



**ASSESSMENT OF PERCEIVED IMPACT OF NURSES' WORKLOAD ON PATIENT
CARE AT A UNIVERSITY TEACHING HOSPITAL – KIGALI**

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By

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A dissertation submitted in partial fulfillment of the requirements for the degree of

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DECLARATION

I do hereby declare that this *dissertation* submitted in partial fulfillment of the requirements for the degree of **MASTER 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

12/06/2017

a. *Authority to submit the dissertation*

Surname and first name of the Supervisor: Mr John MUGARURA

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

12/06/2017

DEDICATION

I dedicate this Dissertation to my husband Nteziryayo Reverien, to my child Igabe Arabella Nteziryayo, to my parents, brothers and sisters. You are the source of my achievement!!

ACKNOWLEDGEMENTS

I could not accomplish this kind of work alone. I therefore humbly express my great gratitude to different individuals for guidance and support in various ways.

First and foremost, I thank the Almighty God for his love and protection.

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ABSTRACT

Background: Nurses face work overload worldwide and this is the single largest cause of poor quality care globally as it is supported by several studies which revealed that one the major problems associated with health care systems is extreme workload of hospital nurses and this has serious consequences to patient care. This study aims to explore causes on nurses' work overload and its adverse outcomes on patient care.

Research Methods: This study used a quantitative approach, and a descriptive cross-sectional design was used; this study was conducted among registered nurses (n= 209) working in all departments of University Teaching Hospital (CHUK). Data were collected using a self-administered questionnaire consisting of three sections eliciting information about the participants' characteristics, level of perceived nurses' workload, level of patient care at CHUK, data were collected in period of two months from 13rd February to 12 April 2017 from Monday to Wednesday, and data were organized and analyzed with SPSS version 20.

Results: The findings indicated that 33(16%) of participants perceived that nurses had low level of workload and 176(84%) of participants perceived that nurses have high workload, 182(87%) of participants had low level of patient care and 27(13%) had high level of patient care, results also indicate that there not significant relationship between nurses' workload and patient as there is a very weak positive relationship of 0.005.

Conclusion: This study sheds light on the impact of nurses' work overload on patients. It has also revealed important issues affecting patients' life and quality of care as perceived by the nurses as the primary caregivers. Reducing nurses' work overload and recruiting nurses' assistants

to carry out non nursing tasks can promote patients outcomes and increase quality of nursing care.

Key words: Assessment, nurses, nurses' workload, patient outcomes and nurse- patient load.

LIST OF SYMBOLS AND ABBREVIATIONS

A/E: Accident and Emergency

CHUK: Centre Hospitaliere Universitaire de Kigali

GAHFs: Government-Assisted Health Facilities

ICU: Intensive Care Unit

IM: Intern Medicine

NISR: National Institute of Statistics of Rwanda

OPD: Out Patient Department

RMoHS: Rwanda Ministry of Health Annual Statistics

SPSS: Statistical Package of Social Sciences

UR-CMHS: University of Rwanda - College of Medicine and Health Sciences

UTI: Urinary Tract Infections

WHO: World Health Organization

TABLE OF CONTENTS

DECLARATION	i
DEDICATION	ii
ACKNOWLEDGEMENTS	iii
ABSTRACT	iv
LIST OF SYMBOLS AND ABBREVIATIONS	vi
LIST OF TABLES	x
LIST OF APPENDICES	xii
CHAPTER I.....	1
1.1 BACKGROUND OF THE STUDY	1
1.2 PROBLEM STATEMENT	4
1.3 OBJECTIVES OF THE STUDY	6
1.3.1 MAIN OBJECTIVES OF THE STUDY	6
1.3.2 SPECIFIC OBJECTIVES	6
1.3.3 RESEARCH QUESTIONS.....	6
1.4 SIGNIFICANCE OF THE STUDY	6
1.4.1 RESEARCH.....	7
1.4.2 PRACTICE.....	7
1.4.3 EDUCATION.....	7
DEFINITIONS OF KEY TERMS	7

CHAPTER II: LITERATURE REVIEW	9
2.1 INTRODUCTION.....	9
2.2 LEVEL OF PERCIEVED NURSES’ WORKLOAD	10
2.3 LEVEL OF PATIENT CARE.....	13
2.4 RELATIONSHIP BETWEEN NURSES’WORKLOAD AND PATIENT CARE	14
2.5. CONCEPTUAL FRAMEWORK	16
CHAPTER III: METHODOLOGY	18
3.1 INTRODUCTION.....	18
3.2 STUDY APPROACH	18
3.3 STUDY DESIGN	18
3.4 STUDY SETTING.....	18
3.5 STUDY POPULATION	19
3.6 INCLUSION CRITERIA	19
3.7 EXCLUSION CRITERIA.....	19
3.8 SAMPLE SIZE.....	20
3.9 SAMPLING STRATEGY	20
3.10 INSTRUMENTATION.....	20
3.11 RELIABILITY OF THE TOOL	21
3.12 VALIDITY OF THE TOOL	21
3. 13 DATA COLLECTION PROCEDURE.....	23

3.14 STUDY LIMITATIONS.....	23
3.15 ETHICAL CONSIDERATIONS	23
3.16 DATA ANALYSIS	24
CHAPTER IV: DATA PRESENTATION AND ANALYSIS.....	25
CHAPTER V: DISCUSSION.....	35
5.1 INTRODUCTION:.....	35
5.2 LEVEL OF PERCIEVED NURSES’ WORKLOAD	35
5.3 LEVEL OF PATIENT CARE AT CHUK	36
5.4 RELATIONSHIP BETWEEN PERCIEVED NURSES WORKLOAD ND PATIENT CARE	36
5.5 SUMMARY	37
CHAPTER VI: CONCLUSION AND RECOMMENDATIONS	38
6.1 RECOMMENDATIONS	38
6.1.1 TO THE MINISTRY OF HEALTH	38
6.1.2 TO THE MINISTRY OF EDUCATION.....	39
6.1.3 TO THE UNIVERSITY TEACHING HOSPITAL-KIGALI.....	39
6.1.4 TO THE FUTURE RESEARCHERS.....	40
6.2 CONCLUSION.....	41
REFERENCES	42
APPENDICES	49

LIST OF TABLES

Table 1: content validity	22
Table 2. DEMOGRAPHIC DATA OF PARTICIPANTS (N=209).....	26
Table 3. Level of perceived nurses' workload (n=209).....	28
Table 4. score for perceived workload among nurses (n=209).....	30
Table 5. Patient care among nurses (n=209).....	32
Table 6. Total score for patient care (n=209)	33
Table 7. Relationships between nurses' workload and patient care	34

LIST OF FIGURES

Figure 1: Conceptual framework (Adopted from Ausserhofer et al, 2014).....	16
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LIST OF APPENDICES

Appendix 1: Consent form

Appendix 2: Used instrument/tool in this study

Appendix 3: Decision from the members of Panel of research proposal

Appendix 4: Application for fee waiver to Institution Review Board for Ethical Clearance

Appendix 5: Ethical clearance from Intern Board Review/College of Medicine and Health Sciences

Appendix 6: Recommendation from Dean of students CMHS/SoN to collect data at CHUK

Appendix 7: Letter requesting for data collection at University Teaching Hospital – Kigali

Appendix 8: Approval from University Teaching Hospital – Kigali for agreement of data collection

CHAPTER I

1.1 BACKGROUND OF THE STUDY

This chapter is describing different studies conducted on nurses' workload and its impact on patient care in developed countries, developing Africa countries.

Nurses are key personnel in providing direct patient care. They are recommended to spend all the time with the patient, monitoring patients' conditions and delivering patient care. Several studies have found that nurses are the one of the main and influential members of the health care teams and they play a critical role in patient care delivering (Jamshidi et al.2013, p4).

Nonetheless, the study conducted by Shammika, Mudihanselage and Chamaru, 2015 in Srilanka confirmed that clinical nurses experience work overload worldwide, they found that more than 75% of registered nurses have experienced work overload due to nursing shortage and this affects the quality of their work life, the quality of care they delivered to patient, and the total of time spent with patients. In the same study 42 nurses (45.16 %) reported that they had overtime hours mandatory. (Shammika et al (2015).

In a study done in America between nurses working in Spain and Uruguay, Uruguay was reported as the one with nurses' shortage in Latin America as it has 88 % of nurses' deficit; Spanish nurses were adversely affected by a global crisis in terms of employment and workload, thereby becoming one of the most overworked and stressed nursing workforces in Europe (Aiken et al., 2014) and nurses accepted that work overload is one of the most prevalent stressors in nursing work environments (Gabel et al. 2016, p1).

Work overload is one of the factors which demonstrate poor working conditions and it is associated with absenteeism, turnover and emigration among recently trained nurses (Nigenda, Magaña-Valladares, Cooper,& Ruiz-Larios, 2010).

In Canada, nurses 33-61% of new nursing graduates change employment roles or exit nursing profession within two to three years of practice due to increased nurses' workplace demands which include, paperwork, work overtime, and increased workload (Canadian Institute for Health Information, 2010)

According to Dubow (2005), anything that affects nurses' work affects the quality of nursing care and patient wellbeing. Reports show that the most important issues affecting medical error rates are workload, fatigue or stress among health professionals, insufficient number of nurses and inadequate time spent with patients (National Survey on Consumers' Experiences with Patient Safety and Quality Information, 2004)

In hospitals with a small number of staff, nurses spend less time with patients due to heavy workload, patients outcomes tend to be poor (Stanton & Rutherford 2004). Other studies (Aiken et al 2001) have revealed that nurses' heavy workload due to shortage of staff often resulted nurses' fatigue, stress, high turnover, burnout and intended to leave the job, those effects are notable because of the potential impact of large numbers of dissatisfied and emotionally exhausted nurses on quality of patient care and patient outcomes

In a study conducted by Berry and Curry in Canada in 2012, 58 % of nurses were dissatisfied with the job because of nurses' shortage which at the end causes nurses to be overloaded.

The Canadian Federation of Nurses Unions (CFNU) report on nurses' workload and patient care have shown that the statistic for every surgical patient added to a nurse's workload, the odds of a patient dying increased by 7%.

Aiken et al, 2002, Needleman et al, 2002 and Yang (2003) found that the patient mortality was 30% higher in hospitals where nurses cared for an average of eight patients each than in those where nurses had an average load of 4–6 patients and risk of death following common surgical procedures increased by 7% for each patient added to the nurse's average workload. Also in hospitals where nurses cared for eight or more patients, the rescue' rates failed 30% higher while managing patients with complications.

As also confirmed by nurses in a community hospital in the Limpopo Province in South Africa where 41% of nurses reported that they were dissatisfied with the job because they were not able to deliver holistic care to patients due to nurses' shortage that causes heavy workload. (Kekana et al, 2007)

Another research done by Chikanda, 2006 in Zimbabwe found that 39.4% migrated to other countries because the workload in the health services of this country is too heavy. In a study done by Fredrich and Maritta (2005) found that 95% nurses in Uganda at Mulago national referral hospital in Kampala, have experience needle injury because of nurses' long working hours over that 40 hours per week.

1.2 PROBLEM STATEMENT

Seeking care at any health facility has been shown to be difficult in developing countries as there is a common problem of increased number of patients since the late 20th century (WHO, 2011).

In Rwanda, the demand for healthcare service is increasing as the majority of the population has health insurance. The establishment of community health insurance in 2006 increased health services utilization which caused a mismatch with the existing resources both human resources and material resources (MOH, 2011).

Since the last 5years the University Teaching Hospital reports a significant increase of clients seeking care at this hospital. In 2011 the hospital received 106621 patients with an average of 8885 each month, while in 2012 the number increased to 11844 patients with an average of 9320 every month, in 2013 the hospital received 122525 with an average of 9532 per month, in 2014 they received 125234 with average of 9650 per month and recently in 2015 the hospital cared 140559 with average of 1038 per month (MOH, 2015).

At CHUK now nurses complain of work overload, from time to time news paper and broadcasted news in Rwanda communicate reports about community complaint about long tails on health facilities waiting for care as evidenced by Mugabe, (2012) a journalist in new times pointed about dissatisfaction of clients receiving health services mainly in public hospitals, but also the same author pointed care providers complaint about work overload due to increased number of clients they are assigned to care for.

In Rwanda a lot of improvement has been made towards outcomes and improvement of patients receiving of quality care. Hospitals have been supported toward this endeavor through increasing

staff number, and increasing the number of new equipments (Rwanda DHS2016). Despite this statistics at CHUK (2015) shows that Emergency department had 40 admissions each day and 45 old cases who are cared by 9 nurses each shift, the ratio is 10.5 patients to 1 nurse and each shift is 12 hours, while according to Massachusetts nurses association nurses patient staffing ratios in adult units should be 1:5.25 for community hospitals and 1: 4.08 for academic medical centre with a minimum of 1:4 for all hospitals at 1:1 in intensive care units (Curtin et al., 2006).

Work overload adversely affects patient care, higher nurse staffing is associated with better in patient and post-discharge outcomes (Needleman et al., 2011, Aiken et al., 2012, Mchugh &Ma 2013).

Estimates of patients deaths from medical errors range from 98800 to 40000 per year due to nurses' work overload ((James, 2013).

Based on patients and nurses ratios at CHUK, patients' complaints about services dissatisfaction and long shift, nurses at CHUK are having work overload and yet none has demonstrated its impact on patient care at CHUK, this study is intended to find out the perceived impact of nurses' work overload on patients care at the University Teaching Hospital Kigali.

1.3 OBJECTIVES OF THE STUDY

1.3.1 MAIN OBJECTIVES OF THE STUDY

The aim of this study is to assess the perceived nurses' workload on patient care at University Teaching Hospital of Kigali (CHUK).

1.3.2 SPECIFIC OBJECTIVES

To determine the level of perceived nurses' workload at CHUK.

To establish the level of patients care among nurses at CHUK.

To examine the relationships between perceived nurses' workload and patient care among nurses at CHUK.

1.3.3 RESEARCH QUESTIONS

What is the level of perceived nurses' workload at CHUK?

What is the level of patient care among nurses at CHUK?

What is the relationship between perceived nurses' workload and patient care among nurses at CHUK?

1.4 SIGNIFICANCE OF THE STUDY

This study has three major areas of significance namely research, practice and education. It is also of great importance to gain more knowledge of nurses' working conditions, perceived

impact of nurses' heavy workload on patient care and job satisfaction-knowledge that might be used to increase nurses' job satisfaction in Rwanda.

1.4.1 RESEARCH

This study will provide more information on nurse's work; this research will provide a basis for further research on what the country must do to resolve issues related to staffing levels of nurses and nurses' workload.

1.4.2 PRACTICE

Results of this study will inform national health policy makers and CHUK administration, in particular, to recognize the impact of nurses' workload on patient care and serve as a basis for developing appropriate approaches to prevent staff workloads. This study also will increase nurses' awareness about their own attitudes toward high workload.

1.4.3 EDUCATION

This study will be an additional source of information to the available literature on this subject. This study will allow me to get knowledge about profession realities to ground and gain experience about research.

DEFINITIONS OF KEY TERMS

Assessment: Assessment refers to the collection of data to describe the better understand an issue (Huitt, Hummel, & Kaeck, 2001). Within the context of this research, assessment is about

asking the right questions, collecting data, analyzing results, and using the results to provide evidence and/or make decisions from those results.

Nurses: Nurses are those who care for individuals of all ages, families, groups, communities, sick or well in all settings. They also promote health, prevent illness and care for the ill, disabled and the dying (Nardi, 2013, pp.317-326). Within the context of this study, a nurse is who performs clinical bedside work in the hospital.

Nurses' workload: nurses' workload is often discuss the amount of time it takes to complete tasks that must be carried out during a given time (Myny et al.,2011)Within in the context of my research, nurses' workload is mixture of nursing and non-nursing tasks/activities done by a nurse during working hours.

Perceived impact: These are unintended events caused by mismanagement rather than the underlying disease or condition of the patient (Kohnet al.2000). Perceived impact refers to any unexpected event that causes harmfully or affects the health of the patient as indicated by the respondents.

Nurse-Patient load: Nurse-Patient load is the number of patients assigned to a nurse during a shift (Al-Kandari, Thomas 2009, pp.581-590). Within the text of my research is the sum of new cases and old cases that a nurse takes care of.

CHAPTER II: LITERATURE REVIEW

2.1 INTRODUCTION

The researchers describe clinical nursing as providing direct patient care in the hospital setting (Mackusick & Minick, 2010, p. 335).

Nurses experience work overload in health care systems worldwide due to nurses' shortage, and this common issue interrupts hospital care quality in all countries but the improvement of hospital work environments such as ratios of patients to nurses, nurse involvement in decision making, and positive doctor-nurse relations must be worked on to improve safety and quality in hospital care and to increase patient satisfaction (Aiken, et al 2012).

In this chapter reviewed literature about nurses' views of nurses on their workload, causes of nurses' workload, impact of workload to patients and nurses, and the relationship between nurses' workload and the patients care. A number of data bases including HINARI, Chochraine, MEDLINE, EBscost, CINHAL were searched using the following key words: nurses, workload, patients outcomes.

A study done at eThekwini District, in KwaZulu-Natal; found that professional nurses at primary health care facilities are faced with augmented workload due to the daily integration of multiple primary health care services (Vawda & Variawa, 2012).

Reseachers have found that an increase in the nursing shortage results in reduced patient care and poor health outcomes (Twigg, Duffield, Thompson, & Rapley, 2010).

A study by (James, 2013) has found that medical error rates, stress or fatigue due to workload among health professionals, inadequate number of nurses and inadequate time spent with patients are the most important issues affecting health sector.

2.2 LEVEL OF PERCIEVED NURSES' WORKLOAD

The shortage of nurses was found to be both the cause of increased workload and the huge trouble was found in the provision of effective primary health care services in all municipalities in Limpopo Province (Baloyi, 2012).

Most nurses find it difficult to describe their roles and accept that they have an increased workload. Nurses deal with time consuming non nursing tasks which often cause them to finish their shift with undone nursing tasks; even those non nursing tasks do not require skills of a registered nurse like checking the medication refrigerator thermometer, transporting food trays, and transporting samples to laboratory (Wakefield, 2013). Other study has found that patient transfers may cause additional burden of workload of nurses (Needleman et al., 2011).

Despite those activities which consume nurses' time and increase their workload managers do not consider them while staffing nurses in their working units (Baernholdt et al. 2010).

Patient transfer and discharge from one unit to another may cause an additional load on the workload of nurses (Needleman et al. 2011), if not calculated into the workload estimation at the starting of a shift.

Failure to take into consideration causes of nurses' workload leaves nursing staff overworked, overwhelmed, stressed and dissatisfied (Hipwell et al. 2011).

Conversely, ineffective nurses allocation, specifically when there are insufficient numbers of RNs and high or heavy nursing workload, can causes adverse patient wellbeing, increase in patient morbidity and mortality (Needleman et al. 2011, Patrician et al. 2011, Trinkoff et al. 2011), and low staffing ratio cause poor patient care (Poghosyan et al., 2010).

A study of nursing care quality in the UK by Ball et al. (2014) found that the high number of patients per nurse in hospitals was associated with nurse reported frequency of missed care (Kalisch et al. 2011).

Working long shifts; night shifts and rotating shifts as well as mandatory or intentional over time contribute to nurse's fatigue, accidents, and errors and a decrease in patient and nurse wellbeing (Brewer, 2011).

Ineffective deployment or work overload can lead to adverse patients' outcomes and can increase patient morbidity and mortality (Patrician et al., 2011, Thinkoff et al 2011). However reducing nursing workloads have been found to be associated with positive patient quality of care and outcomes (Papastavrou et al., 2013).

Primary health care facilities work 24-hour in all services, serving emergency patients; even the non-emergency cases visit the clinics for services as they know that there are always nurses after hours to render services. Increased workloads and increased overtime hours have had harmful effects on nurses' health, with high risk of having a big number of sick days in Canada (O'Brien-Pallas et al. 2013).

In the study done in Kuwaiti found that nursing is not an attractive job for Kuwaiti nationals due to various social and cultural barriers like disapproval from family members , Peer pressure, and

evening and night shift are barriers that have a negative impact on perceptions of nursing as a profession in Kuwait (Al-Kandari and Lew2005).

Also nursing profession is known to have long working hours, work overload, time pressure and lack of breaks (Malik, 2011. P3).

Numerous recent studies have indicated that long work hours have adverse effects on the performance of healthcare providers (Baldwin et al 2003).

The study done by (Rogers et al 2004) indicated that when nurses have worked more than 12consecutive hours or worked longer than scheduled the risks of making errors were significantly elevated.

Therefore, efforts to improve nursing working conditions can increase the retaining nurses and attracting newcomers to the profession (Laschinger et al. 2003).

Nursing profession is facing a severe shortage worldwide, but a reasonable workload can improve job satisfaction. (Paula Greco, et al 2006)

In a study done by Linda Honan Pellico and his colleagues in Canada about nurses experiences nurses have expressed their point of views about their career and gave real reasons they want to quit nursing profession, some are disappointed and others frustrated, they have said that nursing is a very stressful field and under paid. Some has express their selves and said “nurses are overworked, underpaid, and underappreciated (especially by doctors and upper management). They always report too much work, responsibility, and pressure with too little rewards. They complained working more than 36 hours in a week, a high patient-to-nurse ratio, and inability to

take breaks or to take lunch even to sit down during work hours were noted. Complaints about working week-end and holidays, mandatory overtime and sacrifice on family and/or leisure time but extremely working three 12hour shifts are dangerous. (Linda Honan Pellico, et al 2009)

Moreover hospital work environment like better staffing ratios of patients to nurses and nurse involvement in decision making are key features associated with improved patient outcomes, including mortality and patient satisfaction. (Aiken et al 2011)

2.3 LEVEL OF PATIENT CARE

Nursing shortage is becoming a major health care issue worldwide and will not change in the near future (Hudseph, 2013). And this has a negative impact on patient care as the insufficient nursing usually means increased workload to existing nurses, which might be a serious threat to patients care (Wang et al., 2017). That higher workload causes by nursing shortage seems to decrease the quality of patient care (Koivu, 2013; Poghosyan et al., 2010).

Increases of different activities associated with patient admission, transfer and discharge from one unit to other unit have been associated with increased nurses workload (Boernholdt et al., 2010).

The popular way to examine nurses' workloads are the three different levels; unit-level, job-level, and task-level. Unit-level workload includes staffing level and skill mix considerations; job-level workload is based on nurses' perceptions of the general amount of work to be done in the day, and task-level workload considers the nurse resources to do a task, such as mental

concentration associated with medication administration. Each workload level is associated with different cognitive demands and nurse and patient outcomes (MacPhee et al., 2017)

2.4 RELATIONSHIP BETWEEN NURSES' WORKLOAD AND PATIENT CARE

Lack of sufficient nursing staffs causes work overload in the ward (Beswick et al., 2010). And also what makes the problem difficult is that patients' demand a sufficient number of nurses per ward to avoid adverse outcomes. At the same time, workload is increasing due to fewer human resources (Jennings, 2011). Therefore, reliable and valid measures of nurse workload should support nurse managers in making evidence-based staffing decisions (de Cordova et al., 2010).

Higher nursing staff has clearly been linked to patient wellbeing, care quality, and cost (Twigg, Geelhoed, Bremner, & Duffield, 2013).

In hospital care settings, when nurses are assigned the appropriate amount of work, they are able to provide quality care and improve patient outcomes (Patrician et al., 2011).

Now days several studies have be found that hospitals with more staffing and greater proportions of Registered Nurses(RNs) tend to have lower rates of patient complications and mortality (e.g., Aiken et al., 2014; Needleman et al.,2011; Twigg et al., 2012).

There is a huge link between nursing staffing ratios and patients' outcomes. Some studies originate an important relationship between under staffing and elevated incidence of pneumonia (Cho et al, 2013) however reducing nursing workloads have found to be associated with positive patient quality care and outcomes (Papastavrou et al 2013) Working long shifts; night shifts and rotating shifts as well as mandatory or intentional over time contribute to nurse's fatigue, accidents, and errors and a decrease in patient wellbeing (Brewer, 2011).

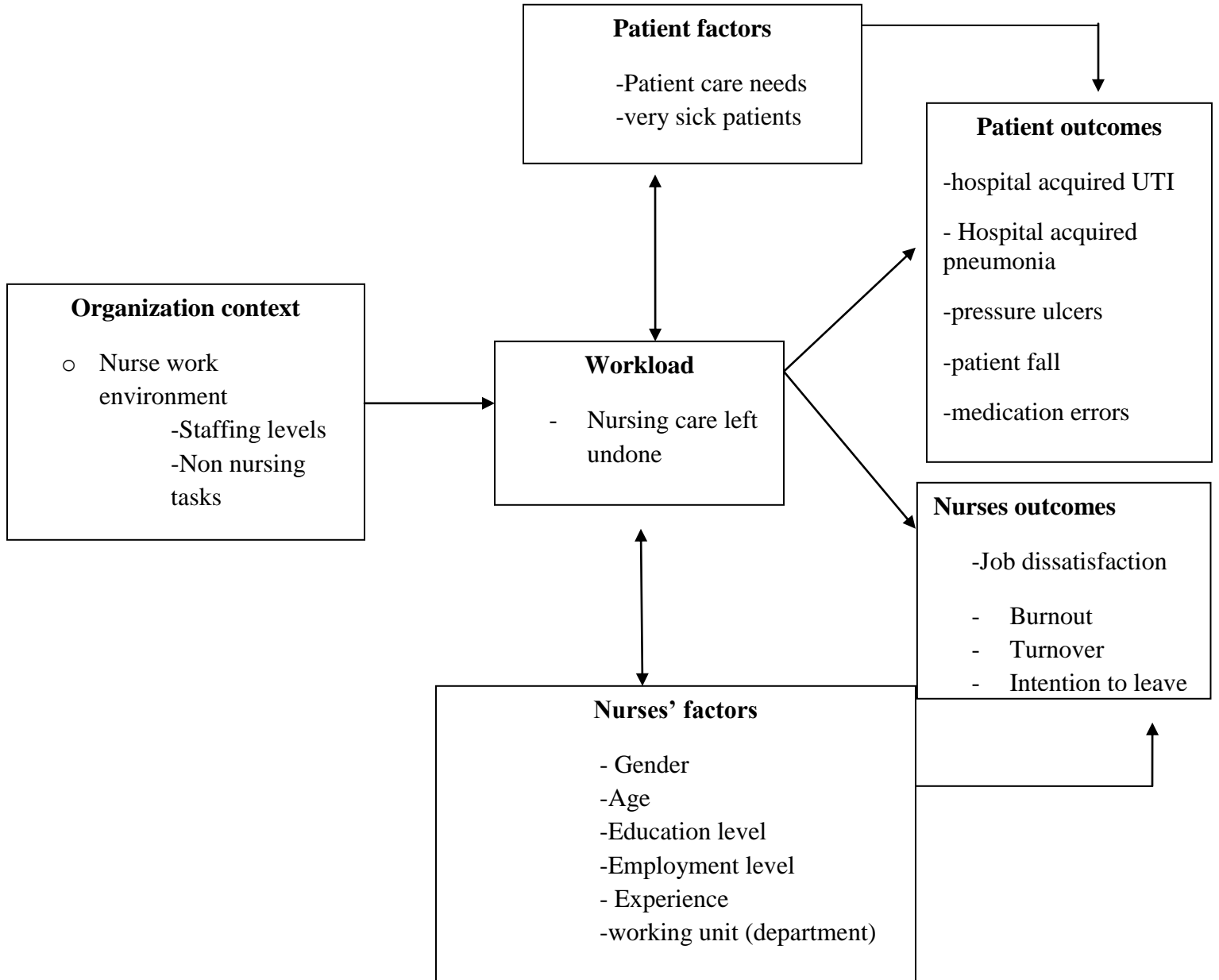
Nurses' heavy workload also have been demonstrated to have a important impact on nosocomial infections occurrence by (Needleman et al, 2012) who did the study in ICU and publish that *E cloacae* infection in the unit was increased when there was understaffing of nurses.

Aiken et al 2012 also said that each additional patient per nurse cause 7% increase of mortality in 30 days following admission and the greater chance of failure to rescue. Aiken as well reports that patients' mortality rate is associated with nurses working hours and the nurses' workloads. A study done by Pronovost et al 2014 also confirmed that having a nurse-patient ratio less than 1:2 to night shifts was associated with a 20 % increased length of stay to patients who had abdominal aortic surgery

A study has found that when nurses are working many hours per day and care for many patients have the like hood of developing UTI increases (Sovie, Jawad 2011).

2.5. CONCEPTUAL FRAMEWORK

Figure 1: Conceptual framework (Adopted from Ausserhofer et al, 2014)



The conceptual framework used by Ausserhofer et al 2014 was adopted and personalized to my study. According to the conceptual model, nursing **care left undone** reflects the nurses' overload and those care were defined as necessary nursing activities that were missed due to a lack of time (Lucero et al 2009, Sochalski 2004).

Staffing level was calculated by comparing the total number of patients to the total number of professional nurses taking care of patients in the unit. In my study nurses respond questions by providing information on their unit's workload, and the number of patients and nurses involved.(Sermeus et al 2011)

Non-nursing tasks were defined as activities that do not require professional nursing training which should be assigned or delegated to other staff, except in extraordinary or emergency circumstances (Aiken et al 2001). I used data from nurses' responded (Never, few times, or every day) on non-nursing tasks performed (eg, transporting patients within the hospital, cleaning patient rooms and equipment, doing clerical work, and dealing discharge process of the patients) those duties determine the prevalence of non-nursing tasks.

Nurse factors in this study included participating professional nurses' socio-demographic and professional characteristics, such as gender, nursing education (ie, nurses with a bachelor or higher degree, professional experience)

CHAPTER III: METHODOLOGY

3.1 INTRODUCTION

This chapter explains the process and methods that was used to conduct this study. This includes study area, study population, sample size and sampling methods, data collection methods and procedures, data analysis, limitation and problems and ethical consideration.

3.2 STUDY APPROACH

The study also used a quantitative approach to present data. The quantitative research is an organized, objective, systematic process in which the researcher obtained numerical data to collect information about the phenomenon (Kothari et al.2014, p121).

3.3 STUDY DESIGN

A descriptive correlation design to this study facilitated the researcher to obtain more information about characteristics of a particular field of as study from which little is known (Burns and Grove, 2007).

3.4 STUDY SETTING

This study was conducted at University Teaching Hospital Kigali (UTHK) in all clinical departments located in Nyarugenge in Kigali the capital city the most populated area of the country (NISR, 2010). The hospital was built in1918 by the Belgian authorities and started with 4 hospitalization rooms and dispensary. As the country, capacity increased the dispensary was also widened to respond to Rwandan population needs. In 1963 an agreement between Rwanda and Belgian kingdom for its assistance was signed finally stopped by 1994 genocide.

During the genocide, the hospital faced with the huge loss of human and finance resources and ought to close.

In July 1994 the hospital reopened and grew gradually seeing that today it has a capacity of receiving 509 in patients in 15 clinical and par clinical services.

Now, the hospital is under the responsibility of the Ministry of Health in collaboration with the National University of Rwanda and financed by the Belgian Technical cooperation .UTHK is the national reference hospital which provides technical support to district hospitals and serves as a training center for medical as well as nurses students and performs medical researchers.

3.5 STUDY POPULATION

This study targeted bed sides nurses working at CHUK; therefore, the population of interest in my study included 456 bedside nurses working in all departments.

3.6 INCLUSION CRITERIA

All present nurses on day of duty who had a contract as a bedside nurse who wanted to participate were included in this study.

3.7 EXCLUSION CRITERIA

Nurses with less than 6 months of experience working at CHUK were excluded in this study.

3.8 SAMPLE SIZE

Sidhu (2003) said that the sample is a very small group that should represent a population and shows what the results are like. In this study, the sample size was composed of 209 working at Emergency, Pediatric, ICU, Internal Medicine, Surgery and maternity. The sample size was calculated using Raosoft sample size calculator; the population was 456 nurses with the margin error of 5% and confidence level of 95%.

3.9 SAMPLING STRATEGY

A sampling strategy is a process of taking a defined and quantified proportion of a larger population of target items being representative of the population as a whole (Berinsky, 2008). In this study I used convenience strategy, participants who had entire requirements, who were there at the time of data collection was asked to respond to the questionnaire.

3.10 INSTRUMENTATION

Data collection instrument is a tool used to collect information for an evaluation, including surveys, tests, questionnaires, interview instruments, case logs and attendance records (Corlien, 2003). For this study, data was collected using a data collection tool developed by the researcher himself. The questionnaire used was a self-reported questionnaire with 3 sections including demographic data, perceived nurses' workload at CHUK, and patient care at CHUK, closed-ended questions were only asked.

3.11 RELIABILITY OF THE TOOL

Reliability was defined as an extent to which a data collection tool can produce a repeatable and consistency results(Romero Morales et al. 2017, p2-14). For the purpose of this study, the data collection tool to be used is originally in English.

It is known that the most challenging aspect of cross-cultural translation is to modify the instrument in a complete and suitable cultural form while respecting the sense of original items(Van Widenfelt et al. 2005, p135-39). Alongside linguistic problems, there is always a challenge of accurately matching cultural differences of the second language.

To prevent some semantic difference to the original tools the questionnaire was kept in English, nurses were able to read and answer in the original language.

Additionally, the questionnaire was analyzed with factor analyses method using Varimax rotation with an eigenvalue greater than 1. Results showed all 4 factors as mentioned in our conceptual framework. Reliability coefficient (**Cronbach's Alpha**) was .72 indicating a sufficient reliability(Romero Morales et al. 2017, p2-14).

3.12 VALIDITY OF THE TOOL

Content validity is defined as an extent to which a data collection tool measure all aspect of a given construct(Kimberlin & Winterstein 2008, p2276-83). In this study, it was covered by assuring that items in the research questions are covering the research objectives. With regard to face validity which refers to an extent to which a tool subjectively appears covering the concepts, it is purported to measure(Romero Morales et al. 2017, p2-14) was guaranteed by presenting the data collection tool to the experts to judge their suitability of the tool.

In order to test the validity of the tool, the researcher has conduct also a pilot study before starting; questionnaires were given to 21 nurses (10% of the sample size). At the end of the pilot study the researcher asked the respondents for any suggestions or any necessary corrections to improve the instrument further. The researcher modified the content of the questionnaire based on the assessment and suggestions of the sample respondents. The researcher excluded irrelevant questions and changed vague or difficult terminologies into simpler ones so as to make the research more comprehensive for the selected respondents.

Table 1: content validity

N^o	Specific Objectives	Elements in the questionnaire
1	To explore the perceived level of nurses' workload nurses' views about their workload at CHUK	SECTION B
2	To determine the level of patient care at CHUK	SECTION C
3	To examine the relationship between perceived nurses workload and patient care at CHUK	SECTION D

3.13 DATA COLLECTION PROCEDURE

To collect data, the researcher obtained permissions from University of Rwanda and from CHUK research committee, the researcher approached nurse managers and explained about the research' aims and data collection process. With his/her approval, the researcher was present in the morning staff to distribute questionnaires to nurses on the day duty, and for nurses who did the night duty, those questionnaires were returned to the researcher in the following day morning after nurses had completed them. Data were collected in a period of two months from 13th Feb 2017 to 12th April 2017, from Monday to Wednesday.

3.14 STUDY LIMITATIONS

The first limitation was that workload and adverse patient outcomes were studied as self-reported by bedside nurses only. And also the time was limited so the researcher used a small sample size.

3.15 ETHICAL CONSIDERATIONS

The study proposal was approved by UR-CMHS Research committee and Kigali University Teaching Hospital Research committee; permissions were obtained prior to collection of data. The participants were briefed on the voluntary nature of their participation in the study and necessary information was provided on study objectives and how to complete the questionnaires before beginning. Furthermore, anonymity and confidentiality was considered as before answering the questionnaire the participants has signed the consent form and mentioning the name of the participant was prohibited, the researcher indicated them to use name initials only.

3.16 DATA ANALYSIS

Once data has been collected, it is needed to be represented in a way that communicates information and enables conclusions to be drawn (Jewell, 2001). After data collection, a Statistical Package for Social Sciences (SPSS) software version 20 was used to organize and analyze data. Data was analyzed using descriptive statistics, frequencies, and percentages and inferantier statistics for the relationship.

CHAPTER IV: DATA PRESENTATION AND ANALYSIS

This chapter is going to describe data in four sections: socio demographic data, perceived nurses' workload, and patient care.

Section A: Socio-demographic features of participants

Table 2 is summarizing all demographic data of participants; two hundred and nine nurses participated in this study .This table indicate the range of age that the participants had, the majority of nurses in CHUK are still young as 107(42.5%) of the participants in this research in range of 25 and 29 years, 58(23%) in the range of 30 and 34, 9(4%) were in the range of 20-24, 11(4%)were in the range of 40-44 , 2(1%) for both the range of 45-49 and 55-59 and 1(0.4%) in the range of 50-59 , for gender 131(63%) of the participants in this research were female and 78(37%) were male, the table indicate that that the majority of the nurses in CHUK have A1 level of education with 156(75%) A2 with 29(14%) and A0 with 24(11%) , this table marital status show that 144(69%)of the nurses who participated in this research are married, 47(23%) were single ,5(2%) divorced and 13(6%)widowed, the working experience shows that 89(43%) of participants has experience between 6 and 10 years and 69(33%) has experience between 1 and 5 years, 27(13%) worked between11-15, 11(5%) worked between16-20, 4(2%) worked between 21-25, and 8(4%) worked below 1 year and only 1 (0.4%) had a working experience of 26-30. According to the department this table 2 shows that 30(14%) were working at emergency, 17(8%) were in ICU, 23(11%) were working in Maternity, 30(14%) were working in Pediatric Emergency, 13(6%) were working in Neonatology, 39(19%) were working in Intern Medicine, 37(18%) were working in Surgery, and 20(10%), were working in Pediatric hospitalization.

Table 2. DEMOGRAPHIC DATA OF PARTICIPANTS (N=209)

VARIABLE	FREQUENCY	% FREQUENCY
<u>AGE</u>		
20-24	9	3.6
25-29	107	42.5
30-34	58	23.0
35-39	19	7.5
40-44	11	4.4
45-49	2	.8
50-54	1	.4
55-59	2	.8
<u>GENDER</u>		
MALE	78	37.3
FEMALE	131	62.6
<u>EDUCATION LEVEL</u>		
A2	29	14
A1	156	75
A0	24	11
<u>MARITAL STATUS</u>		
SINGLE	47	22.4
MARIED	144	68.8
DIVORCED	5	2.3
WIDOWED	13	6.2
<u>WORKING EXPERIENCE</u>		
<1YEAR	8	3.8
1-5	69	33
6-10	89	42.5
11-15	27	12.9
16-20	11	5.2
21-25	4	1.9
26-30	1	.4
<u>DEPARTEMENT</u>		
EMEGENCY	30	14.3
ICU	17	8.1
MATERNITY	23	11
PED EMEGENCY	30	14.3
NEONATOLOGY	13	5.2
INTERN MEDECIN	39	18.6
SURGERY	37	17.7
PED HOSP	20	9.5

Section B: Level of Perceived nurses' workload

TABLE 3. LEVEL OF PERCEIVED NURSES' WORKLOAD (N=209)

The table 3 in section B are exposition perceived nurses' workload; shows that 134(64%) of nurses who participated in this research report that they are overloaded, 61(29%) say that they workload is normal, and 14(7%) declared that is under loaded, the table also shows that 162(78)% of nurses who participated in this research do not feel comfortable working on weekends, holidays and overtime, and 47(22%) remaining they do not mind to work on holidays and weekends, the table indicate that 136(65%) of nurses who participate in this research report that they never come early to this work in order to complete the assigned tasks and 71(34%) say that the come few times a week, this table indicates that 155(74%) of the participant declare that every day they stay to complete the assigned tasks, 46(22%) stay few times a week, and only 8(4%) never stay to accomplish the assigned tasks, the table shows that 140(67%) of the respondent in this research report that they every day continue to working during the breaks to complete the work, 53(25%) do it few times in a week and only 16(8%) report that they never work during the breaks to complete the task, figures in this table indicate that 142(68%) of participants in the research agree that leave necessary task undone due to lack of time at the end the shift and 67(32%) said they do not leave any task, 160(76.5%) of the nurses in this research report that the task leave undone is drug administration, 30(14.3)% declare that they do not record administered drug, 9(4.3)% do not do hygiene for patients, 10(4.7 %) do not discharge patients, and 6(2.8%) agreed that they don't patient's surveillance, this table also indicate that 209(100%) are involve in non nursing tasks, those tasks are grouped as 101(48.3%) are involved

in transporting samples to the laboratory, 57(27.3%) are involved in requesting for materials, 3(1.4%) are involved in cleaning equipment, and 48(23.0%) are involved in clerical work. This table nurses perceived that the cause of their work overload is 101(48.3%) they receive many patients, 74(35.4%) they work more than 8 hours per shift, 12(5.7%) they work more than 4 shifts each week, 22(10.5%) they work more than 40 hours every week.

Table 3. Level of perceived nurses' workload (n=209)

VARIABLE	FREQUENCY	% FREQUENCY
<u>MAGNITUDE</u>		
UNDERLOAD	14	6.6
NORMALLOAD	61	29.1
OVERLOAD	134	64.1
<u>WORKING HOLIDAYS AND WEEK END</u>		
NO	162	78
YES	47	22
<u>COMING EARLY TO FINISH THE WORK</u>		
NEVER	136	65
FEW TIMES	73	35
<u>STAYING LATE TO FINISH THE WORK</u>		
NEVER	8	4
FEW TIMES	46	22
EVERY DAY	155	74
<u>CONTINUE WORKING TO FINISH THE WORK</u>		
NEVER	16	8
FEW TIMES	53	25
EVERY DAY	140	67
<u>DO U LEAVE TASK UNDONE</u>		
NO	67	32
YES	142	68

<u>WHICH TASK</u>		
DRUG ADMINISTRATION	160	76.5
RECORD ADMINISTERD DRUG	30	14.3
PATIENT HYGIENNE	9	4.3
PATIENT DISCHARGE	10	4.7
PATIENT SURVEILLANCE	6	2.8
<u>INVOLVEMENT IN NON NURSING ACTIVITIES</u>		
YES	209	100.0
<u>WHICH ACTIVITES ARE YOU INVOLVE IN</u>		
TRANS SAMPLES	101	40.1
TRANS PATIENTS	57	22.6
CLEANING EQUIPEMETS	3	1.2
CLERICAL WORK	48	19.0
<u>CONTRIBUTION OF WORKLOAD</u>		
MANY PATIENTS	101	40.1
MORE 8H	74	29.4
MORE 40 HOURS	12	4.8
MORE 5 SHIFTS	22	8.7

Table 4. score for perceived workload among nurses (n=209)
Mean score= 18.9 Medium= 19 Mode=19 Minimum=11 Maximun=30

The table 4 indicates that nurses 176(84%) perceived that patients received high level of care starting from 70-100% and 33(16%) perceived the low level of patient care the total below 70%

Score out of 30	%score	Frequency	%frequency
11.00	36.6	2	1.0
12.00	40	7	3.4
13.00	43.3	6	2.9
14.00	46.6	14	6.8
15.00	50	13	6.3
16.00	53.3	26	12.6
17.00	56.6	30	14.5
18.00	60	23	11.1
19.00	63.3	31	15.0
20.00	66.6	24	11.6
21.00	70	8	3.9
23.00	76.6	10	4.8
26.00	83.3	9	4.3
29.00	96.6	3	1.4
30.00	100	3	1.4

TABLE 5. PATIENT CARE AMONG NURSES (N=209)

Table 5 patient care among nurses and 9(4.3%) go home with in, participants reported that at the end of the shift 50(23.9%) go home with headache, 139(65.5%) go home with backache, 11(5.2%) go home with anger and 9(4.3%) go home with insomnia, 34(21.1%) disagree that the job cause stress to them , 152(72.6) agreed that the job cause stress to them and 23(11%) were neutral about this assumption, 140(66.9) agreed that they dissatisfied, 51(24.4%) agreed that they

satisfied and 18(8.6%) were neutral,73(34.9) disagreed to recommend their colleagues to work at CHUK and 127(60.7%) agreed while 9(4.3%) were neutral,126(60.3%)of participants report that patients develop pneumonia because of lack frequent aspiration due to many patients nurses have to take care of and 83(39.7) remaining disagreed, 151(72%) nurses who participated in this research conformed that patients developed bed sores because nurses do not have time to turn patients and only 58(28%) is opposite to this hypothesis, 142(67.9%) of participants report that patients with urinary catheter develop Urinary Tract Infections because nurses don't have time to change them on time and 67(32.1%) say the opposite, 159(76.1%) of participants report that patients develop Hospital Acquired Infections because nurses have many tasks to do so they do not wash hands from one patient to other and only 50(23.9%) says that it not due to that, all participants 209 (100%) remove gloves from one patient to another, 174(83%) of participants says that nurses respect aseptic guidelines during procedures even if they have many techniques to do and 35(17%) report that don't respect aseptic guidelines, 209(100%) of participants recognized that they had an incident due to work overload, the most frequent incident that nurses had are needle injury ,late/missed drug administration, patients' fall ,and lack of documentation, and medication errors186(89%), and 22(11%), 147(70.3%) of nurses who participated in this research report confirmed that patients received poor quality of services when nurses have many patients to take care of and 62(29.7%) reported that they give poor quality of care when they have many patients to take care of.

Table 5. Patient care among nurses (n=209)

VARIABLE	FREQUENCY	%FREQUENCY
<u>ONE NURSES TAKE CARE OF PATIENTS</u>		
1-3	32	15.3
4-6	2	.9
7-9	14	6.6
10-13	90	43
14-16	61	29
17-19	9	4.3
19-22	1	.4
<u>GO HOME WITH SYMPTOMS</u>		
HEADCHE	50	23.9
BACKACHE	139	65.5
ANGER	11	5.2
INSOMIA	9	4.3
<u>THIS JOB CAUSE STRESS TO ME</u>		
STRO DISAGREE	14	6.6
DISAGREE	20	9.5
STRONGRY AGREE	86	41.1
AGREE	66	31.5
NEUTRAL	23	11
<u>AM SATISFIED WITH THIS JOB</u>		
STR DISAGREE	96	45.9
DISAGREE	44	21
STR AGREE	22	10.5
AGREE	29	13.8
NEUTRAL	18	8.6
<u>IWILL RECOMMENDOTHER TO WORK AT CHUK</u>		
STR DISAGREE	27	12.9
DISAGREE	46	22
STRO AGREE	80	38.2
	47	22.4
AGREE		
NEUTRAL	9	4.3
<u>PNEUMONIA DUE TO LACK OF ASPIRATION</u>		
NO	83	39.7
YES	126	60.0
<u>BEDSORES DUE TO LACK OF TURNING</u>		
NO		28.0
YES	58 151	72.0

<u>UTI DUE TO LACK OF CHANGE</u>		
NO	67	32.0
YES	142	68.0
<u>NOSOCOMIAL DUE TO NON WASHING HANDS</u>		
NO	50	24.0
YES	159	76.0
<u>RESPECT OF ASEPTIC PROCEDURE</u>		
NO	35	17.0
YES	174	83.0
<u>ANY INCIDENCE</u>		
YES	209	100.0
<u>WHICH INCIDENCES</u>		
None	22	11.0
patient fall, error sending, family complaints, missed drug, lack of documentation	186	89.0
<u>PERCEPTION OF CARE</u>		
POOR	147	70.0
GOOD	62	30.0

Table 6. Total score for patient care (n=209)

This table 6 is presenting the score of patient care, the below level were considered below 60% which 182(87%) of participants accepted that patients have low score of patient care, and the high score were 27(13%) who accepted that patients had high score of patient care

Score out of 33	%score	Frequency	%frequency
4.00	12	1	.4
8.00	24	1	.4
9.00	27	7	2.8
10.00	30	9	3.6
11.00	33	15	6.0
12.00	36	10	4.0
13.00	39	16	6.3
14.00	42	20	7.9
15.00	45	28	11.1

16.00	48	31	12.3
17.00	51	14	5.6
18.00	54	14	5.6
19.00	58	10	6.3
20.00	61	6	2.4
21.00	64	10	2.5
22.00	67	6	2.4
23.00	70	3	1.2
25.00	79	1	.4
26.00	85	1	.4
28.00	85	3	1.2
30.00	91	2	.8
33.00	100	1	.4

TABLE 7.RELATIONSHIPS BETWEEN NURSES’WORKLOAD AND PATIENT CARE

The relationships were not significant as evidenced by the table 4.6 there is a very weak positive relationship of .005, as the confidence interval was 95% which should have the p value below .005

Correlations

		Tot perceived workload	Tot patient care
Tot perceived workload	Pearson Correlation	1	.005
	Sig. (2-tailed)		.945
	N	209	209
Tot patient care	Pearson Correlation	.005	1
	Sig. (2-tailed)	.945	
	N	209	209

CHAPTER V: DISCUSSION

5.1 INTRODUCTION:

This chapter is discussing results of this study according to the 3 objectives: nurses' views about their workload, level of patient care and the relationship between perceived nurses' workload and patient care CHUK.

5.2 LEVEL OF PERCEIVED NURSES' WORKLOAD

Results showed that 64% of nurses who participated in this research report that they are overloaded but this issue appear to cross national boundaries as confirmed by (Poghosyan et al., 2010) who found that heavy workloads and staffing shortages combine to offer hard working conditions for healthcare professionals, which compromise their ability to provide high-quality care.

The total number of nurses 209(100%) had agreed that they are involved in non-nursing activities like transport samples to the laboratory and clerical work which causes nurses work overload and reduce their time spent with patient also this problem has been found in the other study ((Wakefield, 2013; Needleman et al., 2011) and causes to nursing responsibilities to be interrupted then they leave tasks undone (Kalisch et al. 2011).

Nonetheless several studies have found that the increased workload have negative impact on patient care (Twigg, Geelhoed, Bremner, &Duffield, 2013) this study has found that at CHUK only 33(16%) perceived that there is a low level of patient care and 176(84%) perceived that CHUK has a high level of patient care

5.3 LEVEL OF PATIENT CARE AT CHUK

This study has found poor patient' outcomes related to nurses' work overload like pneumonia, pressures ulcers, and urinary tract infections as also found by other studies(Needleman et al.,2012; Sovie, Jawad2011)

At University Teaching Hospital nurse patient ratio is high where 1 nurse can take care 10-13 patients (42%) which cause poor patient outcomes (Pronovost et al., 2014; Aiken et al., 2012)

Results of this study demonstrate that 182(87%) agreed that patients had low level of care and 37(13%) has high level of care due to the increased workload, high nurse-patient ratio and long working hours (Jennings, 2011;cho et al.,2013; Duffield et al.,2014). A high workload seems to decrease the quality of patient care (Koivu,2013; Poghosyanet al., 2010). Also other study has found that a higher staffing levels were associated with reduced mortality, medication errors, ulcers, infections, pneumonia (Driscoll et al., 2017).

5.4 RELATIONSHIP BETWEEN PERCIEVED NURSES WORKLOAD ND PATIENT CARE

The results of this study have found that there is not a significant relationship between nurses' workload and patient care (p .005) there is weak positive relationship however other recent study have found a strong realationship between nurses' workload and patient outcomes (Aiken et al., 2014; Needleman et al.,2011; Twigg et al., 2012; Patrician et al.,2011).

5.5 SUMMARY

This study was conducted at University Teaching Hospital Kigali the national referral hospital in Rwanda; the aim of this study was to assess the perceived impact of nurses' workload on patient care. A cross section survey was done; questionnaires were distributed to 209 bedside nurses working in different departments. Questions were answered and results shown that nurses at CHUK are arguing of having work overload, nurses are involved in non nursing tasks, nurse-patients ratio is high(1nurse/10patients), nurses work long consecutive hours because they work 12 hours shift and work more than 40 hours per week. Nurses are dissatisfied, are tired go home with backache and make errors because of fatigue but what worsen the situation are poor patients outcomes mainly pressure ulcers, Urinary Tract infection and Pneumonia and raised statistics of incidences like patient falls and late/missed drugs.

Lastly positive appreciation from this study is nurses at CHUK even many tasks assigned to them they keep respecting nursing policies and protocols, respect aseptic procedures and they are willing to recommend other nurses to come and work at CHUK.

CHAPTER VI: CONCLUSION AND RECOMMENDATIONS

6.1 RECOMMENDATIONS

Through this study, the researcher attempted to explore nurses' insight about adverse patient outcomes as related to nurses' workload and to identify causes that contribute to those occurrences of undesirable patient outcomes because of their impact on patients' life and quality of nursing care. Although the literature shows that several studies have been conducted on nurses' workload and adverse patient outcomes, but none has been conducted in Rwanda. Also, this study was conducted in one National Referral hospital with different cultural backgrounds and multicultural, multinational patients as well as nurse populations; the researcher has provides some recommendations.

6.1.1 TO THE MINISTRY OF HEALTH

The study results indicate a wide gap in nursing staff at University Teaching Hospital- Kigali. The researcher therefore, recommends that the Ministry of Health should release enough nursing staffs to CHUK as it is one National Referral hospital with high demand of the whole Rwandan population.

The Ministry of Health needs to conduct an audit to discover those patients' adverse outcome and know the magnitude of the problem.

6.1.2 TO THE MINISTRY OF EDUCATION

The Ministry of Education should recruit enough students in health profession especially in nursing as we know nurses are the key elements in healthcare system.

The Ministry of Education in collaboration with Ministry of Health and Rwanda Education Board should facilitate A2 nurses working at CHUK to access to health higher institutions to enhance their knowledge and practices as they are working in National Referral Hospital

6.1.3 TO THE UNIVERSITY TEACHING HOSPITAL-KIGALI

The University Teaching Hospital Kigali has a greater role in protecting their customers known as patients but also protect health care providers, that is why CHUK firstly should recruit enough staff in order to provider a good service as the research relieved that every nurse at CHUK is arguing of work overload which causes many adverse outcomes to patients. CHUK should respect nurse-patients ratio system as some literatures indicated it.

The clinical significance of this study is that nurses themselves perceive some adverse patient outcomes related to their workload. Nurses should explore the issue of adverse patient outcomes further and assess the contributing factors to the occurrence of adverse events and try to avoid or minimize further occurrence of such factors or events. Efforts should be exerted to use different approaches to enhance patient health and promote wellness.

Secondarily all nurses at CHUK affirmed that they are involved in non nursing tasks which reduce their time to care for patients especially they lose time in transporting samples to the laboratory and doing clerical work.

As the findings showed a positive correlation between the workload and adverse patient outcomes reducing the workload of nurses plays a vital role in promoting patient safety and quality of nursing care. Adequate numbers of clerical and other supportive staff are recommended to carry out non-nursing workload tasks. In light of the nursing shortage faced by many countries regionally and globally, introducing other levels of nursing personnel such as licensed practical nurses and assistant nurses is another option to be explored further to allow registered nurses more time to provide professional nursing care.

6.1.4 TO THE FUTURE RESEARCHERS

Recommendations for future studies include investigating the influence of nurses' educational level on awareness of adverse patient outcomes. Hours of care per patient day, Patient acuity, nurse-patient load and suitable average workload per shift are other aspects to be studied particularly, as patient acuity is a major aspect that influence nurses' workload and patient outcomes was not taken into consideration in this study. Workload was only evaluated comparing nurse-patients ratio system in the hospital only. This could be another limitation, yet the researcher focus was on perceived poor patient outcomes as related to workload apart from of the workload measurement system.

6.2 CONCLUSION

In conclusion, this study addressed the significant matter affecting patient life and quality of care. It also shed light on an area that frequently goes unexplored or is not honestly discussed. Nurses play a fundamental role in the health care system. The cognitive aspect of nursing care should be looked on when staffing units with sufficient numbers of nurses. Recruitment of supportive workers to carry out non- nursing tasks could facilitate nurses and grant more time for nurses to take care for patients, particularly with worldwide nursing shortage frightening health care sector in many countries. It is very important also to keep an eye on the frequent unpleasant outcomes where, why and how they occur and to seriously assess errors like medication errors which cannot be unnoticed. As a final point, nurse managers should set quality indicators to reduce unintended undesirable patients outcomes.

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APPENDICES

Informed Consent

Title: Perceived impact of nurses' workload on patient care.

I,I am going to participate in a research project conducted by Madam **Ihorindeba Hosanna** from University of Rwanda . I understand that the project is designed to gather information about academic work of faculty on campus. I will be one of approximately 209 nurses will being interviewed for this research.

I have understood the purpose of this study which will be conducted on nurses; study results will be communicated to UTHK administration and will react on research end results.

The main purpose of this study is to assess the perceived impact of nurses' workload on patient care at University Teaching Hospital Kigali (CHUK).

The specific objectives of this study are:

To determine the level of perceived nurses' workload at CHUK.

To establish the level of patients care among nurses at CHUK.

To examine the relationships between perceived nurses' workload and patient care among nurses at CHUK.

I was explained and accepted the following statements

- My participation in this project is voluntary. I understand that I will not be paid for my participation. I may withdraw and discontinue participation at any time without penalty. If I decline to participate or withdraw from the study, no one on my campus will be told.
- I understand that I must answer the questionnaire. If, however, I feel uncomfortable in any way during the process, I have the right to decline to answer any question with draw to the research
- To answer the questionnaire, this will take me 30-45 minutes.
- I understand that the researcher will not identify me by name in any reports using information obtained from this interview and that my confidentiality as a participant in this study will remain secure. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions.
- I understand that this research study has been reviewed and approved by the Institutional Review Board (IRB) for any problem the IRB committee will be contacted.

Call 0788834480/ 0725347354 or email hosanna 01@yahoo.com if you have questions about the study, any problems, unexpected physical or psychological discomforts, any injuries, or think that something unusual or unexpected is happening.

Date, Signature of the Investigator.....

Ihorindeba hosanna

Date, Signature of the participant

For further information, please contact: Mr. John Mugarura /UR 0788356351

1. QUESTIONNAIRE

SECTION A. Socio –demographic features of participants

1. Age:

2. Gender: A. Female

B. Male

3. Educational level of participant:

4. Marital status: A. Married B. Single C. Divorced D. Widowed

5. Working experience in the unit:

6. Choose the department that you are working in:

- | | | | | | |
|----------------|--------------------------|-------------|--------------------------|------------------|--------------------------|
| a. Emergency | <input type="checkbox"/> | b. ICU | <input type="checkbox"/> | c. Ped/ emegency | <input type="checkbox"/> |
| d. Neonatology | <input type="checkbox"/> | e. IM | <input type="checkbox"/> | f. Surgery | <input type="checkbox"/> |
| g. Maternity | <input type="checkbox"/> | h. Ped/hosp | <input type="checkbox"/> | | |

SECTION B: Level of Perceived nurses' workload

1. As a bedside nurse how do you perceive the magnitude of your workload?

- a. Under load b. Normal load c. Over load

2. As bedside nurse do you feel comfortable working on weekends, holidays and overtime?

- a. Yes b. No c. Neutral

3. How often do you come early to work in order to complete the assigned tasks?

- a. Never b. Few times a week c. Every day day

4. How often do you stay late to work through breaks in order to complete the assigned tasks?

Never b. Few times a week c. Every day day

5. How often do you continue to work working through breaks to complete work?

a. Never b. Few times a week c. Every day day

6. Do leave necessary tasks undone due to lack of time at the end of your shift?

a. YES b. NO

7. If YES which tasks do you leave undone?

1..... 3..... 5.....
2..... 4..... 6.....

8. As a bedside nurse are you involved in non nursing activities? YES NO

9. If YES, which non nursing tasks are you often involved in?

1..... 2..... 3..... 4..... 5.....

10. The following statements choose those you attribute to your workload?

- a. I receive many patients that I cannot take care of
- b. I work more than 8hours each shift
- c. I work more than 4 shifts in a week
- d. I work more than 40 hours in a week

11. PLEASE RESPOND ACCORDING TO YOUR WORKING DEPARTMENT

How many patients that one nurse can take care of?

SECTION C: Level of Patient care

1. As nurses what do you notice in your department as consequences of your workload	YES	NO
<p>a. patients develop aspiration pneumonia in my unit because lack of frequent aspiration due to many patients nurses have to care of</p> <p>b. patients develop bed sores because nurses do not have time to turn them</p> <p>c. patients with urinary catheter develop UTI because nurses have not time to change them on time</p> <p>d. Patients develop hospital acquired infections because nurses have many tasks to do so they do not wash hands from one patient to other</p> <p>e. Patients develop hospital acquired infections because nurses have many tasks to do so they do not remove gloves from one patient to other</p> <p>f. I respect aseptic guidelines during procedures even if i have many techniques to do</p>	<p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p>	<p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p> <p align="center"><input type="checkbox"/></p>

