USE OF PAIN ASSESSMENT TOOLS AMONG NURSES CARING FOR CHILDREN IN A SELECTED DISTRICT HOSPITAL IN RWANDA

MUKAZIBONEYE Triphonie

College of Medicine and Health Sciences

School of Nursing and Midwifery/Pediatric track

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BY

MUKAZIBONEYE Triphonie

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Supervisor: Dr. Godfrey Katende

Co-Supervisor: Ms. Philomene Uwimana

2022

DECLARATION

I, Triphonie Mukaziboneye do herewith declare that the research study entitled "Use of pain assessment tools among nurses caring for children in selected district hospital in Rwanda." submitted in fulfillment of the requirements for the degree of Master of Science in Nursing Pediatric track at University of Rwanda – College of Medicine and Health Sciences (UR-CMHS), is my original work and has not been submitted elsewhere. Furthermore, I declare that a list of references is delivered with all the quoted and cited information sources.

Signature 30/03/2022

Triphonie MUKAZIBONEYE

Authority to submit the dissertation

Surname and First Name of the Supervisor …

Dr. Katende Godfrey

In my capacity as a Supervisor, I do hereby authorize the student to submit his/her dissertation.

Date and Signature of the Supervisor/Co-Supervisor

Date: 19th April, 2022

DEDICATION

I would like to dedicate this work to:

To Almighty God,

To my children and family,

College of medicine and health sciences (CMHS) authorities,

Our lecturers,

All my friends, classmates.

ACKNOWLEDGEMENTS

First, I would like to thank God, the Almighty for the countless blessings, help and knowledge to be able to work on this research. In addition, I would like to express my sincere gratitude to the following individuals for their numerous contributions.

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Finally, my sincere appreciation goes to my family and children for their unfailing support and unstoppable encouragement.

My God bless you.

Thank you.

ABSTRACT

Background: The majority of the children will experience pain in their childhood. In hospitals, nurses are the first caretakers for children who are experiencing pain, and with the use of pain assessment tools, the nurses could enhance their ability to take care of the children with pain.

Aim: To assess the use of pain assessment tools among nurses caring for children at in a selected district hospital in Rwanda.

Methods: The descriptive cross-sectional design was used. The data was collected from 153 nurses who took care of children under 15 years of age in pediatric ward, surgical ward, emergency department, neonatology, outpatient department and theater at Kabgayi district hospital from southern province, Rwanda. The data was collected using pretested questionnaires and by checking patients' files. The collected data was analyzed using the SPSS Statistics version 26. The descriptive statistics were used to summarize the data. Bivariate analysis and statistical significance were used to infer the association between use of pain assessment tools and other variables.

Results: This research identified that a good proportion (60.4%) of the nurses at Kabgayi district hospital used the pain assessment tools with the verbal pain rating scale being the most frequent used tool. However, the study also demonstrated that nurses (83.8%) had inadequate resources to facilitate them in the effective use of these tools. The review of patient files indicated that nurses needed to improve on documentation when using the pain assessment tool. The use of pain assessment tools was associated with the nurses' working shift (p=0.022). The nurses who worked during the day used the pain assessment tools the most. On contrary, nurses who worked during the nights seemed to not use the pain assessment tools frequently (35.1%).

Conclusion: The findings indicate that the hospital should provide enough support to the nurses to improve the effective use of pain assessment tools. Furthermore, there is a need for training for nurses to start using other type of pain assessment tools such as FLACC and Wong-Baker faces pain rating scale.

Keywords: Children, Nurses, Pain assessment tools, Pain management, Use of pain assessment tools.

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LIST OF SYMBOLS AND ABBREVIATIONS/ACRONYMS

FLACC: Face, Legs, Activity, Cry and Consolability

PIPP: Premature Infant Pain Profile

NPRS: Numeric Pain Rating Scale

CPOT: Critical-care Pain Observational Tool

CPD: Continuing Professional Development

BUTH: Butare University Teaching Hospital

NRS: Numeric Rating Scale

ICU: Intensive Care Units

SPSS: Statistical Package for the Social Sciences

CMHS: College of Medicine and Health Sciences

NISR: National Institute of statistics of Rwanda

MoH: Minister of Health

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1 CHAPTER ONE: INTRODUCTION

1.1.INTRODUCTION

Over Forty two percent (42.9%) of Rwanda's population are children aged 0-14 years (1). This significant proportion calls for crucial and robust care of children while hospitalized including but not limited to pain management. The optimal management of pain depends on accuracy of the examination from the caretaker. Several interventions including the use of pain assessment tools need to be considered for the hospitalized children (2).

The notion of pain assessment and management appears to be new in Rwandan hospitals, that is according to the work done by Ndagijimana in southern province where Kabgayi district hospital is also located (2). According to Tuyishime et al. (2017), pain management among nurses is lacking, mostly due to low awareness (3) which explains why nurses' use of pain assessment tools among nurses is insufficient (4). National Council of Nurses and Midwives in Rwanda provides nurses with continuing professional development (CPD), however, it needs to be strengthened by emphasizing on pain management (5).

Nurses play an important role in pain management among children as they spend most of the time with them. Even though it is the nurses' duty to care for hospitalized children with pain by supporting them, providing effective pain management to children remains a challenge for nurses. This work was conducted on nurses caring for children hospitalized at Kabgayi hospital and focused on how nurses use pain assessment tools to optimally manage children's.

1.2.BACKGROUND TO THE STUDY

1.1.1 Pain in children

Most children will experience pain in their childhood, pediatric pain varies from mild, severe to chronic conditions. Pain is perceived emotionally and arise from brain signals when an individual experiences the pain which might be physical (6). Children's understanding about pain depends on the level of their development, it also depends on their capacity to precisely communicate the pain, and diversity of the prior experience about the pain. Furthermore, infants do not have the ability to communicate as they do not possess the words to describe the pain, they are experiencing (7). In addition, older children (compared to infants) are sometimes unwilling to communicate

about the pain as they might be afraid of the aftermath, on the other hand children incapability to describe their pain may be due to their few vocabulary words. Several factors help to change the series of transmission of nociceptive and help in altering the pain of the child or fear (8).

Pain in children is still left untreated and children experiences unnecessary pain (9). A quality assessment conducted by the Ministry of Health in Rwanda found that in emergency medical services found that 55% of the patients receive who endured pain received some level of care (10).

Pain can also be classified as behavioral fact, due to how children behave in response to the pain's influence, which may be related to stress since a child may be afraid because he/she is experiencing some painful procedures. As a result, children's pain becomes worse and unpleasant. Pain management in children is difficult, and is challenging for nurses, and the use of tools to manage the pain among nurses is often inadequate (11).

1.1.2 Pain assessment tools

According to a study conducted by Stefan et al (2019), pain management's sole goal is to reduce patient discomfort, anxiety and more importantly pain to restrict the children's fear of health procedures (12). The most important part of pain management is pain assessment (13).

According to the Nursing Times from the United Kingdom, a monthly magazine for the nurses, it is a good idea to have more than one pain assessment tools to consider for children (14). Examples of the tools are Premature Infant Pain Profile (PIPP), behavioral tool for pre-verbal children called Face, Legs, Activity, Cry and Consolability (FLACC), Wrong Baker Faces, pain rating scale for mostly verbal children so that depending on age, you can categorize the children's pain (15).

According to a study conducted by Gabija et al in Lithuania, pain assessment tools are crucial to handling pain (9). This is supported by a work done in Malawi which explains how the use of FLACC can be crucial in helping the children who are experiencing pain (16). Furthermore, Ndagijimana showed in his work that FLACC and Wrong Baker Faces are amongst the tools used in Butare University Teaching Hospital (BUTH) to assess pain in children (2).

1.1.3 Use of pain assessment tools among nurses.

To contribute to excellent patient care, more often nurses lack appropriate skills regarding pain and tools to manage it. It is inappropriate for children to suffer from poor management of pain or nurses to provide deficient pain management. It is also unacceptable for nurses to have inadequate understanding about children's pain because it is part of their professional work.

Globally, the use of pain assessment tools among nurses is still inadequate. According to the study conducted at a teaching hospital in Brazil (17), authors asked several health professionals about their knowledge of pain assessment, most of them responded that the lack of training about pain assessment is the main reason low usage of pain assessment tools.

In Africa, the situation is similar for the use of pain assessment tools. For instance, a study conducted in Malawi indicated that inadequate pain management was caused by poor pain assessment related to insufficient knowledge of pain assessment tools. Most of the participants did not know how to use FLACC for pain assessment (16).

Faces related pain scales such as FLACC, Wrong Baker Faces were the most used pain assessment tools in 3 hospitals from southern province in Rwanda including Butare University Teaching Hospital (BUTH) (2). However, there was no consistency in usage because some nurses report that there is no protocol to follow in performing pain management among children (2).

In recent years, Rwanda's Ministry of Health has put much effort in pain management and assessment by rolling out several Continuing Professional Development (CPD) to some health care professional (2).

A research program was set up to improve it, starting in 2013 which appears that this was the period in which pain assessment and management usage was improved in several teaching hospitals in Rwanda (3).

Several nursing programs must embody pain as a mandatory component to train nurses including future nurses by equipping them with the tools used in pain assessment so that they end up with pain management skills for better health outcomes including those in pediatric settings.

Inadequate knowledge about pain assessment tools and management in general could lead to undesired consequences. These consequences could reach the point of increased heart rates and

increased breathing rates. Also, it could lead to psychological consequences such as distress, hopelessness, sleep disturbances, and loss of appetite. This study assessed the usage of pain assessment tools and to identify the factors influencing the effective use of pain assessment tools by nurses at Kabgayi district hospital.

1.3.PROBLEM STATEMENT

The use of pain assessment tools in pediatric settings in Rwanda is still inadequate despite the existence of Rwanda's guidelines for pain management (18). The study conducted by Muteteli et al (19) about pain management in neonates among nurses found that neonates units did not have pain assessment tools. Specifically, a high number of nurses (84.85%) disclosed that no assessment tool was present in the unit. Their findings showed that hospitals lack the use pain assessment tool to assist in pain management and eventually reduce the number of cases of untreated painful procedures in children.

Although several studies were conducted to understand the attitudes and knowledge of nurses in managing pain among children in several Rwandan hospitals (2), nurses need further knowledge about the use of pain assessment tools for hospitalized children. The professional knowledge of nurses about pain management is crucial in their daily activities in their ward, as a result, we see the importance of knowing the tools which can help nurses to better take care of the children experiencing pain. It is crucial for nurses to have skills about children's pain management. Some nurses use pain relief for managing pain in children, however, the use of pain assessment tools is the right way to effectively assess the pain and therefore, manage pain (20).

In Rwanda, few studies have been conducted about the tools to be used in pain management by the nurses, therefore, the researcher focused on the use of pain assessment tools in children admit at Kabgayi wards with the intentions of assessing the actual use of pain assessment tools by nurses caring children with pain.

1.4.THE AIM OF THE STUDY

The overall aim of this study was to assess the use of pain assessment tools among nurses caring for children admit at Kabgayi district hospital.

1.5.RESEARCH OBJECTIVES

The specific objectives were:

1. To identify pediatric pain assessment tools in use at Kabgayi district hospital.
2. To assess the actual use of pain assessment tools in Kabgayi district hospital.
3. To explore the factors influencing the effective use of pediatric pain assessment tools by nurses at Kabgayi district hospital.

1.6.RESEARCH QUESTIONS

1. What are the existing tools which are being used by nurses for pain management among hospitalized children at Kabgayi district hospital?
2. To what extent do nurses use pain assessment tools in their daily tasks of pain management in hospitalized children?
3. What are the factors influencing the effective use of pediatric pain assessment tools by nurses at Kabgayi district hospital?

1.7.SIGNIFICANCE OF THE STUDY

The result of the study will help the leaders of Kabgayi district hospital in understanding the existing use of tools for children's pain management among nurses. In addition, the study evaluated the current usage of several tools used for pain assessment at Kabgayi district hospital in its pediatric ward, this will help health care professionals especially nurses in Kabgayi district hospital and Rwanda in general to have a broader information about the usage of these pain assessment tools.

It also analyzed the factors affecting the utilization of the tools by nurses caring for children under 15 years of age in several wards at Kabgayi district hospital. Thus, providing the state of the use of pain assessment tools at Kabgayi district hospital.

Furthermore, this study will not only benefit Kabgayi hospital but also other hospitals across the country. It will help them to gain insights about the use of pain assessment tools in children's pain management and several tools they should use and how they should use them.

1.8.DEFINITION OF CONCEPTS

This section of the work defines the terms necessary for the reader to easily understand the study of use of pain assessment tools among nurses caring for children.

Pain: International association for the pain study offers a definition of pain as unpleasant sensory and emotional experience from a tissue damage (21). This definition is applicable to children because there is a mention of the way children sense pain might differ according to the change in their age. In this study, pain is only considered in children to assess how pain assessment tools are used for hospitalized children. As a result, pain is defined as the unpleasant sensory feeling for children at the hospital in in different wards.

Assessment: means evaluating or studying something to understand it (22). It can also mean a use of resources which might be technological, or human to assess something. In the context of this study, assessment will refer to assessing the pain among the children by nurses.

Tool: An item used to perform a specific purpose. It can be mechanical object or technical, furthermore, it can be a concept to change something. In the context of this work, I will be assessing how pain assessment tools lead to a better pain management by nurses to take care of hospitalized children. A tool in this study is something that is used to professionally assess the pain among children.

Pediatric: Medicine branch that involves taking care of children and infants. It is concerned with mental, social, and physical health of children from infants to young children. The study is concerned with children under 15 years.

1.9.STRUCTURE/ORGANIZATION OF THE STUDY

The most important part is the chapter 1 introduction which introduces to the reader about work, giving the background to the study and explaining the problem. The document continues with chapter 2, the literature review to talk about related work, the other part is methodology (chapter 3), research findings (chapter 4), discussion (chapter 5), summary (chapter 6) and finally giving conclusions and recommendations with references and appendices.

2 CHAPTER TWO: LITERATURE REVIEW

2.1 INTRODUCTION

Based on the chosen topic, documenting the evaluation of the subject available within a topic area is crucial to a good research (23). This literature review includes four main parts including the introduction, theoretical literature, empirical literature, and the conclusion. The first part is the introduction which introduces to the reader about the research topic in general, it also talks about the structure of the literature and what a reader should expect. The second part is the theoretical literature review that highlights the most important part of the research which is the tools used for pain management among nurses with the addition of definition of pain, and pain management. It also highlights the causes of pain such as physical and emotional. The third part is the empirical literature that critically appraise the work done by others about the topic of the use of tools in pain management by the nurses among children. The fourth part is the conclusion, and it includes the critical review if the research gap regarding the topic of tools used in pain management, some discussions about research conducted in Rwandan hospitals are presented.

In general, this literature review critically analyzes the work done by others with the chosen topic of use of pain assessment tools in pain management by the nurses among children. To be able to get the similar studies, a systematic research was conducted using keywords like tools for pain management among nurses. Furthermore, results were retrieved online via google scholar, PubMed, Medline, Cochrane library and national library of medicine.

2.2 THEORITICAL LITERATURE

Use of pain assessment tools among nurses caring for children is a major concern for many hospitals. Despite being a major problem, knowledge about pain assessment is still lacking in Rwandan hospitals (19). Numerous studies mentioned that poor use of pain management tools leads to lengthy stay of a patients in the hospital. The section of theoretical literature lists some tools used for pain management, and how pain management is practiced in some Rwandan hospitals and some ways to manage pain among children.

2.2.1 Causes of pain among children.

When children are not taken care of carefully, pain may have several causes including physical, emotional stress, and social effects. Emotional stress can come from depression, tiredness, or anxiety while physical pain hurts the body part of a children. In children, brain networks are immature, and most body parts are all immature but undergoes a change which might be rapid during maturation, and this add difficulty in understanding the assessment, causes, and management of pain (24). This indicates the reason why use of pain assessment tools among nurses is crucial for tracing the causes of pain and thereafter, create a pain management scheme.

It was sometimes perceived that neonates do not endure pain due to the immaturity, but it has been proved to be wrong (25). They experience physiologic responses to pain, and it can cause neurological impairments.

2.2.2 Tools for pain assessment

It is crucial to have several tools in place to help several children's patient groups. Metrics are used to differentiate pain levels (14). For instance, 0-5 and/or 0-10 pain ratings may be used, means that it is independent to which tools is used for pain assessment. This helps in early detection of pain and thus, an effective pain management.

Tools used for neonates are for instance Premature Infant Pain Profile (PIPP) (14), and FLACC is used for children with cognitive impairment issues. Pain scale being one the widely used tool is important for verbal children. For pain scale, two methods are used which are numerical scale rating and face pain scale, so depending on their developmental level or age, one of the methods is used (14).

The figure below shows the pain assessment model to follow.

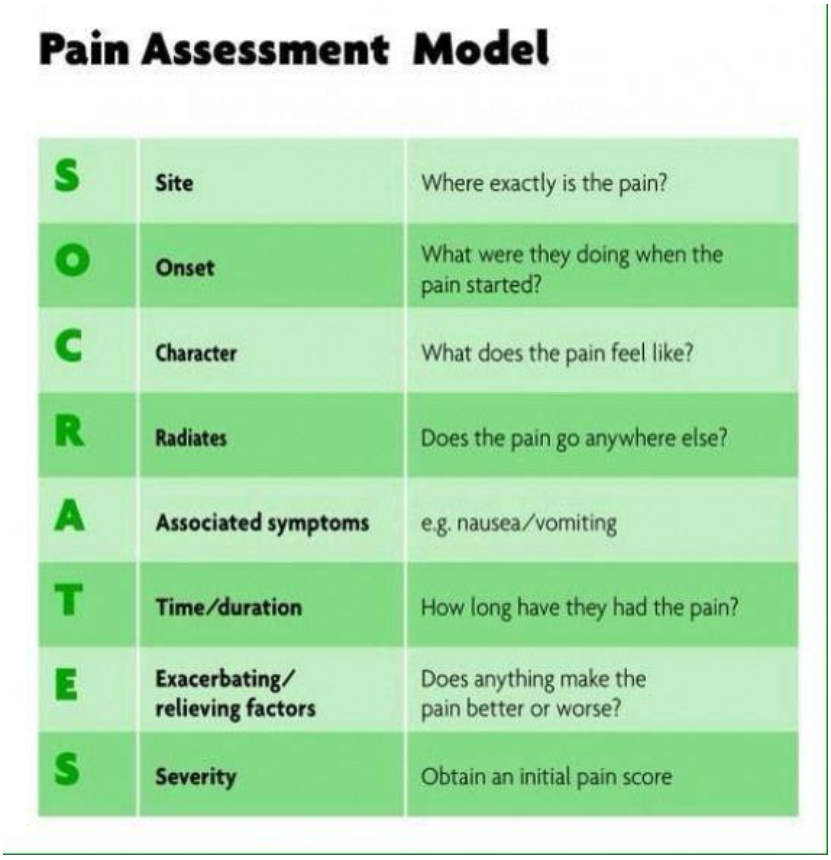


Figure 1 - Pain assessment model

2.2.2.1 Pain scale

A pain scale is a pain assessment tool that nurses/doctors use to assist a person who is experiencing pain. It is usually done via self-reports from a patient side but when it comes to children, the help of a guardian (or a parent) comes into play (26).

Pain scale tool assist the nurses to generate a careful diagnosis, and an effective treatment plan. This method is very useful in children because it provides several choices to nurses in pain assessment.

a. Numeric rating scales (NRS)

This is the most widely used pain scale which scale a children's pain from 0-5 or from 0-10, with 0 up to 5 being the worst scale.

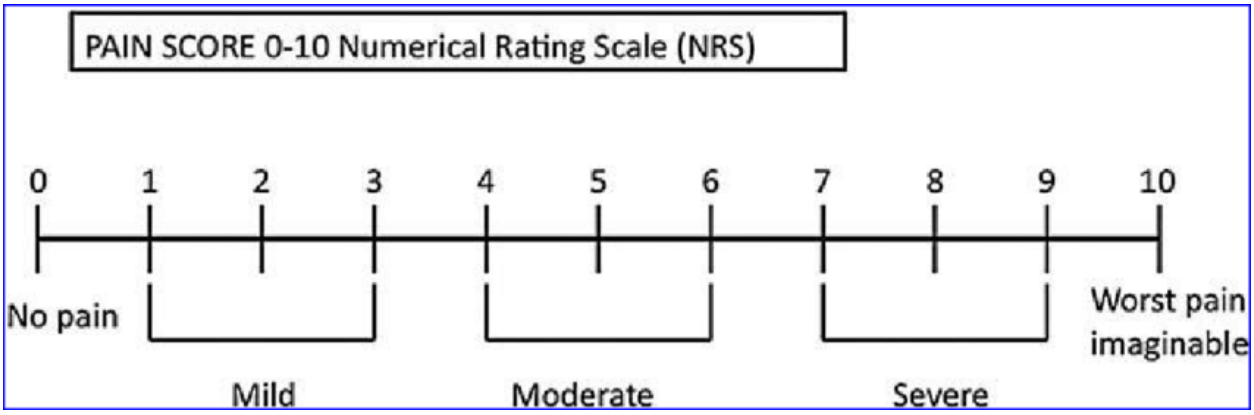


Figure 2- Numeric pain rating scale

Numeric Pain Rating Scale (NPRS) has been proved to be effective to understand pain changes in last 24 hours of the patient experiencing the pain (27).

b. Verbal pain rating scale

This tool is used in children with acute pain and aged between 6 and older but not in ages 4-5 years. According to Carla Kemp, a study was conducted to decide if this method is valid and effective for younger children, this study was done in emergency department.

Several patients were asked whether or not they are experiencing pain in order to separate the ones experiencing pain from individuals not experiencing pain. Then, they were asked about pain intensity using face pain scale and verbal rating scale. Results demonstrated a strong positive correlation between the two tools. However, between ages 4-6 the correlation was not strong which indicates that this tool is effective for children older than 6 years of age (28).

2.2.2.2 Face, Legs, Activity, Cry and Consolability (FLACC)

FLACC has been used in children aged 0-18 years, however, it is intended for children aged 0 months – 8 years. This behavioral scale can be summarized in the following table:

Categories	**Scoring**		
	0	1	2
Face	No particular expression or smile	Occasional grimace or frown, withdrawn, disinterested	Frequent to constant frown, clenched jaw, quivering chin
Legs	Normal position or relaxed	Uneasy, restless, tense	Kicking, or legs drawn up
Activity	Lying quietly, normal position, moves easily	Squirming, shifting back and forth, tense	Arched, rigid, or jerking
Cry	No cry (awake or asleep)	Moans or whimpers, occasional complaint	Crying steadily, screams or sobs, frequent complaints
Consolability	Content, relaxed	Reassured by occasional touching, hugging, or being talked to, distractible	Difficult to console or comfort

Table 2.2-1- FLACC behavioral scale (29).

The way it works, each of the category in the FLACC table is scored 0-2 and a nurse give a result from 0 to ten (29). This technique can be performed in two ways:

- For children who are dormant
- For children who are awake

According to the author of FLACC original report, patients who are not asleep need to be watched for 2-5 minutes. A nurse needs to change the patient's position and assess the body. Also, needed a nurse should start consoling the child.

For children who are dormant, they need to be watched 5 minutes or more. Parts to be observed are body and legs.

a. Faces, Legs, Activity, Cry, Consolability Revised Scale (FLACC-R)

This tool benefits children who are beyond one year and who cannot describe their pain. So FLACC-R help the health workers to help children enduring pain but who are not able to report the pain. This tool also helps in children with issues in their growth or development delays.

2.2.2.3 Wong-Baker faces pain rating scale.

This technique is a pain scale which was developed by Connie Baker and Donna Wong. The authors developed the method using a sequence of faces which range from happy to crying and given a score from 0 to 10.

Figure 3- Wong-Baker faces pain rating scale.

This pain scale is effective for children because they might not know the level of their pain or be able to scale it to 10 but it is easy for them to interpret a cartoon face/faces (30).

2.2.3 Advantages of use of pain assessment tools among nurses

Benefits of tools used for pain assessment varies with respect to the tools used as well as the patients. Several approached helps as physiological intervention and they reduce pain among children, for instance distraction techniques which help in emergency case like in case of needles and other painful procedures (31).

Using tools will assist a nurse to provide adequate pain management. A systematic approach of pain management which involves using specific tools will enhance nurses' ability to accomplish:

- Diminished pain experience for children.
- Increased comfort.
- Enhanced physical, and psychological function for children.
- Increased complacency about pain management for nurses.

Pain is not as simple as people would think, it is not even easily measured. As a result, nurses should have information about sophisticated tools to be used during pain management procedures.

2.3 EMPIRICAL LITERATURE REVIEW

The studies about use of pain assessment tools among nurses caring for children were conducted in several aspects with various results. This section describes pain assessment tools that was evaluated by other researchers.

2.3.1 Use of pain assessment tools among nurses.

A study conducted by Ogidan et al. about the utilization of tools in pain assessment and management among nurses in Ekiti State (Nigeria) revealed that 32% of the nurses confirmed that they have used a pain assessment tool. Furthermore, 90% of the time, nurses suggest that unavailability of the tools was the main reason of their inadequate use. Finally, 83% of the time, nursing workload influenced the use of those tools. Authors provide a recommendation to policy makers of providing the tools or making them available (32).

Gregory of the East Lancashire hospital discussed several observational tools for pain assessment with the addition of pain scale. The author suggest that pain scales methods depend upon the communication of the patient to interpret their pain. In this case, numerous observational pain assessment tools can help in recognizing and evaluating the pain (33).

A need to determine which of the pain assessment tools is convenient for hospitals is crucial in order to boost the use of those tools in day-to-day clinical practice (34).

The overall aim of the work was to assess the use of tools in hospitals using questionnaire survey, and surprisingly no pain rating scale was used in those healthcare organizations with respect to nurses who were surveyed. Nurses responded that they use self-report strategy.

Furthermore, 42 % of the nurses who responded to the questionnaire said that they used Abbey pain assessment scale. It is essential that nurses are informed about which tool is being used at their hospital so that consistency is preserved (34).

Taking a good care of the patients should be a worldwide goal for nurses, in effort to achieve this goal pain management should be a major concern because pain decreases patient's comfort (35). Ehwarieme et al studied the factors recognized by nurses in using the tools for pain assessment by a survey of 306 nurses. They found that 284 of that sample uses pain scale and other tools, and nevertheless only 58 nurses used those tools regularly. The commonly used tools were numerical scale and self-report with the latter being used more. In addition, aspects like shortfall in nursing work force, inadequacy in pain assessment tools awareness, cultural conviction about pain among patients, shortage in exercising pain tools by the nurses, and absence of the tools were all found to be the obstacles in using pain assessment tools. Moreover, a difference in using the tools between male and female nurses with the mean of 3.6 among female and 2.8 among males was reported. Female individuals tended to use the tools more frequently than their male counterpart. The authors concluded that health care providers should come up with rules to force nurses in using pain assessment tools (35).

The use of pain assessment tools among nurses on patients with low consciousness is a considerable challenge. According to a study conducted in Oman, Ahmad-Ali et al recommend the use of behavioral tools such as pain observational tool to assess the pain in low consciousness patients. As the aim of their study, they discover the effects of using observational tool as a critical care tool for assessing pain among nurses to patients (36). The research was conducted in ICU with over 106 nurses, and they observed them while performing pain management and then after, they were taught how to use critical care pain observational tool (CPOT). As a result, the use of this tool improved nurse's knowledge and awareness of the pain management for low

consciousness patients. As a result, the authors mention that CPOT will boost nurse's management pain among low-conscious patients (36).

A study Gugsa et al suggests how nurses have an important part in management of pain. The author proposed a nurse-based pain management programme (37). First, according to the authors this programme is made of two parts: to educate nurses about pain in order to improve their knowledge on the matter, and to guarantee methodical patient's pain monitoring. It involved teaching nurses to incorporate numerical rating scale regularly. The authors investigated pain experience in patient before and after this programme. Eight hundred and forty-five (845) patients were included in the research, data were collected before and after six weeks of the programme. As a result, 68.8 % of the patients reported the severe pain but they dropped to 48.53 % in the performed survey after the programme (37).

2.3.2 Effective utilization of pain assessment tools among nurses in hospitalized children

Pediatric patients experience pain while undergoing several medical procedures. Redmann et al conducted a study about the use of FLACC tool in children who are hospitalized in pediatric wards and who are enduring adenotonsillectomy. A case study was conducted to 125 children hospitalized at pediatric wards, it included using FLACC pain assessment tool, use of opioid medications for pain. According to the author, 56% of the patients needed opioid medication and FLACC score results showed that there was a correlation between the result and use of opioid. FLACC scores diminished as the time goes which showed that this tool is required while treating pediatric patients with pain (38).

The difficulty in assessment of pain in pediatric patients should be given particular attention. Luane et al evaluated how nurses manage pain in hospitalized children (39). Using questionnaires distributed to several nursing individuals (among them practical nurses, registered nurses, and nurses' technicians) in a teaching hospital in Brazil. They were able to find 56 nurses to answer the questionnaire. As a result, 55 of them responded that they were familiar with several methods, like patient's behavior and physical examination. And 98.2% of them declared that they are aware of pain scales tool and also, most of them, stated that behavioral observation is the favorable tool to use (39). Among all who answered, they do not use pain scales or neither employ several other

tools in children's pain management. Authors conclude that it is vital to train nurses caring children (pediatric patients) on how to use several pain assessment tools.

2.3.3 Factors influencing the use of pain assessment tools among nurses.

There are factors which influence non-pharmacological methods for pain relief in children. According to a study conducted at a university hospital in Finland by Pölkki et al, 162 nurses were asked several questions using questionnaire in order to collect the data. They found five aspects which impact the utilization of non-pharmacological including pain alleviation skills, children's ability to collaborate, competences of nurses, workload, and participation of parent. As a result, 98% of the nurses reported that they plan to enhance their knowledge in children's pain alleviation tools. Also, 47% said that they are often provided with inadequate education about those tools. In addition, demographic variables such as age of nurses, work experience, and education also influence the use of pain management methods (40).

Educational intervention has been proved to help nurses in pain management, especially in the use of non-pharmacological methods. This method is effective in pain lessening but the lack of education about the matter is still high. Education about pain is a good approach for changing nurses' skills. Using the questionnaire, 108 nurses in Singapore participated and answered several queries. There was an increase in nurses reporting that they have increased the use of pain management tools. The education about non-pharmacological methods has shown a positive impact on nurses understanding to pain management.

2.4 RESEARCH GAP IDENTIFICATION

Many studies were conducted about the use of tools for pain assessment among nurses. Several authors focused on pain management techniques and factors that influences nurses in using pain assessment tools. However, some of the techniques were not adequately proved to be useful and some research still miss information and proof of concept.

Although, most researchers did several studies on use of pain assessment, they failed to provide a recommendation on which tools might be used in those hospitals. They should have also given a

detailed explanation of several tools in which nurses can use as a cheat sheet while they are on duty. This study aims at understanding the use of pain assessment tools among nurses at Kabgayi district hospital and to eventually help the hospital and other hospitals across the country to apply those tools in managing pain in children.

2.5 CONCEPTUAL FRAMEWORK

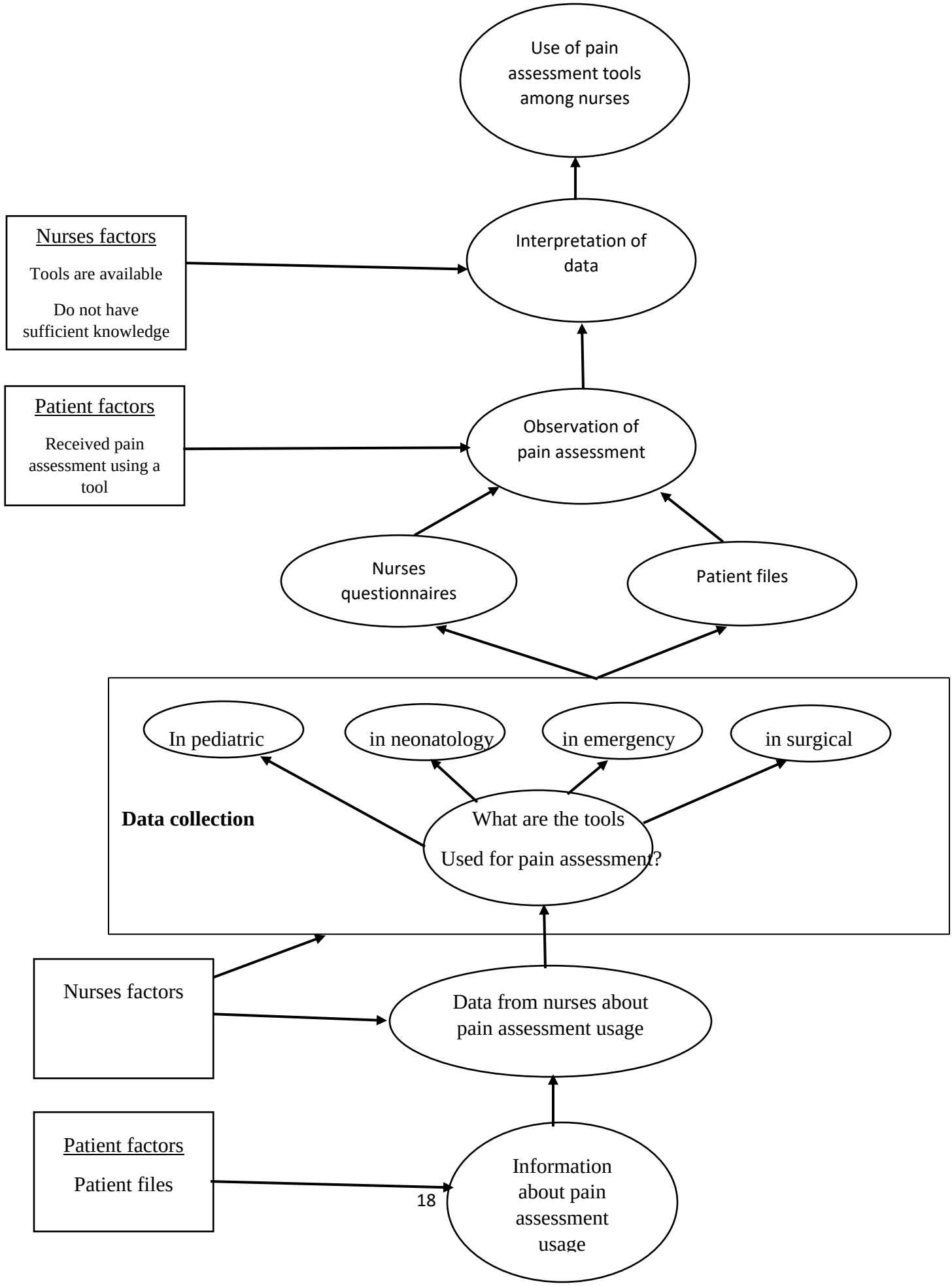
This study used a Conceptual Model of Pain Assessment (41). The model was used for pain assessment by basing on several factors and it was modified to be used in this work. Nurses and patients factor to see the pain assessment tools usage in the hospitals will be consulted.

This model is used for pain assessment and is based on assessing the source of pain, analyzing how the pain is perceived, the external signs and interpretation of those signs. The model focuses on method and factors influencing the use or approach of pain assessment from the medical professional perspective (41). It also looks at the effects on the outcome of the pain assessment usage on a patient.

This model was used in this research because it focuses on assessing the pain and interpretation of the signs related to the pain. In this study, the researcher also assessed the use of pain assessment and interpret the gathered data to achieve the objective of the research.

The data from nurses were interpreted for inferring the usage of pain assessment at the selected hospital. The model analyzes each factor on the impact and outcome of the pain assessment implementation. Factors that contribute to the use of pain assessment by the nurses will be analyzed.

The below figure shows the model adopted from A. Lynn Snow et al (41) **about pain assessment.**


Use of pain assessment tools among nurses
Nurses factors
Tools are available
Do not have sufficient knowledge
Interpretation of data
Patient factors
Received pain assessment using a tool
Observation of pain assessment
Nurses questionnaires
Patient files
Data collection
In pediatric
in neonatology
in emergency
in surgical
What are the tools
Used for pain assessment?
Nurses factors
Data from nurses about pain assessment usage
Patient factors
Patient files
Information about pain assessment usage

3 CHAPTER THREE: RESEARCH METHODOLOGY

3.1 INTRODUCTION

Research methodology is the distinct procedures or approach used to classify, choose, prepare, and evaluate information about the topic of interest which is the use of pain assessment tools among nurses in caring children in different wards. This section lets the reader to assess or critically appraise the study's reliability and efficacy (42).

There are two questions that are answered by this section:

- What was the data collection about use of pain assessment tools and generation process?
- How was the data analyzed?

This study illustrates the steps used to attain objectives of this study; it also states the research design. As for the data, it describes sample size, study population, and data collection & analysis.

3.2 RESEARCH DESIGN AND APPROACH

This study relied on quantitative approach, using a descriptive cross-sectional study design.

The benefit of the quantitative research design was for this study to try and collect the information that addresses the use pain assessment tools among nurses.

Descriptive research was used because it relies on "what" question (43) like what population of interest (their distribution). This study relied on nurses at Kabgayi district hospital in different wards.

3.3 RESEARCH SETTING

The study was conducted in Kabgayi district hospital, which is in Southern province, Muhanga district. Specifically, the researcher conducted the research for children who are under 15 years of age in several wards including pediatric ward, surgical ward, emergency department, neonatology, outpatient department and theater. This hospital was selected using stratified random sampling, Kabgayi district hospital is one of the referral hospitals in Muhanga district and Southern province. The research setting was selected among other strata using the method of stratified random sampling.

Kabgayi District Hospital was chosen because of several reasons including the fact that it is the referral hospital in Muhanga district. Furthermore, it is also situated in a center of the district, it serves a big population, and usually serve many patients periodically including children. These make Kabgayi District Hospital an ideal research site for this work.

Kabgayi District Hospital has 8 units and can serve 344351 people with 365 bed capacity. Furthermore, pediatric ward at Kabgayi District Hospital has 34 bed capacity, 56 bed capacity in surgical ward, 30 bed capacity in emergency department and 15 in neonatology. As of today, Kabgayi District Hospital has 153 nurses, and the average number of pediatric patients is 300 per month (44).

3.4 STUDY POPULATION

A population is a group of individuals in its entity that happen to be linked with the criteria of the study set by the researcher (45). Thus, the population in this study consisted of nurses and retrieving data from several patients' files in different wards. There are 153 nurses who took care of children under 15 years of age in several wards at Kabgayi district hospital. These wards include pediatric, surgical, emergency department, neonatology, outpatient department and theater. The research also retrieved data of 100 children from patients' files admitted at the hospital at the period of research data collection. It included 30 patient files from pediatric ward, 10 files from emergency, 20 files from neonatology, 20 files from surgical, 10 from theater and 10 outpatient files.

3.5 SAMPLING

The sampling process in quantitative research is the way of selecting a part of population to be used as a representation of general population and eventually make decisions based on insights drawn from the quantitative study (45). Therefore, the sample population was picked out from nurses who meet the criteria to be included in the study. The research included the nurses who took care of children who are 15 years old or under. These nurses worked in pediatric ward , emergency, surgical, neonatology, outpatient consultation and emergency from the Kabgayi district hospital in Rwanda. The research did not include nurses who work in internal medicine.

3.5.1 Sample size and sampling procedure

The sample size was calculated using Yamane (46) simplified sampling formula and confidence level of 95%.

e = margin error = 0.05 at confidence level of 95%

N = population = 153 (number of nurses at the pediatric wards)

$$n = \frac{N}{1+ N* e^2} = \frac{153}{1+ 153* 0.05^2} = \frac{153}{1+(153*(0.0025))} = \frac{153}{1+0.3825} = \frac{153}{1.3825} = 110.669 \approx 111$$

n = sample size

Thus, the sample size will be about 111 nurses.

3.5.2 Sampling strategy

In this study, stratified random sampling was used to select the population that is representative of the whole population in general. This ensured that sampling process is not biased against the population. In stratified sampling process, a population is divided into subgroups called strata. Population in each strata has shared characteristics. For the nurses and patients' files, the subgroups (strata) included the services they work from which are Emergency, Neonatology, Outpatient, Pediatric,, Surgical, and Theater.

3.5.3 Inclusion criteria

This study focused on all nurses who looked after children who are 15 years old or under. In addition, those nurses must be working in the pediatric ward, neonatology, surgery, emergency department, theater, and outpatient consultation. The new recruits who joined before the study begun were included in the study.

3.5.4 Exclusion criteria

This study did not look at nurses who do not work in the services mentioned above in inclusion criteria such as internal medicine for female and for male. In addition, new recruits who joined while the study had already begun were not included in the study.

3.6 INSTRUMENT

An existing and pretested well-developed questionnaire adopted from Meng'anyi (47) and adapted to fit this study was used to record necessary information from nurses caring for children at Kabgayi district hospital to assess the use of pain assessment tools. In addition, questionnaire was given to nurses to record information and to test its accuracy. It is attached in the appendix section.

A permission to modify and use the tool was obtained from Lucy Meng'anyi, Email: robiwankuru@gmail.com.

3.6.1 Validity of the research instrument

The validity was ensured by collecting the data which are relevant to the research (48). The technique to collect the data used the existing developed questionnaire and it was adapted to fit the Rwandan context and this research as well to assess the use of pain assessment tools among nurses at Kabgayi district hospital. The tool was easy to read and self-explanatory to make it easy for nurses based on small pilot test among 9 nurses.

To control the internal validity, the mentioned easy-to-use questionnaire was used and modified to have words which are not complicated. The questionnaire was in English and French because the target population is assumed to have skills in both languages. The respondents provided answers according to their preferred language.

The external validity was controlled by using stratified random sampling to select a sample population that is representative of all population. The sample size was selected using stratified random sampling to avoid selection bias.

3.6.2 Reliability of the research instrument

In this study, the reliability was controlled by monitoring the questionnaire. The overall purpose was to keep the usefulness of the data collected through the questionnaire. The existing Cronbach alpha of the research instrument is 0.6. The researcher calculated the internal consistency reliability coefficient using Cronbach alpha which is between 0.5 and 0.7 to evaluate the relationship between the items of the questionnaire (48).

3.7 DATA COLLECTION PROCEDURE

Data collection was the main source of information in this study. The researcher collected the data using self-administered questionnaire from respondents (nurses). In addition, the researcher used the patient files. The researcher investigated the patient files to analyze the use of pain assessment tools. Among the collected data are the information about the assessment tools used as present in the patient files, the usage of pain assessment with regard to the patient health, and accurate documentation about the usage of these tools. Furthermore, the researcher used the developed framework to collect the data from patient files by accessing each of the 100 recorded patient files from the pediatric ward at Kabgayi hospital and filled the questionnaire based on these files. The researcher was looking for how frequent the nurses use the pain assessment tools, whether on a daily basis or not and how often they use these tools.

A written request was sent to Kabgayi district hospital officials for authorization to conduct the study. Furthermore, the permission was given. Thus, the researcher explained to the nurses the objectives and benefits of the study.

The meeting was organized with nurses working in pediatric settings to explain the research procedures. The most important part of the meeting was to explain to them about the confidentiality of the research procedure. Finally, the researcher asked the nurses if they are voluntarily willing to participate in the study. For those who accepted to participate in the study, they started to fill the questionnaire.

The researcher distributed the questionnaire to nurses for them to start filling the questionnaire. They were asked the language preferences between French and English. The questionnaire took approximately 30 minutes to fill for each nurse. It was filled by each nurse who is included in the study. In addition, the researcher investigated patient files of patients who were in the hospital at the moment of data collection. In addition, those files are supposed to have been filled by the nurses.

3.8 DATA ANALYSIS

The collected data from the nurses were entered and analyzed by SPSS Statistics version 26. Descriptive statistics was used to analyze the data. Furthermore, descriptive data were analyzed by presenting the data in form of frequency distributions, percentage of the respondents, mean,

and standard deviation for numerical variables. Categories were considered such as gender, age, and years of experience. In addition, the patient files were also analyzed using descriptive statistics to determine frequency and percentages of use of pain assessment tools.

3.9 ETHICAL CONSIDERATION

The research proposal was submitted to the CMHS review board which approved the study to be conducted (Reference CMHS/IRB/197/2021). The permission from relevant health authorities especially at Kabgayi district hospital was prioritized before starting the study. Ethical clearance from CMHS was submitted to Kabgayi district hospital and the permission to conduct the study was obtained. Also, the aim of the study was clearly explained to nurses before the study and the protection of their data as well as ensuring their privacy; informed consent was obtained from nurse participants.

3.10 DATA MANAGEMENT AND STORAGE

The questionnaires with the responses were kept secure and confidential. The researcher found a secure storage with key and lock where they were kept during the research and after for a certain period and then they will be destroyed. For the data that are stored on a computer, they will be protected using computer's password.

3.11 DATA DISSEMINATION

The hospital in which this study will be conducted from, will get a copy of this work. Furthermore, the results of this study will be shared to various stakeholders such as hospitals.

4 CHAPTER FOUR: RESULTS

4.1 INTRODUCTION

The aim of this chapter is to demonstrate the results of this research. The findings try to answer the research questions that were set in chapter one. It starts by describing the respondents using demographic characteristics, then provide the assessment tools in use at Kabgayi hospital according to the nurses who responded to the questionnaire, the actual use of these tools by the nurses, and the factors influencing the effective of the assessment tools. Results are visualized graphically and statistically using descriptive statistics. The 100% of the questionnaire were returned and the respondents responded to the questionnaires.

4.1.1 Demographic attributes of respondents (N=111)

Demographic attributes		**Frequency (N = 111)**	**Percentage (%)**
Age (M=35, SD=8)	Below 24	10	9
	25-34	38	34.2
	35-44	37	33.3
	45-54	21	18.9
	55 and above	5	4.5
Gender	Male	34	30.6
	Female	77	69.4
Marital status	Single	26	23.4
	Married	82	73.9
	Widow	2	1.8
	Divorced	1	0.9
Educational level	A2 Certificate	11	9.9
	A1 Advanced Diploma	80	72.1
	A0 Bachelor's degree	20	18
	Masters	0	0
Work experience	< 5 years	28	25.2
	5-9 years	32	28.8
	> 10 years	51	45.9
Unit	Pediatrics	15	13.5
	Emergency	41	36.9
	Neonatology	9	8.1
	Surgical	27	24.3
	Theater	6	5.4
	OPD	13	11.7
Working shift	Days only	29	26.1
	Nights only	0	0
	Mixes days and nights	82	73.9

Table 4.1-1 - Demographics data of respondents (N=111)

The majority of the respondents were females (77%). Most of the respondents had an Advanced Diploma in Nursing (A1). In addition, the majority of respondents were aged between 25-44 years of age, the mean age was 35 years and standard deviation of 8 years (M=35, SD=8). Furthermore, a good proportion of the nurses (45.9%) had more than 10 years of working experience in pediatric. The working shift was added as parameter because it helped to explain if the working hours contribute to the use of pain assessment tools at Kabgayi district hospital. The majority of the respondents (73.9%) worked during days and nights.

4.2 EXISTING USE OF PAIN ASSESSMENT TOOLS BY NURSES AMONG HOSPITALIZED CHILDREN AT KABGAYI DISTRICT HOSPITAL

Do you use the pain assessment tools in your everyday ward work?	**Frequency**	**Percent**
No	2	1.8%
Yes	67	60.4%
Sometimes	42	37.8%
Total	111	100.0%

Table 4.2-1 - Existing use of pain assessment tools (yes or no question)

The 60.4% of respondents (nurses) reported that they used the pain assessment tools in their everyday ward work, while only 1.8% responded that they did not use the pain assessment tools in their ward work. In addition, 37.8% of the respondents said that they sometimes used the pain assessment tools in their work.

4.2.1 Types of pain assessment tools in use at Kabgayi hospital

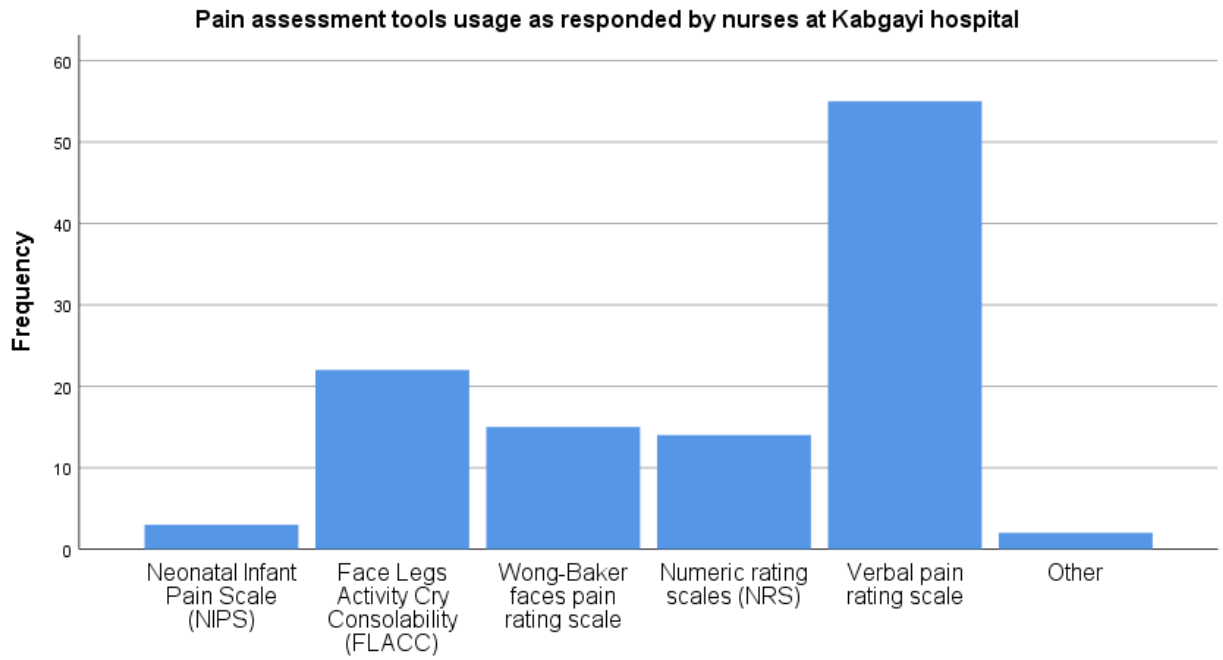


Figure 4 - Pain assessment tools usage as answered by the respondents

Respondents were also asked about the pain assessment tools they use while caring for children in pediatric wards at Kabgayi hospital. The figure above shows the usage of several pain assessment tools. The good proportion (49.5%) of the nurses who responded to the questionnaires reported that they used verbal pain rating scale. Among the respondents also, 19.8 % responded that they use Face Legs Activity Cry Consolability (FLACC) tool. The 13.5% of the respondents reported that they us Wong-Baker faces pain rating scale. In addition, 12.6% of the respondents responded that they used numeric rating scales (NRS) pain assessment tool and 2.7% of the respondents said that they use Neonatal Infant Pain Scale (NIPS). While 1.8% of the respondents reported that they use other pain assessment tools which were not listed on the questionnaire.

4.2.2 Use of pain assessment tools according to the patients' files (100 patient files)

Use of pain assessment tools according to the patient files		**Frequency (N = 100)**	**Percentage (%)**
Hospital	Kabgayi	100	100
Service	Emergency	10	10
	Neonatology	20	20
	Outpatient	10	10
	Pediatric	30	30
	Surgical	20	20
	Theater	10	10
Presence of the use of pain assessment tool in the patient file	Yes	67	67
	No	33	33
Number of tools used as present in the patient files	One tool	23	23
	Two tools	26	26
	Three tools	18	18
Frequency of pain assessment usage	Daily	67	67
	Not on a daily basis	33	33
Availability of the description of the use of pain assessment tool	Yes	58	58
	No	9	9
	Not applicable	33	33
Usage of pain assessment tools considering child's age	Yes	56	56
	No	11	11
	Not applicable	33	33

Use of pain assessment tools according to the patient files		**Frequency (N = 100)**	**Percentage (%)**
Addressing health problems related pain (physiological, spiritual, etc.)	Yes	64	64
	No	3	3
	Not applicable	33	33
Usage of pain assessment tools following its gravity	Yes	62	62
	No	5	5
	Not applicable	33	33
The goal of the tool is patient oriented	Yes	67	67
	Not applicable	33	33
The goal is relevant to pain management	Yes	63	63
	No	4	4
	Not applicable	33	33
Safety of the pain assessment tools	Yes	61	61
	No	6	6
	Not applicable	33	33
Rationales indicated for each nursing intervention after pain assessment done	Yes	61	61
	No	6	6
	Not applicable	33	33
Indicates the extent to which the outcome criteria	Yes	64	64
	No	3	3
	Not applicable	33	33
Accurate documentation is done in the charts and type of the pain assessment tool	Yes	48	48
	No	19	19
	Not applicable	33	33

Use of pain assessment tools according to the patient files		Frequency (N = 100)	Percentage (%)
Records contain name and signature of the nurse	Yes	100	100

Table 4.2-2 - Patient files summary about the use of pain assessment tools

The data from patients' files showed that 10% of the of patients were from emergency service, 20% from neonatology service, 10% from outpatient service, 30% from pediatric service, 20% percent from surgical and 10% from theater.

According to the data, 67% of patient files showed the presence of a pain assessment tool. In addition, 23% of the patients' files had one assessment tool present, 26% of the patient files had two assessment tools present, while 18% of the patient files had three assessment tools listed to have been used.

Among these tools, verbal pain rating scale were the most (49.5%) used tools in regard to the patient files. It was mostly used in outpatient service, emergency service and pediatric service. In Neonatology, the most used pain assessment tool is the neonatal infant pain scale. Face Legs Activity Cry Consolability (FLACC) is mostly used in pediatric and theater service. Numeric rating scale is used in Surgical service and emergency service.

Sixty-four percent (64%) of the patient files showed that the pain assessment tools were used daily. In addition, the majority of the files (58%) presented the descriptions of the usage of pain assessment tool while 9% of them did not present the description of usage of the pain assessment tools.

The majority of the patients' files (56%) presented that the pain assessment tools are used by considering child's age while 11% presents otherwise.

Sixty-four percent (64%) of the patient files showed that the pain assessment tools address health problem related to pain holistically. Those health problems might include physiological, psychological, spiritual, and social. In addition, 62% of the files showed that the usage of the pain assessment tools follows its gravity and only 5% indicated the opposite. Positively, a 67% of the

files showed that the goal of the tools is patient oriented. As a result, 63% of the files indicated that the goal is relevant to the pain management and only 4% indicated otherwise.

The safety of the pain assessment tools is also guaranteed because 61% of the files showed that the used tools are safe for patients while only 3% of the indicated that the tools are not safe for the patients.

The documentation post usage of the pain assessment tools appeared to be average. According to the patient files, 48% of the files showed that the rationales are indicated for each nursing intervention after pain assessment is done, 19% of the files indicated that the rationale are not indicated for each nursing intervention after the usage of pain assessment tool. The majority of the files (64%) indicated that the outcome criteria of the tools are achieved while 3% showed that the outcome criteria are not achieved. Finally, the records containing the name and signature of nurse was also present for each examined pediatric patient files.

4.3 USE OF PAIN ASSESSMENT TOOLS BY NURSES IN THE DAILY TASKS OF PAIN MANAGEMENT AMONG CHILDREN

4.3.1 Use of pain assessment tools among nurses by working shift

Use of pain assessment tools per shift (tools)		**Frequency**	**Percent (%)**
	1-3	28	25.2
	4-6	22	19.8
	7-9	25	22.5
	10 and above	36	32.4
Total		111	100.0

Respondents provided the answers on the use of pain assessment tools per shift. First, the researcher wanted the data about how many patients they care per shift. In general shift are classified in three categories which are day, nights and mix of day and nights. The 25.2% of the respondents said that they care for 1 to 3 patients per shift, 19.8% responded that they care for 4

to 6 patients per shift, 22.5% of the respondents responded that they care for 7-9 patients per shift and 32.4% reported that they care for 10 and above patients per shift.

The researcher added another question about the how many pain assessment tools they use per shift.

Number of pain assessment tools per shift		**Frequency**	**Percent (%)**
	1-3	87	78.4
	4-6	12	10.8
	7-9	6	5.4
	10 and above	3	2.7
	Total	108	97.3
Missing (record about the tools usage)		3	2.7
Total		108	100.0

Table 4.3-1 - Number of pain assessment tools used per shift

As the table above shows, 78.4% responded that they used 1-3 pain assessment tools per shift in the ward. Furthermore, 10.8% reported that they used 4-6 pain assessment tools, 5.4% of the respondents answered that they used 7-9 pain assessment tools per shift and 2.7% of the respondents replied that they use 10 and above pain assessment tools per shift to assess the among children.

Use of pain assessment tools per in night shifts		**Frequency**	**Percent (%)**
	No	72	64.9
	Yes	39	35.1
Total		111	100.0

Table 4.3-2 - Tools by nights shifts

As the table shows, 64.9% of the respondents responded that they did not use pain assessment tools during their nights shifts. Few of them (35.1%) responded that they used pain assessment tools during their nights shifts.

4.3.2 Use of pain assessment tools in different circumstances

Do you think the use of pain assessment tools is time consuming?		**Frequency**	**Percent (%)**
	No	47	42.3
	Yes	62	55.9
	Total	109	98.2
Missing record about the tool usage		2	1.8
Total		109	100.0

Table 4.3-3 - Question about the use pain assessment tools being time consuming

The respondents were asked to provide their views on if they think the use of pain assessment tools is time consuming. A 109 out 111 responded by either confirming that the use of pain assessment tools is time consuming or not. The 55.9% of the respondents thinks that the use of pain assessment tools is time consuming in their work. Furthermore, 42.3% finds the use of pain assessment tools to not be time consuming at all.

A nurse should use pain assessment tool regardless of the circumstances.		**Frequency**	**Percent (%)**
	No	23	20.7
	Yes	88	79.3
	Total	111	100.0

Table 4.3-4 - Nurses should use pain assessment tools regardless of the circumstances results

Yes indicates that the respondents think that a nurse should use pain assessment tool regardless of the circumstances. The majority of them (79.3%) thinks that indeed a nurse should use the pain

assessment tool regardless of the circumstances. Only 20.7% of the respondents thinks that a nurse should not always use assessment tool under certain circumstances.

4.4 FACTORS INFLUENCING THE EFFECTIVE USE OF PEDIATRIC PAIN ASSESSMENT TOOLS

Factors which might influence the use of pain assessment tools		**Frequency (N = 111)**	**Percentage (%)**
Availability of pain assessment tool sheet/form in the ward	Yes	54	48.6
	No	54	48.6
Facility infrastructure to support the use the pain assessment tools	They are adequate	41	36.9
	They are inadequate	59	53.2
	They do not support at all	11	9.9
Hospital management and support for the use of pain assessment tools	Gives adequate support	39	35.1
	Gives inadequate support	61	55
	Does not support at all	11	9.9
Missing resources to facilitate the use of pain assessment tools	Yes	93	83.8
	No	18	16.2
How would you classify your workplace?	Negligent	8	7.2
	Disorganized	7	6.3
	Stressful	65	58.6
	Conducive	22	29.8
Training about the use of pain assessment tools	Yes	26	23.4
	No	84	75.7
Prefer training about the use of pain assessment tools	Yes	109	98.2
	No	2	1.8

Table 4.4-1 - Factors influencing the use of pain assessment tools

Availability of pain assessment tool sheet/form in the ward

According to the table above, the respondents provided equal opinions on the availability of the pain assessment tools form in the wards. Forty-eight and six tenths (48.6%) of the respondents said that the tools sheet or forms were available in the wards while 48.6% responded that the tools sheet or forms are not available.

Facility infrastructure to support the use the pain assessment tools

The 36.9% of the respondents responded that the facility infrastructure in terms of support for the utilization of pain assessment tools is adequate, 53.2% responded that the support is inadequate and 9.9% replied that there is no support at all.

Hospital management and support for the use of pain assessment tools

The 35.1% of the respondents replied that the hospital management in terms of support for the utilization of pain assessment tools provide adequate support, 55% responded that they provide inadequate support while 9.9% responded that there is no support at all.

Missing resources to facilitate the use of pain assessment tools

According to the respondents, the majority of them (83.8%) think that there are missing resources/items to facilitate the utilization of pain assessment tools. Only 16.2% percent responded that there no missing resources or items.

The respondents were also asked about what they think about the missing resources. Some of the reported items are like the adequate pain assessment tools, human and material resources, charts, no evaluation formula, no training for pain assessment, presence of medications to manage pain, sheet form, toy for children, and games for children.

Dissatisfying aspect of nursing in different wards

Nurses reported several dissatisfying aspects about the job including caring for so many patients, new reporting system, rules made without considering staff, and useless paperwork.

How would you classify your workplace?

The majority (58.6%) of the respondents responded that the workplace is stressful. Furthermore, 6.3% of the respondents responded that they find the workplace disorganized, 7.2% of them responded that they find their workplace negligent, and 19.8% find the workplace conducive.

Training about the use of pain assessment tools

Most of the respondents (75.7%) reported that they do not have enough in service training on the use of pain assessment tools. Some of them (23.4%) responded that they have training on the use of pain assessment tools.

Preferred training about the use of pain assessment tools

The majority of the respondents (98.2%) preferred the in-service training about the use of pain assessment tools. Only 1.8% would not prefer the training about the use of pain assessment tools.

4.5 RESULTS OF ASSOCIATIONS BETWEEN SEVERAL VARIABLES

Demographic attributes		**Use of assessment tools**		**P-value**
		Use pain assessment tool (N=67)	**Sometimes use pain assessment tool (N=42)**	
Age	Below 24	11.9% (N=8)	2.4% (N=1)	0.113
	25-34	37.3% (N=25)	31% (N=13)	
	35-44	28.4% (N=19)	42.9% (N=18)	
	45-54	19.4% (N=13)	16.7% (N=7)	
	55 and above	3% (N=2)	7.1% (N=3)	
Gender	Male	32.8% (N=22)	28.6% (N=12)	0.921
	Female	67.2% (N=45)	71.4% (N=30)	
	Transgender	0% (N=0)	0% (n=0)	
Marital status	Single	23.9% (N=16)	19% (N=8)	0.126
	Married	73.1% (N=49)	78.6% (N=33)	
	Widow	3% (N=2)	2.4% (N=1)	
	Divorced	0% (N=0)	0% (N=0)	

Educational level	A2 Certificate	1.5% (N=1)	21.4% (N=9)	0.933
	A1 Advanced Diploma	85.1% (N=57)	52.4% (N=22)	
	A0 Bachelor's degree	13.4% (N=9)	26.2% (N=11)	
	Masters	0% (N=0)	0% (N=0)	
Work experience	< 5 years	26.9% (N=18)	21.4% (N=9)	0.632
	5-9 years	25.4% (N=17)	15% (N=15)	
	10-14 years	22.4% (N=15)	4.8% (N=2)	
	15-19 years	9% (N=6)	23.8% (N=10)	
	20 and above	16.4% (N=11)	14.3% (N=6)	
Unit	Pediatrics	17.9% (N=12)	4.8% (N=2)	0.448
	Emergency	29.9% (N=20)	50% (N=21)	
	Neonatology	13.4% (N=9)	0% (N=0)	
	Surgical	20.9% (N=14)	28.6% (N=12)	
	Theater	9% (N=6)	0% (N=0)	
	OPD	9% (N=6)	16.7% (N=7)	
Working shift	Days only	32.8% (N=22)	14.3% (N=6)	**0.022**
	Nights only	0% (N=0)	0% (N=0)	
	Mixes days and nights	45% (N=67.2)	85.7% (N=36)	

Table 4.5-1 - Association between demographic variables and the use of pain assessment tools

Only the working shift was statistically significant with the utilization of pain assessment tools among nurses working with children (p=0.022).

5 CHAPTER FIVE: DISCUSSION

5.1 INTRODUCTION

The purpose of this chapter is to discuss the results of the data from the study. In addition, this chapter will contribute to assess if the objectives of the research have been achieved. The researcher looked at other literature reviews to compare the findings according to the objectives.

5.2 DEMOGRAPHICS CHARACTERISTICS OF NURSES

In this study, female participants were dominant which is explained by the report by the National Institute of statistics of Rwanda (NISR) indicating how female nurses occupy a large proportion (49). Most of the participants possessed the advanced diploma (A1) of nursing education, the large proportion of nurses with advanced diploma is explained by the increased number of nurses possessing the A1 diploma in recent years with the support of the Minister of Health (MoH) (50). The results from this study did not reveal any association between the nurses' level of education and the use of pain assessment tools, which is in controversy with the study conducted by Kolsoum et al (51) that reported inadequate knowledge about pain assessment tools among nurses with baccalaureate nurses level (A0) and therefore, a barrier to using these tools. The majority of the participants had more than 10 years of experience which is similar to results from previous study (51) that reported a mean of work experience of 12 years, similarly, the findings did not indicate an association between the use of pain assessment tools and the nurse's work experience. The results of this study found that the nurses' working shift was associated with the use of pain assessment tools among nurses, nurses who work during the day reported using pain assessment tools more compared to the ones who cover night shifts. This is congruent with the findings reported in (51) on the use of pain assessment scale such as verbal pain rating scale where the results indicated that some nurses covering particular shifts do not follow the pain management protocols. This may probably be explained by the fact that during day shift nurses on duty are many compared to the night shift, they may have more time to deepen pain assessment by using various pan assessment tools while those at night shift are few and have many tasks to attend to and don't give priority to use pain assessment tools.

5.3 EXISTING USE OF PAIN ASSESSMENT TOOLS BY NURSES AMONG HOSPITALIZED CHILDREN AT KABGAYI DISTRICT HOSPITAL

The study revealed that, a good proportion of nurses used pain assessment tools in their everyday work in pediatric wards at Kabgayi hospital. The verbal pain rating scale was the most common used pain assessment tool but with the low usage of other types of pain assessment tools. The high usage of verbal pain rating scale may probably be due to the fact that it is easy to use for nurses and does not require a lot of resources to be used among children. The nurses reported that there are limited resources and training for them to be able to use a wide range of pain assessment tools. Furthermore, bivariate analysis revealed that there is a statistical association between the use of pain assessment tools by nurses among hospitalized children at Kabgayi district hospital and the nurses' working shift. This association may be due to the fact nurses who work during the night are few and have a high workload, and as a result, they do not use the pain assessment tools often compared to the ones who work during the day (51).

These results are supported by the research done previously (52) about the use of pain assessment tools in clinical practice that indicated over 50% of the respondents used two or more than two tools for pain assessment. The author reported that nurses use pain assessment tools in practice, however, they use a limited types of pain assessment tools to assess the main among children (52). The usage of verbal pain rating scale is supported by the study conducted by Daniel et al (53) that indicated that this type of tool is the most common in self-report of pain.

5.3.1 Existing use of the use of pain assessment tools according to the patient files

The patient files showed a good proportion of pain assessment tools usage among nurses. The patient files having the pain assessment tools usage showed that the frequency of utilization of pain assessment tools was mainly daily. The documentation post usage of the pain assessment tools was inadequate, and it indicated a need for nurses to improve the documentation of assessment tools usage. The consequence of not documenting the usage of pain assessment includes unawareness of the current patient's pain status. As a result, nurses might not perform a follow-up or reassessment on a patient (13). The majority of the respondents showed that the missing resources to facilitate the use of pain assessment tools was the main reason of not using a variety of pain assessment tools, hence, the usage of only one tool. Furthermore, it might be due

to the lack of training on the use of the variety of pain assessment tools, because the majority of the nurses responded that they lack training about the use of pain assessment tools.

The inadequate documentation post-usage of pain assessment tools is supported by Ogidan et al. (54) in the study conducted in Nigeria which showed that only 29% of the nurses who cared for children documented the outcome of the usage of pain assessment tools.

On the contrary to the good proportion usage of pain assessment tools, a study conducted in Ekiti state in Nigeria by Ogidan et al (54) found that even if nurses assessed the pain in patients but not all of them used pain assessment tools to assess the pain. Furthermore, 32% of the respondents used pain assessment tools. However, they found that the numeric rating scale and verbal pain rating scale tools were the most used pain assessment tools which is similar to this study which also found that verbal pain rating scale was the most used pain assessment tools (54).

5.4 FACTORS INFLUENCING THE USE OF EFFECTIVE USE OF PAIN ASSESSMENT TOOLS BY NURSES AT KABGAYI DISTRICT HOSPITAL

This study revealed that the effective use of pain assessment tools was influenced by the missing health system resources, hospital support, and the training on the assessment tool usage. Nurses reported that resources were inadequate to help them in the implementation of the use of pain assessment tools to assess pain among children hospitalized at Kabgayi hospital. In addition, nurses reported that the support from the hospital management to effectively use the pain assessment tools was inadequate.

These results are congruent with findings from previous study done by Limungi et al (55) which revealed that the utilization of pain rating scale was influenced by staff training on these tools, availability of the tools, and the missing protocols on the usage of pain rating scale. In the same vein, the finding from the current study indicated that the lack of training, missing resources, and support on the use of pain assessment tools were among the factors influencing the use of these tools among nurses at Kabgayi district hospital.

Also, a previous study conducted in Rwanda by Ndagijimana (2) revealed that most hospitals do not have pain protocol in several unit which indicates that the nurses do not get enough support and resources that will help them in pain assessment and management, which is in agreement with

Ogidan et al (54) who reported that the majority of nurses did not have availability and support to be to effectively use pain assessment tools.

In addition to the above factors, the workplace environment, training, and workload were also reported to affect the use of a variety of the tools to assess the pain. Nurses reported some dissatisfying aspects of nursing in different wards such as caring for so many patients, rules made without considering other staff and unhelpful paperwork. As a result, the majority of the nurses responded to have a stressful environment. As the variables associations showed that the working shift is a significant factor in the use of pain assessment tools, majority of the nurses reported that they care for seven (7) or more patients per shift. This big number of patients nurses care for per shift might explain the number of non-usage of pain assessment tools and the factors that influence the use of these tools.

These findings are supported by the study by Ogidan et al (54) who reported that the nursing workload was a barrier to the use of pain assessment tools by nurses.

5.4.1 Conclusion to the objectives results

From the results of the study, the percentage of use of pain assessment tools is increasing. Furthermore, the factors influencing the use of the pain assessment tools include mostly the fact that the nurses do not get enough training on the use of pain assessment effectively which explains why even if the use of pain assessment is high but the tools which are used are dominated by one tool which is the verbal pain rating scale.

6 CHAPTER SIX: CONCLUSIONS AND RECOMMENDATIONS

6.1. CONCLUSION

This study demonstrated the utilization of pain assessment tools by nurses among children hospitalized at Kabgayi district hospital. The usage of pain assessment tool (s) is necessary for the effective pain management in children hospitalized in hospitals.

As revealed by the study, there was 60.4% usage of pain assessment tools among nurses. The most used tool is the verbal pain rating scale. In addition, for the effective utilization of the pain assessment tools, nurses need further training and support from the hospital. Furthermore, the improvement in the documentation after the usage of pain assessment tools is needed as revealed by the patient files. The nurses need professional training about the utilization of pain assessment tools to improve its usage. The hospital needs to improve the working environment for nurses as well as addressing the issue of limited resources for nurses to use a variety of pain assessment tools.

The association between demographic variables and the use of pain assessment tools showed that it can be associated with the nurses' working shift. This showed that nurses who work during the day tend to use these tools compared to the ones who worked during the nights. In addition, there is need to use other variety of tools.

6.2. RECOMMENDATIONS AND IMPLICATIONS OF THE STUDY

Results of the study provide the recommendations for nurses, and hospital managers.

For the Nurses

To improve the documentation after the use of pain assessment tools among children so that everyone who reads the document understand how the tool (s) was used.

To improve the effective use of pain assessment tool so that children benefit from it because children should not suffer from unwanted pain which can be detected early.

To use other types of pain assessment tools in addition to the verbal pain rating scale which was the most frequent used one.

For the hospitals

Even if the percentage of the use of pain assessment tools is increasing, there is a need to educate, acquire resources which will equip the nurses with knowledge of using other types of pain assessment tools adequately.

Therefore, the researcher recommends to the hospital to provide enough support to the nurses who care for children hospitalized at Kabgayi hospital and offer training about the use of other tools such as FLACC, Neonatal Infant Pain Scale, and Wong-Baker faces pain rating scale and provide understandable documents/charts/sheets showing how the tools are used.

To improve the working environment for the nurses who work in the pediatric wards and diminish the number of patients they care for per day. It will help them to work in friendly environment and hence provide better care for the hospitalized children.

Nurses recommended more training about the use of pain assessment tools, the programs like the continuing professional development (CPD) about the tools usage, and support from the hospital on the use of pain assessment tools.

In further nursing research

The researcher would recommend other future research to conduct a similar research in several hospitals in Rwanda so that we can fully understand the state of the use of pain assessment tools in Rwanda.

6.3.LIMITATIONS AND CHALLENGES

Even if the objectives of the study were achieved, there were some challenges and limitations in conducting the study.

6.1.1 Limitations

The time constraints and the financial effects limited the researcher to conduct the research in only one hospital. As a result, this study was conducted in one hospital (Kabgayi district hospital), thus, the results from only one study cannot generalized to all hospitals in Rwanda. However, Kabgayi hospital is becoming a district hospital with the additional staff. Another limitation is that the study

was conducted during the COVID-19 pandemic period. As a result, it resulted in collecting few datapoints compared to the expectations.

6.1.2 Challenges

The data collection was challenging for the researcher to get as much data as possible. For example, there was some missing data because of some respondents leaving some unanswered questions on the questionnaire.

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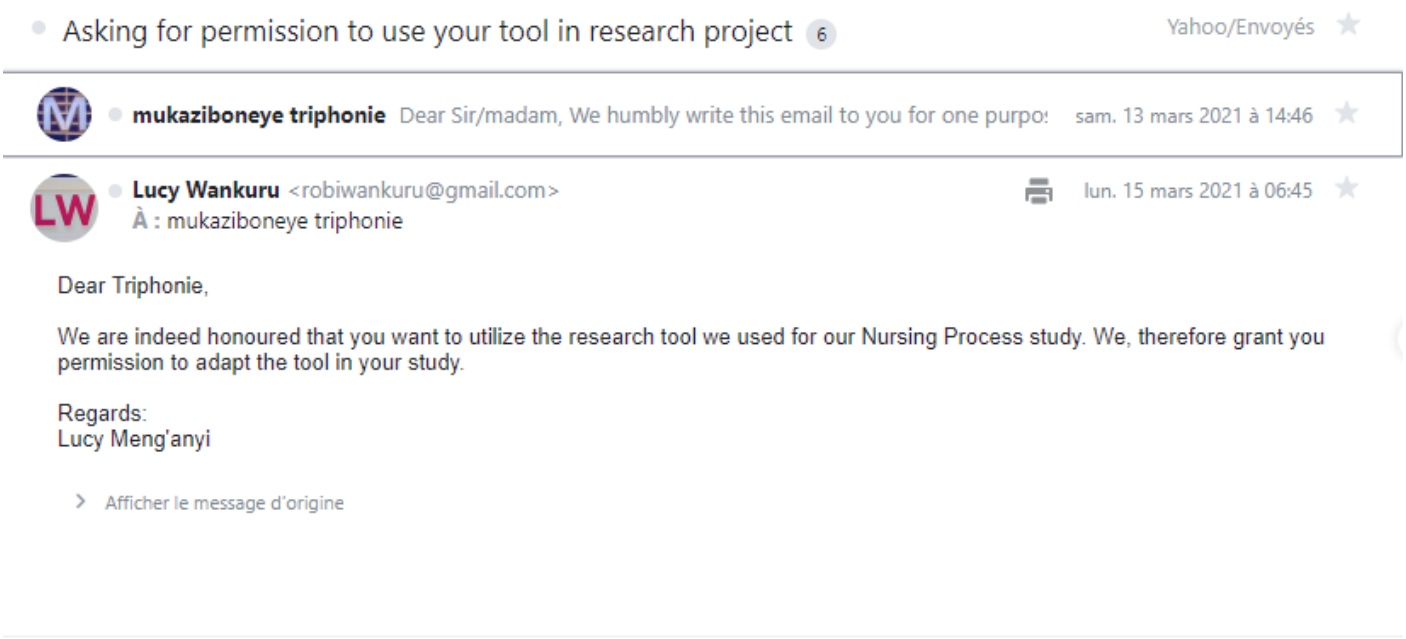
7 APPENDICES

Appendix A - APPROVAL TO USE THE QUESTIONNAIRE



Asking for permission to use your tool in research project 6

Yahoo/Envoyés

mukaziboneye triphonie Dear Sir/madam, We humbly write this email to you for one purpo: sam. 13 mars 2021 à 14:46

Lucy Wankuru <robiwankuru@gmail.com>
À : mukaziboneye triphonie

lun. 15 mars 2021 à 06:45

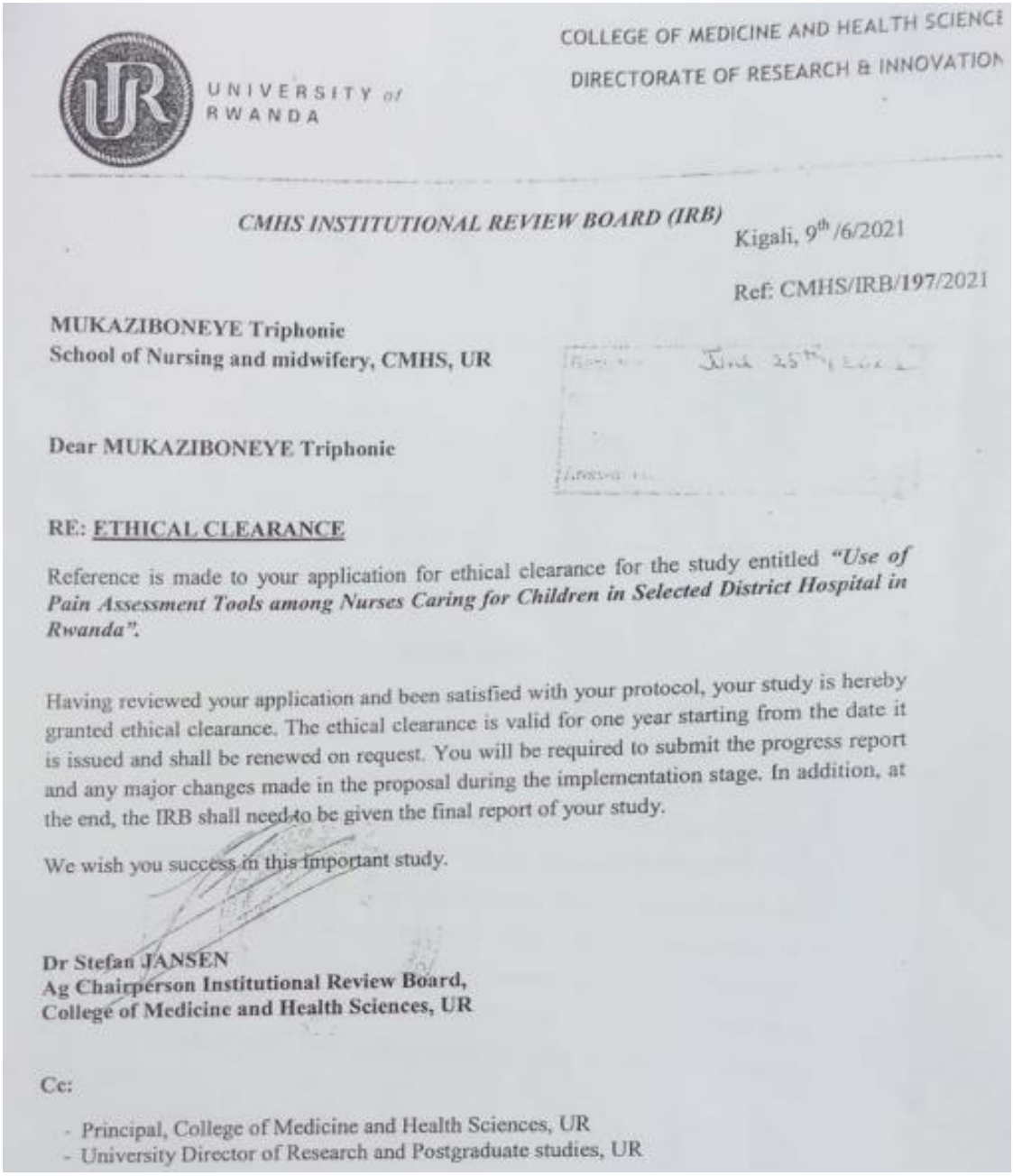
Dear Triphonie,

We are indeed honoured that you want to utilize the research tool we used for our Nursing Process study. We, therefore grant you permission to adapt the tool in your study.

Regards:
Lucy Meng'anyi

Afficher le message d'origine

Appendix B - ETHICAL CLEARANCE FROM UR-CMHS



UNIVERSITY of RWANDA

COLLEGE OF MEDICINE AND HEALTH SCIENCE

DIRECTORATE OF RESEARCH & INNOVATION

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 9th /6/2021

Ref: CMHS/IRB/197/2021

MUKAZIBONEYE Triphonie
School of Nursing and midwifery, CMHS, UR

Dear MUKAZIBONEYE Triphonie

RE: ETHICAL CLEARANCE

Reference is made to your application for ethical clearance for the study entitled ***"Use of Pain Assessment Tools among Nurses Caring for Children in Selected District Hospital in 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.

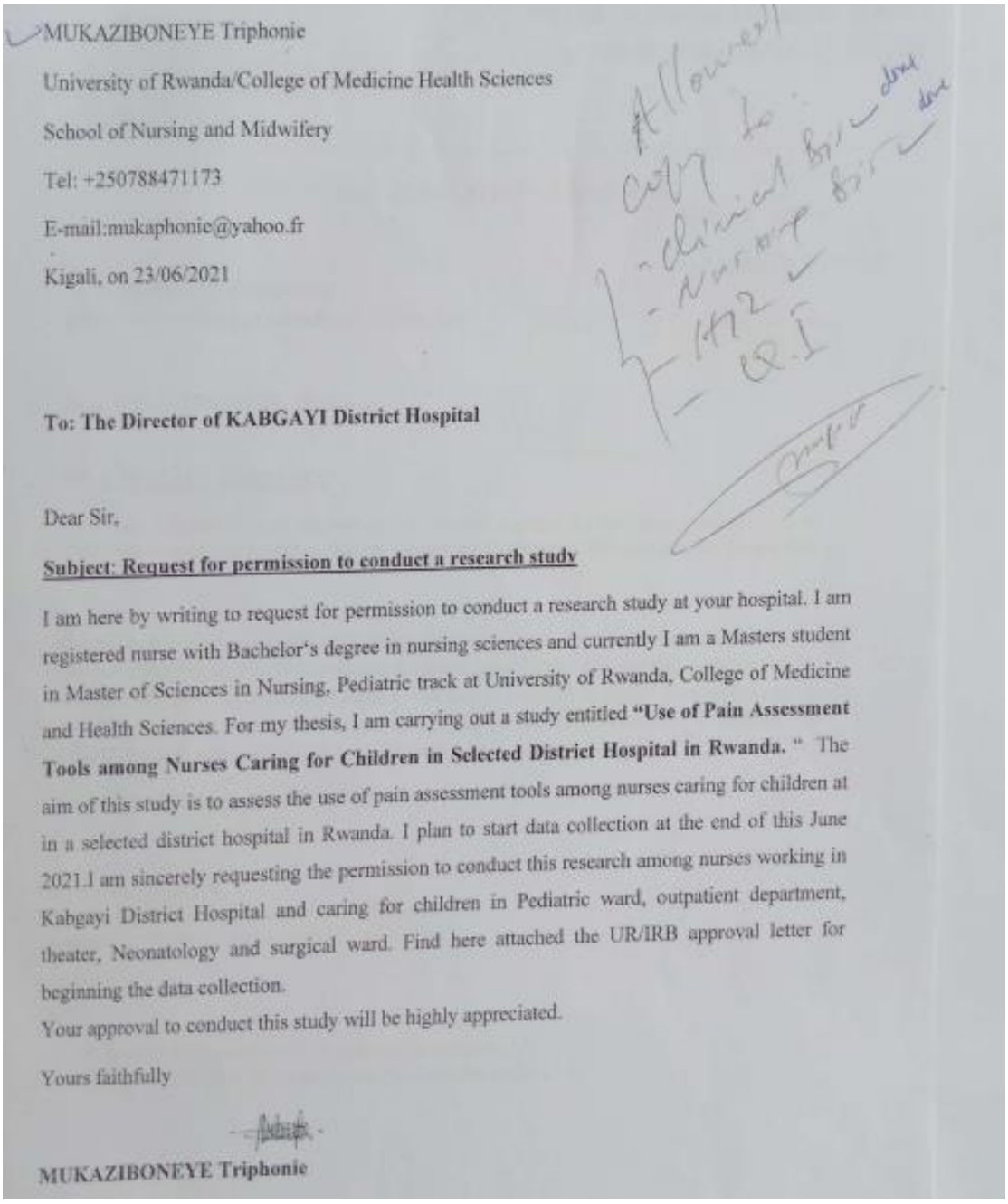
We wish you success in this important study.

Dr Stefan JANSEN
Ag 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

Appendix C - PERMISSION TO CONDUCT A STUDY AT KABGAYI DISTRICT HOSPITAL



MUKAZIBONEYE Triphonie

University of Rwanda/College of Medicine Health Sciences

School of Nursing and Midwifery

Tel: +250788471173

E-mail:mukaphonie@yahoo.fr

Kigali, on 23/06/2021

To: The Director of KABGAYI District Hospital

Dear Sir,

Subject: Request for permission to conduct a research study

I am here by writing to request for permission to conduct a research study at your hospital. I am registered nurse with Bachelor's degree in nursing sciences and currently I am a Masters student in Master of Sciences in Nursing, Pediatric track at University of Rwanda, College of Medicine and Health Sciences. For my thesis, I am carrying out a study entitled **"Use of Pain Assessment Tools among Nurses Caring for Children in Selected District Hospital in Rwanda. "** The aim of this study is to assess the use of pain assessment tools among nurses caring for children at in a selected district hospital in Rwanda. I plan to start data collection at the end of this June 2021.I am sincerely requesting the permission to conduct this research among nurses working in Kabgayi District Hospital and caring for children in Pediatric ward, outpatient department, theater, Neonatology and surgical ward. Find here attached the UR/IRB approval letter for beginning the data collection.

Your approval to conduct this study will be highly appreciated.

Yours faithfully

MUKAZIBONEYE Triphonie

Appendix D - INFORMED CONSENT FORM (for nurses) (56)

1. Information sheet

Research study: Use of pain assessment tools among nurses caring for children selected hospital in Rwanda.

Researcher: Triphonie Mukaziboneye.

Graduate Program: Pediatric track, School of Nursing and Midwifery, College of Medicine and Health Sciences, University of Rwanda.

Brief explanations of the study

This study will assess the use of pain assessment tools among nurses caring children at Kabgayi district hospital..

Your contribution to this research

We value your inputs on the use of pain assessment tools among nurses in Pediatric ward at Kabgayi district hospital. Since you are one of the nurses caring for children, your contribution is helpful in this research. You will be answering some questions.

Benefits of this research.

This research will assist a nurse to understand several pain assessment tools, provide adequate pain management to children. Thus, patients will also benefit in having a reduced painful procedure.

Right to withdraw or refuse

You have the right to stop answering questions at any time. No answer is wrong or right as you are giving your opinions about your experience in pain assessment tools usage. No answers or thoughts will be given to the hospital. By signing this document, you are volunteering to be part of this study.

Confidentiality

Each nurse will be given a code number which will be kept confidential.

Any question about the research?

You can ask me any question about the research itself and about your involvement in this research.

……..…….……

2. Certificate of Consent

I understand what this study is all about and my questions have been answered. I know that I have the right to withdraw from this study and I am aware of the usage of my information for the purpose of the study. I am also assured that my information will be kept confidential. I therefore confirm that I have voluntarily agreed to take part of this study.

Participant: …….

Signature…….

Date…….

Day/month/year

I can confirm that each participant had an opportunity to ask questions about this study and I have tried my best to answer their questions. I can also confirm that all the participants had freedom to participate in this study.

Person obtaining assent/ Researcher: …….

Signature……...

Date……...

Day/month/year

Appendix E - NURSES QUESTIONNAIRE

Data collection tool for use of pain assessment tools among nurses caring for children selected hospital in Rwanda.

Questionnaire Serial Number _____

Date: ____/____/___

Health facility name:

Your honest responses on the following questionnaire will greatly assist in the attempt to assess the use of pain assessment tools among nurses caring for children at Kabgayi district hospital. All responses will be coded by an identification number, kept confidential, and analyzed in group form so that there will be no revelation of personal information.

Thank you for taking you time (estimated at 30 minutes) to complete the questionnaire.

1. Age: below 24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 and above ☐
2. Gender: Male ☐ Female ☐ Transgender ☐
3. Marital status: Single ☐ Married ☐ Widow ☐ Divorced ☐
4. Educational level: A2 Certificate ☐ A1 Advanced Diploma ☐ A0 Bachelor's degree ☐ Masters in…… (specify field) ☐
5. Working experience in nursing profession:
   < 5 years ☐ 5-9 years ☐ 10-14 years ☐ 15-19 years ☐ 20 and above ☐

6. Unit: Pediatrics emergency Neonatology surgical Theater

7. Working shift: Which shift do you work on?

Days only Nights only Mixes days and nights

8. Do you use the pain assessment tools in your everyday ward work?

Yes Sometimes No (just interchange)

9. Which of the following pain assessment tool have you used?

i) Neonatal Infant Pain Scale (NIPS)

ii) Face Legs Activity Cry Consolability (FLACC)

iii) Wong-Baker faces pain rating scale

iv) Numeric rating scales (NRS)

v) Verbal pain rating scale

vi) Other: …….

10. How many patients do you care per shift?

1-3 4-6 7-9 10 and above

11. How many pain assessment tools do you use per shift?

1-3 4-6 7-9 10 and above

12. Do you think the use of pain assessment tools is time-consuming?

Yes ☐ No ☐

13. A nurse should use pain assessment tool regardless of the circumstances

Yes ☐ No ☐

14. It is not necessary to use pain assessment tools in some circumstances

Yes ☐ No ☐

15. It is not always practical to adhere to the use of pain assessment tools

Yes ☐ No ☐

16. Are the pain assessment tool sheet/form available in the ward?

Yes ☐ No ☐

17. How would you rate the facility infrastructure in terms of support for the utilization of pain assessment tools?

i) They are adequate ☐

ii) They are inadequate ☐

iii) They do not support at all ☐

iv) Others (specify): ……

18. How would you rate the hospital management in terms of support for the utilization of pain assessment tools?

i) Gives adequate support ☐

ii) Gives inadequate support ☐

iii) Does not support at all ☐

iv) Others (specify): …….

19. Are there missing resources/items to facilitate the utilization of pain assessment tools?

Yes ☐ No ☐

20. If yes (in the question above), in your opinion what are the missing resources/items? (list all of them)

……

…….

21. Is there dissatisfying aspect of nursing in different wards among the following?

a) Caring for so many patients

Yes ☐ No ☐

b) New reporting system

Yes ☐ No ☐

c) Rules made without considering staff

Yes ☐ No ☐

d) Useless paperwork

Yes ☐ No ☐

e) Others: Please specify: …….

22. How would you classify your workplace?

Negligent ☐ disorganized ☐ stressful ☐ conducive ☐

23. Have you had in service training in the use of pain assessment tools?

Yes ☐ No ☐

24. Would you prefer a training in the use of pain assessment tools?

Yes ☐ No ☐

Thank you for being part of our research.

Appendix F - CHECKLIST FOR PATIENT FILE

Data collection tool for use of pain assessment tools among nurses caring for children at selected hospital in Rwanda.

Part1: ***(for first objective)***

Hospital: …… Service: …… Unit: …….

Period of hospitalization: Date of admission: …. /……/……Date of discharge: ……/…. /…….

Is there a filled use of pain assessment tool in the file of patient? Yes ☐ No ☐

How many tools were used? As present in the file? ☐

Please fill in the blanks:

If any, which tool (s) were used? As present in the patient file: …….....

How frequently were pain assessment tools used? daily, weekly, or monthly?

……

Part 2 ***(for second objectives)***

Item	**Yes**	**No**	**Not applicable**
Is the pain assessment tool usage available in-patient file?			
Are the pain assessment tools used by considering child 'age?			
Are the pain assessment tool addressing health problems related to pain holistically (physiological, psychological, spiritual, social)?			

Are the usage of pain assessment tools following its gravity?			
Is the goal patient oriented?			
Is the goal relevant to pain management?			
Pain assessment tools used are safe for patients?			
Are rationales indicated for each nursing intervention after pain assessment done?			
Indicates the extent to which the outcome criteria have been achieved (evaluation)			
Accurate documentation is done in the charts and type of pain assessment tool used?			
Records contain name and signature of the nurse			

Appendix G - FORMULAIRE DE CONSENTEMENT ÉCLAIRÉ (pour les infirmières) *(56)*

1. Fiche d'information

Etude de recherche: Utilisation des outils d'évaluation de la douleur chez les infirmières s'occupant d'enfants en hôpital choisi.

Chercheuse: Triphonie Mukaziboneye.

Programme d'études supérieures: Pediatric track, School of Nursing and Midwifery, College of Medicine and Health Sciences, University of Rwanda.

Brèves explications de l'étude

Cette étude évaluera Utilisation des outils d'évaluation de la douleur chez les infirmières s'occupant d'enfants en hopital choisi (l'hôpital de district Kabgayi).

Votre contribution à cette recherche

Nous apprécions vos contributions sur l'utilisation des outils d'évaluation de la douleur parmi les infirmières du service pédiatrique de l'hôpital de district Kabgayi. Puisque vous êtes l'une des infirmières qui s'occupent des enfants, votre contribution est utile dans cette recherche. Vous répondrez à quelques questions.

Avantages de cette recherche.

Cette recherche aidera une infirmière à comprendre plusieurs outils d'évaluation de la douleur et à fournir une gestion adéquate de la douleur aux enfants. Ainsi, les patients bénéficieront également d'une procédure douloureuse réduite.

Droit de se retirer ou de refus

Vous avez le droit de cesser de répondre aux questions à tout moment. Aucune réponse n'est fausse ou juste car vous donnez votre avis sur votre expérience dans l'utilisation des outils d'évaluation de la douleur. Aucune réponse ou réflexion ne sera donnée à l'hôpital. En signant ce document, vous vous portez volontaire pour participer à cette étude.

Confidentialité

Chaque infirmière recevra un numéro de code qui restera confidentiel.

Une question sur la recherche?

Vous pouvez me poser n'importe quelle question sur la recherche elle-même et sur votre implication dans cette recherche.

……..…….……

2. Certificat de consentement

Je comprends en quoi consiste cette étude et j'ai répondu à mes questions. Je sais que j'ai le droit de me retirer de cette étude et je suis conscient de l'utilisation de mes informations aux fins de l'étude. Je suis également assuré que mes informations resteront confidentielles. Je confirme donc que j'ai volontairement accepté de participer à cette étude.

Participant: …….

Signature…….

Date…….

Jour/mois/année

Je peux confirmer que chaque participant a eu l'occasion de poser des questions sur cette étude et j'ai fait de mon mieux pour répondre à leurs questions. Je peux également confirmer que tous les participants avaient la liberté de participer à cette étude.

Personne ayant obtenu l'assentiment / Chercheur: …….

Signature……...

Date……...

Jour/mois/année

Appendix H - QUESTIONNAIRE INFIRMIÈRES

Outils de collecte de données pour l'utilisation des outils d'évaluation de la douleur chez les infirmières s'occupant d'enfants hospitalisés dans les different services de l'hôpital de district de Kabgayi.

Numéro de série du questionnaire _____

Date: ____/____/___

Nom de l'établissement de santé:

Vos réponses honnêtes au questionnaire suivant aideront grandement à tenter d'évaluer l'utilisation des outils d'évaluation de la douleur parmi les infirmières qui s'occupent d'enfants à l'hôpital de district de Kabgayi. Toutes les réponses seront codées par un numéro d'identification, gardées confidentielles et analysées sous forme de groupe afin qu'il n'y ait aucune révélation d'informations personnelles.

Merci de prendre le temps (estimé à 30 minutes) pour remplir le questionnaire.

1. Age: en dessous de 24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55 et ci-dessus ☐
2. Le genre: Male ☐ Feminin ☐ Transgenres ☐
3. État civil: celibataire ☐ Marié ☐ Veuve ☐ Divorcé ☐
4. Niveau d'éducation en: A2 (Certificat) ☐ A1 (Diplôme) ☐ A0 ☐ Maîtrise ☐
5. Expérience de travail dans la profession infirmière:
   < 5 ans ☐ 5-9 ans ☐ 10-14 ans ☐ 15-19 ans ☐ 20 +

o

6. Unité: Pédiatrie Urgence chirurgie Neonatology consultation

Externe sale d'operation

7. Quart de travail: sur quel quart de travail travaillez-vous?

Les jours seulement les nuits seulement Mixe les jours et les nuits

8. Utilisez-vous les outils d'évaluation de la douleur dans votre travail quotidien dans la salle?

Oui Parfois non (juste échange)

9. Lequel des outils d'évaluation de la douleur suivants avez-vous utilisé?

i) Échelle de douleur néonatale infantile (NIPS)

ii) Consolabilité des cris d'activité des jambes du visage (FLACC)

iii) Wong-Baker fait face à une échelle d'évaluation de la douleur

iv) Échelles numériques de notation (NRS)

v) Échelle d'évaluation de la douleur verbale

vi) Autre: …….

10. Combien de patients vous occupez-vous par quart de travail?

1-3 4-6 7-9 10 +

☐ ☐ ☐ ☐

11. Combien d'outils d'évaluation de la douleur utilisez-vous par quart de travail?

1-3 ☐ 4-6 ☐ 7-9 ☐ 10 + ☐

12. Pensez-vous que l'utilisation des outils d'évaluation de la douleur prend du temps?

Oui ☐ No ☐

13. Une infirmière devrait utiliser un outil d'évaluation de la douleur quelles que soient les circonstances

Oui ☐ No ☐

14. Il n'est pas nécessaire d'utiliser des outils d'évaluation de la douleur dans certaines circonstances.

Oui ☐ No ☐

15. Il n'est pas toujours pratique de se conformer à l'utilisation des outils d'évaluation de la douleur.

Oui ☐ No ☐

16. Une feuille / formulaire des outils d evaluation de pain est-il disponible dans le service

Oui ☐ No ☐

17. Comment évalueriez-vous l'infrastructure de l'établissement en termes de soutien à l'utilisation des outils d'évaluation de la douleur?

(i) Ils sont adéquats ☐

(ii) Ils sont inadéquats ☐

(iii) Ils ne supportent pas du tout ☐

(iv) Autres (précisez): ……

18. Comment évalueriez-vous la direction de l'hôpital en termes de soutien à l'utilisation des outils d'évaluation de la douleur?

(i) Fournit un soutien adéquat ☐

(ii) Donne un soutien inadéquat ☐

(iii) Ne supporte pas du tout ☐

(iv) Autres (précisez): …….

19. Y a-t-il des ressources / éléments manquants pour faciliter l'utilisation des outils d'évaluation de la douleur?

Oui ☐ No ☐

20. Si oui (dans la question ci-dessus), à votre avis, quelles sont les ressources / éléments manquants? (listez-les tous)

……

……

21. Y a-t-il un aspect insatisfaisant des soins infirmiers dans le service parmi les suivants?

a) Prendre soin de tant de patients

Oui ☐ No ☐

b) Nouveau système de reporting

Oui ☐ No ☐

c) Des règles élaborées sans tenir compte du personnel

Oui ☐ No ☐

d) Paperasse inutile

Oui ☐ No ☐

e) Autres (précisez): …….

22. Comment classeriez-vous votre lieu de travail?

Negligent ☐ désorganisée ☐ stressant ☐ propice ☐

23. Avez-vous reçu une formation continue sur l'utilisation des outils d'évaluation de la douleur?

Oui ☐ No ☐

24. Préférez-vous une formation sur l'utilisation des outils d'évaluation de la douleur?

Oui ☐ No ☐

Merci de faire partie de nos recherches

Appendix I - LISTE DE CONTRÔLE POUR LE DOSSIER PATIENT

Outils de collecte de données pour l'utilisation des outils d'évaluation de la douleur chez les infirmières s'occupant d'enfants hospitalisés de l'hôpital de district de Kabgayi.

Partie 1: (pour le premier objectif)

Hôpital: …… Service: …… Unité: …….

Période d'hospitalisation: Date d'admission:…. / …… / …… Date de sortie: …… /…. / …….

Y a-t-il une utilisation complète de l'outil d'évaluation de la douleur dans le dossier du patient?

☐ ☐

Oui No

Combien d'outils ont été utilisés? Comme présent dans le fichier? ☐

Veuillez remplir les espaces vides:

Le cas échéant, quel (s) outil (s) ont-ils été utilisés? Tel que présent dans le dossier patient: …… ....

À quelle fréquence les outils d'évaluation de la douleur ont-ils été utilisés? quotidien, hebdomadaire ou mensuel?

……

Partie 2 (pour les seconds objectifs)

Article	**Oui**	**No**	**N'est pas applicable**
L'utilisation de l'évaluation de la douleur est-elle disponible dans le dossier des patients hospitalisés?			
L'utilisation de l'évaluation de l outil de la douleur sont-elles indiquées ?			
L'utilisation de l'évaluation de l outil de la douleur considere les problèmes de santé liés à la douleur de manière holistique (physiologique, psychologique, spirituelle, sociale)?			
L'utilisation des outils d'évaluation de la douleur est-elle organisée par ordre de priorité?			
L'objectif est-il orienté vers le patient?			
L'objectif est-il pertinent pour la gestion de la douleur?			
Les actions prévues sont-elles sûres pour les patients?			
Des justifications sont-elles indiquées pour chaque intervention infirmière?			
Indique dans quelle mesure les critères de résultat ont été atteints (évaluation)			
Une documentation précise est fournie dans les tableaux et le type d'outil d' evaluation de la douleur.			
Les dossiers contiennent le nom et la signature de l'infirmière			