about dying.										
14	Carry out the physician's orders for what I consider to be unnecessary tests and treatments.										

NO	**Situation**	**Frequency**					**Intensity**				
		Never	**Rarely**	**Sometimes**	**Often**	**Always**	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
15	Continue to participate in care for a hopelessly ill person who is being sustained on a ventilator, when no one will make a decision to withdraw support.										
16	Avoid taking action when I learn that a physician or nurse colleague has made a medical error and does not report it.										
17	Assist a physician who, in my opinion, is providing incompetent care.										
18	Be required to care for patients I don't feel qualified to care.										
19	Witness medical students perform painful procedures on patients solely to increase their skill.										

NO	**Situation**	**Frequency**					**Intensity**				
		Never	**Rarely**	**Sometimes**	**Often**	**Always**	**Never**	**Rarely**	**Sometimes**	**Often**	**Always**
20	Provide care that does not relieve the patient's suffering because the physician fears that increasing the dose of pain medication will cause death.										
21	Follow the physician's request not to discuss the patient's prognosis with the patient or family.										
22	Increase the dose of sedatives/opiates for an unconscious patient that I believe could hasten the patient's death.										
23	Take no action about an observed ethical issue because the involved staff member or someone in a position of authority requested that I do nothing.										

NO	Situation	Frequency					Intensity				
		Never	Rarely	Sometimes	Often	Always	Never	Sometimes	Rarely	Often	Always
24	Follow the family's wishes for the patient's care when I do not agree with them but do so because of fears of a lawsuit.										
25	Work with nurses or other healthcare providers who are not as competent as the patient care requires.										
26	Witness diminished patient care quality due to poor team communication.										
27	Ignore situations in which patients have not been given adequate information to insure informed consent.										
28	Watch patient care suffer because of a lack of provider continuity.										
29	Work with levels of nurse or other care providers that I consider unsafe.										

Section C Institutional risk factors of moral distress development among nurses.

Put sign of V on the column of **YES** if you agree that institutional factor cause moral distress among nurses and in **NO** column if you fink it is not an institutional risk of moral distress among nurses.

NO	**Items considered as institutional risk factor for moral distress development among nurses**	**Percentage (%) of risk factors identified as moral distress cause.**	
		YES	NO
30	Lack of effective leadership		
31	Lack of organization health system		
32	Lack of support from institution		
33	Nursing shortage in health system		
34	Lack of discussion of ethical issue in health system		
35	Lack of ethics committees		
36	Lack of equipment/resources		
37	Problems in the physical structure of the institution		
38	Lack of consideration for nurse's knowledge		
39	Excessive number of patients assigned to each nurse		
40	Low autonomy at work		
41	Being excluded from decision-making of nurses		

2 INFORMATION AND CONSENT FORM SHEET

STUDY TITLE

ASSESSMENT OF MORAL DISTRESS AND ITS INSTITUTIONAL FACTORS AMONG NURSES WORKING AT UNIVERSITY TEACHING HOSPITAL OF KIGALI, RWANDA.

PRINCIPAL INVESTIGATOR

Name: Emmanuel MANIRAHO

Institution: University of Rwanda College of Medicine and Health Sciences

Phone number:0781616651/0726927683

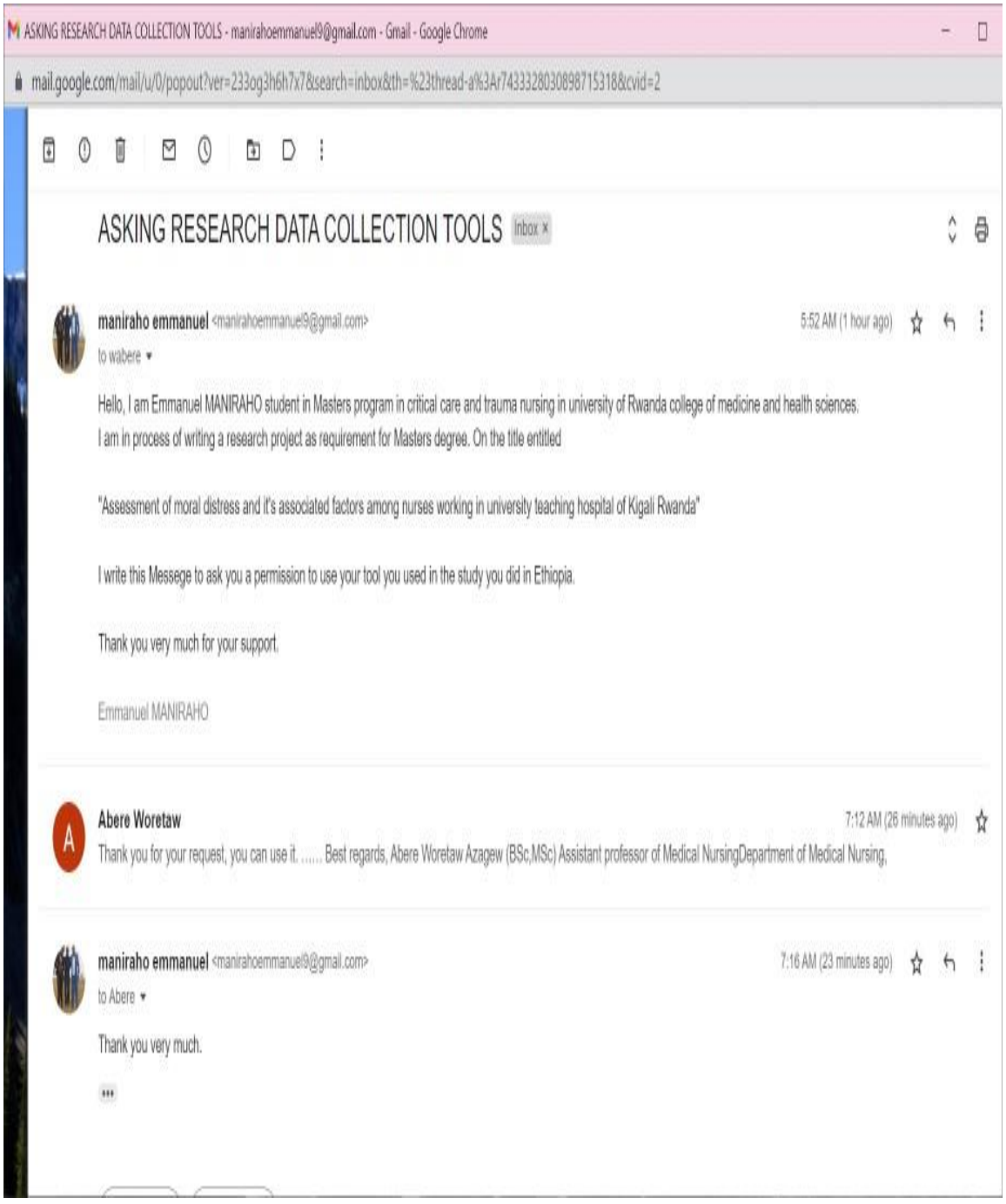
Email: manirahoemmanuel9@gmail.com

I, MANIRAHO Emmanuel, Masters student in critical and trauma nursing in UR-CMHS, Remera campus, school of nursing under supervisor Dr KANAZAYIRE Clementine, Coo supervisor NIYONSENGA Gaudence and MUTABAZI Gedeon, I would like to conduct research entitled "assessment of moral distress and its institutional factors among nurses working at University Teaching Hospital of Kigali, Rwanda. This research is one of my requirements that I have to fulfil in order to obtain master degree in critical care and trauma nursing. In regarding this research, I have prepared a questionnaire for data collection which will not include your name on it. The information and findings from questionnaire will be kept confidential. You have right to agree or disagree to participate from this study and to withdraw any time and you will not be condemned. Your identity will not be disclosed in any published and written material resulting from this study. With your permission, I kindly request you to give as much information as possible by responding well the questionnaire which will be addressed to you. If you accept to participate in this research, please only sign in the space provided for you bellow.

Participant's initials names and signature: ……Date …../…/2023

Investigator's name and signature: ……..……. Date …. /… /2023

3 LETTER OF APPROVAL AND PERMISSION TO USE TOOL



4. ETHICAL CLEARANCE FROM IRB CMHS

UNIVERSITY of RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCES

DIRECTORATE OF RESEARCH & INNOVATION

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 22/12/2022
Ref: CMHS/IRB/587/2022

MANIRAHO EMMANUEL

Postgraduate Studies Program,

School of Nursing and Midwifery, CMHS, UR

Dear MANIRAHO EMMANUEL,

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled ***"Assessment of moral distress and its institutional factors among nurses working in University Teaching Hospital of Kigali, Rwanda."***

Having reviewed your application and been satisfied with your protocol, 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.

Assoc. Prof. Stefan Jansen (PhD)
Acting 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

5. ETHICAL CLEARANCE FROM ETHICS COMMITEE CHUK FOR DATA COLLECTION

CENTRE HOSPITALIER UNIVERSITAIRE
UNIVERSITY TEACHING HOSPITAL

Quality Health Care
Training & Research

Ethics Committee / Comité d'éthique

13th Apr,2023 Ref.:EC/CHUK/065/2023

Review Approval Notice

Dear MANIRAHO Emmanuel,

Your research project: ***"ASSESSMENT OF MORAL DISTRESS AND ITS INSTITUTIONAL FACTORS AMONG NURSES WORKING IN UNIVERSITY TEACHING HOSPITAL OF KIGALI, RWANDA "***

During the meeting of the Ethics Committee of University Teaching Hospital of Kigali (CHUK) that was held on 13th Apr,2023 to evaluate your request for ethical approval of the above mentioned research project, we are pleased to inform you that the Ethics Committee/CHUK has approved your research project.

You are required to present the results of your study to CHUK Ethics Committee before publication by using this link:www.chuk.rw/research/fullreport/?appid=787&&chuk.

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

Yours sincerely,

Dr Emmanuel Rusingiza Kamanzi
The Chairperson, Ethics Committee,
University Teaching Hospital of Kigali

ETHICS COMMITTEE
CHUK

Scan code to verify.

" 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 "