

Predictors of burnout amongst nurses in paediatric and maternity wards of district hospitals of Kigali City, Rwanda

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ABSTRACT

Background

Burnout is a condition of emotional exhaustion (EE), depersonalization (DP), and a reduced sense of personal accomplishment (PA) that can occur among individuals who work with people in some capacity. Burnout is more prevalent in the helping professions, and high levels of burnout have been documented in all categories of nurses.

Study aim and methods

A descriptive and analytical quantitative cross-sectional study was conducted to measure the level of burnout and its possible associated factors among nurses of two district hospitals in Kigali City. All 126 nurses working in the maternity and paediatric sections of Muhima and Kibagabaga District Hospitals were included in the study. A self-administered questionnaire was used to collect socio-demographic and workplace information as well as responses to 22 questions in the Maslach Burnout Inventory (MBI), which assesses burnout along its three dimensions of emotional exhaustion, depersonalisation and reduced personal accomplishment. Descriptive statistics such as percentage, mean score, and standard deviation were computed for each burnout category and Chi-square test statistic was performed to test the relationship between burnout (dependent variable) and personal factors, workplace demands, and access to resources (independent variables); and between burnout and hospital and service (paediatric or maternity).

Results

Of the 126 questionnaires distributed, 102 (81%) were returned and useable for analysis. The average age of respondents was 29.7 years and female nurses represented the majority (88.2%) of our sample. Just over half (52.9%) were married and 53.9% had at least one child. The average years of experience as a nurse was 5.6 years, while the average years of experience in the hospital was 4 years. High burnout was found with high levels of EE in 43.1% of respondents, high levels of DP in 48.0%, and low level of PA in 34.3%.

Burnout was associated with being young and inexperienced, having less training, having at least one child, working longer hours, experiencing workloads as demanding, poor perceived control of the work, perceived staff shortages and workplace conflicts. However, good communication, job satisfaction and trust in colleagues and in hospital management, appeared to be protective for all three dimensions of burnout.

Conclusion

In conclusion, burnout was found to be associated with personal, workplace demands and environmental factors. Improvement of nursing work conditions, conflict prevention and improved communication between hospital managers and staff would be expected to prevent burnout among nurses working in paediatric and maternity wards of Muhima and Kibagabaga District Hospitals.



DECLARATION

I, SEMASAKA SENGOMA Jean Paul hereby declare that the study entitled “**Predictors of burnout amongst nurses in paediatric and maternity wards of district hospitals of Kigali City, Rwanda**” is my own work, that it has not been submitted for any degree or examination at any other higher learning institution, and that all references have, to the best of my knowledge, been correctly reported and acknowledged.

.....

Dr SEMASAKA SENGOMA Jean Paul

Date 20th December 2012



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TABLE OF CONTENT

Keywords:	ii
ABSTRACT	iii
ACKNOWLEDGEMENT	vi
TABLE OF CONTENT	vii
ABBREVIATIONS	ix
LIST OF TABLES	xi
LIST OF FIGURES	xii
CHAPTER ONE: INTRODUCTION	1
1.1. Background and rationale	1
1.2. Study setting	2
1.3. Problem statement	3
CHAPTER TWO: LITERATURE REVIEW	5
2.1. Burnout measurements	5
2.2. Prevalence of burnout	6
2.3. Predictors of burnout	7
2.3.1. Burnout and workplace demands	8
2.3.2. Burnout and personal factors	8
2.3.3. Burnout and workplace resources	9
CHAPTER THREE: METHODOLOGY	11
3.1. Aim	11
3.2. Objectives	11
3.3. Study design and conceptual framework	11

3.4.	Study population.....	13
3.5.	Sampling	13
3.6.	Data Collection Methods.....	13
3.7.	Validity and reliability.....	13
3.8.	Data analysis	14
3.9.	Limitations	15
3.10.	Ethical considerations.....	15
CHAPTER FOUR: RESULTS		17
4.1.	Profile of respondents	27
4.2.	Other personal characteristics.....	18
4.3.	Individual feelings about the job.....	19
4.4.	Workplace demands.....	20
4.5.	Workplace resources.....	21
4.6.	Levels of burnout	22
4.7.	Burnout by hospital.....	24
4.8.	Burnout by service.....	24
4.9.	Association between levels of burnout and personal factors	24
4.10.	Association between levels of burnout and workplace demand factors.....	27
4.11.	Association between levels of burnout and workplace resource factors.....	28
CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS		
5.1.	Prevalence of burnout.....	30
5.2.	Factors associated with burnout	38
5.3.	Hospital and service	40

5.4. Limitations.....41

5.5. Conclusions.....33

5.6. Recommendations.....34

References35



ABBREVIATIONS

MBI: Maslach Burnout Inventory

EE: Emotional Exhaustion

DP: Depersonalisation

PA: Personal Accomplishment

USA: United States of America

HIV: Human immunodeficiency virus

AIDS: Acquired Immuno-Deficiency Syndrome

ENT: Ear Nose and Throat

MOH: Ministry of Health

DHS: Demographic and Health Surveys

RDHS: Rwandan Demographic and Health Surveys

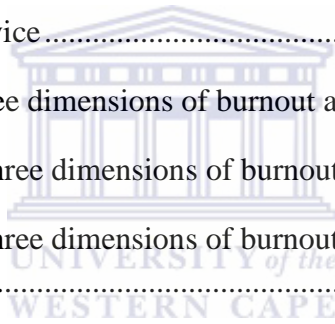
ICUs: Intensive Care Units

BM: Burnout Measure



LIST OF TABLES

Table 1 : Categorisation of burnout scores on the Maslach Burnout Inventory	14
Table 2 : Profile of respondents (n=102)	18
Table 3 : Other personal characteristics of respondents (n=102)	19
Table 4: Individual feeling about the job (n=102)	20
Table 5 : Work place demand factors (n=102)	20
Table 6 : Respondents' degree of agreement with presence of workplace resources.....	22
Table 7 : Levels of Burnout by hospital.....	24
Table 8 : Levels of Burnout by service.....	24
Table 9 : Associations between three dimensions of burnout and personal factors	26
Table 10 : Associations between three dimensions of burnout and workplace demands factors .	27
Table 11 : Associations between three dimensions of burnout and workplace resources factors.	29



LIST OF FIGURES

Figure 1 : Model of factors associated with burnout 12

Figure 2 : Levels of Emotional Exhaustion (EE)..... 23

Figure 3 : Level of Depersonalization (DP)..... 23

Figure 4 : Low Personal Accomplishment (PA)..... 23



CHAPTER ONE: INTRODUCTION

1.1. Background and rationale

Burnout is a phenomenon described as a specific set of psychological symptoms that arise in the context of work. Freudenberger first described burnout after observing volunteers who had worked in aid organizations with great dedication and enthusiasm for several months prior to the onset of a series of characteristic symptoms such as exhaustion, irritability and cynicism (Langle, 2003). Maslach then subsequently provided a comprehensive definition of the term, taking into account the physical as well as the mental exhaustion observed in professionals whose work requires continuous contact with other people. Burnout is more prevalent in the helping professions.

High levels of burnout have been documented in all categories of nurses, who represent the largest group of healthcare professionals and are at the frontline of direct patient care in hospitals (Aiken, 2005). Nursing is a challenging profession: long working hours, night shifts, caring for the severely ill and sometimes dying patients (Kaissi, 2010). Individuals entering the nursing profession are often motivated by a desire to work with people and to contribute significantly to the lives of those they serve; most have high expectations that they will succeed in their efforts to help others (De Silva, Hewage & Fonseca, 2009). Failure to achieve this expectation can potentially cause burnout.

Environmental factors including the stressful conditions in the health care setting, interpersonal conflict, noise pollution; and personality factors including psychological hardiness, locus of control and empathy have been shown to be strongly related to burnout (Beckstead, 2002). Overwhelming exhaustion, frustration, anger, cynicism, sense of ineffectiveness and failure are also key characteristics of burnout (Maslach & Goldeberg, 1998).

Absenteeism, negligence, decreased ethics, avoiding work setting so that other employees are burdened with their responsibilities, have been identified as the most important consequences of burnout syndrome (Alparslan & Doganer, 2009).

Most studies on nurses' burnout had been carried out in developed countries, mostly in the USA and Europe (De Silva, Hewage & Fonseca, 2009). In sub-Saharan Africa, almost

all studies on burnout among nurses have been conducted in South Africa where the burnout prevalence was 59.2% among nurses taking care of HIV/AIDS patients (Hall, 2004). Engelbrecht et al (2008) identified high levels of burnout in professional nurses working in primary health care facilities of South Africa, with high levels of emotional exhaustion (68.7%) and depersonalization (85.1%).

1.2. Study setting

The study was conducted in two district hospitals in Kigali City. Kigali is the capital city of Rwanda with a population of one million. It is divided administratively into 3 districts, each with one district hospital: Muhima Hospital in Nyarugenge District, Kibagabaga Hospital in Gasabo district and Masaka Hospital in Kicukiro district.

Muhima Hospital was inaugurated in 2002 with a catchment area of 287,599 populations. it has 108 beds, 113 nurses of all categories, 21 medical. Muhima hospital has only three services (maternity, paediatrics and emergency) with 80 nurses working in maternity and paediatric services (in 2012). It performs an average of 220 caesarean sections and 950 normal births per month (<http://Nyarugengedistrict.gov.rw>).

Kibagabaga hospital in Gasabo district was inaugurated in 2006 with a catchment area of 411,710, about 61% of the Kigali City's population. It has 203 beds, 142 nurses of all categories, 17 doctors and 6 medical students. It provides medicine, paediatrics, surgery, ENT, multi-drug resistant tuberculosis and mental health services. The maternity section has 32 nurses and the paediatric and neonatology sections have 20 nurses in 2012.

Masaka Hospital was commissioned recently, thus excluded in this study as it was still relatively new to study burnout.

In Rwandan health system, there are three categories of nurses A2, A1, and A0. A2 level nurses are trained to the secondary school level. A1 nurses possess a diploma in nursing obtained after three years of nursing school. A0 nurses possess a bachelor's degree. (MOH HRH Strategic plan, 2011)

1.3. Problem statement

The magnitude and factors of burnout among maternity and paediatric nurses in Kigali district hospital is unknown. However there are reasons to think that it does exist. Kigali City has a population of 1 million inhabitants which, until recently, had only two operational public district hospitals. The establishment of National Health Insurance, national policy promoting birth delivery in health facilities, improvements in the maternal referral system and availability of ambulances, has had a big impact on the utilization of the services of district hospitals of Rwanda (MOH, 2008). According to the Rwandan DHS (2010), delivery at a health facility increased from 45% to 69% between 2008 and 2010. The expansion of Health Insurance coverage has been found to be associated with higher health service utilization (Saksena et al 2010) and the number of visits higher in urban areas than in rural areas especially in the city of Kigali and in South province. (RDHS, 2010).

This has produced increasing workloads especially for maternity and paediatric nurses. The Rwandan DHS showed the number of visits is highest among children under 5 (2.7 visits for girls and 2.9 visits for boys per annum) and among women. The annual admission peaks has been found among young children (under age 5), and women of reproductive age (15-49).

To compound the situation, in the last five years Muhima Hospital has lost more than 20 nurses, and the anecdotal evidence is that the majority left the health profession for less stressful occupations. Muhima Hospital nurses especially those from the maternity ward are frequently heard complaining about workload issues and job stress. Nursing turnover has been strongly linked to high workload, job dissatisfaction and subsequent burnout (Aiken, 2005).

Kibagabaga Hospital has the added problem of being located in an affluent residential area where its employees cannot easily find affordable accommodation. Many nurses have to travel long distances to work with poor access to public transport services.

In addition to these challenges, there has been an increase in patient complaints about quality of health services provided by Kigali hospitals especially for Muhima hospital, expressed through suggestion boxes or in local newspapers and radios. These

complaints often relate to how nurses receive patients by talking to them rudely, and sometimes even hitting them. According to Aiken (2005), the inadequate nursing staffing levels caused by excessive turnover have been significantly associated with nursing errors and poorer patient outcome.

A study to determine the level of burnout among nurses of district hospitals of Kigali City is needed in order to help district hospital managements as well as the ministry of health to overcome the nursing crisis in the country.

This study seeks to describe and explain factors influencing the levels of burnout in nurses of two district hospitals (Muhima and Kibagabaga) of Kigali City. Since no previous study has been done in Rwanda to measure burnout among health professions, this study will also serve as the baseline for future studies. The results of this study will help the management of the two district hospitals as well as the Ministry of Health to know the magnitude of nurse burnout and to consider appropriate strategies to address this.



CHAPTER TWO: LITERATURE REVIEW

Initial research on burnout began in the mid-1970s and 1980s and was concentrated in the United States and Canada. With the translation of articles and research measures, it began to be studied in many other countries, and currently, research is being conducted internationally, with the bulk of the work occurring in “post-industrialized” nations (Maslach, Schaufeli, & Leiter, 2001; Schaufeli & Enzmann, 1998 as cited by Maslach, Leiter & Schaufeli, 2008).

In 1982, Maslach provided a comprehensive definition of the term, taking into account the physical as well as the mental exhaustion observed in professionals whose work requires continuous contact with other people. She conceptualized burnout as a multi-dimensional syndrome consisting of three components: emotional exhaustion (EE), depersonalization (DP), and a reduced sense of personal accomplishment (PA) that can occur among individuals who work with people in some capacity (Maslach, 1993 as cited by Maslach, Leiter & Schaufeli, 2008). Emotional exhaustion is characterized by chronic fatigue (even at the thought of work), sleep disturbance and disorders, diffused physical symptoms and being prone to illness. Depersonalisation or dehumanisation is negative, cynical attitudes towards colleagues, negative feelings towards the people who seek aid, feelings of guilt, retreat, avoiding behaviour and reduction of work, and automatic and routine-like “functioning”. Reduced personal accomplishment is described as subjective feelings of failure and impotency, lack of recognition, pre-dominant feelings of insufficiency and permanent overcharge (Langle, 2003).

Burnout affects every aspect of life: physical, mental, emotional, and professional; not only the well-being of the individual but the individual's family, friends, and colleagues (Aiken, 2005).

2.1. Burnout measurements

The Maslach Burnout Inventory (MBI) is by far the most used instrument to measure burnout (Schaufeli at al, 2001; Beckstead, 2002). MBI contains three scales: Emotional Exhaustion, Depersonalization and personal accomplishment. High levels of EE and DP,

and a low level of PA are characteristics of burnout (Schaufeli et al, 2001). The validity of the MBI has been assessed worldwide. A study in Netherlands found the MBI an overall internal consistency of 0.70 in examining burnout (Schaufeli et al 2001). A study in South Africa also confirmed on the validation of the use of MBI in emergency medical services in Gauteng (Naude & Rothmann, 2004). A multi-country study United States, Canada, United Kingdom, Germany, New Zealand, Russia, Armenia and Japan validated the factorial structure and reliability of the MBI. The study found a similar factorial structure across countries with differently organized and financed health systems and different languages and can be used with confidence to study the correlates of nurse burnout globally (Poghosyan, Aiken, & Sloane, 2009).

The MBI is a 22-item scale which has three categories: EE (nine items), DP (five items) and PA (eight items). Each item has a self report rating scale from 0 (Never) to 6 (Always). The summation of all items within each category constitutes the category score: EE score (range 0–54), DP score (range 0–30) and PA score (range 0–48). Normative scores are available for the calculation of the burnout level (see *Table 1: Categorisation of burnout scores on the Maslach Burnout Inventory*). High scores on the EE and DP dimensions and low scores on the personal accomplishment dimension reveal a high level of occupational burnout (Chiron et al, 2010).

2.2. Prevalence of burnout

Considerable research on burnout has been conducted in nurses, presumably due to their continuous contact with patients or clients (Demerouti et al 2000, as cited by Kent & Lavery, 2007:44). It was reported that 17% of published studies on burnout used nurses as their sample group (Schaufeli & Enzmann 1998 as cited by Kent & Lavery, 2007:44). Various levels of burnout have been found by several studies.

High levels of burnout have been identified in a recent study in South Africa exploring burnout experienced by professional nurses working in Primary Health Care facilities, which found high levels of EE (68.7%) and DP (85.1%), and moderate levels of PA (91%) (Engelbrecht et al, 2008). In Zambia a qualitative survey done to study about occupational burnout and utilization of HIV services among health providers in the

Lusaka public health sector found 51% of health providers who reported occupational burnout, with having another job and knowing a co-worker who left in the last year as main risk factors (Kruse et al, 2009). In Malawi, 72% of the staff working in obstetrics and gynaecology unit of a referral hospital reported EE, 43% reported DP and 74% experienced reduced PA (Thorsen, Tharp & Meguid, 2011).

Moderate levels of burnout have been found In the Midwestern United States, where a descriptive cross-sectional survey on healthcare providers in a cancer centre comparing fatigue and burnout showed that 44% of inpatient and 33% of outpatient staff scored at high risk for burnout (Potter et al, 2010), and a cross-sectional study in Belgium which found 50% of nurses in a teaching hospital with moderate level and 25% with high level burnout (Stordeur, Vandenberg & D'hoore, 1999). A multi-hospital study in United States conducted among nurses from 40 units in 20 urban hospitals found that there were average levels of burnout. Such level was similar to the burnout level for healthcare workers that have been reported by Maslach (Vahey et al, 2004).

Burnout has been studied in other professional groups. A cross-sectional study in New Zealand showed high EE (29.7%), high DP (24.4%), and low PA (31.2%) amongst public hospital-based medical consultants; and one in five consultants experienced high overall burnout (Surgenor et al, 2009). In a study conducted in French public hospitals, 46.5% of the physicians (n=978) working in intensive care units (ICUs) experienced high level of burnout, with 37% having high level of DP, 19% with high level of EE and 39% with low level of PA (Embriaco et al, 2007). In Lusaka in Zambia, a cross-sectional qualitative and quantitative study showed high prevalence of occupational burnout among district health staff. In Spain, burnout syndrome was presented in a significant percentage of hospital workers attending paediatric patients; with the lack of PA being the most noticeable factor 67.7% of respondents had a low level of PA, 14.5% had high scores for EE and 23.9% high score for the DP (Franco et al, 2005).

2.3. Predictors of burnout

“A better understanding of what factors support a commitment to a nursing career could inform both policies and workplace practices” (Leiter & Maslach, 2009: 331). Many

studies have been conducted to identify and understand factors that are related to burnout. The factors can mainly be categorized as related to workplace demands, personal factors, and workplace resources.

2.3.1. Burnout and workplace demands

In Canada a cross-sectional study showed that workload had a correlation with the burnout dimension of exhaustion. The nurses' perceptions of increasing workload had a direct effect on emotional exhaustion, which in turn predicted turnover intentions (Greenglass, Burke & Fiksenbaum, 2001: 214). Excessive work demands, particularly for emergency overtime work and low job control were work environment factors that appeared to contribute to burnout among community psychiatric nurses in Japan (Imai et al, 2004).

Another Canadian study found overall burnout was correlated moderately with job satisfaction, psychosomatic health problems, organizational commitment, and job stress in both nurses and managers (Jamal & Baba, 2000). In 2002 Aiken et al found that each additional patient per nurse was associated with a 23% increase in the odds of burnout and a 15% increase in the odds of job dissatisfaction. In New Zealand longer working hours, lower job satisfaction, and shorter time in the same job among medical doctors all independently increased the odds of reaching the threshold for high EE. Longer time in the same job was associated with low PA (Surgenor et al, 2009).

2.3.2. Burnout and personal factors

Some studies have been conducted to identify the socio-demographic variables associated with burnout. Maslach & Jackson (1985) found employees who were married or who had children experienced less burnout. Similar result was also found in a study on American physicians: there is a significant inverse relationship between EE and the number of children at home as well as work-life balance. While gender has no significant impact on burnout: analysis showed the number of children at home has the same impact on both male and female physicians (Keeton et al, 2007).

A multiple regression analysis on nurses working in a university hospital in Japan revealed that neuroticism was associated with personal burnout, work-related burnout, and client-related burnout (Shimizutani et al, 2008). And some sources of stress like professional uncertainty, interpersonal and family conflicts, tensions in work relationships, and tensions in nurse–patient relationships were found to be significant predictors of EE as well as DP (Lee & Akhtar, 2007). In addition, Maslach & Jackson (1981: 108) stressed that “burnout is likely to occur within the first few years of one’s career. If people have difficulty in coping effectively with burnout at this point, they may leave their profession entirely. Thus, the people in the older age range of our sample may be those who have survived the early stresses of their job and done well in their career”. Maslach & Jackson (1981) found that more education was associated with higher scores on EE; people who had completed college or done postgraduate work scored higher than those who had not completed college. The results was supported by another study which found additional education associated with DP (Malliarou, Moustaka, & Konstantinidis, 2008). However, a study done in Sweden found that the low level of education was an important factor of high burnout among women (Norlund et al., 2010)

2.3.3. Burnout and workplace resources

Three predictors in the workplace have been identified as the main sources of high levels of burnout amongst nurses in South Africa: time pressure or workload, availability of resources and interpersonal conflicts (Engelbrecht et al, 2008). Study also found EE was moderately related to organizational support, job demands, and DP was moderately related to work engagement and sense of coherence (Van der Colff & Rothmann, 2009). Clear job duties can promote higher job satisfaction; while positive interpersonal relationships improve morale and increase productivity (Oncel, Ozer & Efe, 2007).

In summary burnout has been conceptualised as a multi-dimensional syndrome. The MBI is a validated tool to measure burnout and has been used by many researchers worldwide. There has been considerable research on burnout in nurses, presumably because of their continuous contact with patients. Workload or time pressure, job dissatisfaction, inadequate rewards, job stress, psychosomatic health problems, unavailability of

resources, and interpersonal conflict in the workplace among others have been identified as main predictor's factors of burnout.



CHAPTER THREE: METHODOLOGY

3.1. Aim

To measure level of burnout and associated factors amongst nurses in paediatric and maternity wards of Muhima and Kibagabaga district hospitals of Kigali City.

3.2. Objectives

To determine the following amongst nurses working in district hospitals in Kigali City:

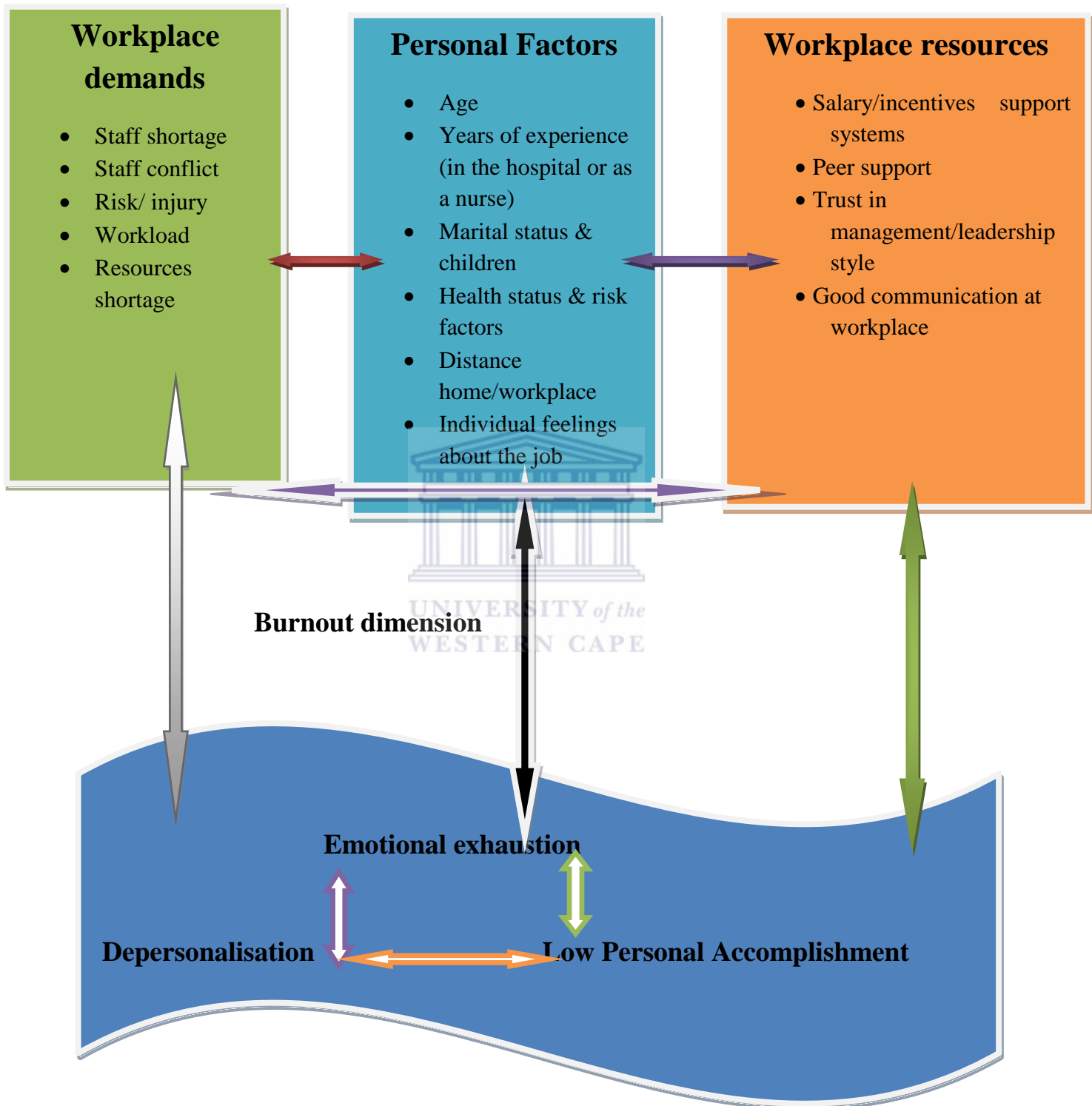
- levels of emotional exhaustion, depersonalization and reduced personal accomplishment
- association between personal, workplace demands and workplace resource factors and burnout
- association between hospital (Muhima/Kibagabaga) or type of service (paediatric /maternity) and burnout.



3.3. Study design and conceptual framework

A descriptive and analytical quantitative cross-sectional study was conducted. Using the Maslach Burnout Inventory, the study assessed the prevalence of burnout and its associated factors. Drawing on the literature and understanding of the specific factors in this context, the conceptual framework for the factors studied is outlined in Figure 1 below. These factors have been divided into workplace resources, workplace demands and personal factors.

Figure 1 : Model of factors associated with burnout



3.4. Study population

All 126 nurses working in the paediatric and maternity sections of Muhima and Kibagabaga district hospitals, with at least one year of experience and less than 2 years to retirement, were included in this study.

3.5. Sampling

No sampling method was utilized due to the small study population; the entire population was sampled.

3.6. Data Collection Methods

The study was explained to and supported by the Muhima and Kibagabaga district hospital management. In October 2012 a brief explanation about the study aims and objectives was provided to the nurses during the morning staff meeting before the questionnaires were distributed and every 2 days the study data collector passed in each hospital to collect filled questionnaires.

Nurses working in the paediatric and maternity sections were asked to complete a self-administered questionnaire (Appendix A). Information collected included questions relating to socio-demographic profile, the place of work and duration of experience, and personal, workplace demand and resource factors outlined in the framework, as well as the 22 questions of the Maslach Burnout Inventory (MBI). Questionnaires were collected immediately after completion.

3.7. Validity and reliability

Validity refers to whether the measurement process, assessment, or project actually measures what the research intends to measure (Handley, 2001). In our study we used the Maslach Burnout Inventory (MBI), which is a validated tool to measure burnout. The questionnaire was administered in the two official languages used in Rwanda: French and English. The questionnaire was translated into French and then back translated to English

to ensure the quality of the translation did not affect the integrity of the questionnaire. Pilot testing was performed before the study period on five nurses from an urban health centre in order to limit the likelihood of information bias.

Reliability addresses whether repeated measurements or assessments provide a consistent result given the same initial circumstances (Handley 2001). In our study we also assessed reliability through repeat administration of 10 (10%) questionnaires. Selection bias did not exist as there was no sampling.

3.8. Data analysis

Data was double entered and analyzed using Stata11.0. Burnout scores for each burnout construct were calculated and respondents categorised into levels of burnout as follows:

Table 1 : Categorisation of burnout scores on the Maslach Burnout Inventory

	Low burnout	Moderate burnout	High burnout
Emotional exhaustion	<17	18-29	>30
Depersonalisation	<5	6-11	>12
Personal accomplishment	>40	34-39	<33

Descriptive statistics such as percentage, the average score, and standard deviation were computed for each category of burnout (EE, DP and PA). The Chi-square test statistic was performed to test the relationship between burnout dimension (dependent variable) and: 1) personal factors, 2) workplace demands, 3) access to resources (independent variables) 4) job designation (maternity or paediatric ward) and 5) hospital (Muhima or Kibagabaga). Because of small sample sizes, binary variables were created of both the burnout (e.g. high vs moderate/low) and independent variables (e.g. satisfied/very satisfied vs other). In cases of sample sizes <5 in individual cells of 2x2 tables, the Fisher Exact Test was performed. Simple logistic regression was used to estimate the odds ratios.

3.9. Limitations

We selected nurses working in maternity and paediatric wards and this may limit generalisability of findings to nurses working in other services. The other limitation was the recall bias. We may have also been affected by the healthy worker effect or bias because only working employees (relatively healthy) were investigated and those suffering from burnout could be absent or on sick leave. Much attention was paid to careful explanation and strict observance of all procedures of confidentiality and anonymity.

While the conceptual framework suggests directions of causality, a cross sectional study can only establish associations between variables and not directions of cause-effect relations. Multiple regression analyses were not conducted as the complexity and inter-relationship of independent variables would have necessitated a further level of analysis which was beyond the scope of this mini-thesis.

3.10. Ethical considerations

An application for ethics was submitted to and approved by the UWC Ethics Committee. Participation was voluntary for all nurses of maternity and paediatric sections of Muhima and Kibagabaga hospitals. An information sheet explaining details about the study, benefits and costs, the voluntary nature of the study and confidentiality was provided and read to all participants (Participants information sheet, Appendix III). Informed consent was sought and signed only by those willing to participate in this study (informed consent form, Appendix VI). There was no cost for participating in this study other than the time that participants spent filling the questionnaire. Participant names were not recorded. The signed consent form was kept separate from completed questionnaires. The hard copies of the questionnaires were locked away and will be destroyed after the completion of this study. Participation in this study was completely voluntary which means that participants did not have to complete the questionnaire if they did not want to. Participants were informed that they had the right to stop the process at any time, and did not have to answer any questions that they feel uncomfortable answering. We will make the hospital authorities as well as the clinical office of the Ministry of health aware of the findings of

the study so that they can establish mechanisms to mitigate burnout or provide appropriate support and follow up.



CHAPTER FOUR: RESULTS

A total of 126 questionnaires were distributed to Muhima and Kibagabaga district hospital nurses working in paediatric and maternity wards. In Muhima hospital we distributed 80 questionnaires, of which 64 (80%) were filled out completely, and in Kibagabaga hospital, 38 of 46 (82%) distributed questionnaires were filled out completely. This gave a total of 102 questionnaires (response rate of 81%), all of which were usable for analysis.

The results of the study are presented by starting with the descriptive analysis of respondent characteristics and their responses to items on personal factors, workplace demands and workplace resources. This is followed by categorisation of respondents into high, moderate and low EE, DP, and PA. In the analytical part of the results section, the associations between personal, workplace demands and workplace resource factors and burnout and between hospital and type of service and burnout will be presented.

4.1. Profile of respondents

The average age of respondents was 29.7 years and female nurses represented the majority (88.2%) of our sample (Table 2). The majority (65.7%) were A2 nurses who had completed secondary school only, while 27.4% hold nursing diploma. Nearly three quarters (72.5%) of respondents were based in the maternity wards.

Table 2 : Profile of respondents (n=102)

Characteristics	Value	Mean	%	SD*	Range
Number	102				
Age, yr		29.7		4.8	23-50
Age < =30 years	67		65.7		
Age > 30 years	35		34.3		
Sex					
Male	12		11.8		
Female	90		88.2		
Hospital					
Kibagabaga Hospital	38		37.2		
Muhima Hospital	64		62.7		
Maternity Ward	74		72.5		
Paediatric ward	28		27.4		
A1 category**	28		27.4		
A2 category***	67		65.7		
Others****	7		6.9		

* SD: Standard Deviation

**A1 Category is nurses with a diploma

***A2 category is nurses with secondary school level only (6 years of secondary school)

**** Others categories (nurses with bachelor degree, and other nurses working in administration)

4.2. Other personal characteristics

Married people represented 52.9%, and single people 42.2% of the sample (Table 3). The respondents had an average of 1.3 children and 53.9% of all respondents had at least one child. The respondents had an average 5.6 years of nursing experience and average 4 years working in the hospital. Few respondents were smokers (2.9%), reported drinking alcohol (8.8%), were on treatment for any chronic condition (6.8%) or reported another job in addition to working as a nurse (7.8%). Less than one third (29.4%) travelled for more than one hour to and from work each day (see Table 3).

Table 3 : Other personal characteristics of respondents (n=102)

Personal factor	Value	Mean	%	SD*	Range
Marital status					
Married	54		52.9		
Single	43		42.2		
Mean no of children		1.3		1.6	0-6
Have at least one child	55		53.9		
Years of experience as a nurse		5.6		3.4	1-19
Years of experience in the hospital		4.1		2.4	1-12
Smokes	3		2.9		
Drinks alcohol	9		8.8		
On treatment for any chronic condition	7		6.8		
Has another job	8		7.8		
Distance (km) between home and hospital		11.1		10.6	1-60
Time (minutes) Home-Hospital-Home		57.3		44	10-240
Time (minutes) Home-Hospital-Home >= 60 minutes	30		29.4		

4.3. Individual feelings about the job

The majority (92.4%) of respondents felt confident about their ability to do their job. Fifty one percent (51.2%) agreed or strongly agreed that they were not in control of things that affect the work. However, the majority of respondents (69.7%) reported being very satisfied or satisfied with their job.

Table 4: Individual feeling about the job (n=102)

Individual feelings	Value	%
Confident about the ability to do the job (strongly agree or agree)	85	92.4%
Not in control of things that affect the work (strongly agree or agree)	42	51.2%
Respondent “very satisfied” or “satisfied” with job	46	69.7%

4.4. Workplace demands

The evaluation of workplace demands focused on workloads, staffing (including levels of availability and conflict), resource shortages (drugs and consumables), risks (needle-stick injuries) and patient-related factors (such as numbers of patients seen per day).

The average working hours per week, number of night shifts per month, and number of patients seen by a nurse per day were 41.6 (SD=10.1), 2.1 (SD=1.1), and 5.6 (SD=0.8), respectively (Table 4). Forty one nurses (40.2%) reported working more than 45 hours per week. One-third and one-quarter of respondents reported that their wards ran out of drugs and consumables, respectively, in prior month.

Table 5: Work place demand factors (n=102)

Characteristics	Value	Mean	%	SD*	Range
Working hours per week, in hours		41.6		10.1	14-68
Working hours >45 Hours per week	41		40.2		
Night shifts per month		2.1		1.1	0-3
Number of patients seen/day		5.6		0.8	3-8
Needle-stick injury last year	6		5.8		
Colleagues unexpected absent from work in past month	19		18.6		
The ward ran out of drugs in the previous month	36		35.3		

There was never a time when the ward ran out of beds	42	41.2
The ward ran out of consumables in the previous month	27	26.5%

With respect to workplace conflict, 58.8% and 52.0% agreed or strongly agreed that there was sometimes conflict between nurses and doctors, and between colleagues, respectively, at the two hospitals. With respect to staffing and workloads, half the respondents (49.4%) felt that their unit was short of medical staff while three-quarters (75.5%) believed that there were enough nurses to do the work.

4.5. Workplace resources

Just over one-fifth (21.6%) of respondents would feel comfortable discussing a personal problem that affects their job with their immediate supervisor, while only 6.8% would feel comfortable discussing it with the head of the section or department. However, 62 (60.7%) indicated being satisfied or very satisfied with their immediate “boss”.

Fifty nine percent (59.8%) of respondents would feel comfortable discussing a personal problem that affects their job with their colleagues.

Only 5.9% of respondents reported being satisfied with their salary, 33.3% were “fairly satisfied” and 60.7% were unsatisfied.

Table 5 shows the respondents’ degree of agreement with presence of workplace resources. About sixty three percent agreed to participate regularly in discussions with other colleagues about the work situation in their unit, 41.2% agreed that enough was being done to support staff working with HIV infected patients, and 48.0% agreed that they would welcome more opportunities to discuss work related stress with a qualified counsellor.

Table 6 : Respondents' degree of agreement with presence of workplace resources (n=102)

Item	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
well informed about policy changes affecting the work	7 (6.8%)	14 (13.7%)	17 (16.6%)	49 (48.0%)	15 (14.7%)
participate in discussion with other colleagues	2 (1.9%)	9 (8.8%)	12 (11.7%)	65 (63.7%)	14 (13.7%)
communication with hospital managers good	6 (5.8%)	37 (36.2%)	21 (20.5%)	17 (16.6%)	21 (20.6%)
there is support to staff working with HIV infected patients	10 (9.8%)	11 (10.7%)	22 (21.6%)	42 (41.2%)	17 (16.6%)
hospital management usually ignores staff suggestions	9 (8.8%)	8 (7.8%)	21 (20.6%)	40 (39.2%)	14 (13.7%)
Would like to discuss work related stress with a qualified counsellor	10 (9.8%)	8 (7.8%)	8 (7.8%)	49 (48%)	13 (12.7%)

4.6. Levels of burnout

High burnout scores were found across all three dimensions of burnout: 43.1% of respondents had high burnout scores in the EE category, 48.0% for DP, and 34.3% for Low PA (Figures 2-4).

Figure 2: Levels of Emotional Exhaustion (EE)

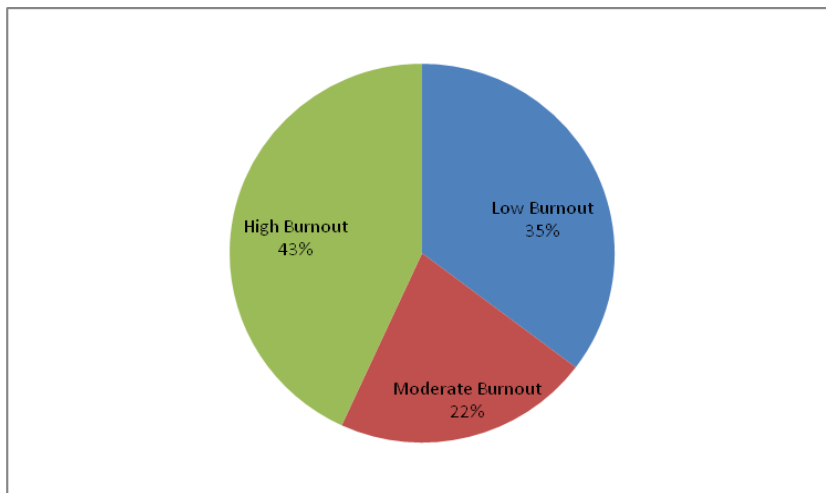


Figure 3 : Levels of Depersonalization (DP)

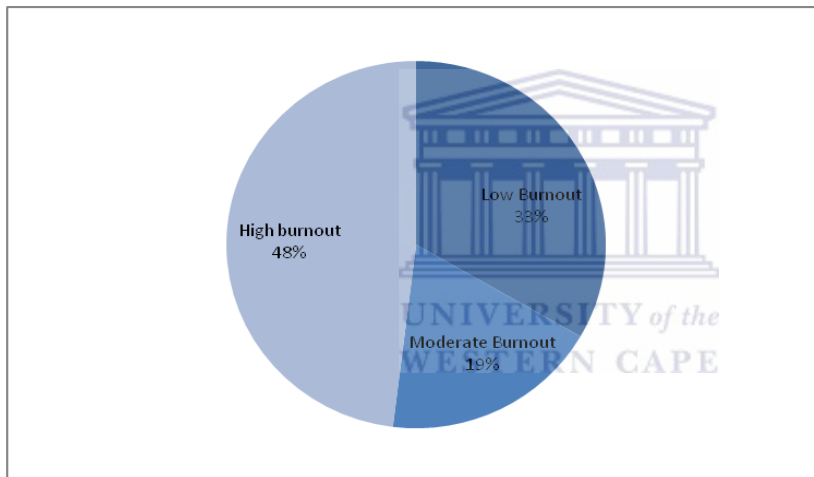
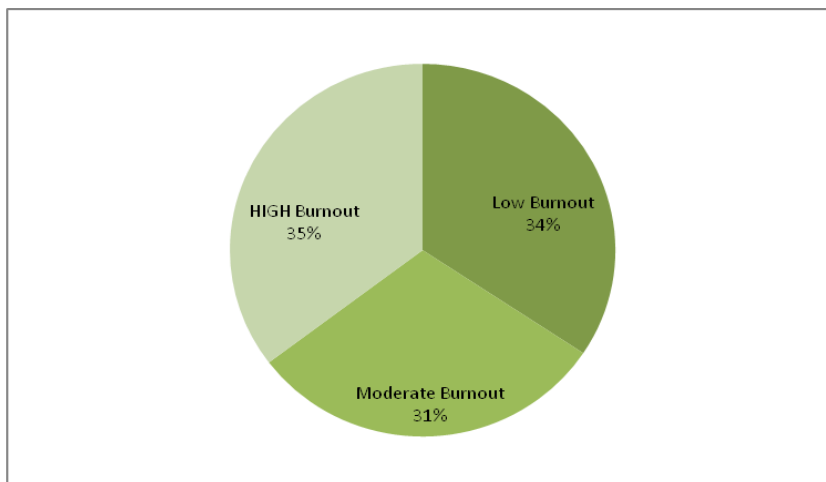


Figure 4 : Levels of Low Personal Accomplishment (PA)



4.7. Burnout by hospital

High burnout scores on the PA scale were more frequent in Kibagabaga ($p=0.02$) (Table 7). In contrast, Muhima hospital had higher, but not statistically significant, levels of EE and DP.

Table 7 : Levels of Burnout by Hospital

Burnout Dimension	Level	Muhima (n=64)	Kibagabaga (n=38)	Chi-squared	P value
EE	Low	18 (28.2%)	18 (47.4%)	3.9	0.10
	Moderate	15 (23.4%)	7 (18.4%)		
	High	31 (48.4%)	13 (34.2%)		
DP	Low	17 (26.6%)	17 (44.8%)	4.6	0.08
	Moderate	11 (17.2%)	8 (21.0%)		
	High	36 (56.2%)	13 (34.2%)		
PA	Low	29 (45.3%)	7 (18.5%)	7.6	0.02
	Moderate	17 (26.6%)	14 (36.8%)		
	High	18 (28.1%)	17 (44.7%)		

4.8. Burnout by service

There was no statistically significant difference in burnout levels when the two services (maternity and paediatric) were compared (Table 8).

Table 8 : Levels of Burnout by service

Burnout Dimension	Level	Maternity (n=74)	Paediatric (n=28)	Chi-squared	P value
EE	Low	28 (37.8%)	12 (42.8%)	0.9	0.63
	Moderate	16 (21.6%)	8 (28.6%)		
	High	30 (40.6%)	8 (28.6%)		
DP	Low	28 (37.8%)	6 (21.4%)	2.9	0.22
	Moderate	14 (18.9%)	5 (17.9%)		
	High	32 (43.3%)	17 (60.7%)		
PA	Low	24 (36.5%)	12 (42.8%)	1	0.61
	Moderate	23 (31.1%)	8 (28.6%)		
	High	27 (32.4%)	8 (28.6%)		

4.9. Association between levels of burnout and personal factors

In this section we present the associations between levels of burnout and personal factors. High burnout will be compared with other levels (moderate and low levels combined) for

EE and DP dimensions, and for PA, high and moderate levels are combined and compared with low levels.

Age group >30 years was protective of EE (OR=0.41, p=0.04), and more than 6 years of experience as a nurse was protective against all 3 dimensions of burnout: EE (OR=0.41, p=0.02), DP (OR=0.28, p<0.001) and low PA (OR=0.40, p=0.03) (Table 9). Nurses who had children were 2.82 times more likely to report EE (OR=2.82, p=0.017), and low PA (OR=4.07, p=0.002). Being an A2 category (lesser trained) vs trained nurse was associated with all dimensions of burnout: EE (OR=2.69, p=0.030), DP (OR=3.87, p=0.005) and low PA (OR=2.91, p=0.020). Feeling in control of things that affect the work was protective against all three dimensions of burnout: EE (OR=0.12, p<0.001), DP (OR=0.08, p<0.001) and low PA (OR=0.10, p<0.001). Job satisfaction was protective of burnout for DP (OR=0.16, p=0.002) and low PA (OR=0.14, p=0.001).



Table 9: Associations between three dimensions of burnout and personal factors (significant factors in bold)

Variable	Burnout dimension*	Pearson chi2	OR	P
Age (<=30 years=0; >30 years=1)	EE	4.25	0.41	0.041
	DP	0.83	0.68	0.362
	PA	0.08	0.88	0.778
Sex (Female=1; Male=0)	EE	1.92	2.51	0.188
	DP	1.91	0.41	0.179
	PA	0.24	0.73	0.624
Marital status (being married=1, other=0)	EE	2.22	1.82	0.139
	DP	1.48	1.62	0.226
	PA	2.70	1.99	0.104
Have at least one child=1 no child=0	EE	6.43	2.82	0.013
	DP	2.03	1.76	0.156
	PA	10.31	4.07	0.002
Nurse category (A2 level=1; other levels=0)	EE	4.48	2.69	0.030
	DP	8.64	3.87	0.005
	PA	5.49	2.91	0.020
Years of experience as a nurse (more than 6 years=1 experience<=6=0)	EE	4.39	0.41	0.038
	DP	9.01	0.28	0.004
	PA	4.48	0.40	0.035
Years of experience in the hospital (more than 3 years=1 experience<=3=0)	EE	1.89	0.57	0.171
	DP	5.67	0.38	0.019
	PA	4.97	0.39	0.028
Has another job=1 no other job=0	EE	3.63	0.22	0.078
	DP	5.97	0.11	0.047
	PA	0.79	0.51	0.371
Time(minutes) Home-Hospital-Home >= 60 minutes=1; Time(minutes) Home-Hospital-Home < 60=0	EE	0.73	0.68	0.396
	DP	3.74	0.42	0.058
	PA	2.78	0.45	0.107
Confident about the ability to do the job (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	0.01	0.92	0.925
	DP	0.21	1.43	0.652
	PA	0.21	1.44	0.642
Not in control things that affect the work (strongly agreed & agreed=0; strongly disagreed & disagreed=1)	EE	18.95	0.12	<0.001
	DP	25.15	0.08	<0.001
	PA	19.04	0.10	<0.001
Job satisfaction (unsatisfied=0; satisfied & very satisfied=1)	EE	3.52	0.35	0.063
	DP	10.09	0.16	0.002
	PA	11.54	0.14	0.001

* Categorized high (=1) vs low/moderate (=0) for EE and DP scales and High/moderate (=1) vs low (=0) for PA scales

4.10. Association between levels of burnout and workplace demand factors.

In this section we present the association between levels of burnout and workplace demand factors.

Working less than 45 hours a week was protective against burnout for DP (OR=0.26, p=0.002) and low PA (OR=0.22, p=0.002) (Table 10). Nurses who reported that “the amount of work was too demanding” were more likely to have burnout on all three dimensions: EE (OR=7.61, p=0.009); DP (OR=3.55, p=0.001), and low PA (OR=3.31, p=0.025). Agreement that “the unit was short of medical staff” was also associated with EE (OR=3.81, p=0.005), DP (OR=4.46, p=0.001) and low PA (OR=3.52, p=0.013). Conflict between colleagues was associated with all three dimensions of burnout: EE (OR=5.63, p=0.001), DP (OR=5.87, p=0.000) and low PA (OR= 4.98, p=0.008); as was conflict between nurses and doctors.

Table 10 : Associations between three dimensions of burnout and workplace demand factors

Variable	Burnout dimension*	Pearson chi2	OR	P
Working hours (< 45 Hours per week=1;> 45 Hours per week=0)	EE	3.71	0.44	0.06
	DP	9.90	0.26	0.002
	PA	10.55	0.22	0.002
Needle-stick injury at work (Yes=1; No=0)	EE	0.12	0.74	0.727
	DP	0.56	1.91	0.464
	PA	0.01	1.09	0.918
Colleagues unexpected absent from work (Yes=1; No=0)	EE	8.97	0.20	0.005
	DP	3.95	0.35	0.055
	PA	2.96	0.41	0.085
The ward ran out of drugs in previous month (Yes=1; No=0)	EE	0.41	1.30	0.523
	DP	4.49	2.55	0.030
	PA	1.40	1.69	0.243
Too demanding (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	15.88	7.61	<0.001
	DP	7.22	3.55	0.009
	PA	5.58	3.31	0.025
Short of medical staff (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	8.46	3.81	0.005
	DP	11.29	4.46	0.001
	PA	6.77	3.52	0.013
Sometimes conflict between colleagues (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	12.12	5.63	0.001
	DP	13.28	5.87	0.001
	PA	8.61	4.98	0.008

Sometimes conflict between nurses and doctors (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	13.93	4.57	0.004
	DP	14.26	6.04	0.001
	PA	6.00	3.59	0.022

* Categorized high vs low/moderate for EE and DP scales and High/moderate vs low for PA scales

4.11. Association between levels of burnout and workplace resource factors.

In this section we report the associations between levels of burnout and workplace resource factors.

Poor communication between hospital managers and staff emerged as the most consistent association with burnout EE (OR=6.7, $p<0.001$), DP (OR=6.3, $p<0.001$) and low PA (OR=3.93, $P=0.007$) (Table 11). Willingness to share a personal problem affecting their work (trust) with colleagues and immediate supervisors were also protective for all three dimensions of burnout



Table 11: Associations between three dimensions of burnout and workplace resources factors.

Variable	Burnout dimension*	Pearson chi2	OR	P
Trust in immediate supervisor (Yes=1; No=0)	EE	20.90	24.40	0.001
	DP	25.43	34.5	0.002
	PA	9.95	7.40	0.010
Trust in colleagues (Yes=1; No=0)	EE	11.61	4.14	0.001
	DP	14.49	4.95	<0.001
	PA	5.43	2.67	0.021
Participate in discussion with other colleagues (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	3.80	0.26	0.066
	DP	2.67	0.33	0.121
	PA	4.85	0.23	0.031
Communication with hospital managers (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	15.49	6.70	<0.001
	DP	15.38	6.30	<0.001
	PA	7.78	3.93	0.007
Support to staff working with HIV infected patients (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	0.03	0.91	0.862
	DP	0.08	0.86	0.779
	PA	0.61	0.66	0.432
Hospital management usually ignores staff suggestions (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	3.12	2.37	0.085
	DP	0.23	1.25	0.636
	PA	0.25	0.78	0.617
Would like to discuss work related stress with a qualified counsellor (strongly agreed & agreed=1; strongly disagreed & disagreed=0)	EE	0.00	0.96	0.946
	DP	1.43	0.52	0.237
	PA	2.23	0.44	0.135

* Categorized high vs low/moderate for EE and DP scales and High/moderate vs low for PA scales

CHAPTER FIVE: DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

This chapter discusses the overall results of this study (along study objectives), and provides conclusions as well as recommendations to prevent or mitigate burnout in the two hospitals.

5.1. Prevalence of burnout

In this study high burnout scores were present in one third (for low PA domain) to nearly half (for DP and EE domains) of respondents.

The results of this study are consistent with the findings of Aiken (2005) that burnout is prevalent in the helping professions, especially nurses. Similar high levels of EE in (45.3%) and high levels of DP (40.6%) have been reported in Greece by Malliarou, Moustaka, & Konstantinidis (2008), but low PA levels were not presented in the sample because high PA were present in 71.9%. However, Engelbrecht et al (2008) reported higher levels of burnout compared to the results of this study with high levels of EE (68.7%), high levels of DP (85.1%), and 91% of respondents having moderate levels of PA in professional nurses working in Primary Health Care facilities. A study conducted in France on physicians working in intensive care units (ICUs) found low levels of burnout compared to the findings of the current study with high level of DP in 37% of the respondents, high level of EE present in 19% of the respondents and a low level of PA found in 39% (Embriaco et al, 2007)

5.2. Factors associated with burnout

The results of this study showed that there was no statistically significant difference between male and female in all three dimensions of burnout although female respondents represented the majority of respondents and this limited the power to detect differences. Although sex as a factor is not always reported, (Embriaco et al, 2007), our study agrees with what was argued by Maslach & Jackson (1985: 837) that “the sex of the employee is not a major factor in burnout”.

In this study we found that nurses who had high burnout scores were more likely to be young and inexperienced. Young age and inexperience have been repeatedly found in other studies. Age has been negatively associated with EE and DP indicating that as nurses' age increased their levels of these two burnout components decreased (Kent & Lavery, 2007). Maslach & Jackson (1981) found that younger people scored higher on EE and age was found protective against burnout, and patterns of burnout did vary by age (Maslach & Jackson, 1981). In the same vein Kent & Lavery (2007) found that nurses' experience was negatively associated with DP, and shorter time in the current job ($p < 0.05$) have been found independently to increase the risk of high EE (Surgenor et al, 2009). Our finding also is consistent with the study done in Turkey that midwives who had worked 10 years or more had lower levels in the dimensions of EE and DP than those who had worked less ($p < 0.05$) (Oncel, Ozer & Efe, 2007).

In this study, A2 nurses (with only six years of secondary school) composed the majority of nurses working in Muhima and Kibagabaga hospital. This study found also this category of nurses associated with high scores of burnout. This confirm what Zellars, (1999), found that the categories of nurses who spend much of their time in direct contact with patients have the highest levels burnout compared to nursing administrators (who presumably have limited direct contact with patients).

Lesser training as a nurse, low locus of control and having at least one child were associated with high scores of burnout. In this study nurses who have at least one child at home were found 2.82 times more likely to have burnout. This finding is also mirrored in a study conducted among maternal health staff at a referral hospital in Malawi, which showed that number of children was a significant predictor for DP and PA (Thorsen, Tharp & Meguid, 2011).

The nurses who had high burnout scores in our study were also more likely to work long hours, experience workloads as demanding and complain of staff shortages. Workplace conflicts also, were associated with high levels of burnout in all its three dimensions. Good communication job satisfaction and trust in colleagues and in hospital management, however, appeared to be protective for all three dimensions of burnout.

Working long hours, experiencing workloads as demanding and staff shortages were associated with high burnout in this study. Several studies have found similar results. Greenglass, Burke & Fiksenbaum (2001) showed that the nurses' perceptions of increasing workload had a direct effect on emotional exhaustion and found a positive association between workload and EE with an inverse relationship between workload and professional efficacy; and heavy work demands have been incriminated by Imai et al (2004). A study done in Australia found that as the number of working hours increased, nurses were more likely to experience EE and DP. This study reported the average number of hours worked for nurses of 32.17 hours (SD = 10.64) indicating a lower average than a typical full-time week (Kent & Lavery, 2007). In this study number of hours worked as a nurse to be positively associated with EE and DP.

This study also found that staff shortages played a big role in the burnout phenomenon. Aiken et al (2002) found that higher EE levels were strongly and significantly associated with patient- to-nurse ratios and indicated that an increase of 1 patient per nurse to a hospital's staffing level increased burnout by factors of 1.23 (95% CI, 1.13-1.34) or by 23%.

In this study also workplace conflicts have been identified associated with burnout. Similar results have been found by both Embriaco et al (2007) and Engelbrecht et al (2008) who found conflicts at work associated with high burnout.

5.3. Hospital and service

In this study high levels of burnout on the PA scale were more prevalent in Kibagabaga than in Muhima hospital which in contrast, had higher, but not statistically significant, levels of EE and DP. There was no statistically significant difference in burnout levels when the two services (maternity and paediatric) were compared. This result is different from what has been found by a study conducted elsewhere which suggests that maternity services are associated with higher levels of burnout. A study in Spain on paediatric health workers found they had significantly higher levels of PA and a study done in Malawi on midwives showed higher levels of burnout in the three components compared to nurses working in other services.

5.4. Limitations

The results of this study are limited by the fact that considering the nature of the study design, which was a cross sectional study, causality cannot be inferred between burnout and predictors factors (directions of causality).

Also we selected only nurses working in maternity and paediatric in two district hospital which represented a small sample size and did not enable us to do stratified analyses or assess some of the some predictors (e.g. salary satisfaction, fewer nurses from paediatric wards, fewer men, smoking, drinking alcohol etc). In our study we also did not perform multi-variate analysis and we were unable to control for some of potential confounders. Multiple tests of association are bound to result in some being significant (1 in 20 at 5% level of significance). Further analyses such as factor analysis would have allowed for grouping of independent variables, however, this was beyond the scope of this study.

We have thus focused in our discussion on factors significantly associated across all three dimensions of burnout.

Finally, the MBI is a psychometric tool developed elsewhere, and there is an urgent need for the development of more African context specific ones.

5.5. Conclusions

In this study, high burnout levels have been found with high EE in 43.1% of respondents, high DP in 48%, and low PA in 34.3% of respondents. Kibagabaga hospital had high levels of burnout on the PA.

Burnout have been found associated with being young and inexperienced, lower levels of training as a nurses, poor locus of control, having children, working long hours, experiencing workloads as demanding, staff shortages and workplace conflicts. However, good communication, job satisfaction and trust in colleagues and in hospital management, appeared to be protective for all three dimensions of burnout.

5.6. Recommendations

Based on the main findings of this study recommendations can be formulated in order to address some of factors that have been identified associated with burnout.

In this study young age, inexperience of nurses, locus of control and workplace conflicts have been found associated with burnout, good communication and trust in colleagues and in hospital management have been found to be protective for burnout. Hospital managers and the Ministry of Health should establish mechanisms for supporting young nurses in order to promote mentorship of new appointed nurses by old and experienced nurses, in order to promote self-confidence and trust between colleagues as well as between nurses and management.

Less training (A2 nurses category) has been identified associated with burnout and this reinforces the strategy of Ministry of Health of upgrading all A2 nurses to A1 level, but this study highlights the need for special attention to be given to A2 nurses working in district hospitals.

Hospital managers and the ministry of health should consider reorganising work processes in district hospital to reduce working hours and workload, developing appropriate patient to nurse ratio in district hospitals in Rwanda is necessary.

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Appendix I – Self Administered Questionnaire (English version)

QUESTIONNAIRE FOR DISTRICT HOSPITAL

I. BACKGROUND INFORMATION

<i>Today's date</i>/.....	2012
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I.1. Your age (years)

Please fill or tick the right answer

I.2. Sex:	<i>Female</i>	<input type="checkbox"/>	<i>Male</i>	<input type="checkbox"/>
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I.3. Marital status:	<i>Married</i>	<input type="checkbox"/>	<i>Single</i>	<input type="checkbox"/>	<i>Divorced</i>	<input type="checkbox"/>	<i>Separated</i>	<input type="checkbox"/>	<i>Widow</i>	<input type="checkbox"/>	<i>Other</i>	<input type="checkbox"/>
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I.4. How many children do you have in your household? _____ (Numbers)

I.5. How old are they? ____/____/____/____/____/ (Full years)

I.6. Your service:	<i>Maternity</i>	<input type="checkbox"/>	<i>Paediatrics</i>	<input type="checkbox"/>
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I.7. Name of Your Unit in the Hospital

I.8. How many night shifts per week did you have last month? (Numbers)

I.9. Your current position:

<i>Nurse A2</i>		<i>Nurse A1</i>		<i>Ward or unit manager</i>		<i>Nurse A0</i>		<i>Other (specify)</i>	
---------------------	--	---------------------	--	---------------------------------	--	---------------------	--	----------------------------	--

I.10. For how many years have you been working as a nurse? (Years)

I.11. For how many years have you been working in this hospital? (Years)

II. WORK & PERSONAL SITUATION

II.1. Can you please estimate the distance between your home and your hospital?
(Kilometres)

II.2. Can you please estimate the total time you spend in your way to come to work from
your house? (Minutes)

II.3. Can you please estimate the total time you spend in your way to come from your
house to work? (Minutes)

II.4. How would you say that you are satisfied with your job?

Very satisfied	Satisfied	Fairly satisfied	Unsatisfied
4	3	2	1

II.5. How would you say that you are satisfied with your salary?

Very satisfied	Satisfied	Fairly satisfied	Unsatisfied
4	3	2	1

II.6. How would you say that you are satisfied with your direct boss?

Very satisfied	Satisfied	Fairly satisfied	Unsatisfied
4	3	2	1

II.7. Besides this job, do you have another job and/or are studying after work?...../.....
 (yes, no)

II.8. In the last week, how many hours would you say you worked in total?
 (hours)

II.9. On your most recent working day, how many patients did you see or care for?
 (patients)

II.10. When did last you run out beds for patients in this ward?

During last month	
During last 6 months	
Prior to the last 6 months	
Never	
I'm not sure	



II.11. In the last month, do you have any of your colleagues being unexpectedly absent from work?/..... (yes/no)

II.12. In the last month, did your ward run out of any of the following?

	Yes	No
Drugs		
Consumables		

II.13. If you had a personal problem that affected your work, who would you feel comfortable to discuss this problem with (you can tick more than one)?

Colleagues	
Family member or friend	
Your immediate supervisor or person to whom you report	
The head of the section or department	
None of the above	

II.14. In the last year, have you experienced a needle-stick	Yes		No	
---	------------	--	-----------	--

II.15. Please indicate your degree of agreement with the following statements:

	Strongly Disagree	Disagree	Not sure	Agree	Strongly Agree
I am confident about my ability to do my job					
There are enough nursing staff to do the work in this unit					
I feel that I am not in control of things which affect my work					
We are well informed about policy changes affecting our work					
I participate regularly in discussions with other colleagues about the work situation in this unit					
We are short of medical staff in this unit					
Hospital management communicates well with staff in this hospital					
The amount of work I have to do is too demanding					
Enough is being done to support staff working with HIV infected patients					
Suggestions made by staff on how to improve their work are usually ignored by hospital management					

I would welcome more opportunities to discuss work related stress with a qualified counsellor					
In this hospital there are sometimes conflict between colleagues					
In this hospital there are sometimes conflict between nurses and Doctors					



II.16. On this page there are 22 statements of job-related feelings. Please read each statement carefully and decide how often you feel this way about your job, from never to every day.

	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
I feel emotionally drained from my work							
I feel used up at the end of the workday							
I feel fatigued when I get up in the morning and have to face another day on the job							
I can easily understand how my patients feel about things							
I feel I treat some patients as if they were impersonal objects							
Working with people all day is really a strain for me							
I deal very effectively with the problems of my patients							
I feel burned out from my work							
I feel I'm positively influencing other people's lives through my work							
I've become more callous toward people since I took this job							
I worry that this job is hardening me emotionally							
I feel very energetic							
I feel frustrated by my job							
I feel I'm working too hard on my job							
I don't really care what happens to some patients							
Working with people directly puts too much stress on me							
I can easily create a relaxed atmosphere with my patients							

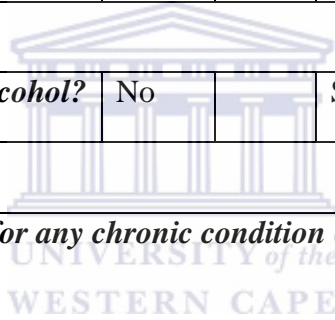
I feel exhilarated after working closely with my patients							
I have accomplished many worthwhile things in this job							
I feel like I'm at the end of my rope							
In my work, I deal with emotional problems very calmly							
I feel patients blame me for some of their problems							

III. INDIVIDUAL BEHAVIOURS

III.1. In this last week did you smoke?	No		Some days		Every day	
--	----	--	-----------	--	-----------	--

III.2. In this last week did you drink alcohol?	No		Some days		Every day	
--	----	--	-----------	--	-----------	--

III.3. Are you on long term treatment for any chronic condition (e.g. High blood pressure, Diabetes, or HIV)?	No		Yes	
--	----	--	-----	--



Appendix II – Self Administered Questionnaire (French version)

QUESTIONNAIRE POUR HOPITAL DE DISTRICT

I. INFORMATIONS GENERALES

<i>Date</i>/.....	2012
-------------	-------------	------

Votre âge (ans)

Compléter ou cocher la bonne réponse.

<i>Sexe:</i>	<i>Feminin</i>		<i>Masculin</i>	
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<i>Statut Matrimonial :</i>	Marié (e)		Célibataire		Divorcé (e)		Séparé (e) de son partenaire		Veuf (veuve)		Autre	
---------------------------------	--------------	--	-------------	--	----------------	--	------------------------------------	--	-----------------	--	-------	--

Combien d'enfants avez-vous à la maison ? _____ (Numbers)

Quel âge ont-ils ? ____/____/____/____/____/ (Full years)

<i>Quel est votre service ?</i>	Maternité		Pédiatrie	
---------------------------------	-----------	--	-----------	--

Quel est votre unité

Combien de garde de nuit par semaine avez-vous eu le mois passé ? .../..... (OUI, NON)

Quel est votre grade scolaire actuel ?

Infirmier (e) A2		Infirmier (e) A1		Chef d'unité ou chef de service		Infirmier (e) A0		Autre (spécifier)	
---------------------	--	---------------------	--	------------------------------------	--	---------------------	--	----------------------	--

Depuis combien de temps avez-vous exercé comme infirmier (e)? (nombre d'années)

Depuis combien de temps avez-vous travaillé dans cet hôpital ? (nombre d'années)

II. INFORMATION SUR LE TRAVAIL ET SUR LA SITUATION PERSONNELLE

Pouvez-vous nous estimer la distance qui est entre votre maison et votre hôpital?
(in Km. Aller -retour)

Pouvez-vous nous estimer le temps qu'il vous faut pour quitter votre maison et arriver a votre hôpital? (Minutes : aller-retour)

Peut-on dire que vous êtes satisfait de votre travail?

Tres satisfait	Satisfait	Partiellement satisfait	Insatisfait
4	3	2	1

Peut-on dire que vous êtes satisfait de votre salaire?

Tres satisfait	Satisfait	Partiellement satisfait	Insatisfait
4	3	2	1

Peut-on dire que vous êtes satisfait de votre chef direct?

Tres satisfait	Satisfait	Partiellement satisfait	Insatisfait
4	3	2	1

A part ce travail, avez- vous un autre travail à côté ou vous étudiez soir après le travail?



Combien d'heures pouvez-vous dire que vous avez travaillé la semaine passée? _____ (heures)

En général combien de patient tu es charge de t'occuper ou tu reçois par jour? _____ (patients)

C'est quand la dernière fois que vous avez manque de lits pour les malades dans ce service ?


Dans les 6 mois	
Dans les 6 mois avant	
Jamais	
Je ne suis pas sur (e)	

<i>Y a- il un de vos collègues qui s'est absenté au travail d'une manière inattendue ?</i>	Oui		Non	
--	-----	--	-----	--

Durand le mois passé votre service a-il enregistré une rupture de stock pour les matériels suivants?

	Oui	Non
Médicaments		
Consommables (gants)		

Supposons que vous avez un problème personnel la quelle des personnes suivantes vous vous sentiriez confortable (à l'aise) de discuter de ce problème ? (vous pouvez choisir plus d'une personne)



Collègues	
Membre de votre Famille ou ami (s)	
Votre superviseur immédiat ou la personne pour laquelle Vous reportiez	
Le chef de service ou chef du département	
Personne parmi les-haut citées	

Est-ce que durant l'année passée vous vous êtes piquée accidentellement avec une Infectée de VIH	Oui		Non	
---	-----	--	-----	--

Pouvez-vous indiquer votre degré d'accord ou de désaccord avec les énoncés suivants :

	Pas du tout d'accord	Pas d'accord	Pas sur (e)	D'accord	Entièrement d'accord
Je me sens très confiant en ma capacité de bien finir mon travail.					
Nous avons suffisamment de staff pour bien finir notre travail dans notre unité.					
Je sens que je ne contrôle pas des choses qui affectent mon travail.					
Nous sommes bien informés des changements de règlements affectant notre travail.					
Je participe régulièrement dans les discussions avec les autres collègues sur la situation de notre travail dans notre unité.					
Nous avons une carence de staff médical dans notre unité.					
La communication entre la direction de l'hôpital avec le personnel se passe très bien.					
La qualité du travail que je fais est très demandant.					
La direction fait énormément pour soutenir le staff travaillant avec les patients vivant avec le VIH.					
Les suggestions données par le staff sur la façon d'améliorer leurs conditions de travail sont souvent ignorées par la direction de l'hôpital.					
J'aimerais avoir plus d'opportunités de discuter sur le stress lié au travail avec un conseiller.					
Dans cet hôpital il ya quelque fois les conflits entre collègues.					
Dans cet hôpital il ya quelque fois les conflits entre le staff avec le chef					

Sur cette page il ya 22 énoncés sur les sentiments liés au travail. S'il vous plaît lisez attentivement chaque énoncé et décidez si quelques fois vous vous sentez de cette façon au sujet de votre travail, de jamais à chaque jour. (Maslach Burnout Inventory)

	Jamais	Quelques fois par an	Une fois par mois	Quelques fois par mois	Une fois par semaine	Quelques fois par semaine	Chaque jour

	Jamais	Quelques fois par an	Une fois par mois	Quelques fois par mois	Une fois par semaine	Quelques fois par semaine	Chaque jour
Je me sens émotionnellement vidé(e) par mon travail							
Je me sens à bout à la fin de ma journée de travail							
Je me sens fatigué(e) lorsque je me lève le matin et que j'ai à affronter une autre journée de travail							
Je peux comprendre facilement ce que mes patients/clients/élèves ressentent							
Je sens que je m'occupe de certains patients/clients/élèves de façon impersonnelle comme s'ils étaient des objets							
Travailler avec des gens tout au long de la journée me demande beaucoup d'effort							
Je m'occupe très efficacement des problèmes de mes patients/clients/élèves							
Je sens que je craque à cause de mon travail							
J'ai l'impression, à travers mon travail, d'avoir une influence positive sur les gens							
Je suis devenu(e) plus insensible aux gens depuis que j'ai ce travail							
Je crains que ce travail ne							



	Jamais	Quelques fois par an	Une fois par mois	Quelques fois par mois	Une fois par semaine	Quelques fois par semaine	Chaque jour
m'endurcisse émotionnellement							
Je me sens plein(e) d'énergie							
Je me sens frustré(e) par mon travail							
Je sens que je travaille « trop dur » dans mon travail							
Je ne me soucie pas vraiment de ce qui arrive à certains de mes patients/clients/élèves							
Travailler en contact direct avec les gens me stresse trop							
J'arrive facilement à créer une atmosphère détendue avec mes patients/clients/élèves							
Je me sens ragaillardi(e) lorsque dans mon travail j'ai été proche de mes patients/clients/élèves							
J'ai accompli beaucoup de choses qui en valent la peine dans ce travail							
Je me sens au bout du rouleau							
Dans mon travail, je traite les problèmes émotionnels très calmement							
J'ai l'impression que mes patients/clients/élèves me rendent responsable de certains de leurs problèmes							

III. COMPORTEMENT ET HABITUDES INDIVIDUELS

<i>Durant la semaine passée avez-vous fumé?</i>	Jamais		Quelques jours		Tous les jours	
---	--------	--	----------------	--	----------------	--

<i>Durant la semaine passée avez-vous bu l'alcool?</i>	Jamais		Quelques jours		Tous les jours	
--	--------	--	----------------	--	----------------	--

<i>Suivez-vous un traitement à long terme pour une condition ou une maladie chronique quelconque (ex. HTA, Diabète, or VIH)?</i>	Oui		Non	
--	-----	--	-----	--





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PARTICIPANT INFORMATION SHEET



Dear participant,

Thank you for your willingness to hear about this study. What follows is an explanation of the research project and an outline of your potential involvement. The research is being conducted for a mini-thesis. This is a requirement for the Masters in Public Health which I am completing at the University of the Western Cape. If there is anything you do not understand or unclear about, please ask me. My contact details and those of my supervisor are provided at the end of this information sheet.

Title of the research

My research is entitled: Predictors of burnout amongst nurses in pediatric and maternity wards of district hospitals of Kigali City, Rwanda

Research purpose

This study is trying to measure the level of burnout and its associated factors among nurses of district hospitals of Kigali City. It is hoped that with your participation a better understanding and description of levels of burnout will be gained in order to measure the prevalence of burnout, and analyze its predictors. This will help the management of your hospital as well as the Ministry of Health to know the magnitude of nurses' burnout in Rwandan hospitals in order to address their issues properly, including appropriate human resource for health plans and improve patients' satisfaction and quality of services.

Description of the study design and your involvement

A self-administered questionnaire will be used to collect data directly from you, and the information that you will provide include questions on: socio-demographic profile as well as, service where you work, years of experience, as well as 22 questions from an instrument called "Maslach Burnout Inventory", which is the most tool used to measure burnout.

Confidentiality

Your name will be kept confidential at all times, and will not appear on the questionnaire or any records of your participation, excluding the signed consent form which I will keep separate from your completed questionnaire. The hard copies of the questionnaires will be locked away all times and will be destroyed after the completion of this study.

Voluntary participation and withdrawal

Your participation in this study is completely voluntary which means that you are not obliged to participate in this study. You have the right to stop the process of completion of the

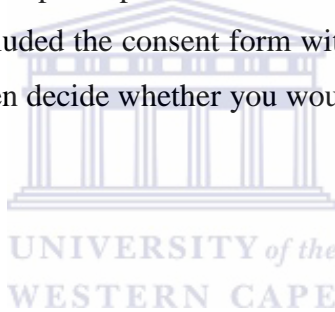
questionnaire at any time. You do not have to answer any questions that you do not want to answer.

Benefits and costs

There is no direct benefit to you for participating in this study. The information you provide, however, will help the management of your hospital as well as the Ministry of Health to know the magnitude of nurses' burnout in Rwandan hospitals. There is no cost for participating in this study other than your time that you will spend filling the questionnaire.

Informed consent

I request your signed consent to participate in this study before I proceed to give you the questionnaire to fill. I have included the consent form with this information sheet so that you will be able to review it and then decide whether you would like to participate in this study or not.



Questions

Should you have further questions or wish to know more, I can be contacted as follow:

SEMASAKA SENGOMA Jean Paul

Student number: 3175821

Cell phone: + (250)788842142

Email: jsengoma@nursph.org

I am accountable to Prof Helen Schneider, my supervisor at UWC. Her e-mail address is

hschneider@uwc.ac.za



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PARTICIPANT CONSENT FORM

Predictors of burnout amongst nurses in paediatric and maternity wards of district hospitals of Kigali City, Rwanda

As indicated in the information sheet, your participation in this study is completely voluntary. Refusal to participate or withdraw from the study will not result in penalty nor any loss of benefits to which you are otherwise entitled.

If you choose to participate, you have the right to stop completing the questionnaire at any time. You do not have to answer any questions that you do not want to answer.

The information collected from you will be kept strictly confidential.

If you agree to participate in this research study, your signed consent is required before I proceed with the interview with you.

I have read the information about this study on the participant information sheet, or it has been read for me. I have had the opportunity to ask questions about it and any question I have asked have been answered to my satisfaction.

I consent to voluntarily to be participant in this project and understand that I have the right to stop the process at any time, and to choose not to answer a particular questions that are asked in the study.

Participant Name

Participant signature



---/---/---

consent date

Researcher conducting informed consent

Researcher signature

---/---/---

Date