



NURSES' KNOWLEDGE AND ATTITUDES REGARDING PEDIATRIC PAIN  
MANAGEMENT IN THREE HOSPITALS IN SOUTHERN PROVINCE OF  
RWANDA

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Master in Nursing –Pediatric track

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RWANDA

By

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A dissertation submitted in partial fulfillment of the requirement for the degree of  
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Supervisor: Dr. Patricia Moreland

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# DECLARATION AND AUTHORITY TO SUBMIT THE DISSERTATION

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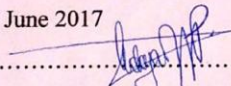
***Nurses' Knowledge and Attitudes Regarding Pediatric Pain Management In Hospitals in the Southern Province of Rwanda***

a. Declaration by the Student

I do hereby declare that this **dissertation** submitted in partial fulfilment of the requirements for the degree of **MASTERS OF SCIENCE** in **NURSING**, at the University of Rwanda/College of Medicine and Health Sciences, is my original work and has not previously been submitted elsewhere. Also, I do declare that a complete list of references is provided indicating all the sources of information quoted or cited.

Date and Signature of the Student

12 June 2017

.....  


b. Authority to Submit the dissertation

Surname and First Name of the Supervisor

**Moreland Patricia**

.....

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

Date and Signature of the Supervisor/Co-Supervisor

12 June 2017 

## **DEDICATION**

I dedicate this work to

You, All my friends and colleagues.

You , my mother.

## **ACKNOWLEDGMENT**

The accomplishment of this work was the results of many contributions by individuals.

First, I would like to express my gratitude and appreciation to **Dr. Patricia Moreland** my research dissertation supervisor for her guidance, supervision and kind patience throughout this study, special thanks also go to Dr. Betty Ferrell and Dr. Renee C.B.

Manworren who helped me in finding the tool that has been used in this study. Greatly, I acknowledge the nurses who participated in this study. I thank all hospitals' directors of the three hospitals that gave me the permission and helped me throughout the data collection process. My grateful acknowledgments go to the Ministry of Health for funding me in this masters course as well as to the school of nursing that gave me the opportunity to undertake this masters. I wish to show my respect to my friend ever KARERA Eric and his family for his unforgettable support throughout my study. Special thanks go also to the colleagues classmates for their big help offered to me. I deeply appreciate the special help from my Employer and staff colleagues of the emergency department for their valuable help during this masters program.

## **ABSTRACT**

**Introduction:** pain is a condition which is common and treatable in pediatric patients. The management of this condition depends on the knowledge and attitude of a health care professional especially nursing staff. This concept of pain management seems to be new in Rwandan hospitals; however, there is almost no research done to assess the knowledge and attitude of nurses about pediatric pain management

**Aim:** To assess the knowledge and attitudes regarding pediatric pain management among nurses in three hospitals in Southern Province of Rwanda

**Methods:** A descriptive cross-sectional research design was used. Data were collected from 117 nurses in three hospitals in Southern Province of Rwanda using a self-administered survey. Demographics and the Pediatric Nurses' Knowledge and Attitudes Survey was used. Descriptive statistic was used to analyze the frequency distributions, means, and percentages of participants. Descriptive categories included age, gender, the level of education, years in nursing practice. Chi-square was be used to determine a relationship between demographic variables and knowledge and attitudes scores

**Results and conclusion:** The final scores for nurses were 30% as a minimum, 77.5% as maximum and the mean score was 54.7%.The findings of the survey show that nurses have insufficient knowledge regarding pediatric pain management. None of the sociodemographic variables predicted the scores obtained by the participants ( $P > 0.05$ ). Due to this deficiency, pain in children remains inadequately managed, which leads to suffering in this population. It is necessary to increase the continued training for nurses

## **KEY WORDS**

**Pain:** The International Association for the Study of Pain (IASP) taxonomy defines pain as an unpleasant sensory and emotional experience from actual or potential tissue damage or described in terms of such damage

The expression of pain depends on the person and subjective experience related to individual psychology, physiology, and environmental factors such as culture, previous experiences, personal coping strategies, fear and anxiety (MOH, 2012).

**Pain management:** pain management is aimed to decrease pain, anxiety, and distress

**Attitude:** according to Cambridge Dictionary,( 2016)attitude is defined as the way of thinking or feeling about something or someone that determine the way of behaving

**Knowledge:** Merriam-webster (2016)defines knowledge as having awareness about something, information, understanding got from education

**Pediatrics:** MedicineNet(2017) defines it as a field of medicine that that involves the medical care of infants, children, and adolescents. In the context of the study setting, these who are cared as pediatric patient are patients who are under 15 years

## **LIST OF SYMBOLS AND ACRONYMS**

A0: Nurse who completed bachelor's degree

A1: Nurse who completed three years of higher learning institution

A2: Nurse who completed high school level

BUTH: Butare University Teaching Hospital

CHUK: Centre Hospitalier Universitaire De Kigali

I V: Intravenous

IASP: International Association for the Study of Pain

ICU: Intensive Care Unit

KAP: Knowledge Attitude and Practice

MOH: Minister of Health

OPD: Out Patient Department

PNKAS: Pediatric Nurses' Knowledge and Attitudes Survey

PRN: Pro Re Nata (when necessary)

U R: University of Rwanda

WHO: World Health Organization



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# **CHAPTER 1. INTRODUCTION**

## **1.1 Background**

The World Health Organization (WHO) and the International Association for the Study of Pain have identified unrelieved pain as a significant global health issue. Despite the recognition that relief from pain is a basic human right, the under treatment and mismanagement of pain persists worldwide (WHO 2007)

Developing countries face considerable challenges related to pain management due to limited resources, poorly developed healthcare systems, lack of education and access to information, cultural attitudes and lack of analgesic medication, (Johnson et al. 2015) Sub-Saharan Africa, carries a high burden of disease and therefore a significant potential for pain and suffering (Albertyn,2009).

Previous research has shown that pain in children is often underrecognized and undertreated (Taylor et al. 2008). Barriers to pediatric pain management may include system, professional, and patient obstacles. System barriers are related to the regulatory barriers to access to analgesics, resource limitations, and prioritization of infectious diseases(Johnson et al. 2015) . Professional barriers include beliefs that narcotics are more dangerous in the pediatric patient; that the infant's immature nervous system does not allow them to feel pain, that pain builds character, the tolerance of pain in children is better in adult, and that the memory of pain is absent in children (Olmstead et al. 2010; Ortiz et al. 2015). Patient barriers include cultural and religious beliefs, fear of addiction and anxiety about side effects.

Under or untreated pain in children has multiple consequences including both physiological and psychological effects. Adverse effects include complications involving the cardiovascular, respiratory and gastrointestinal systems, weakened immune function, delayed healing, predisposition to chronic pain, anxiety and depression.

Nurses play an integral part of pain management in children. As advocates for the child and family, nurses are responsible for ensuring that pain medication is provided. Previous research indicates that nurses' knowledge and attitudes affect their response to children in pain and thus pain management (Vincent,2010). Nursing factors related to under management of children's' pain include lack of standardized assessment and evaluation methods, limited knowledge of pediatric pain, education level, lack of knowledge of analgesics, and lack of time(Olmstead et al. 2010)

In Rwanda, from the researcher experience, he observed also that under treatment and/or undertreatment of pain in hospitals may arise from different effect either from the health care provider or patient. Here he can highlight some like the Rwandan culture that always encourages not to express the feeling of pain in order to be considered strong in the society. Unavailability of some pain medication in health facilities also plays another big role in undertreatment of pain in the pediatric population, another challenge that is hindering the proper pain management is from the insufficient knowledge about pain assessment especially in a pediatric patient where the communication with the health care team is impaired due to the undeveloped cognition of the patient,pain assessment tools are not present in many hospitalisation wards ,they are not even in patient file.

The opiophobia due to insufficient knowledge about pain medication stands there as a challenge in much Rwandan health care provider.

## **1.2. Problem statement**

According to the Declaration of the Human Rights of 1948, relief from pain is a fundamental human right. Despite this international mandate and significant advances in the management of pediatric pain, children continue to suffer needlessly indicating a disparity between rights and reality (Olmstead et al. 2010). Studies have identified that nurses' knowledge, attitudes, and beliefs contribute to the inadequate management of pain in children (Johnson et al. 2015; Nimbalkar et al. 2013).

Yet much effort has been made by Rwandan Ministry of Health to improve the aspect of pain management for the patient guidelines have been established to help care professionals and drugs to manage pain including narcotics has been distributed at the district level of the health system, also training has been offered to some health care professionals about the pain management. From the literature studies have shown that many health care professionals tend to ignore the pain in a pediatric patient (Olmstead et al. 2010), moreover, they do not intervene adequately to manage pain for these special population of a patient who sometimes cannot report properly the feeling of pain according to the age of the patient.

Despite all measures taken to address the pain of patients, little is known about the attitude and knowledge regarding pediatric pain management among nurses in Rwandan Hospitals. Therefore this study is designed to assess the knowledge and attitude among nurses about managing pain for pediatric patients.

### **1.3. Objectives**

#### **1.3.1. Main Objective**

The aim of the study is to assess the knowledge and attitudes regarding pediatric pain management among nurses in three hospitals in Southern Province of Rwanda

#### **1.3.2. Specific Objectives**

- To assess the knowledge and attitudes regarding pediatric pain management among nurses in three hospitals in southern province hospitals of Rwanda.
- To determine a relationship between nurses' demographic data and knowledge and attitude of pediatric pain management.

### **1.4. Research questions**

1. What is the knowledge and attitude regarding pediatric pain management of nurses in three hospitals in southern province hospitals of Rwanda?
2. What is the relationship between demographic characteristics and nurses' knowledge and attitudes regarding pediatric pain management among nurses in three hospitals in southern province hospitals of Rwanda?

### **1.5. Significance of the Study**

As IASP and WHO cited, the pediatric pain management is a special concern especially in developing country and Rwanda included, and unmanaged pediatric pain result in many complications, while nurses play an important role in pain management; once the results of this study are available:

- They will provide information to enhance the pain management in pediatric patients.
- They will identify gaps in knowledge that may suggest further education.
- It will document the current knowledge and attitudes in pediatric pain management.



## CHAPTER 2: LITERATURE REVIEW.

### 2.1. Introduction

This chapter will present the overview of nurses' knowledge and attitude regarding pediatric pain management based on existing theory and literature that talk about the topic which is of interest in this research

A need to master the knowledge of pain management is also supported by a focus group study conducted in Rwanda in Centre Hospitalier Universitaire de Kigali (CHUK) where a researcher was interested in perspectives, perceptions, and experiences of anesthesia residents regarding postoperative pain management strategies in postoperative pain management in developing countries and one of participant anesthesiologist resident interviewed reported that pain ICU it is the responsibility of ICUs' nurses to manage postoperative pain(Johnson et al. 2015) .

Studies from many years ago in the 1990s showed that many pediatric patients still experiencing pains. These studies revealed that three-quarter of the patient hospitalized in pediatric ward report moderate to severe pain and recent studies reported that a great number of Pediatrics inpatient are experiencing moderate at a percentage of 21% to 64% (Birnie et al. 2014). Ortiz *et al.*, (2015) in a prospective, descriptive, analytical, and cross-sectional study conducted to investigate the knowledge and attitudes regarding pediatric pain in nurses and nursing students reported that pain in the pediatric patient is still inadequately addressed due to insufficient knowledge in the treatment of pain.

Failure to address adequately the pain for a suffering patient and repeated exposure to pain may results in numerous consequences of persistent pain such as sleep disturbance,

anxiety, aggressive behaviors , attention deficit disorder, impaired social skills, in addition to that pain deteriorate the quality of life of a person(Zwakhaleh et al, 2007; Steven D. Waldman, 2009). Not addressing the pain adequately also extends the lengths of stay thus increases the cost of care for the patient (Mathews 2011; Ortiz et al. 2015; Imani & Safari 2011)

Vallano et al (2006) in Asadi-noghabi *et al.*, (2014) in a study aimed to determine knowledge, attitude, and performance vis-à-vis pain management in neonates by nurses working in neonatal units in Bandar Abbas University Hospitals ,reported that various personal factors can influence how a health care professional understand the meaning of pain, values and beliefs influence in understanding the pain in developing child, some professionals does not give importance to child's pain believing that pain builds character.

Many misconceptions exist for some health professional; nurses included the pediatric pain; where they think that:

- Children feel less pain than adult, they do not even have the memory of pain and some of the drugs like narcotics are very dangerous for them because they can cause addiction(Mathews 2011; Johnson et al. 2015)
- They believe that the urgent life-saving act for critical condition outweighs the need of applying the principles of pain management also presumptions of the health care givers as well as of caregivers have a great impact on the assessment of the pain of children, also children may bias the caregivers either because of fear of injections or fear of disappointing a caregivers.

- A great number of health care providers also think that they are the ones to who can judge the intensity precisely of the pain rather than the child's experience. Also, they will count on some visible signs like sweating tachycardia, crying, muscle tension, uncoordinated movement of the body (Mathews 2011)

#### **2.4. Conceptual framework**

Knowledge, Attitude and Practice model will be used in this study. The KAP model has been used historically in the field of family planning (Cleland 1973). This model has been progressively more used in survey research especially in health care organization; KAP model can give quantifiable data whereby the researcher can be able to identify gap between knowledge and attitudes and practice ; it has been proven to be a good model when it comes to deal with nurses' knowledge, attitude, and practices (Launiala 2009).

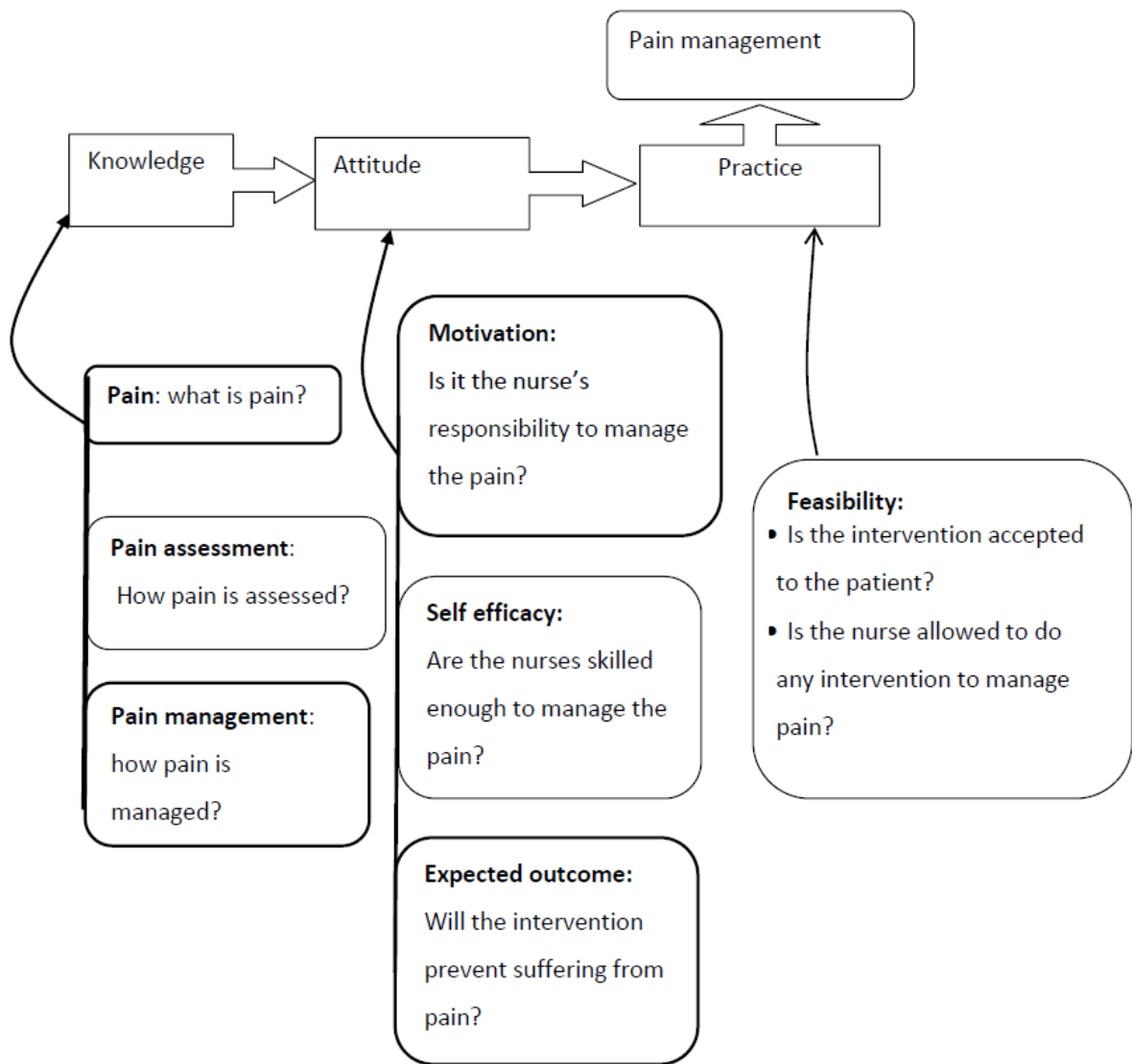
In order to provide high-quality nursing care in managing pain, the high-level nursing knowledge that will influence a positive attitude are indispensable for managing effectively the pain. The knowledge needed to include; knowledge of pain, types, and different causes; knowledge how pain is assessed and tools used; knowledge of pain medication and non-pharmacological management of pain.

Even if knowledge can be acquired through a different mode of acquisition of ideas such as; judgment, perception, imagination, and memory; education has been proven as a promising method of knowledge acquisition (Gustafsson & Borglin 2013; Smyth et al. 2007).

Attitude refers to the way of thinking or feeling about something or someone that determine the way of behaving in a certain situation. Nurses' attitude about pain has a big impact on how nurses practice pain management methods. Attitude has been identified as

one of the barriers to proper deal with pediatric pain. Nurses who are equipped with good knowledge and have a positive attitude about pediatric pain tend to proper manage pediatric pain(Stanley & Pollard 2013). In this study knowledge and attitude have been combined due to their impact on nurses’ practices when they are caring pediatric patient with pain.

**Figure2. 1: KAP conceptual framework**



## **CHAPTER 3: METHODOLOGY**

### **3.1. Introduction**

This is the systematic way to solve the research problems (Rajasekar & Philominathan 2013). The step to adopt in studying the research problems along with the reason are presented in this chapter. It contains various step adopted by the researcher in studying his research problems along with the reason behind them.

### **3.2. Research approach and design**

This is quantitative non experimental study and descriptive cross-sectional study design was used in this study.

Cross-sectional study design was used in this study because; it is relatively inexpensive and takes up little time to do and there is no loss of follow-up, it can assess many outcomes and risk factors, it estimates prevalence of outcome of interest because sample is usually taken from the whole population(Levin 2006)

### **3.4. Research setting**

The study was conducted in three hospitals: Butare University Teaching Hospital (BUTH) and other two District Hospitals that include Kibilizi and Nyanza District Hospital in the Southern Province of Rwanda. Of the ten hospitals in the southern province, three were selected, BUTH is a referral hospital located in Huye district, Kibilizi Hospital is a district hospital of Gisagara District, Nyanza Hospital is a district hospital of Nyanza District. These settings have been selected randomly among the southern hospital

### **3.5. Study population**

The study population included nurses working in hospitals and who take care of pediatric patients. Nurses were included if they work in the following areas; emergency department, OPD; pediatric department, Surgical Department.

### **3.6. Sampling criteria**

#### **3.6.1. Inclusion criteria**

All nurses working at BUTH, Kibilizi District Hospital and Nyanza District Hospital who provide care to ill children were eligible for inclusion in the study.

#### **3.6.2. Exclusion criteria**

Nurses who work in a unit that does not provide care to the pediatric patient was excluded.

### **3.7. Sample Size**

The total study population of nurses in the units of three hospitals were 166 nurses. Calculation using SurveyMonkey online software for sample size calculation with a confidence level of 95 %, margin error of 5% and normal distribution of 50%, the sample size has been 117 participants.

The proportion to be taken on each study site is presented in the table below.

**Table3.1: The proportion to be taken on each study site is presented in the table below**

<b>Study site</b>	<b>Study population</b>	<b>Sample size</b>
Butare University Teaching Hospital(BUTH)	108	76
Kibilizi District Hospital	27	19
Nyanza District Hospital	31	22
<b>Total</b>	<b>166</b>	<b>117</b>

### **3.8. Sampling strategy**

Non-probability sampling strategy has been used. Non-probability sampling has been used because the procedures to use in selecting units for inclusion in a sample are much easier, quicker and cheaper when compared with probability sampling. The researcher chosen 2 district hospitals that were accessible to him and included one teaching hospital to look whether the type of hospital may have an impact on the level of knowledge and attitude regarding pediatric pain management, the sample to be taken in each setting depended on the size of the population and participants in each hospital were convenient sample. Nurses who take care of ill children were recruited such those who work in pediatrics, surgery because their take care of children with surgical pathologies, emergencies where emergency cases of pediatrics are received and OPD where pediatric outpatient are consulted.

### **3.9. Instrument**

In this study, a self-administered questionnaire was used as a tool for gathering information. The questionnaire has been chosen as a data collection tool because it can be used to collect data quite quickly and all participants can be given the opportunity to provide feedback which is generally anonymous and encourages openness and honesty.

Collected demographic information about the participating nurse included: age, gender, and years of nursing experience, hospital unit and level of education.

A modified version of Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS -Shriners revision 2002) was translated into french. Of the 38 items, one item (number 35) was removed because it is considered not to be applicable to Rwandan context. Modified PNKAS has three section: Section one from item 1 to 24 is true or false questions where the participant is asked to circle the collect answer; Section two from item 25 to 37 multiple choice question, a participant was asked to pick the collect answer; section three contains two case studies, participant will analyze each case and make decision about pain medication.

Permission to use and modify and translate Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS) PNKAS - Shriners revision 2002 has been obtained to measure nurses' knowledge and attitude; permission of the use of PNKAS was obtained from Dr. Betty R. Ferrell. City of Hope Pain Resource Center, Email: [bferrell@coh.org](mailto:bferrell@coh.org), the tool is available on [http://prc.coh.org/res\\_inst.asp](http://prc.coh.org/res_inst.asp). With test and re-test the author of the instrument found  $r = 0.67$  as content validity indication that it is acceptable. To look at internal consistency, 247 pediatric nurses working in a large children's hospital and 88 members of a pediatric nursing specialty organization have been uses and the Cronbach's



alpha was 0.72 and 0.77 respectively indicating an acceptable level of internal consistency.

The revised PNKAS was pretested among 10 nurses who provide care to ill children to test the clarity of questions, validity, and appropriateness to Rwandan context. After comments and correction proposed by those participants, the researcher revised the survey instrument, where some questions in multiple choice section which contained dedication that are not available in the settings were removed to avoid the confusion for the participants.

Question regarding the use of pain assessment tools and the presence of pain protocol was added to the questionnaire.

### **3.10. Ethical considerations**

The present study received the Institutional Review Board approval from the University of Rwanda, College of Medicine and Health Sciences, School of Nursing and Midwifery, the permission from the Director of the District Hospitals and the permission from the research committee of Butare University Teaching Hospital. Written informed consent has been obtained prior to data collection. All participants were informed of the study purpose and objectives and voluntary nature of their participation. In addition, participants were informed that their responses will be kept strictly confidential and will not be shared with anyone outside the research team. Responses will be kept in a locked filing cupboard in the researcher's office.

### **3.11. Data collection procedure**

The researcher went to the study setting and explains the purpose of the study and nurses who met the eligibility criteria; consent to participate in the study. Questionnaire was provided to them by the researcher. The participant was asked to complete the questionnaire, and the researcher was available for answering questions of participant regarding the questionnaire. After completing the questionnaire the participant submitted it to the unit manager where the researcher collected them.

### **3.11. How data was analyzed**

SPSS version 20.0 was used and data was checked to remove any error. Descriptive statistics have been used to analyze the frequency distributions, means, and percentages of participants. Descriptive categories included age, gender, the level of education, years in nursing practice. Bivariate analysis including Chi-square was used to determine a relationship between demographic variables and knowledge and attitudes scores

### **3.12. Data Management**

Confidentiality was respected to the collected data. Anonymity of the participant who completed the questionnaire have been assured and data have been stored on a password protected hard disk; tools used in data collection have been kept in privately locked cupboard to be destroyed after five years of storage

### **3.13. Data dissemination**

The result of this study will be presented to the University of Rwanda and clinical settings. They will be also published in recognized journals.

### **3.14. Limitations of the study addressed**

A study conducted only one province, so results may not be generalizable to all of Rwanda.

Sampling strategy used may not give reliable result in order to generalize to all nurses

Lack of financial means to facilitate the researcher

## CHAPTER 4: RESULT PRESENTATION

The purpose of this chapter is to present the findings of the study. It starts with the rate of questionnaires that has been returned, demographic characteristics of nurses who participated in the study, nurses' knowledge and attitude regarding pediatric pain management and the finding of a relationship between demographic data and nurses' knowledge and attitude regarding pain management in children. Then the finding from the question asking whether there is a protocol for pediatric pain management in the unit and what pain scales that participants used are presented.

### *The rate of returned Questionnaire*

**Table 4.2: Percentage of returned questionnaire of each hospital (N=117)**

Hospital	Distributed Returned		
	N	n	%
Butare University teaching Hospital(BUTH)	76	73	96.0
Kibilizi District Hospital	19	13	68.4
Nyanza District Hospital	22	21	95.4
Total	117	107	92

A total of 117 questionnaires have been distributed to eligible participants in three hospitals in southern province and one hundred and seven questionnaires have been returned (92%).For each hospital, the return rate was: 96% for Butare University Teaching Hospital, 68.4% from Kibilizi District Hospital and 95.4 % from Nyanza District Hospital.

## Social demographic characteristics of participant

Table4. 3: Socio-demographics

<b>Socio-demographics</b>	<b>N</b>	<b>Percentage</b>
<b>Age (years)</b>		
20 – 30	50	46.7
31 – 40	55	51.4
> 40	2	1.9
<b>Gender</b>		
Male	51	47.7
Female	56	52.3
<b>Level of Education</b>		
A2	14	13.1
A1	82	76.6
A0	11	10.3
<b>Years of Nursing Experience</b>		
1 – 3	20	18.7
3 – 6	34	31.8
6 – 9	18	16.8
9 – 12	30	28.0
> 12	5	4.7
<b>Hospital Unit</b>		
Emergency	30	28
Surgery	47	43.9
Pediatric	29	27.1
OPD	1	0.9
<b>Type of Hospital</b>		
District Hospital	34	31.8
Referral Hospital	73	68.2

Results on the socio-demographic characteristics of the participants are depicted in table4.2.

The majority of the participants were female (56%) and ranged in age between 31 to 40

years (51.4 %). With regard to the level of education, most (76.6%) participants had an A1 degree and only 10.3% were educated at the bachelor level (A0). Thirty-one percent of the participants had three to six years of nursing experience, 28% had nine to twelve years of experience and only 4% have more than 12 years of experience in the nursing profession. Results on type of hospital showed that 68.2% worked in a referral hospital. Forty-three percent of participants worked on a surgical unit and 27.1% on a pediatric unit.

### ***Nurses' Knowledge and Attitudes regarding pediatric pain management***

Regarding data analysis of Nurses Knowledge and Attitudes Survey Regarding Pain, according to Ferrell and Margo (2014) authors of Knowledge and Attitudes Survey Regarding Pain found that, it is most helpful to avoid distinguishing items as measuring either knowledge or attitudes. Many items such as one measuring the incidence of addiction really measure both knowledge of addiction and attitude about addiction. Therefore, they have found the most benefit to be gained from analyzing the data in terms of the percentage of complete scores as well as in analyzing individual items. Authors have found very helpful to isolate those items with the least number of correct responses and those items with the best scores in order to guide the educational needs.

Nurses were asked to answer 37 questions, 24 of them were true and false and 13 were multiple choice questions related to nurses' knowledge and attitude regarding pediatric pain management. The questionnaire included questions about nurse's knowledge and attitude regarding pediatric pain management, pediatric pain assessment and pharmacological and non pharmacological management of pain.

**Table4.4: Frequency, mean, minimum and maximum scores of nurses knowledge and attitude regarding pediatric pain management ( $n=107$ )**

Overall nurses' knowledge and attitude						
Variables and level	n	%	Min	Max	Mean	Level
Low level (<60%)	76	71.0				
Moderate (60-79.9%)	31	29.0	30	77.5	54.7	Low
High level (80-100%)	0	0				

Results of the Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS) Scale are summarized in table4.3. Of the 37 questions, 20 (74%) were answered incorrectly. One hundred and seven nurses completed the PNKAS with a mean score of 21.89 ( $n = 107$ ). This relatively low mean score suggests deficiencies in the knowledge and attitudes of the nurses regarding pediatric pain and pain management. It was found that most of the nurses have low level of knowledge 71 % ( $n=76$ ), twenty-nine percent ( $n=31$ ) fallen in category of moderate level. The categorization of knowledge and attitude score was made using McDonald (2002) learning outcomes. According to McDonald learning outcomes, the scores are categorized in five grades (A, B, C, D and F) or five levels (very high, high, moderate, low and very low) as follow:

Grade	Percentages	Levels
A	90-100%	Very high
B	80-89.99%	High
C	70-79.99%	Moderate
D	60-69.99%	Low
F	<60%	Very low

In this study, the researcher modified the McDonald learning outcomes into three levels (high: 100-80%, moderate: 80-60% and low: less than 60%) in order to categorize the nurses' knowledge and attitude regarding pediatric pain management.

The majority of nurses responded incorrectly to questions regarding pharmacologic knowledge of analgesia, appropriate pain management procedures, recommended routes of medication administration, and definition of addiction.

Seventy-two percent of participants did not know that ibuprofen and other nonsteroidal anti-inflammatory agents were effective analgesics for bone pain (Item 6). Similarly 68.2% did not know that Paracetamol 650 mg PO was equal in analgesic effect to codeine 32 mg PO (Item 10) and 60.7% incorrectly identified anxiolytics, sedatives, and barbiturates as appropriate medications for the relief of pain during painful procedures (Item 21). Sixty-one percent were unable to identify which drugs (Ibuprofen, Morphine, Amitriptyline, or all of the above) were useful for the treatment of pain in children (Item 33) and 70% did not know the IV dose of morphine that would be equivalent to 15 mg of oral morphine (Item 28).

Regarding pain administration procedures, 87.9% were unable to correctly identify the recommended route of administration of opioid analgesics to children with continuous, persistent pain (Item 25). The majority (54.2%) did not know that analgesics for post-operative pain should initially be given around the clock on a fixed schedule (Item 29).

### ***Nurses attitude regarding pediatric pain management***

Regarding attitudes toward pain management, 80.4% believed that patients over-reported the amount of pain that they had (Item 35) and 53.3% did not know that the most likely



explanation for a child/adolescent with pain to request increased doses of pain medication was because the child/adolescent was experiencing increased pain (Item 32). Seventy-seven percent thought that infants/children/adolescents may sleep in spite of severe pain and 52.3% believed that if an infant/ child/ adolescent could be distracted from his pain this usually means that he is not experiencing a high level of pain (Item 3). Sixty-two percent did not believe that based on one’s religious beliefs a child/ adolescent may think that pain and suffering are necessary (Item 20). Seventy-nine percent incorrectly answered the question regarding addiction to opioid analgesics (Item 36).

**Table4. 5: Pain Protocol in Hospital Unit**

	N	Percentage
Pain Protocol on Hospital Unit		
Yes	52	48.6
No	46	43
Unsure	9	8.4

Table 4.6 presents the number and percentage of hospital units that had pain protocols. Results indicate that approximately half (48.6%) of the hospital units at the three study hospitals had pediatric pain protocols. Eight percent of participant answered that they are unsure whether they have the pain protocol or not.

**Table4. 6: Pediatric Pain Scales Used by Participants**

<b>Pediatric Pain Scale</b>	<b>N</b>	<b>Percentage</b>
Neonatal Infant Pain Scale (NIPS)	1	0.9
FLACC (Face, Legs, Activity, Cry, 8 Consolability)	8	7.5
FACES	52	48.6
Numeric	20	18.7
FLACC and FACES	3	2.8
FACES and NUMERIC	14	13.1
None	9	8.4

Table4. 5 summarizes the pediatric pain scales used by participants. The FACES Pain Scale (ages 3-7 years) was the most frequently used scale (48.6%) followed by the Numeric Pain Scale (18.7%) (ages 8 years and older). The Neonatal Infant Pain Scale (birth to one year) was only used by 0.9%. of participants. Eight percent of participants had never used any of the pediatric pain scales listed.

**Table4. 7: Percentage of top five of question most correctly answered and top five most erroneously answered regarding nurses’ knowledge and attitude regarding pediatric pain management**

<b>Rank</b>	<b>Items</b>	<b>Correct %</b>
<b>Five highest</b>		
1	Parents should not be present during painful procedures.	84.1
2	Adolescents with a history of substance abuse should not be given opioids for pain because they are at high risk for repeated addiction.	72
3	Comparable stimuli in different people produce the same intensity of pain.	71
4	The child/ adolescent with pain should be encouraged to endure as much pain as possible before resorting to a pain relief measure.	71
5	Because of an underdeveloped neurological system, children under 2 years of age have decreased pain sensitivity and limited memory of painful experiences.	70.1
<b>Five lowest</b>		
1	The recommended route of administration of opioid analgesics to children with background (continuous, persistent) pain	12.1
2	Your assessment, above, is made two hours after he received morphine 2 mg IV. After he received the morphine, his pain ratings every half-hour ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2 as an acceptable level of pain relief. His physician’s order for analgesia is “morphine IV 1-3 mg q1h PRN pain relief.” Check the action you will take at this time: (Administer morphine 4 mg IV now).	12.1
3	What do you think is the percentage of patients who over-report the amount of pain they have? Circle the correct answer. (0 or 10%)	19.6
4	Narcotic/opioid addiction is defined as psychological dependence accompanied by overwhelming concern with obtaining and using narcotics for psychic effect, not for medical reasons. It may occur with or without the physiological changes of tolerance to analgesia and physical dependence (withdrawal). Using this definition, how likely is it that opioid addiction will occur as a result if treating pain with opioid analgesics? Circle the number closest to what you consider the correct answer. (< 1%)	20.6
5	Non-drug interventions (e.g. heat, music, imagery, etc.) are very effective for mild-moderate pain control but are not helpful for more severe pain. (true)	20.6

*The relationship between nurses' knowledge and attitudes, and nurses' demographic characteristics.*

**Table4.8: Relationship between nurses' demographic characteristics with knowledge and attitude regarding pediatric pain management**

		knowledge and attitude		P value
		Low level n (%)	Moderate n (%)	
Hospital unit	Emergency	23(76.7%)	7(23.3%)	0.562
	Surgery	30(63.8%)	17(36.2%)	
	Pediatric	22(75.9%)	7(24.1%)	
	OPD	1(100.0%)	0.0%	
Age of participants	20-30 years	35(70%)	15(30.0%)	0.69
	>30-40 years	40(72.7%)	15(27.3%)	
	above 40 years	1(50.0%)	1(50.0%)	
Years of Experience	> 1 - 3 years	12(60.0%)	8(40.0%)	0.426
	>3- 6years	24(70.6%)	10(29.4%)	
	>6-9 years	12(66.7%)	6(33.3%)	
	>9-12 years	25(83.3%)	5(16.7%)	
	Above 12 years	3(60.0%)	2(40.0%)	
Level of education	A2	12(85.7%)	2(14.3%)	0.109
	A1	54(65.9%)	28(34.1%)	
	A0	10(90.9%)	1(9.1%)	
Hospital	district hospital	24(70.6%)	10(29.4%)	1
	referral hospital	52(71.2%)	21(28.8%)	

Table 4.7 shows no relationship between demographic characteristics of participant with nurses' knowledge and attitude regarding pediatric pain management, all P values are greater than 0.05.

## **CHAPTER 5: RESULT DISCUSSION**

Adequate knowledge and appropriate attitude are required to properly and assess effectively manage the pain. Nurses have the responsibility of assessing pain, treating pain using pharmacological or non-pharmacological intervention and evaluate the effectiveness of the interventions by reassessment(Ekim & Ocakci 2013).

The purpose of this study was to assess the knowledge and attitudes regarding pediatric pain management among nurses in three hospitals in Southern Province of Rwanda. A total of 117 questionnaires were distributed to eligible nurses. One hundred and seven well-completed questionnaires were returned (92%), this good response rate is quite similar to the study conducted by Dongara *et al.*, 2015. Some of the reason of non-participation to the study stated by nurses included a long questionnaire, lack of time to complete the questionnaire and some participant were complaining that the questionnaire has too difficult questions

In this study, nurses completed the modified Pediatric Nurses' Knowledge and Attitude Survey questionnaire, and the individual score ranged from 30% to 77.5 % with the average score of 54.7 %.Ekim and Ocakci,( 2013) have found that PNKAS, scores ranged from 15% to 65%, with a mean score of 38.2% that is low compared to the findings from this study .however ,the study done by Rieman and Gordon( 2007) found PNKAS scores to range from 37% to 100%, with a mean score of 74% which is high compared to the present study

### ***Demographic characteristics of Nurses***

The majority (56%) of the participants were female, thus this results cannot be generalized male nurses and ranged in age between 31 to 40 years (51.4 %). In this study, most of the nurses (76.6%) who participated had an A1 degree (studied nursing for three year in higher learning institute) which is inconsistent with the study conducted in Mongolia where the majority of participant were nurses with bachelors degree (Lunsford 2015) and only 10.3% were educated at the bachelor level (A0). The majority of A1 nurses are explained by the effect of that, in Rwanda A1 diploma has become widespread in health system especially in Hospitals, with minimal recruitment of Bachelors' degree nurses and limitation of recruiting nurse with high school diploma, analysis of the data of the level of education did not revealed any influence on knowledge and attitude regarding pain which is inconsistent with the finding of a study where level of education influenced positively the level of knowledge nursing staff knowledge and belief regarding pain management( Zwakhalen et al, 2007) . The majority of participants were having less experience than other studies(Dongara et al. 2015) with the range of 3 to5 years but more experience than those who participated in a study conducted by Ortiz *et al.*, 2015 where 48.6% were having the experience ranged between 1 to 5 years (Dongara et al. 2015) but quite similar to those of Nimbalkar *et al.*, 2013. Analysis of year of experience did not show any correlation with the level of experience, inconsistently to the findings of the study where the increase of experience goes with the decrease of the score (Ekim & Ocakci 2013) however , Studies have found that experience, level of education contribute to the nursing knowledge as evidenced by the high score obtained by who are more

experienced and those who have the higher level of education than others (Lui et al. 2008; Rieman & Gordon 2007; Dongara et al. 2015).

### ***Knowledge and attitude regarding pediatric pain management***

The study results revealed that in general, the nurses have a low level of knowledge and attitude about pediatric pain management (mean 21.89) of the Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain (PNKAS) Scale, only 29 % had moderate level without anyone with high level of knowledge. These findings are quite similar to those of Ortiz *et al.*, (2015) and Lunsford, (2015) which reported a very low nurses' knowledge regarding pediatric pain management.

Analysis of top five questions answered erroneously, revealed that ,most of the nurses answered incorrectly the questions regarding pharmacological and non pharmacological management of pain of pain , For example, the question “The recommended route of administration of opioid analgesics to children with background (continuous, persistent) and the question Your assessment, above, is made two hours after he received morphine 2 mg IV. After he received the morphine, his pain ratings every half-hour ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2 as an acceptable level of pain relief. His physician's order for analgesia is morphine IV 1-3 mg q1h PRN pain relief.” Check the action you will take at this time (Administer morphine 4 mg IV now)” were answered correctly by only 12.1% of the participants, also the question regarding addiction, seventy nine point four of the participant answered it wrongly the same as to the question “Non-drug interventions (e.g. heat, music, imagery, etc.) are very effective for mild-moderate

pain control but are not helpful for more severe pain. (True)” were answered. This study showed that there is insufficient knowledge regarding the management of pain especial using pharmacological approach. These findings are consistent with the result of the found in other studies done like the study of Ekim and Ocakci, (2013) and Nimbalkar *et al.*, (2014), deficiency in pain analgesic drugs was also stated by Ellis *et al.*, (2007). This limited knowledge of pharmacological pain management of nurse will result in poor management of patients who have pain.

Almost a half ( 48.6%) of the nurses reported that they do not have any pain protocol in their unit and 8.4% don't even know whether pain protocol exists , this means that the majority of pediatric patient with pain is not managed in a standardized way , these results are similar to those reported in a study done by Linhares *et al.*, (2014)



## **CHAPTER 6. CONCLUSION AND RECOMMENDATION**

This chapter reports the conclusion from the interpretation of the findings of the study and the recommendations from the researcher.

### **6.1. Conclusion**

A descriptive study was conducted to assess the knowledge and attitude regarding pediatric pain management in three hospitals from the Southern Province of Rwanda. Participants were recruited in two District Hospitals and one Referral Hospital which is University Teaching Hospital. The study result showed that there is a deficiency in nurses' knowledge and attitude regarding pediatric pain management. The data from question asking about existence of pain protocol in the unit shows that there is no standardized way of pain treatment, regarding pain scale used when assessing the level of pain the result showed that there is a group of patient (patients under 2 years) that are not assessed using a standardized tool for pain assessment thus improper pain management in that group of patient. Due to that insufficiency, the management of pain in children remains inadequately and poorly and poorly addressed, which lead to unnecessary suffering in pediatric patients.

## **6.2. Recommendations**

Results of this study gives many insights and implications for nursing administration, nursing practices, nursing education, and future research in pediatric pain management

### **In nursing education**

The results of this study revealed that nurses are not having adequate knowledge related to pediatric pain management and this have a negative impact on their practice. While the nursing profession the cornerstone for effective pain management, but the majority of the nurses in this study were not ready to give appropriate care to the pediatric patients who suffer. Therefore, the knowledge about pain assessment, pharmacological and non-pharmacological pain management should be emphasized on and added in the Curriculum for nursing students

### **In nursing practice**

The study's results show that patient is not assessed and managed using standardized way. This may suggest the in-service education and training in pediatric pain management, and this supported by the study conducted among Mongolian nurse where the mean score for post-intervention was greater than the mean score for pre-intervention(Lunsford 2015). Pain assessment, pharmacological and non-pharmacological management of pediatric pain management have to be included in that education and training. The study findings also suggest the availability of pain assessment tools and pain protocols in order to facilitate nursing staff.

### **In nursing administration**

The information from this study about nurses' knowledge regarding pediatric pain management has an impact on the quality of provided to the pediatric patient. However, there is a limited research paper in the field of nursing pediatric pain management. Thus the results of this study should be a basis for future planning and policy making at the local level.

### **In nursing research**

The findings from this research show the level of nurses' knowledge and attitude in only three hospitals of Southern Province of Rwanda. Further studies may be done to many hospitals of Rwanda in order to have the real picture of nurses' level of knowledge and attitude regarding pediatric pain management in Rwanda. Study to explore the barriers and influences of pediatric pain management for the context of Rwanda in the nursing field are needed.

## REFERENCES

- Asadi-noghabi, F. et al., 2014. Neonate Pain Management : What do Nurses Really Know ? , 6(5), pp.284–293.
- Birnie, K.A. et al., 2014. Hospitalized children continue to report undertreated and preventable pain. , 19(4), pp.198–204.
- Cambridge Dictionary, 2016. Attitude. *Cambridge University Press*. Available at: <http://dictionary.cambridge.org/dictionary/english/attitude> [Accessed December 20, 2016].
- Cleland, J., 1973. A Critique of KAP Studies and Some Suggestions for Their Improvement. *Studies in Family Planning*, 4(2), pp.42–47. Available at: <http://www.jstor.org/stable/1964829>.
- Dongara, A.R. et al., 2015. Knowledge of and Attitudes Regarding Postoperative Pain among the Pediatric Cardiac Nursing Staff: An Indian Experience. *Pain Management Nursing*, 16(3).
- Ekim, A. & Ocakci, A.F., 2013. Knowledge and attitudes regarding pain management of pediatric nurses in turkey. *Pain Management Nursing*, 14(4), pp.e262–e267. Available at: <http://dx.doi.org/10.1016/j.pmn.2012.02.004>.
- Ellis, J.A. et al., 2007. Implementing best practice pain management in a pediatric hospital. *Journal for Specialists in Pediatric Nursing*, 12(4), pp.264–277. Available at: <http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=emed11&NEWS=N&AN=47631029%0Ahttp://onlinelibrary.wiley.com.ezp.lib.unimelb.edu.au/store/10.1111/j.1744-6155.2007.00121.x/asset/j.1744->

6155.2007.00121.x.pdf?v=1&t=j0eww3zo&s=0022c9c7f181e61f585dfd59b66.

Ferrell, B. & Margo, M., 2014. No Title. , (July).

Gustafsson, M. & Borglin, G., 2013. Can a theory-based educational intervention change nurses' knowledge and attitudes concerning cancer pain management? A quasi-experimental design. *BMC health services research*, 13(1), p.328. Available at: <http://www.biomedcentral.com/1472-6963/13/328> <http://www.ncbi.nlm.nih.gov/pubmed/23958335> <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=PMC3844371>.

Imani, F. & Safari, S., 2011. Pain Medicine. *anesthesiology and pain medicine*, 1(2), pp.55–57. Available at: [www.AnesthPain.com](http://www.AnesthPain.com) ?Pain.

Johnson, A.P. et al., 2015. Original article Perspectives , perceptions and experiences in postoperative pain management in developing countries : A focus group study conducted in Rwanda. , 20(5), pp.255–260.

Launiala, A., 2009. How much can a KAP survey tell us about people's knowledge, attitudes and practices? Some observations from medical anthropology research on malaria in pregnancy in Malawi. *Anthropology Matters Journal*, 11(1), pp.1–13. Available at: [http://www.anthropologymatters.com/index.php/anth\\_matters/article/view/31/53](http://www.anthropologymatters.com/index.php/anth_matters/article/view/31/53) [Accessed December 14, 2016].

Levin, K.A., 2006. Study design III : Cross-sectional studies. *Evidence-Based Dentistry*, pp.24–25.

Linhares, M. et al., 2014. Assessment and management of pediatric pain based on the opinions of health professionals. *Psychology and Neuroscience*, 7(1), pp.43–53.

Available at: <http://www.scopus.com/inward/record.url?eid=2-s2.0-84896843954&partnerID=tZOtx3y1>.

Lui, L.Y.Y., So, W.K.W. & Fong, D.Y.T., 2008. Knowledge and attitudes regarding pain management among nurses in Hong Kong medical units. *Journal of Clinical Nursing*, 17(15), pp.2014–2021.

Lunsford, L., 2015. Knowledge and Attitudes Regarding Pediatric Pain in Mongolian Nurses. *Pain Management Nursing*, 16(3), pp.346–353. Available at: <http://dx.doi.org/10.1016/j.pmn.2014.08.007>.

Mary E. McDonald, 2002. *Systematic Assessment of Learning Outcomes: Developing Multiple-Choice Exams 1st Edition*,

Mathews, L., 2011. Pain in Children : Neglected , Unaddressed and Mismanaged. , 17.

MedicineNet, 2017. Medical definition of pediatrics. Available at:

<http://www.medicinenet.com/script/main/art.asp?articlekey=4814>.

merriam-webster, 2016. No Title. *Merriam-Webster, Incorporated*. Available at:

<https://www.merriam-webster.com/dictionary/knowledge> [Accessed December 20, 2016].

Nimbalkar, A.S. et al., 2014. Knowledge and attitudes regarding neonatal pain among nursing staff of pediatric department: An Indian experience. *Pain Management Nursing*, 15(1), pp.69–75. Available at:

<http://dx.doi.org/10.1016/j.pmn.2012.06.005>.

Nimbalkar, A.S. et al., 2013. Pain in children: Knowledge and perceptions of the nursing staff at a Rural Tertiary Care Teaching Hospital in India. *Indian Journal of Pediatrics*, 80(6), pp.470–475.

- Olmstead, D.L., Scott, S.D. & Austin, W.J., 2010. Unresolved pain in children: a relational ethics perspective. *Nursing ethics*, 17(6), pp.695–704. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/21097968>.
- Ortiz, M.I. et al., 2015. Nurses ' and Nursing Students ' Knowledge and Attitudes regarding Pediatric Pain. , 2015.
- Rajasekar, S. & Philominathan, P., 2013. Research methodology. , pp.1–53.
- Rieman, M.T. & Gordon, M., 2007. Pain management competency evidenced by a survey of pediatric nurses' knowledge and attitudes. *Pediatric nursing*, 33(4), pp.307–12. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17907731>.
- RWANDA MINISTRY OF HEALTH, 2012. *Pain management guidelines*,
- Sandra MG Zwakhalen , Jan PH Hamers , Rieneke HA Peijnenburg, M.P.B., 2007. Nursing staff knowledge and beliefs about pain in elderly nursing home residents with dementia. , 12(3), pp.177–184.
- Smyth, E., Caamano, F. & Fernández-Riveiro, P., 2007. Oral health knowledge, attitudes and practice in 12-year-old schoolchildren. *Medicina oral, patologia oral y cirugia bucal*, 12(8), pp.E614–E620.
- Stanley, M. & Pollard, D., 2013. Relationship Between Knowledge, Attitudes, and Self-Efficacy of Nurses In the Management of Pediatric Pain. *Pediatric Nursing*, 39(4), pp.165–171. Available at: <http://search.ebscohost.com/login.aspx?direct=true&db=c8h&AN=2012215854&lang=es&site=ehost-live>.
- Taylor, E.M., Boyer, K. & Campbell, F.A., 2008. Pain in hospitalized children: A prospective cross-sectional survey of pain prevalence, intensity, assessment and

management in a Canadian pediatric teaching hospital. *Pain Research and Management*, 13(1), pp.25–32.

Waldman, S.D., 2009. The Pediatric Patient with Pain. *Pain Review*, pp.665–667.

Available at:

<http://www.sciencedirect.com/science/article/pii/B9781416058939003506>.

WHO, 2007. WHO Normative Guidelines on Pain Management Report of a Delphi Study

to determine the need for guidelines that should be developed by WHO. *World Health Organisation*, (June), pp.1–50. Available at:

[www.who.int/medicines/areas/quality\\_safety/delphi\\_study\\_pain\\_guidelines.pdf](http://www.who.int/medicines/areas/quality_safety/delphi_study_pain_guidelines.pdf).



**LIST OF APPENDIX**

QUESTIONNAIRE .English Version

**Modified Pediatric Nurses' Knowledge and Attitudes Survey Regarding (PNKAS).**

**Demographic Data for Nurse-Participants**

Age (years):

gender : Male  Female

Highest Nursing Degree obtained:

A2  A1  A0  MSN  Other(specify)

Years of experience:

Do you work in:

Emergence .....

Surgical ward.....

ICU/HDU.....

Pediatric ward.....

OPD.....

Does your unit has a pediatric pain management protocol? Yes / No /Don't know

Which of the following pain scale have you used?( write a pain scale used if it doesn't appear on the list below)

1. Neonatal Infant Pain Scale (NIPS)
2. Face Legs Activity Cry Consolability (FLACC)
3. Faces
4. Numeric
5. Other:.....

**True/False - Circle the correct answer.**

T /F 1. Observable changes in vital signs must be relied upon to verify a child's/ adolescent's statement that he has severe pain.

T/ F 2. Because of an underdeveloped neurological system, children under 2 years of age have decreased pain sensitivity and limited memory of painful experiences.

T/ F 3. If the infant/ child/ adolescent can be distracted from his pain this usually means that he is not experiencing a high level of pain.

T/ F 4. Infants/ children/ adolescents may sleep in spite of severe pain.

T/ F 5. Comparable stimuli in different people produce the same intensity of pain.

T/ F 6. Ibuprofen and other non-steroidal anti-inflammatory agents are NOT effective analgesics for bone pain.

T/ F 7. Non-drug interventions (e.g. heat, music, imagery, etc.) are very effective for mild-moderate pain control but are not helpful for more severe pain.

T/ F 8. Children who will require repeated painful procedures (i.e. daily wound care or blood draws), should receive maximum treatment for the pain and anxiety of the first procedure to minimize the development of anticipatory anxiety before subsequent procedures.

T/ F 9. Respiratory depression rarely occurs in children/ adolescents who have been receiving opioids over a period of months.

T/ F 10. Paracétamol 650 mg PO is approximately equal in analgesic effect to codeine 32 mg PO.

T /F 11. The World Health Organization (WHO) pain ladder suggests using single analgesic agents rather than combining classes of drugs (e.g. combining an opioid with a non-steroidal agent).

T / F 12. The usual duration of analgesia of Morphine IV is 4-5 hours.

T/ F 13. Research shows that promethazine (Phenergan) is a reliable potentiator of opioid analgesics.

T /F 14. Parents should not be present during painful procedures.

T /F 15. Adolescents with a history of substance abuse should not be given opioids for pain because they are at high risk for repeated addiction.

T/ F 16. Beyond a certain dosage of morphine increases in dosage will NOT provide increased pain relief.

T/ F 17. Young infants, less than 6 months of age, cannot tolerate opioids for pain relief.

T/ F 18. The child/ adolescent with pain should be encouraged to endure as much pain as possible before resorting to a pain relief measure.

T /F 19. Children less than 8 years cannot reliably report pain intensity and therefore, the nurse should rely on the parents' assessment of the child's pain intensity.

T/ F 20. Based on one's religious beliefs a child/ adolescent may think that pain and suffering is necessary.

T/ F 21. Anxiolytics, sedatives, and barbiturates are appropriate medications for the relief of pain during painful procedures.

T/ F 22. After the initial recommended dose of opioid analgesic, subsequent doses should be adjusted in accordance with the individual patient's response.

T F 23. The child/ adolescent should be advised to use non-drug techniques alone rather than concurrently with pain medications.

T F 24. Giving children/ adolescents sterile water by injection (placebo) is often a useful test to determine if the pain is real.

**Multiple Choice - Place a check by the correct answer.**

25. The recommended route of administration of opioid analgesics to children with background (continuous, persistent) pain is :

\_\_\_\_\_ a. intravenous

\_\_\_\_\_ b. intramuscular

\_\_\_\_\_ c. subcutaneous

\_\_\_\_\_ d. oral

\_\_\_\_\_ e. rectal

\_\_\_\_\_ f. I don't know

26. The recommended route of administration of opioid analgesics to children with brief, severe pain of sudden onset, e.g. trauma or postoperative pain, is

\_\_\_\_\_ a. intravenous

\_\_\_\_\_ b. intramuscular

- \_\_\_\_\_ c. subcutaneous
- \_\_\_\_\_ d. oral
- \_\_\_\_\_ e. rectal
- \_\_\_\_\_ f. I don't know

27. Which of the following analgesic medications is considered the drug of choice for the treatment of prolonged moderate to severe pain for children?

- \_\_\_\_\_ a. fentanyl
- \_\_\_\_\_ b. codeine
- \_\_\_\_\_ c. morphine
- \_\_\_\_\_ d. I don't know

28. Which of the following IV doses of morphine administered would be equivalent to 15 mg of oral morphine.

- \_\_\_\_\_ a. Morphine 3 mg IV
- \_\_\_\_\_ b. Morphine 5 mg IV
- \_\_\_\_\_ c. Morphine 10 mg IV
- \_\_\_\_\_ d. Morphine 15 mg IV

29. Analgesics for post-operative pain should initially be given

- \_\_\_\_\_ a. around the clock on a fixed schedule
- \_\_\_\_\_ b. only when the child/ adolescent asks for the medication
- \_\_\_\_\_ c. only when the nurse determines that the child/ adolescent has moderate or greater discomfort

30. A child with background (continuous, persistent) pain has been receiving daily opioid analgesics for 2 months. The doses increased during this time period. Yesterday the child was receiving morphine 20 mg/hour intravenously. Today he has been receiving 25 mg/hour intravenously for 3 hours. The likelihood of the child developing clinically significant respiratory depression is

- \_\_\_\_\_ a. less than 1%
- \_\_\_\_\_ b. 1-10%
- \_\_\_\_\_ c. 11-20%
- \_\_\_\_\_ d. 21-40%

\_\_\_\_\_ e. > 41%

31. Analgesia for background (continuous, persistent) pain should be given

\_\_\_\_\_ a. around the clock on a fixed schedule

\_\_\_\_\_ b. only when the child asks for the medication

\_\_\_\_\_ c. only when the nurse determines that the child has moderate or greater discomfort

32. The most likely explanation for why a child/ adolescent with pain would request increased doses of pain medication is

\_\_\_\_\_ a. The child/ adolescent is experiencing increased pain.

\_\_\_\_\_ b. The child/ adolescent is experiencing increased anxiety or depression.

\_\_\_\_\_ c. The child/ adolescent is requesting more staff attention.

\_\_\_\_\_ d. The child's/ adolescent's requests are related to addiction.

33. Which of the following drugs are useful for treatment of pain in children?

\_\_\_\_\_ a. Ibuprophen (Motrin)

\_\_\_\_\_ b. Morphine

\_\_\_\_\_ c. Amitriptyline (Elavil)

\_\_\_\_\_ d. All of the above

34. The most accurate judge of the intensity of the child's/ adolescent's pain is

\_\_\_\_\_ a. the treating physician

\_\_\_\_\_ b. the child's/ adolescent's primary nurse

\_\_\_\_\_ c. the child/ adolescent

\_\_\_\_\_ d. the pharmacist/ another primary team member

\_\_\_\_\_ e. the child's/ adolescent's parent

35. What do you think is the percentage of patients who over-report the amount of pain they have? Circle the correct answer.

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

36. Narcotic/opioid addiction is defined as psychological dependence accompanied by overwhelming concern with obtaining and using narcotics for psychic effect, not for medical reasons. It may occur with or without the physiological changes of tolerance to analgesia and physical dependence (withdrawal).

Using this definition, how likely is it that opioid addiction will occur as a result if treating pain with opioid analgesics? Circle the number closest to what you consider the correct answer.

< 1%   5%   25%   50%   75%   100%

### Case Studies

Two patient case studies are presented. For each patient you are asked to make decisions about pain and medication.

**Directions: Please select one answer for each question.**

37. Patient A: Andrew is 15 years old and this is his first day following surgery. As you enter his room, he smiles at you and continues talking and joking with his visitor. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort), he rates his pain as 8.

A. On the patient's record you must mark his pain on the scale below. Circle the number that represents your assessment of Andrew's pain.

0      1      2      3      4      5      6      7      8      9      10

---

No pain/ discomfort

Worst pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. After he received the morphine, his pain ratings every half-hour ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time:

\_\_\_\_\_ 1) Administer no morphine at this time.

- \_\_\_\_\_ 2) Administer morphine 1 mg IV now.
- \_\_\_\_\_ 3) Administer morphine 2 mg IV now.
- \_\_\_\_\_ 4) Administer morphine 3 mg IV now.

38. Patient B: Robert is 15 years old and this is his first day following surgery. As you enter his room, he is lying quietly in bed and grimaces as he turns in bed. Your assessment reveals the following information: BP = 120/80; HR = 80; R = 18; on a scale of 0 to 10 (0 = no pain/discomfort, 10 = worst pain/discomfort) he rates his pain as 8.

A. On the patient's record, you must mark his pain on the scale below.

Circle the number that represents your assessment of Robert's pain:

0    1    2    3    4    5    6    7    8    9    10

---

No pain/ discomfort

Worst pain/discomfort

B. Your assessment, above, is made two hours after he received morphine 2 mg IV. After he received the morphine, his pain ratings every half-hour ranged from 6 to 8 and he had no clinically significant respiratory depression, sedation, or other untoward side effects. He has identified 2 as an acceptable level of pain relief. His physician's order for analgesia is "morphine IV 1-3 mg q1h PRN pain relief." Check the action you will take at this time:

- \_\_\_\_\_ 1) Administer no morphine at this time.
- \_\_\_\_\_ 2) Administer morphine 1 mg IV now.
- \_\_\_\_\_ 3) Administer morphine 2 mg IV now.
- \_\_\_\_\_ 4) Administer morphine 3 mg IV now.



QUESTIONNAIRE .French Version

**Pediatric Nurses' Knowledge and Attitudes Survey Regarding (PNKAS) Modifié**

**Démographie des infirmiers participants**

Age (années):

Genre : Masculin       Femine

Le plus haut diplôme obtenu:

A2     A1     A0       MSN(maitrise)       Autres (specifier)

Experience ( Années):

Tu travaille en:

Urgence .....

Chirurgie.....

Soins intensif .....

Pédiatrie.....

Consultation extern ....

Est-ce votre service a un protocole de gestion de la douleur pour les enfant?

Oui/ Non/ Je e sais pas

Parmi les échelles suivante de la douleur la quelle avez-vous utilisé ? ( si vous ave utilise celle qui n'est pas sur la liste , écrit la)

1. Neonatal Infant Pain Scale (NIPS)

2. Face Legs Activity Cry Consolability (FLACC)

3. Faces

4. Numeric

5. Autres :.....

**Vrai/Faux – Encerle la bonne réponse.**

V/ F 1. On doit dépendre sur les changements des signes vitaux pour dire que un enfant/ adolescent la douleur sévère.

V/ F 2. Pour raison d'un système neurologique sous-développés, les enfants de moins de 2 ans ont une sensibilité faible à la douleur et une mémoire limitée des expériences douloureuses.

V/ F 3. Si le nourrisson/ enfant/ adolescent peut être distrait, cela signifie que habituellement qu'il n'avait pas un haut niveau de la douleur.

V/ F 4. Les nourrissons/ enfants/ adolescents peut dormir malgré douleur sévère.

V/ F 5. Stimulus comparables dans différente personnes produisent la même intensité de la douleur.

V/ F 6. L'ibuprofène et autres non-stéroïdiens anti-inflammatoires ne sont pas des analgésiques efficaces pour la douleur des os.

V /F 7. Interventions non pharmacologiques (p. ex., chaleur, musique, images, etc.) sont très efficaces pour contrôler la douleur léger- modérée mais ne sont pas utiles pour une douleur sévère.

V /F 8. Les enfants qui auront besoin de procédures douloureuses répétées (c.-à-d. tous les jours les soins des plaies ou des prises de sang), devrait recevoir le maximum de traitement pour la douleur et l'anxiété de la première procédure afin de réduire le développement de l'anxiété pour les procédures ultérieures.

V/ F 9. La dépression respiratoire se produit rarement chez les enfants/ adolescents qui ont reçu des opioïdes sur une période de plusieurs mois.

T/ F 10. Paracétamol 650 mg PO est approximativement égale à l'effet analgésique de la codéine 32 mg PO.

T / F 11. L'échelle de la douleur l'Organisation Mondiale de la Santé (OMS) suggère d'utiliser des agents analgésiques unique plutôt que de combiner des catégories de médicaments (ex : combinant un opioïde avec un non- stéroïdien).

T/ F 12. La durée habituelle de l'analgésie de la morphine IV est de 4-5 heures.

T/ F 13. La recherche montre que la prométhazine (Phenergan) est un potentialisateur des analgésiques opiacés.

T/ F 14. Les parents ne devraient pas être présents lors des procédures douloureuses.

T/ F 15. Les adolescents ayant des antécédents d'abus substance ne devraient pas être donné d'opioïdes pour la douleur parce qu'ils sont à haut risque de dépendance.

T/ F 16. Au-delà d'une certaine augmentation de la dose de morphine, il ne donnera pas un soulagement de la douleur.

T /F 17. Les jeunes enfants, de moins de 6 mois d'âge, ne peut pas tolérer des opioïdes pour le soulagement de douleur.

T/ F 18. L'enfant/ adolescent avec la douleur devrait être encouragé à supporter autant de douleur que possible avant de recourir à une mesure d'allègement de la douleur.

T /F 19. Les enfants de moins de 8 ans ne peut pas rapporter de façon fiable l'intensité de la douleur de et par conséquent, l'infirmière doit s'appuyer sur l'évaluation des parents de l'enfant pour évaluer l'intensité de la douleur.

T /F 20. En fonction de ses convictions religieuses l'enfant / adolescent peut penser que la douleur et la souffrance est nécessaire.

T/ F 21. Anxiolytiques, sédatifs, et les barbituriques sont des médicaments pour le soulagement de la douleur pendant les procédures douloureuses.

T /F 22. Après la dose initiale recommandée d'opiacé, les doses suivantes devraient être modifiées en fonction de la réponse de chaque patient.

T /F 23. L'enfant/ adolescent devrait être conseillé d'utiliser des techniques non médicamenteuses seul plutôt qu'en même temps que les médicaments contre la douleur.

T/ F 24. Donner aux enfants/ adolescents par injection d'eau stérile (placebo) est souvent un bon test pour déterminer si la douleur est réelle.

**Choix multiples - Cochez la case par la bonne réponse.**

25. La voie d'administration d'analgésique *opiacé* pour les enfants ayant la douleur continue,

\_\_\_\_\_ a.une intraveineuse.

\_\_\_\_\_ b. intramusculaire.

\_\_\_\_\_ c. sous-cutanée

\_\_\_\_\_ d. orale

\_\_\_\_\_ e. rectal e.

\_\_\_\_\_ f. Je ne sais pas

26. La voie recommandé d'administration d'analgésique opiacé pour les enfants avec douleur sévère de courte dure d'apparition soudaine, par exemple un traumatisme ou de douleur postopératoire, est

\_\_\_\_\_ a.une intraveineuse.

\_\_\_\_\_ b. intramusculaire.

\_\_\_\_\_ c. sous-cutanée

\_\_\_\_\_ d. orale

\_\_\_\_\_ e. rectal e.

\_\_\_\_\_ f. Je ne sais pas

27. Lequel des analgésiques suivants est considéré comme médicament de choix pour le traitement de la douleur prolongée modérée ou sévère pour les enfants ?

- a. fentanyl
- b. codéine
- c. morphine
- d. Je ne sais pas

28. Laquelle de ces doses IV de morphine administré serait équivalent à 15 mg de morphine orale.

- a. Morphine 3 mg IV
- b. Morphine 5 mg IV
- c. Morphine 10 mg IV
- d. Morphine 15 mg IV

29. Analgésiques pour la douleur post-opératoire doit être donnée, dans un premier temps

- a. sur l'heure fixé
- b. seulement lorsque l'enfant/ adolescent demande le médicament
- c. seulement lorsque l'infirmière détermine que l'enfant/ adolescent a mal

30. Un enfant avec douleur persistante a reçu des analgésiques opiacés quotidiennement pendant 2 mois. Les doses ont augmenté pendant cette période. Hier, l'enfant recevait la morphine 20 mg/heure par voie intraveineuse. Aujourd'hui, il a reçu 25 mg/heure par voie intraveineuse pendant 3 heures. La probabilité de l'enfant développer une dépression respiratoire cliniquement significative est

- a. moins de 1%
- b. 1-10%
- c. 11-20%
- d. 21-40%
- e. > 41%

31. L'analgésie pour une douleur continu/permanent doit être donnée :

- a. sur l'heure fixé
- b. seulement lorsque l'enfant/ adolescent demande le médicament
- c. seulement lorsque l'infirmière détermine que l'enfant/ adolescent a mal

32. L'explication la plus probable pour expliquer pourquoi un enfant/ adolescent avec douleurs demande une augmentation des doses de médicaments contre la douleur est

- a. L'enfant/ adolescent a eu une augmentation de la douleur.
- b. L'enfant/ adolescent a eu une augmentation de l'anxiété ou la dépression.
- c. L'enfant/ adolescent demande plus d'attention du personnel.
- d. L'enfant/ adolescent, les demandes sont liées à l'addiction.

33. Lequel des médicaments suivants sont utiles pour le traitement de la douleur chez les enfants ?

- a. Ibuprophen (Motrin)
- b. Morphine
- c. Amitriptyline (Elavil)
- d. Tous les éléments ci-dessus

34. Le juge le plus précis de l'intensité de la douleur de l'enfant/ adolescent est

- a. le médecin traitant
- b. infirmière principale de l'enfant/ adolescent,
- c. l'enfant/ adolescent
- d. le pharmacien/ d'autres membre de l'équipe primaire
- e. parent s de l'adolescent / enfants

35. Selon vous, quel est le pourcentage de patients qui exagèrent dans le rapportage de l'intensité de la douleur qu'ils ont ? encerle la bonne réponse.

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

37. La dépendance aux opiacés est définie comme la dépendance psychologique accompagné de très grande préoccupation à l'obtention et l'utilisation des stupéfiants pour l'effet psychique, pas pour des raisons médicales. Il peut se produire avec ou sans changements physiologiques de la tolérance à l'analgésie et la dépendance physique.

En utilisant cette définition, quelle est la probabilité que la dépendance aux opioïdes peuvent survenir comme résultat de traitement de la douleur avec des analgésiques opiacés ? Encerlez le chiffre le plus proche de ce que vous considérez la réponse correcte.

< 1% 5% 25% 50% 75% 100%

### Études de cas

Deux cas des patients sont présentés. Pour chaque patient on vous demande de prendre des décisions au sujet de la gestion pharmacologique de la douleur.

**Instructions: Veuillez sélectionner une réponse pour chaque question.**

38. Patient A : Andrew a 15 ans et c'est son premier jour suivant la chirurgie. Lorsque vous entrez dans sa chambre, il vous sourit et continue de parler avec son visiteur. Votre évaluation révèle les informations suivantes TA = 120/80; P = 80; R = 18 sur une échelle de 0 à 10 (0= pas de douleur /malaise, 10;= pire douleur), il estime sa douleur comme 8.

A. Sur le dossier du patient vous devez marquer sa douleur sur l'échelle ci-dessous. Encerlez le numéro qui représente votre évaluation de la douleur d'Andrew.

0 1 2 3 4 5 6 7 8 9 10

---

Pas de douleur

pire douleur

B. votre évaluation, ci-dessus, est faite deux heures après avoir reçu la morphine 2 mg IV.

Après avoir reçu la morphine, sa douleur évaluations toutes les demi-heures variait de 6 à 8 et il n'avait aucun effet cliniquement significatif de dépression de la respiration, la sédation, ou autres effets secondaires indésirables. Il a identifié 2 comme un niveau acceptable de soulagement de douleur. Son médecin prescrit "la morphine IV 1-3 mg PRN pour le soulagement de douleur." Quelle est l'action que vous allez prendre à cette temps ?

- 1) n'est pas administrer la morphine à ce moment
- 2) Administrer la morphine 1 mg IV maintenant.
- 3) Administrer la morphine 2 mg IV maintenant.
- 4) Administrer la morphine 3 mg IV maintenant.

39. Patient B : Robert a 15 ans et c'est son premier jour suivant la chirurgie. Lorsque vous entrez dans sa chambre, il est allongé tranquillement au lit et cri quant il tourne dans sons lit. Votre évaluation révèle les informations suivantes TA=120/80; HR = 80; R = 18 sur une échelle de 0 à 10 (0 pas de douleur 0, 10 =pire douleur/inconfort) il estime sa douleur comme 8.

A. Sur le dossier du patient vous devez marquer sa douleur sur l'échelle ci-dessous.

Encerclez le numéro qui représente votre évaluation de la douleur de Robert

0      1      2      3      4      5      6      7      8      9      10

---

Pas de douleur

pire douleur

B. votre évaluation, ci-dessus, est faite deux heures après avoir reçu la morphine 2 mg IV. Après avoir reçu la morphine, sa douleur évaluations toutes les demi-heures variait de 6 à 8 et il n'avait aucun effet cliniquement significatif de dépression respiratoire, la sédation, ou autres effets secondaires indésirables.



Il a identifié 2 comme un niveau acceptable de soulagement de douleur. Son médecin pour l'analgésie est "la morphine IV 1-3 mg q1h PRN le soulagement de douleur." Choisissez l'action que vous allez prendre à ce moment.

- 1) Ne pas Administrer la morphine a ce moment.
- 2) Administrer la morphine 1 mg IV maintenant.
- 3) Administrer la morphine 2 mg IV maintenant.
- 4) Administrer la morphine 3 mg IV maintenant.

**AUTHORIZATION TO USE THE QUESTIONNAIRE**

**Ferrell, Betty** <BFerrell@coh.org> Sep 15

to me

You are welcome to use and translate our instrument.

Betty Ferrell PhD RN

Nov 29 (13 days ago)

Sent from my iPhone

**From:** Ferrell, Betty  
**Sent:** Monday, November 28, 2016 10:15 PM  
**To:** Peter Ndagije  
**Cc:** Radell, Celeste  
**Subject:** Re: Request to use questionnaire

I received your message that you can't access the site. I'm copying Celeste who is the coordinator for the site so she can send you the tool tomorrow.

**Radell, Celeste** <Cradell@coh.org>

to me, Betty

Hi Peter,

I've attached the questionnaire and scoring sheet you requested. For future reference, you can access the attachment at the link below. #25

[http://prc.coh.org/res\\_inst.asp](http://prc.coh.org/res_inst.asp)

Thank you

**CONSENT FORM (English version)**

Dear Sir/Madam,

**Re: Request participation in Research Study ‘Nurses’ Knowledge and Attitudes regarding pediatric Pain in five hospitals in southern province of Rwanda’.**

You are being asked to participate in a research study which will be conducted by postgraduate student NDAGIJIMANA Jean Pierre, supervised by Dr. Patricia Moreland from the School of Nursing and midwifery in College of Medicine and Health Sciences-University of Rwanda. This study will be conducted in five hospitals from the southern province of Rwanda. The aim of this study is to assess the knowledge and attitudes regarding pediatric pain management among nurses working in southern province hospitals in Rwanda and the factors that might influence their knowledge and attitude. Participation in this study will consist of the completion of the ‘**Pediatric Nurses’ Knowledge and Attitudes Survey Regarding Pain management**’ attached. This survey will take no more than 30 minutes to complete.

It must be emphasized that participation in this study is on a voluntary basis. In addition, confidentiality and anonymity of all participants and data collected will be maintained as far as is possible.

If you consent to participate in this study, please sign this form and remove it from the survey. The participant can keep this signed copy as proof of consent. Then please complete the survey attached.

If you have any further questions or require more information about this study, you can contact the researcher and supervisor directly.

NDAGIJIMANA Jean Pierre  
Email: ndagpeter@gmail.com  
Phone: 0783261580

Dr. Patricia Moreland  
Email: pjmoreland2012@gmail.com  
Phones: 0787115028

**Participant:** All of my questions and concerns about this study have been addressed. I choose, voluntarily, to participate in this research project.

Names of the participant:.....

Signature of participant:.....

Date:.....

**CONSENT FORM (French version)**

Monsieur/Madame,

**Objet:** demande de participation dans l'étude «*Connaissances et Attitudes des infirmiers au sujet de la gestion de la douleur en pédiatrie dans Cinq hôpitaux de la Province du Sud du Rwanda* ».

Vous êtes appelés à participer à une étude de recherche qui sera effectuée par l'étudiant NDAGIJIMANA Jean Pierre, supervisé par le Dr Patricia Moreland de l'Ecole des Sciences Infirmières et de Sages-femmes au Collège de la Médecine et des Sciences de la Santé-Université du Rwanda. Cette étude sera menée dans cinq hôpitaux de la province du sud au Rwanda. Le but de cette étude est d'évaluer les connaissances et les attitudes au sujet de la gestion de la douleur en pédiatrie chez les infirmières travaillant dans les hôpitaux de la province du Sud au Rwanda et les facteurs susceptibles qui peuvent influencer leurs connaissances et leur attitude. La participation à cette étude est de remplir le questionnaire « **Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain management** » attaché sur ce papier . Cette enquête prendra pas plus de 30 minutes à remplir.

Il convient de souligner aussi que la participation à cette étude est volontaire. La confidentialité et l'anonymat de tous les participants et les données recueillies seront maintenus.

Si vous consentez à participer à cette étude, veuillez signer le présent formulaire et retirez-le sur le questionnaire. Le participant peut garder cette copie signée comme preuve du consentement. Ensuite, veuillez remplir le questionnaire attaché.

Si vous avez des questions ou vous désirez plus d'informations sur cette étude, vous pouvez contacter le chercheur et le superviseur directement.

NDAGIJIMANA Jean Pierre

Email: ndagpeter@gmail.com

Phone: 0783261580

Dr. Patricia Moreland

Email: pjmoreland2012@gmail.com

Phones: 0787115028

**Participant:** Toutes mes questions et préoccupations au sujet de cette étude ont été traitées. Je choisis volontairement de participer dans cette étude.

Nom et prénom du participant :.....

Signature du participant :..... date

CMHS INSTITUTIONAL REVIEW BOARD (IRB)

Kigali, 16/01/2017  
Ref: CMHS/IRB/093/2017

NDAGIJIMANA Jean Pierre  
School of Nursing and Midwifery, CMHS, UR

Dear NDAGIJIMANA Jean Pierre

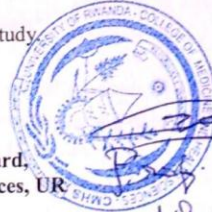
**RE: ETHICAL CLEARANCE**

Reference is made to your application for ethical clearance for the study entitled "*Nurses' Knowledge And Attitudes Regarding Pediatric Pain Management In Hospitals In The Southern Province Of Rwanda.*"

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

We wish you success in this important study.

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



Prof. JB Gahutu  
IRB Vice-Chair

**Cc:**

- Principal, College of Medicine and Health Sciences, UR
- University Director of Research and Postgraduate studies, UR

13/3/2017

Accepted

D. N. S.



University of Rwanda

Phone: +250783261580

e-mail: ndagpeter@gmail.com

Kigali, 13<sup>th</sup> February, 2017

**To: The Director of Nyanza District Hospital**

Dear Sir,

**Re: REQUEST FOR PERMISSION FOR DATA COLLECTION**

I am humbly requesting for the permission to conduct the research at Nyanza District hospital from 13<sup>th</sup> February to 12<sup>th</sup> March, 2017.

In fact I am a registered nurse from Master of sciences in nursing program, at the University of Rwanda/College of Medicine and Health Sciences in the Pediatric track. The aim of the study is to assess the knowledge and attitudes regarding pediatric pain management among nurses working in southern province hospitals in Rwanda and the factors that might influence their knowledge and attitudes, the study will be conducted in five hospitals that are: CHUB, Kibilizi, Kabutare, Nyanza and Kabgayi district Hospitals.

Find attached the study protocol and other relevant required documents.

I am looking forward to hearing from you.

Yours Sincerely,

NDAGIJIMANA Jean Pierre

University of Rwanda

Phone: +250783261580

E-mail: [ndagpeter@gmail.com](mailto:ndagpeter@gmail.com)

Kigali, 13<sup>th</sup> February, 2017

**To: The Director of Kibilizi District Hospital**

Dear Sir,



**Re: REQUEST FOR PERMISSION FOR DATA COLLECTION**

I am humbly requesting for the permission to conduct the research at Kibilizi District hospital from 13<sup>th</sup> February to 12<sup>th</sup> March, 2017.

In fact I am a registered nurse from Master of sciences in nursing program, at the University of Rwanda/College of Medicine and Health Sciences in the Pediatric track. The aim of the study is to assess the knowledge and attitudes regarding pediatric pain management among nurses working in southern province hospitals in Rwanda and the factors that might influence their knowledge and attitudes, the study will be conducted in five hospitals that are: CHUB, Kibilizi, Kabutare, Nyanza and Kabgayi district Hospitals.

Find attached relevant required documents to the study.

I am looking forward to hearing from you.

Yours Sincerely,

NDAGIJIMANA Jean Pierre



**CENTRE HOSPITALIER UNIVERSITAIRE  
UNIVERSITY TEACHING HOSPITAL**

**CENTRE HOSPITALIER UNIVERSITAIRE  
DE BUTARE (CHUB)  
OFFICE OF DIRECTOR GENERAL**

Huye, **06 MAR 2017**

N° Ref: CHUB/DG/SA/03/399/2017


**Jean Pierre Ndagijimana  
University of Rwanda  
College of Medicine and Health Sciences  
School of Nursing and Midwifery  
Phone: +250783261580  
Email: [ndagpeterc@gmail.com](mailto:ndagpeterc@gmail.com)**

Dear Ndagijimana

**Re: Your request for data collection**

Reference made to your letter requesting for permission to collect the data within University Teaching Hospital of Butare, for your research proposal entitled "**Nurses knowledge and attitudes regarding pediatrics pain management in five hospitals in the southern Province of Rwanda**", and based on approvals Ref: CMHS/ IRB /093/2017 from University of Rwanda and No RC/UTH/B/007/2017 from our research committee, we are pleased to inform you that your request was accepted. Please note that your final document will be submitted in our Research department.

Sincerely,

  
**Dr. Augustin SENDEGUYA  
Director General of CHUB**



**Cc:**

- Medical Director
- Nursing Director
- Training and Research Manager

**CHUB**

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E-mail : [info@chub.rw](mailto:info@chub.rw)  
Website : [www.chub.rw](http://www.chub.rw)

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Hotline:2030