ASSESSING THE LEVEL OF BURNOUT AMONG MATERNITY HEALTHCARE WORKERS AT ZOMBA CENTRAL HOSPITAL, ZOMBA AND BWAILA MATERNITY UNIT, LILONGWE, MALAWI.

MASTER OF SCIENCE (MIDWIFERY) THESIS

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UNIVERSITY OF MALAWI
KAMUZU COLLEGE OF NURSING
OCTOBER, 2017

Kamuzu College of Nursing

Assessing the Level of Burnout among Maternity Healthcare Workers at Zomba Central Hospital, Zomba and Bwaila Maternity Unit, Lilongwe, Malawi.

Master of Science (Midwifery) Thesis

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Submitted to the Faculty of Nursing at the University of Malawi, Kamuzu College of Nursing in Partial Fulfilment of the Requirements of Degree of Masters (Midwifery).

University of Malawi

Kamuzu College of Nursing

October, 2017

Declaration

I, the undersigned hereby declare that this thesis is my own original work and has not been submitted for any other awards at the University of Malawi or any other University for similar purposes. Acknowledgement has been made in text where other people's work has been used.

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Certificate of Approval

The undersigned certify that this thesis represents the student's own work and has been submitted with our approval.

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Dedication

To my loving husband and family for the endless love, support and faith in me.To my lovely daughter, for giving me strength throughout my studies.

Acknowledgements

I am greatly indebted to the following:

- Heavenly Father for the unwavering love, support and good health.
- My loving husband, Dr Victor Singano, supportive family and friends.
- My supervisors; Mrs Rose Mazengera, Dr Idah Mdendera, Dr Mathews Ngwale and Dr Elizabeth Glaser for the rich and profound academic guidance they offered throughout my study period at Kamuzu College of Nursing.
- The Postgraduate Dean, Dr G. Msiska, for her patience and endless support throughout my study period.
- USAID under World Learning scholarship through Kamuzu College of Nursing and the Ministry Of Health Malawi for funding my studies.
- All staff at Zomba District Health office specifically Matawale health centre, Zomba central Hospital maternity department and Bwaila Maternity Unitfor their timely support.
- Heads of departments Maternity Units (Labour ward and Postnatal Wards) in the above hospitals for accepting to be enrolled in my study.
- The Director of Zomba Central Hospital and the District Health Officer at Bwaila Maternity Unit and Zomba District Health Office, for permitting me to conduct my studyin their institutions.

Abstract

Burnout is more prevalent in healthcare workers due to emotional strain of dealing with patients' pain and suffering, accompanied by a poor working environment which leads to: poor quality of work, loss of self-confidence, negative attitudes, staff conflicts, absenteeism, anxiety and frustration.The rate and effects of burnout have not been properly investigated in the maternity facilities in Malawi. The main aim of the study was to assess the level of burnout among maternity healthcare workers by specifically determining the extent, describing the factors associated with it and exploring measures that can address burnout among maternity healthcare workers.A cross-sectional study was conducted among maternity healthcare workers at Zomba Central Hospital (ZCH) and Bwaila Maternity Unit (BMU) in June 2017.Data were collected usingan adapted Maslach Burnout Inventory self-administered questionnaire which includeddemographic characteristics, job perceptions and burnout constructs: emotional exhaustion(EE), depersonalization(DP) and reduced personal accomplishment(PA).A total of 81 participants were enrolled in the study, 50 (62%) were from Bwaila Maternity Unit and 31(38%) from Zomba Central Hospital. The mean age was 31 years (SD: 6.2); 68 % (55) were female; 65% (52) were married. 21(26%) of the participants were from antenatal, 27(33%) from labour, 20(25%) from postnatal wards and 13 (16%) worked in all departments (antenatal, labour and postnatal wards). There was 75%, 28 % and 33 %burnout rates on EE, DP and reduced PA.In multivariate analysis, healthcare worker absenteeism (adjusted OR {P-value} 15.38(0.05) and low job satisfaction (adjusted OR {P-value} 17.72(0.02) were the only factors associated with EE.

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List of Abbreviations

AIDS:	Acquired Immune Deficiency Syndrome
BMU:	Bwaila Maternity Unit
COMREC:	College Of Medicine Research and Ethics Committee
DP:	Depersonalisation
EE:	Emotional Exhaustion
HCW:	Health Care Worker
HIV:	Human Immune-deficiency Virus
HMIS:	Health Management Information System
KCN:	Kamuzu College of Nursing
MDHS:	Malawi Demographic Health Survey
MBI:	Maslach Burnout Inventory
MBI-HSS:	Maslach Burnout Inventory-Health Services Survey
PA:	Personal Accomplishment
USA:	United States of America
WHO:	World Health Organisation
ZCH:	Zomba Central Hospital

Definition of Terms

Burnout: Is a phenomenon described as negative psychological symptoms that occur in normal individuals due to chronic work-related stress

Depersonalisation: (cynicism) is detachment from within oneself, regarding one's mind or body. Employees feel cynical about the value of their work and actively start to ignore positive aspects.

Emotional Exhaustion: Is a prolonged state of physical and emotional failing that results from chronic work and/or personal stress. It is a feeling of being emotionally overstretched and tired by one's efforts(Maslach, Schaufeli, & Leiter, 2001).

Reduced Personal Accomplishment: Is described as subjective feelings of failure, lack of recognition, pre-dominant feelings of insufficiency and permanent overcharge(Maslach et al., 2001).

Maternity Healthcare Workers- These are health professionals providing support, care and advice during pregnancy labour and after birth.

CHAPTER 1

Introduction and Background

Introduction

Malawi faces a crisis of inadequate human and material resources due to population increase and inadequate health services funding (Government Of Malawi, HSSP., 2011-2016). The White Ribbon Alliance (2016) found that there were 3,420 bedside midwives in Malawi handling approximately 4 million women of reproductive age group. This corresponds to a ratio of 1 midwife to 1200 women which falls outside the recommended World Health Organisation (WHO) ratio of midwife to women of reproductive age group of 1:175. The same applies to Malawian physician-patient ratio which is 1:14,000 and clinician patient ratio 1:14667 compared to the recommended WHO's ratio of 1:8000 (Government Of Malawi, HSSP., 2017-2022; WHO report on state of worlds midwifery, 2017). Such ratios display work overload among Malawian healthcare workers which can result in job dissatisfaction and burnout.

Burnout as a phenomenon was initially described by a United States Psychologist, Freudenberger in the 1970'sas the feeling of failure and exhaustion that was observed in social workers that provided human services. Maslach (1981) provided a comprehensive definition of burnout considering the physical and mental exhaustion observed in professionals who work in continuous contact with people. Maslach described burnout as negative psychological symptoms that occur in individuals due to chronic work-related stress (Maslach & Jackson, 1981). According to Maslach, burnout is characterised by emotional exhaustion (EE), depersonalisation (DP) and ineffectiveness. Emotional exhaustion involves physical and emotional failing.

Individuals are tired of their efforts and feel emotionally overstretched. Depersonalisation involves detachment from within oneself.

Healthcare workers feel cynical about the value of their work hence, ignoring positive aspects. Thereafter, there are feelings of reduced personal accomplishment (PA) which include feelings of failure. Healthcare worker evaluates oneself negatively regarding owns work with clients. Healthcare workers are dissatisfied with their accomplishments on the job (Maslach & Jackson, 1981).

Knowledge of emotional demands facing today's healthcare workers is critical for explaining how work stressors translate into burnout. Burnout affects all occupations but it is reported to be very high and more prevalent among healthcare workers due to the demanding nature of their job (Kruse et al., 2009; Portoghese, Galletta, Coppola, Finco, & Campagna, 2014). Healthcare workers experience emotional strain when dealing with patients' pain and suffering. Emotional strain is accompanied by a discouraging work environment, stretched working hours, high workload and job displeasure. Experiencing such syndromes chronically degrades mental wellbeing of healthcare workers leading to burnout (Jain & Lal, 2016). Burnout among healthcare workers has negative effects on the health service delivery which leads to poor patient outcomes and reduces organisational performance (Kruse et al., 2009). In the maternity departments of United States of America and Canada, higher frequencies of unethical treatment of women in labour were witnessed mostly in healthcare workers with high burnout levels(Sessions, Henley, & Roth, 2017). In Malawi, burnout among healthcare workers has been reported to lead to suboptimal patient care, making mistakes in treatment and shouting at patients (Kim et al., 2018)

Studies done in both developed (USA & Europe) and developing countries (South Africa & Malawi) have shown that the effects of burnout among healthcare workers include job dissatisfaction which leads to poor performance, negative attitudes, increased illnesses, absenteeism, staff conflicts and high staff turnover (Leiter & Maslach, 2009; Thorsen et al., 2011; Toral-Villanueva, Aguilar-Madrid, & Juárez-Pérez, 2009). Understanding the causes of job dissatisfaction among healthcare workers can help in management of burnout. Studies worldwide have indicated that job dissatisfaction is caused by the following among others ;high workload, stretched working hours, poor communication, lack of supervisory support and workplace bullying (Jain & Lal, 2016).

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Background

The phenomenon of burnout appeared to have some consistencies in the United States and Europe, especially among individuals doing peoples work. Most burnout studies conducted showed higher levels of burnout among health care workers. Therefore, it was concluded that burnout is mental stress resulting from chronic job and interpersonal stressors, high and more prevalent among health professionals (Maslach et al., 2001).

Many researchers around the world have indicated that burnout is quite common among physicians and nurses (Thomas & Valli, 2006; Thorsen et al., 2011). Burnout prevalence among physicians has been reported to range from 25% to 60% and among nurses/midwives from 15%-85%. These ranges of burnout are high enough to affect personal and professional performance. The prevalence of burnout varies according to medical specialty and working conditions. Nurses have constantly reported higher

burnout rates compared to other healthcare workers (Thorsen et al., 2011). This is so because nurses represent the largest group of healthcare professionals and are in front line of direct care to patients. Therefore, they experience emotional strain when dealing with pain, suffering and distress of patients and their families (Aiken, 2005). Hence in this study we included other cadres like physicians and clinical officers because few studies in Malawi have been conducted on such to provide a baseline of the rates of burnout among healthcare workers.

The prevalence of burnout among nurses differs from one speciality to another. Studies done in Florida, USA and Pisa, Italy on nurses working in the neonatal intensive care unit (ICU) showed high levels of burnout among the neonatal ICU nurses. This was attributed to high levels of emotional and physical pressure (Braithwaite, 2008; Raggio & Malacarne, 2007). On the other hand, a study in Italy showed lower burnout rates among dermatology nurses which was attributed to low workload and low levels of physical and emotional pressure (Renzi, Tabolli, Ianni, Di Pietro, & Puddu, 2005).

Physician's rate of burnout also appears to vary from one specialty to another. In United States of America physicians working in family medicine, internal medicine, emergency medicine and neurology experienced higher rates of burnout than those working in dermatology or preventive medicine. High burnout was attributed to working with too many and very sick patients(Kuerer et al., 2007; Shanafelt et al., 2012). In South Africa, physicians' burnout was higher among physicians working in the medical department than those working in the surgical department (Thomas & Valli, 2006). Those in medical department experienced a high workload due to the emerging diseases like HIV and AIDS hence higher burnout rates than those in surgical wards.

In Malawi, information about burnout remains scanty. One study in a district referral hospital in Lilongwe reported that 69 out of 101 maternal healthcare workers were experiencing high rates of burnout (Thorsen et al., 2011). High burnout rates were attributed to the inability of healthcare workers to balance between work and family. Fulfilling the parental role makes it difficult to perform the work role satisfactorily when demands from the family and work are not mutually compatible. Work-family conflict has a negative influence on job satisfaction especially when work pauses a threat to family role (Lu et al., 2016).

Problem Statement

In Malawi, the rate of burnout among healthcare workers is at 68% (Thorsen et al., 2011). However,Thorsen et al.,conducted this studyin 2011 when only 73% of the pregnant women were delivering at health facility which is currently at 91%. In 2011 only 55% of the women were making decisions for their own health care compared to 68%in 2017 (National Statistical Office (NSO) Malawi & ICF, 2017). These reasons indicate burnout could currently be higher than 68% found by Thorsen et al., in 2011. The increase in hospital deliveriescontributes to workload on the few healthcare workers leading to burnout.

White Ribbon Alliance (2016), indicated that in Malawi there are few midwives as compared to the reproductive population. Currently, the midwife-patient ratio is 1: 1200(Prime health Consulting and Services, 2016). This ratio falls outside the WHO recommended ratio which is 1:175. The same applies to Malawian physician-patient ratio which is 1:14,000 and clinician-patient ratio 1:14667 compared to the

recommended WHO's ratio of 1:5000 (Government Of Malawi, HSSP., 2017-2022; WHO report on state of worlds midwifery, 2017).

Zomba Central Hospital and Bwaila Maternity Unit are facing problems of shortage of material and human resources and work overload. The number of healthcare workers allocated in the maternity department of both hospitals is less compared to the number of referrals, walk-in and deliveries occurring at the facilities.ZCH maternity department has 33 nurses, 6 clinicians and 1 doctor covering the departments.On average per quarter the hospital receives 2000 admissions and conducts 1200 deliveries. This translates to a midwife-patient ratio of 1:20,clinician-patient ratio of 1:111 andphysician-patient ratio of 1:666 (HMIS Zomba Central Hospital, 2016). Similarly, BMU has 50 midwives, 5 doctors and 9 clinicians covering the antenatal, postnatal and labour wards. On average the unit has 5000 admissions and conducts 4200 deliveries per quarter. This translates to midwife-patient ratio of 1:32, clinician-patient ratio of 1:177 and physician-patient ratio of 1:320 (HMIS Lilongwe District Health Office, 2016).

These ratios display work overload among ZCH and BMU healthcare workers which can result in job dissatisfaction and burnout. Inadequate staff and increased workload have adverse effects on the patient, healthcare worker and the facilities. The increased number of asphyxia, maternal deaths and neonatal deaths among others in both facilities could be related to healthcare worker burnout. Chronic work overload on healthcare workers at both facilities has led to low job satisfaction, absenteeism and poor work performance which most of the healthcare workers complain about. In

addition to these challenges, there has been an increase in patient complaints through suggestion boxes about quality of health services provided at both facilities. Low job satisfaction, absenteeism, poor work performance and poor organisation performance are some of the effects of healthcare worker burnout hence the need to properly investigate the degree and factors associated with burnout at both facilities.

Justification of the Study

Understanding the extent of burnout at these facilities can enable hospital management team find ways of improving the provision of health services because burnout can lead to low staff motivation and job dissatisfaction which affect staff performance hence negatively affecting maternal and neonatal health outcomes.

Burnout studies in hospital settings are lacking (McAuliffe et al., 2009). The prevalence and causes of burnout have not been properly investigated in Malawi. Thorsen et al., (2011) indicated that in Lilongwe, Malawi maternal health staff experienced more burnout than their colleagues working in other medical settings. Thorsen, recommended that further research is needed to identify factors specific to Malawi that contribute to burnout in order to inform the development of prevention and treatment within the maternal health setting. Therefore, this study will assist in generating evidence on factors leading to burnout specific to Malawi.This study will also assist in generating evidence for future studies concerning healthcare worker burnout which might aid in future hospital policy directions.

Broad Objective

To assess the level of burnout among maternal healthcare workers and its associated factors at Zomba Central Hospital and Bwaila Maternity Unit.

Specific objectives.

To determine the rate of burnout among maternal healthcare workers.

To describe factors associated with maternal healthcare workers burnout.

To explore measures that can be institutedto address burnout among healthcare workers.

CHAPTER 2

Literature Review

Introduction

This is a narrative literature review with critical analysis of healthcare worker burnout literature published in books and electronic or paper-based journal articles. Burnout has been assessed from a theoretical and contextual point of view focusing on healthcare worker burnout prevalence, causes and effects. Hence, the use of narrative literature review. In addition, the review shows recommendations on reducing burnout among healthcare workers. The following search engines were used to access literature related to healthcare worker burnout: HINARI, Google scholar, Pub Med, WHO data base and Wiley online library. The review was guided by the theory of burnout.

Conceptual Framework

Burnout theory

The theory was first developed by Freudenberger in the 1970s. Maslach, subsequently provided a comprehensive conceptualisation of burnout in 1981. Initial burnout research began in the 1970s and 80s but was mostly conducted in the western countries. However, currently such studies are conducted internationally (Maslach et al., 2001).The framework is relevant because it has been recognised over a decade as the leading measure of burnout and has variables that help to assess the level of burnout and factors that contribute to burnout(Maslach et al., 2001).

Studies done in several countries (United States, Canada, United Kingdom, Germany, New Zealand, Russia, Armenia and Japan) have confirmed the validity and

reliability of the Framework. The studies found that similar factors affected burnout cross-culturally and that countries with different healthcare systems and language variation can use the tool with confidence in assessing healthcare worker burnout (Poghosyan, Aiken, & Sloane, 2009). Hence using this framework in this study will help to provide basic and reliable results on burnout in maternity healthcare workers in Malawi.

Origin of Burnout Syndrome

Burnout originally emerged as a social problem, not as a scholarly concept. Therefore, the initial conception of burnout was shaped by practical rather than academic concerns (Maslach & Jackson, 1981). Later, there was the experimental phase, in which the emphasis shifted to systematic research on the phenomenon of burnout. Burnout studies started in the mid-1970s and 1980s. Most of the studies done throughout that time were in the developed countries. Over the time studies began in many other countries. Currently, research is conducted worldwide but mostly in developed countries (Maslach, Leiter, & Schaufeli, 2008).

Effects of Burnout

Maslach, (1981) indicated that burnout leads to personal and professional detachment. Burnout affects an individual personally and it also affects the individual's family, friends, and colleagues (Aiken, 2005). Burnout affects several aspects of an individual’s life. The effects include emotional exhaustion, depersonalisation and a sense of reduced personal accomplishment. These result into low work morale, absenteeism, poor job performance, poor staff attitudes, job dissatisfaction, high staff turnover, lower quality of life and poor health (Gill, Flaschner, & Shachar, 2006;

Maslach & Jackson, 1981). Burnout also causes adverse personal effects i.e. alcohol and drug abuse, suicidal ideations and broken relationships (Shanafelt et al., 2012). Burnout can negatively impact professional well-being and may lead to profession and organisation impairment.In both study sites, Bwaila Maternity Unit and Zomba central hospital, health care workers experience chronic work overload which has led to low job satisfaction, absenteeism, poor work performance which most of the healthcare workers complain about. In addition there has been an increase in patient complaints in the local media about quality of health services provided. These problems may be related to burnout as the framework has explained.

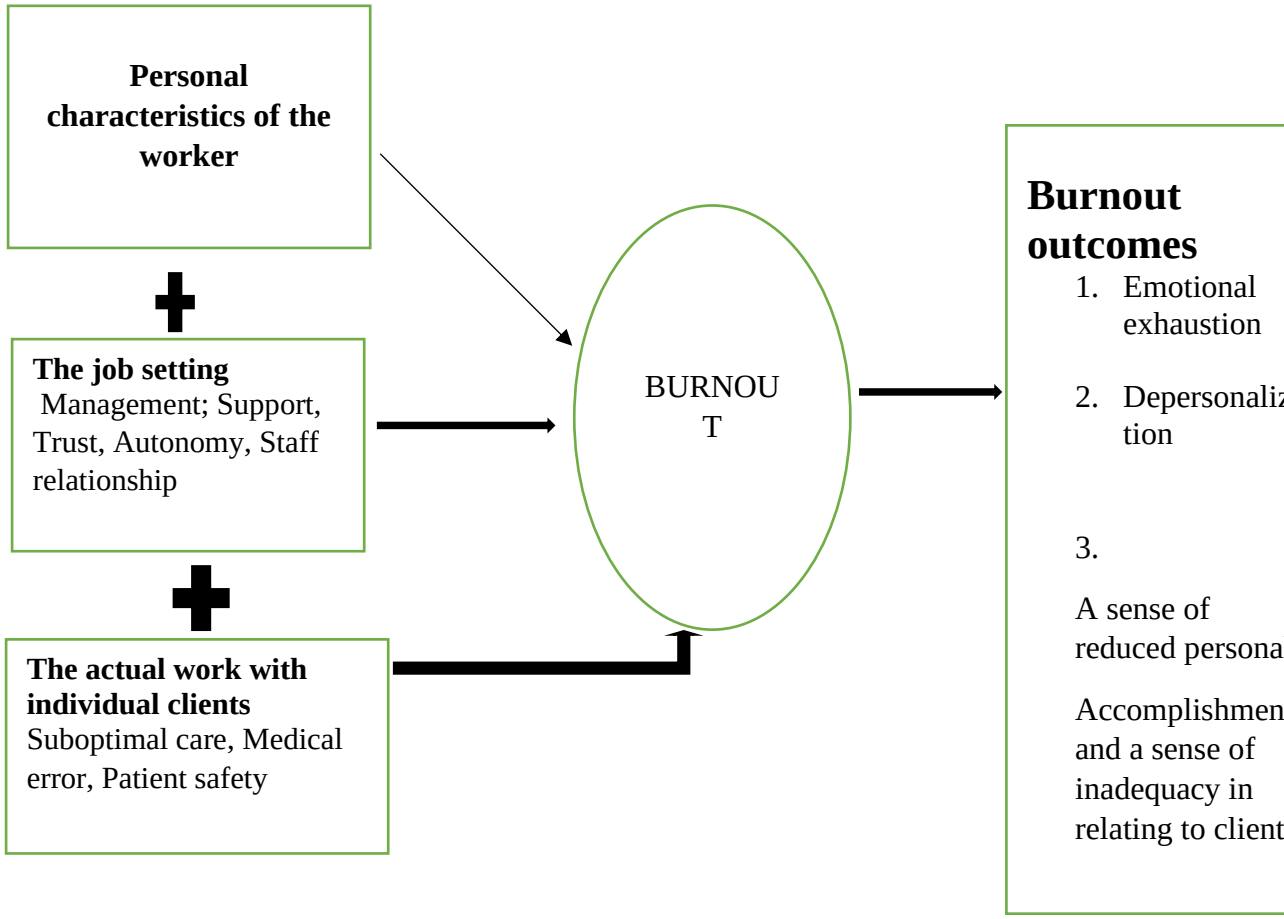

Figure 2.1: Burnout and its related factors. Adapted from Montgomery, 2011

Predictors of Burnout

Burnout has been found to be influenced by individual factors, job related factors and direct patient care. Figure 2.1 showsthe factors that influence burnout: individual factors, job setting and providing direct patient care.

Individual factors.

These are the individual features of the healthcare worker for example; age, gender or marital status that contribute to burnout of the healthcare worker. On individual features that have been studied, age has been consistently found to be related to burnout. In a physicians'study in the United States of America (USA),higher burnout

levels were attributed to age of less than 40 years (Shanafelt et al., 2012). Similarly, in another study in USA, on 843 acute registered nurses, higher burnout rate was attributed to age of below 30 years (Erickson & Grove, 2008). (Maslach et al., 2001) indicated that, age is mostly related to work experience, therefore burnout is common earlier in one's career.

Females are more prone to burnout than males because of role conflict. Females who have families are unable to balance the roles hence exhaustion (Braithwaite, 2008; Shanafelt et al., 2012).

Job setting.

The job setting for example absence of work resources and on job social support have been studied at length. Several studies suggest that lack of social support from supervisors and co-workers is related to burnout (Erickson & Grove, 2008; Paul, 2012). High workload too is highly and frequently related to burnout. Long working hours and high patient load lead to exhaustion of the healthcare worker (Maslach et al., 2001; Paul, 2012).

Direct patient care.

Direct care for very sick patients by the health care worker may result into healthcare workers stress from the high expectations of patient recovery. Healthcare workers with such expectation work too hard and too much leading to exhaustion. Cynicism eventually occurs when the efforts do not yield the expected results (Angolla & Ongori, 2008; Doef, Mbazzi, & Verhoeven, 2012).

Malawi faces a crisis of inadequate human and material resources due to population increase and inadequate health services funding (Government Of Malawi, HSSP., 2011). Therefore, health care workers experience work overload and long working hours. Most healthcare workers in Malawi are females which is one of the contributing factors to burnout. Therefore the framework is relevant in this study.

Prevalence of burnout in developed countries.

Globally, various rates of healthcare worker burnout have been reported by several studies. High burnout rates have been reported in USA, Mexico and Israel. In Texas USA, a study on 1519 surgical oncologists and on 7288 physicians showed high burnout rates of 28% and 45.8%, respectively. The oncologists reported EE of 24%, DP of 15.2% and low levels of PA of 9.6% (Kuerer et al., 2007; Shanafelt et al., 2012). In Mexico, a high burnout rate of 47% was found among 50 healthcare workers with subscales of EE: 18.2%, DP: 6.9% and reduced PA: 37.6% (Raggio & Malacarne, 2007). High burnout rates of 54.9 % were also found among 118 mental healthcare workers in Gaza, Israel (Abu Akar, 2009). Despite the reported high burnout rates, a study on 189 oncology nurses in Turkey, showed low burnout rates with subscales of EE of 18%, DP of 5% and reduced PA of 11%(Tuna & Baykal, 2014).

Prevalence of burnout in developing countries.

High burnout rates have also been reported among healthcare workers in developing countries. In Uganda, a high burnout rate among 126 maternal and paediatric healthcare workers was reported with EE of 43.1%, DP of 48% and low rate of PA of 34.3% (Paul, 2012). In South Africa, a study on 543 nurses showed high burnout rates with EE of 68.7%, DP of 85.1% and low rate of PA of 81% (Engelbrecht, Bester, Van Den Berg, & Van Rensburg, 2008). In Lusaka, Zambia a study on 483

healthcare workers showed a high burnout rate of 51% (Kruse et al., 2009). In Lilongwe, Malawi a study on 101 maternal healthcare workers showed high burnout rate of 68% with EE of 72%, DP of 43% and reduced PA of 74% (Thorsen et al., 2011).

The review shows differences in burnout rates based on departments. Healthcare workers in dermatology department have shown lower burnout rates than healthcare workers in maternity and paediatric departments. Dermatology department is less demanding unlike maternity and paediatric department hence the difference. The various studies mentioned above indicate burnout rates ranging from 28% to 68% which is sufficient enough to affect personal or professional performance.

The studies have also indicated a low burnout rate in developed countries and high burnout rate in developing counties, especially in the Sub Saharan region. The high burnout rates in the Sub Saharan region are related to increased workload due to inadequate human and material resources and high infectious disease burden. The 2006 World Health Organisation report on health indicated that the crisis of healthcare workforce is worse in the sub-Saharan region, which has 3% of the global healthcare workers tackling 24% of the world's burden of disease. This is contributing to the high burnout rates among healthcare workers within the region. In the sub-Saharan region (Malawi inclusive), studies on burnout prevalence are scarce. The few studies that have been conducted have shown high burnout rates.

Predictors of Burnout in Developed Countries

In the developed countries, the studies have indicated that long working hours, higher education level, females, speciality, inadequate human resource and age below

50 years as predictors of higher burnout rate among healthcare workers (Kuerer et al., 2007; Shanafelt et al., 2012; Stimpfel, Sloane, & Aiken, 2012).

Physicians and registered nurses who worked more hours than the recommended US Bureau of labour hours of 34.5 per week experienced higher rates of burnout due to overworking (Shanafelt et al., 2012; Stimpfel, Sloane, & Aiken, 2012). As a result of the high burnout rates, physicians experienced exhaustion, whilst nurses experienced fatigue, anger and frustration. Experiencing exhaustion, anger and frustration can negatively affect day to day activities of healthcare workers and how they attend to patients.

Female physicians in USA experienced a high rate of burnout due to the failure of effective balancing of multiple roles between work and family, while in another study gender indicated to have 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). Physicians working in family medicine, internal medicine, emergency medicine and neurology experienced higher rates of burnout than those working in dermatology or preventive medicine. Similarly, nurses working in neonatal intensive care units (ICU) showed a higher burnout rate than nurses in other departments in Florida, USA and Pisa, Italy (Kuerer et al., 2007; Shanafelt et al., 2012). Departments which involve working with too many and very sick individuals like the ICU increase stress among healthcare workers hence higher burnout.

In USA, a study on 843 registered nurses, reported high rates of burnout on nurses below30 yearsthan their older counterparts.This was attributed to the emotional attachment they had towards their patients (Erickson & Grove, 2008). In addition,

Maslach & Jackson (198, p 108) reported 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." In USA, inadequate human resource increased the levels of nurse's burnout due to increased workload (Holdren & Coustasse, 2015).

Burnout among healthcare workers has negative effect on health service delivery leading to poor patient outcomes and reducing organisational performance. The predictors above can accelerate negative effects of burnout on the healthcare worker, patients and the organisation. Despite the differences in developing and developed countries, in this study these predictors are relevant because healthcare workers in Malawi have long working hoursranging from 8 to16 and most healthcare workers are females.

Predictors of Burnout in Developing Countries

Healthcare workers in developing countries are prone to high levels of burnout due to inadequate staff, high population and high disease burden. Several studies conducted in the Sub-Saharan region indicated that high work load, speciality, inadequate human resource, poor physical working environment, lack of experience, long working hours and poor management communication as predictors of high burnout (Jain & Lal, 2016; Ndawula, 2012; Paul, 2012; Thomas & Valli, 2006; Thorsen et al., 2011). These factors were also important in this study because Malawian healthcare workers are facing the same challenges (shortage of human resource, poor physical working environment long working hours).Therefore, assessing the relationship between these factors and maternity healthcare worker burnout can help in

narrowing down to specific ways of preventing healthcare worker burnout in the facilities.

High workload due to inadequate healthcare workers was associated with higher rates of burnout and job dissatisfaction among physicians in South Africa and nurses in east Africa (Doef, Mbazzi, &Verhoeven, 2012; Jain & Lal, 2016; Kruse et al., 2009; Thomas &Valli, 2006). Physicians in medical wards experienced high burnout due to increased work load related to emerging diseases like HIV/AIDS. Conversely, doctors in surgical department experienced low burnout due to less work (Thomas & Valli, 2006). Poor physical working environment also caused high burnout among nurses in East Africa which was attributed to fear of contracting and transmitting infections (Doef et al., 2012; Kruse et al., 2009). Long working hours was found to increase the rates of burnout among nurses in Mengo, Uganda. Morning, evening and night shifts were a challenge to nurses with families because of failure to balance work and personal life which increased exhaustion (Ndawula, 2012).

Studies Done Locally on Predictors of Burnout

Few studies have been done in Malawi hence the magnitude of the burnout is unknown. In a study in Lilongwe, Malawi high workload and long working hours among maternal healthcare workers were associated with high burnout rate. Burnout was more common among maternal healthcare workers than those working in medical and surgical departments which was attributed to the increased workload in the maternity department. Another factor leading to high burnout rates was inability to balance between work and family which increased the stress especially among female workers (Thorsen et al., 2011). In another study, high rates of emotional exhaustion

were found among healthcare workers in all cadres. Healthcare workers who believed that their work environment is inadequately resourced had high rates of emotional exhaustion (McAuliffe et al., 2009). Another study focused on how caring for the chronically ill, socioeconomic changes and increased workload impacted the nurse's role. In this study more than 90% of the nurses had burnout symptoms (Peltzer, 1997). This study could not be used in this review because it was conducted more than 10 years ago. However, it has been used because it was one of the first studies to be conducted and the findings remain the same as noted from the current studies.

The literature review shows that burnout in both physicians and nurses is related to similar factors. Across the globe high burnout rate is associated with age below 50 years, speciality, high education, long working hours, females, increased workload and shortage of human and material resources. The predictors of burnout in developing countries are similar to those in developed countries.Therefore, considering these factors in this study is vital so as to note any associations between the factors and burnoutand measures used in addressing burnout among maternity healthcare workers.

CHAPTER 3

Methodology

Introduction

This chapter discusses the methodology used for the study. It explains the studytype, setting, population, sample size, sampling method, tool used for piloting and data collection, inclusion and exclusion criteria, validity and reliability, data analysis and ethical consideration.

Study Type

This wasa descriptive cross-sectional study conducted at the Zomba Central Hospital Maternity Unit, Zomba and Bwaila Maternity Unit, Lilongwe from March – May 2017.Cross-sectional studies are carried out at one point in time or over a short period. They are conducted to estimate the prevalence of the outcome of interest for a given population. They also provide a 'snapshot' of the outcome and its associated characteristics at a specific point in time. Cross-sectional studies are used to describe some features of the population such as prevalence and also they support inferences of cause and effect (Levin, 2006). Therefore, this design was relevant since the objective of the study was to find the prevalence and factors associated with burnout and also because quantifying healthcare workerburnout will demonstrate the gravity of the situation in Malawian hospitals hence prompting those in management to act accordingly.

Study Setting

Zomba Central Hospital is a government tertiary care facility in Zomba district in the South East Health Zone of Malawi. It has a catchment population of 648,882 (National Statistics Office Malawi, 2016). The hospital has a 500 bed capacity but it runs at almost

twice its capacity with patients sharing beds and sleeping on the floor (HMIS Zomba central hospital, 2016).ZCH is a referral hospital for all the health facilities in Zomba district. The obstetrics and gynaecology department has 33nurses, six clinicians and one doctor covering the departments permanently. The hospital on average receives 600 pregnant women both walk-in and referrals in a month. It had on average 1499 admissions of pregnant women, 931 deliveries, 227 caesarean sections, 8 maternal deaths, 9 neonatal deaths, and 41 birth asphyxia by end of quarter 2 in 2016 (HMIS Zomba Central Hospital, 2016).

Bwaila Maternity Unit is a government facility situated in Lilongwe, in the Central West Health Zone of Malawi. The hospital serves a catchment population of 1,077,116 (National statistics office, 2016). It functions as a referral facility for health centres, rural and community hospitals in Lilongwe. Ithas 220 bed capacity but it runs at almost twice its capacity with some patients delivering and sleeping on the floor. The unit has 50 midwives, five doctors and nine clinicians covering the antenatal, postnatal and labour ward permanently. On average the unit has 17000 deliveries and 23000 admissions per year. By the end of quarter 2, 2016, there were 3563 pregnant women admissions, 4360 deliveries, 673 caesarean section, three maternal deaths, 98 neonatal deaths and 348 birth asphyxia (HMIS Lilongwe District Health Office, 2016).

Study Population

According to (Polit & Beck, 2008) study population refers to an aggregate or totality of all the objects, subjects or members that conform to a set of specifications. In this study all full-time and part-time nurses, clinical officers and doctors at ZCH Maternity Unit (antenatal, intra-partum and postnatal wards) and Bwaila Maternity Unit

(antenatal, intra-partum and postnatal wards) were included in the study. The two sites were selected to increase the sample size and to achieve a high study power.

Sampling

Convenience sampling method was used to enrol study participants working in the maternity department of the two facilities. Convenience sampling involves the use of readily accessible persons or subjects in a study (Polit & Beck, 2008). Any case, that happens to meet the inclusion criteria set for the study, gets included in a convenience sample. The convenient sampling technique enabled the study to reach its intended sample size and gather data that would not have been possible to gather using other sampling techniques. This method also helped to achieve the sample size in a relatively fast and inexpensive way.

Inclusion criteria.

An inclusion criterion is the list of requirements that all participants have to meet in order to qualify for a study. This determines the participants required to meet the study objectives (McElroy & Ladner, 2014). The study included full-time and part-time nurses, clinical officers and physicians at ZCH Maternity Unit (antenatal, intra-partum and postnatal wards) and Bwaila Maternity Unit.

Exclusion criteria.

Exclusion criteria outlines participants who are not supposed to be enrolled regardless of their potential to develop outcome of interest (McElroy & Ladner, 2014). Students and patient attendants were excluded in this study because they are not formal healthcare workers.

Sample size calculation.

Sample size is the number of investigated units that will be included in the study (Pourhoseingholi, Vahedi, & Rahimzadeh, 2013). The main purpose of the sample size calculation was to determine the sufficient number of participants needed to detect the unknown parameters. In order to estimate the required sample the single proportion method by Lemeshow, Hosmer, & Klar, (1990) was used in this study.

$$\mathbf{N= \frac{(Za)^2[pq]}{d^2}}$$

p: The prevalence of the condition/ health state

q: when p is in percentage terms: (100-p)

Or

ii. When p is in decimal terms: (1-p)

d: The precision of the estimate. In this case relative precision was used.

Za [Z alpha]: is the value of z from the probability tables. If the values are normally distributed, then 95% of the values will fall within 2 standard errors of the mean. The value of z corresponding to this is 1.96 (from the standard normal variant tables).

In this study, burnout rate which was found in Lilongwe, Malawi of 68 % in 2011 will be used (Thorsen et al., 2011) to find the sample size.

$$N= \frac{(Za)^2[pq]}{d^2}$$

Precision set at 5 %

$$N = \frac{(1.96)^2[0.68(1-0.68)]}{0.05^2}$$

$$= 334$$

Therefore, the total was 367 taking into account 10 % non - response rate.

However, considering that the target population is small the finite population correction factor was used to find the sample size formula below.

$$n = \frac{n_0}{1+ (n_0-1) \div N}$$

In this formula n is the needed sample size, S is n_0 sample size from the large population in this case 367, n is total population of healthcare workers working in the maternity department of Bwaila Maternity Unit (64 healthcare workers) and Zomba Central Hospital (40 healthcare workers) which together is 104 healthcare workers.

Therefore sample size $n = n_0 \div (1+ (n_0-1) \div 104)$

$n= 367 \div (1+ (367-1) \div 104)$

= 81 health care workers

Therefore, dividing the sample size between the two sites will be as below;

Sample size for Bwaila = 64/104*81

=50 healthcare workers

Sample size for ZCH = 40/104*81

= 31 healthcare workers

Reliability of Data Collection Tool

Reliability is the extent to which any measuring procedure yields the same results on repeated trials. The more consistent the results achieved by the same participants in the same repeated measurements, the higher the reliability of the measuring procedure (Polit & Beck, 2008). To ensure reliability of the data collecting instrument pilot testing was done on five healthcare workers from Matawale health centre, Zomba. This helped to limit the likelihood of information bias. After 2 weeks the same subjects were given the same questionnaire to respond. Scores from time 1 and time 2 were correlated using thePearson correlation coefficient test to assess the stability of the scores from time 1 and time 2. Using the same data, ceilings and flow effects were assessed.

Validity of the Data Collection Tool

Validity of a tool is when the measuring device does what it intends to do (Polit & Beck, 2008). In this study, the Maslash Burnout Inventory (MBI) which is a validated tool in measuring burnout was adapted and used for assessment. Experts were used to review the questionnaire to provide construct validity. Three senior lectures from KCN and two senior matrons from BMW were used as experts whereby they reviewed wording of the tool. The questionnaire was also reviewed by the College of Medicine Research Ethics committee (COMREC). Permission to use and adapt the tool was sought from the owner Christina Maslach and payment was done, licence to reproduce and permission to alter wording of some items in the tool were given.The Cronbach's alpha coefficients for this study were: 0.84 for EE, 0.57 for DP, and 0.74 for PA. These figures are better than those reported by a study that was done in Lilongwe which reported 0.67 for EE, 0.42 for DP, and 0.60 for PA (Thorsen et al., 2011). However, Maslach, Jackson and Leiter reported that the MBI reliability reported Cronbach's

alpha coefficients ranging from 0.50 to 0.82 for the three subscales with slightly lower values of the DP scale (Maslach & Jackson, 1981; Maslach et al., 2008).

Data Collection and Analysis

The researcher explained in detail the purpose and procedures of the study, obtained verbal consent, ensured confidentiality of all participantsand gave the participants a self-administered questionnaire. Participants were informed that there would be minimal risks associated with participating in this study that include time spent to answer the questionnaire.Healthcare workers who fulfilled the inclusion criteria voluntarily participated in this study. Healthcare workers were supposed to answer the questions in the questionnaire intheir own free time and the researcher would collect them afterwards. However, the participants were told that reminders would be sent to them after a specified period of time.

An adapted Maslach Burnout Inventory self – administered questionnaire was used for data collection. This is a standard tool in assessing burnout. However, it was adapted by changing some words like exhilarated to very happy to fit the Malawian context.

Data collection tool

The questionnaire had 50 questions which were grouped into three parts which included; demographic characteristics, job perceptions and three burnout constructs: EE that captures the experience of having one's emotional resources depleted and having no source of replenishment; DP that describes the experience of becoming cold and indifferent to other's needs; and reduced PA which is a sense of inadequacy about one's ability to relate to patients which may result in a self-imposed verdict of "failure". The questionnaire was scored to evaluate the degree of healthcare worker burnout.

Burnout is classified as high, moderate or low(table 3.1). High levels of EE and DP and a low level of PA are characteristics of burnout (Chiron, Michinov, Olivier-Chiron, Laffon, & Rusch, 2010; Maslach et al., 2001; Maslach et al., 2008). 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 Likert scale ranging 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). MBI yields three, non-cumulative scores, high mean scores on EE and DP subscales correspond to higher degrees of experienced burnout, whereas a low mean score on the PA subscale corresponds to a higher degree of burnout.Table 3.1 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

Data were verified daily for completeness and entered into Microsoft office excel 2010, cleaned, coded and merged for analysis using STATA version 13 (Statacorp, College Station Texas, USA).Demographicvariables were presented using descriptive statistics. Bivariateanalyseswere used to explore the association between the dependent (emotional exhaustion, personal accomplishment and depersonalisation) and independent variables (age, gender, marital status, facility, hours worked past week, number of dependants and absenteeism last week).

The study used logistic regression in analysing data. Logistic regression is a statistical method used in data analysis in modelling the chance of an outcome based on individual characteristics, in a dataset with more than one independent variable (Sperandei, 2014). Logistic regression analyses the independent/predictor variable (for example; age, gender, marital status) simultaneously. This process is necessary in cases when we are interested in the impact of various independent variables on the dependent variable. The process also helps in removing any confounding effects.

The model was relevant to this study because burnout as a dependent variable is associated with several factors therefore, this method of analysis was necessary to help in narrowing down to specific factors associated with burnout. The significance of the association between independent variables and burnout were assessed using the likelihood ratio test. The results of logistic regression leads naturally to Odds Ratio (OR). OR provides an estimate for and describes the relationship between two variables (exposure and outcome). It gives the number of times an event of interest occurs given exposure to the variable of interest. OR is mostly used in categorical variables hence, it is not easy to use in continuous variables. Therefore, logistic regression is used since it

produces the OR. When OR=1 it means exposure does not affect outcome, when it is OR >1 it means exposure is associated with higher odds of outcome and when it is OR<1there are lower odds of outcome (Szumilas, 2010).

Plausiblecollineality was assessed, logistic regression on independent variables was done independently against all the three burnout categories EE, DP and PA. Independent variables with a p-value of <0.05 were included in the multivariable logistic regression model to remove any confounding effects.

Ethical Consideration

The study was approved by the College of Medicine Research and Ethics Committee (COMREC) {P.02/17/2125}.Written approvals were sought from ZCH, Bwaila Maternity Unit and Zomba District Health Office. The main ethical issues included voluntary participation of the healthcare workers working in maternity department at ZCH and Bwaila Maternity Unit (mentally stable and aged 18 years of above).

Voluntary participation was ensured by informing the participants of their freedom to participate or not and even drop out in the middle of the study if they wanted to. Participants were also informed about their right to stop the process at any time, and not to answer any questions that they feel uncomfortable answering. An information sheet explaining details about the study, benefits and costs were explainedto ensure participants have informed consent. Written informed consent was obtained from study participants. Participants were also informed on the risks associated with study participation which include time and reliving the experiences and feeling. Privacy was ensured by providing the participants with a questionnaire to respond at their

convenient time. To ensure confidentiality, codes rather than names were recorded during data entry. Individual responses were also encoded so as to be kept confidential.Signedconsent forms were kept separate from completed questionnaires. The hard copies of the questionnaires were locked in a cupboard and will be destroyed after the completion of this study. The report will be handed over to hospital authorities to be aware of the findings of the study so that they can establish mechanisms to mitigate burnout or provide appropriate support and follow up.

CHAPTER4

Results

Introduction

The results are being presented in three parts according to the study's research objectives. Demographic characteristics of the participants, rates of burnout, factors contributing to burnout and measures in addressing burnout.

Demographic Characteristics

A total of 81 participants were enrolled in the study (Table 4.1& 4.2) of which50 (62%)were from the BMU and 31 (38%) where from ZCH.

Table 4.1: Demographic Characteristics of the Participants

Variables	***n***	***Percentage(%)***
Cadre		
Nurses/Midwives	69	(85)
Clinical Officer	11	(14)
Medical Doctor	1	(1)
Facility		
Bwaila Maternity Unit	50(62)	
Zomba Central Hospital	31(38)	
Temporary employment	11	(14)
Permanent employment	70	(86)
Age		
< 30 years	44	(54)
>= 30 years	37	(46)
Age mean(SD)	31.6(6.2)	
Gender		
Male	26	(32)
Female	55	(68)
Marital status		
Single	27	(33)
Married	52	(65)
Separated	2	(2)

The mean age was 31.6 years with a standard deviation (SD) of 6.2; 68 % (55) were female; 65% (52) were married. The mean number of dependants was 3.6 (SD: 3.2); 68% (55) had diploma or certificate as their highest level of education. The participants were evenly distributed in the antenatal, labour and postnatal wards. The mean duration of service at the facility was 40.5 months (SD: 37.8). The participants experienced shortage of healthcare workers at a mean of 5.2 times per week (SD: 1.8) and 70 % (57) responded that their fellow healthcare worker were absent from work in the previous month. The participants worked a mean of 50.3 hours in a week (SD: 32).

Table 4.2: Other Characteristics of the Participants

Variables	***n***	***Percentage (%)***
Educational level		
Certificate	4	(5)
Diploma	51	(63)
Bachelor's degree	24	(29)
Postgraduate degree	2	(2)
Department		
Antenatal ward	21	(26)
Labour ward	27	(33)
Postnatal ward	20	(25)
All wards(antenatal, labour, postnatal)	13	(16)
Absenteeism in the previous week		
No	24	(30)
Yes	57	(70)
Number of Dependents (mean, SD)	3.6	(3.2)
Duration of Service (mean, SD)	40.5	(37.8)
Hours worked in past week (mean, SD)	50.3	(32)

Number of times in a week with shortage (mean, SD)	5.2	(1.8)

Rates of Burnout

Table 4.3 shows high burnout ratefound at ZCH and BMU on all the three burnout categories: 75% high burnout rates on EE category, 34% high burnout rate on DP category and 33% high burnout rate on reduced personal accomplishment.

Table 4.3 : Rates of burnout among maternity healthcare workers at Bwaila Maternity Unit and Zomba Central Hospital

	Low Burnout, n(%)	**Moderate Burnout, n(%)**	**High Burnout, n(%)**
Emotional exhaustion	9(11)	11(14)	61(75)
Depersonalization	16(20)	37(46)	28(34)
Reduced Personal accomplishment	36(45)	18(22)	27(33)

Exploring on Measures that can Address Burnout

Burnout interventions should focus on both individual and organisational solutions. This is so particularly because the factors of burnout are paradoxical in nature. Table 4.4shows results of some of the measures explored to address burnout in the study facilities.

Table4.4: Exploration on Measures that can Address Burnout

	Strongly Disagree n (%)	**Disagree n (%)**	**Not Sure n (%)**	**Agree n (%)**	**Stron Agree n (%)**
Well informed about policy changes and issues affecting our work	26(32)	31(38)	11(14)	10(13)	
Participate regularly in discussions with other colleagues about the work situation in this unit	6(8)	8(10)	2(2)	43(53)	22
Hospital management communicates well with staff in this hospital	19(23)	28(35)	8(10)	18(22)	8
I would welcome more opportunities to discuss work related stress with a qualified counsellor	1(1)	2(2)	3(4)	43(53)	32
I am confident about my ability to do my job	0	2(2)	0	9(11)	70
Work on conflict between colleagues	9(11)	5(6)	9(11)	41(51)	17(20

Seventy percent (57) of the healthcare workers reported that hospital management poorly inform them on work policies and issues affecting them. Ninety three percent (73) of the healthcare workers thought that discussing work related stress with a qualified councillor is one way they would prefer to reduce burnout. Seventy one percent (58) of the healthcare workers thought that working on conflicts between colleagues could help in reducing burnout.

Factors Associated with Burnout

In this segment, associations between categories of burnout and personal and work related variables(Tables4.5 and 4.6) will be presented.High burnout ratewas compared with the other burnout categories (moderate and low levels combined) for EE, DP and PA dimensions.

Logistic regression was used to analyse the association between burnout and predictor variables(both work and personal characteristics). Personal variables included; age, gender, marital status, education level, worker type, department, months of service, hours worked in a week and absenteeism of fellow healthcare worker. Work variables included; work demand, poor communication on work policies, conflict between colleagues, low job satisfaction, department supervision and discussing work stress with colleagues. As explained in chapter 2, these predictor variables are among the many factors that influence individual burnout. Hence it was necessary to utilise them in the logistic regression model.

In bivariate analysis logistic regression was done for each predictor variable independently against all the three burnout categories EE, DP and PA. The variables with a p-value of <0.05were included in the multivariable logistic regression model. This was so because looking at multiple predictor variables independently causes one to ignore covariance among variables thereby subjected to confounding effects. The significance of the associations between burnout categories and predictor variables were assessed using the likelihood ratio test.

Table 4.5: Demographic and Work related Factors Associated with High Burnout Dimensions

Variable	BURNOUT CATEGORY	Crude OR	P– value
Name of Facility (BMU=1, ZCH=0)	**EE**	**0.13**	**0.001**
	PA	**8.31**	**0.000**
	DP	**0.39**	**0.04**
Age (<30years=0,>=30 years=1	**EE**	**4.26**	**0.019**
	PA	**0.58**	**0.267**
	DP	**1.09**	**0.02**
Gender (Male=1, female=0)	**EE**	2.38	0.108
	PA	0.72	0.50
	DP	0.77	0.58
Highest Educational Level (Cert. and Dip.=0, Bachelor and Postgrad=1)	**EE**	0.93	0.871
	PA	0.85	0.130
	DP	1.36	0.46
Department (All wards(antenatal, postnatal) =1, labour wards=0)	**EE**	**7.14**	**0.001**
	PA	**1.78**	**0.01**
	DP	**1.51**	**0.059**
Absenteeism of fellow healthcare worker (Yes=0 No=1)	**EE**	4.71	0.108
	PA	**0.34**	**0.042**
	DP	2.56	0.058
Poorly informed on policy changes (A=0, D=1)	**EE**	10.18	0.06
	PA	**11.74**	**0.000**
Poor communication from management (A=0, D=1)	**EE**	**0.197**	**0.010**
	PA	0.35	0.17
	DP	3.03	0.136
Increased work demand(A=0, D=1)	**EE**	**3.85**	**0.010**
	PA	1.72	0.262
	DP	**0.34**	**0.020**
Discuss work situation with colleagues (A=0, D=1)	**PA**	0.35	0.17
	DP	1.03	0.94
Low Job satisfaction	**EE**	**0.85**	**0.0001**
	PA	**5.09**	**0.0013**
Conflict between colleagues (A=0, D=1)	**PA**	**0.16**	**0.015**
	DP	**0.27**	**0.015**

A=Agree, D= Disagree, Categorised high (=0) vs low/moderate (=1) for EE, PA and DP scales

Table 4.6: Demographic and Work Related Factors Associated with High Burnout Dimensions (multiple logistic regression)

Characteristics	Burnout dimensions	Adjusted OR	P – value
Absenteeism of fellow healthcare worker (Yes=0 No=1)	**EE**	**15.38**	**0.05**
	PA	0.166	0.09
	DP	**9.91**	**0.054**
Name of Facility (BMU=1, ZCH=0)	**EE**	0.84	0.20
	PA	**10.06**	**0.022**
	DP	0.48	0.39
Age (<30years=1,>=30 years=0	**EE**	1.39	0.752
	DP	2.27	0.212
Department (All wards(antenatal, postnatal) =1, labour wards=0)	**PA**	**0.166**	**0.047**
	DP	3.26	0.182
Poor communication from management (A=0, D=1)	**EE**	4.25	0.377
Increased work demand (A=1, D=0)	**EE**	0.215	0.234
	DP	0.66	0.54
Poor department supervision (A=0, D=1)	**EE**	**17.72**	**0.02**
	PA	0.26	0.256
Low job satisfaction (A=0, D=1)	**PA**	**0.06**	**0.023**
Conflict between colleagues (A=0, D=1)	**EE**	**17.7**	**0.02**

Discuss work situation with colleagues (A=0, D=1)	**PA**	**0.122**	**0.026**

A= Agree, D= Disagree, Categorised high (=0) vs low/moderate (=1) for SSWEWEE, PA and DP scales

High burnout rate on EE, DP and PA category were associated with absenteeism of fellow healthcare worker, working at Zomba central hospital, working at the labour ward, poorly informed about work policy changes, poor department supervision, unable to control issues affecting ones work, low job satisfaction and increased work demands. Burnout was high among healthcare workers more than 30 years of age and among permanent healthcare workers.

In multivariate analysis healthcare worker absenteeism (adjusted OR {P-value} **15.4**(**0.05**), low job satisfaction (adjusted OR {P-value} **17.7**(**0.02**) and conflict between colleagues (adjusted OR {P-value} **17.7** (**0.02**) were the only variables found to be associated with EE. Working at Zomba central hospital (adjusted OR {P-value} **10.1** (**0.02**), low job satisfaction (adjusted OR {P-value} **0.2** (**0.02**) working in the labour and antenatal wards (adjusted OR {P-value} **0.2** (**0.05**) and poor work situation (adjusted OR {P-value} **0.1**(**0.02**) were associated with PA category. Healthcare worker absenteeism (adjusted OR {P-value} **9.91** (**0.054)** was the only variable associated with the DP category.

CHAPTER 5

Discussion

Introduction

This section discusses the study results in general, in line with the study objectives and provides conclusions as well as recommendations on how to prevent or alleviate burnout in the two hospitals. The section also relates the findings to the theory of burnout.

Rates of Burnout

The aim of this study was to determine the extent of burnout among maternal healthcare workers that provide services and care to antenatal, labouring, and postnatal women in Zomba and Lilongwe, Malawi. The findings show thatthe healthcare workers experienced high burnout rates in all the three subscales EE: 61(75%), DP: 28(34%), PA: 27(33%). These burnoutrates are high enough to affect personal and professional performance.

This isconsistent with the findings of Thorsen et al., (2011) wheresimilar high levels EE (72%), DP (43%) and PA (74%) were found at a district referral hospital, Lilongwe. However, there were different PA levels (33% in our study vs 74%). Thorsen et al., (2011), suggested that high PA levels could be due to feelings of being less competent. This is contrary to the current study since 79(98%) of the healthcare workersresponded to have confidence in the ability to do their job. In South Africa, Engelbrecht et al., (2008), reported high levels of burnout among nurses.Highlevels of EE (68.7%), high levels of DP (85.1%), and 91% of low PA.Compared to this study

results, our group similarly experienced high levels of EE with the largest percentage difference between PA and DP (33% & 28% of this study vs 91% & 85.1%) respectively. This could be because DP and PA are partly related to resource availability which was not fully collected or analysed in this study.

In Nigeria and USA, similar high level of burnout were identified among nurses and physicians respectively. Thirty nine or nearly one percent (39.1%) of the participants had high EE, 29.2% in the area of DP, and 40.0% in the area of reduced PA in Nigeria.24.1% had high EE, 15.2% demonstrated high DP, and 9.6% had a low sense of PAin USA (Kuerer et al., 2007; Lasebikan & Oyetunde, 2012). In Switzerland a cross-sectional survey on healthcare practitioners reported low percentages on high burnout on the sub-scales, 19% had a high score for EE, 22% had a high score for DP and 16% had a low score for PA (Goehring, Bouvier, Gallacchi&Bovier 2005).

The percentages of burnout are much high in the developing countries than those in the developed countries. This could be related to the differences in health system processes in terms of shortages in of human and material resources between developed and developingcountries. Healthcare workers are frustrated with such conditions in developing countries. Unlike most developing countries, developed countries have good healthcare infrastructures, good sanitation, roads, transportation and electricity(Peters et al., 2008). The findings of this study support Maslach's, inference that the majority of health workers experience high levels of emotional exhaustion and depersonalisation.

Factors Associated with Burnout

The second objective of the study was to determine the factors that are associated with high burnout rates in the three burnout categories as per healthcare workers experience. The study has shownthat there is nostatistically significant difference between male and female in all three burnout categories. Theseresults are similar to an earlier study on maternal and paediatric healthcare workers in Uganda, where no significant difference of burnout was found between male and female (Paul, 2012). The two study results agreewith what Maslach & Jackson (1985: 837) argued that "the sex of the employee is not a major factor in burnout''.

Thisstudy found that healthcare workers with high EE burnout scores were older (above 30 years old) (Crude OR {P-value} 4.26(0.019). The OR shows that the likelihood of a healthcare worker above 30 years to have burnout is 4 times higher than one who is under 30 years. Similar results were reported in Nigeria. They reported that older nurses (38 years above) were associated with high EE (Lasebikan & Oyetunde, 2012). This could be because the two countries (Nigeria and Malawi) have similar health systems. In Malawi a large number of healthcare workers are in the public sector since the private sector can only employ a few. This makeshealthcare workers in the public sector to stay in the system for a long time waiting for their retirementand in the process experiencing emotional exhaustion due to the many problems the Malawian health system is facing. This contrasts the findings in USA and Rwanda that 50 years of age or younger was associated with high burnout of EEcategory among healthcare workers (Kuerer et al., 2007; Paul, 2012).Some of the reasons for the difference in the findings could be because of the differences in health systems and also because healthcare workers can leave the system if they are not satisfied.Other factors associated

with high EE burnout included absenteeism of fellow workers, being poorly informed about work policy changes, poor department supervision, low job satisfaction and inability to control issues at work.

However, in multivariate analysis, absenteeism of fellow healthcare worker (adjusted OR {P-value} 15.38(0.05) and low job satisfaction (adjusted OR {P-value} 17.7(0.02) were the only factors associated with high EE burnout rates. This means that the risk of having burnout EE category is 17 times more in healthcare workers with low job satisfaction than those with job satisfaction. Similarly on healthcare workers working whilst their colleagues are absent the risk of burnout EE category is 15 times more. Absenteeism and low job satisfaction work paradoxically. Insufficient staff due to absenteeism increases job dissatisfaction among healthcare workers which in the end leads to job burnout.Therefore, it can be inferred that colleague's absenteeism fuels the increase in workload andit also increases the intensity of contacts with patients of the remaining healthcare workers (increases the patient-to-healthcare worker ratio of the remaining healthcare workers) which then leads to emotional exhaustion. Supporting the notion,Maslach et al., (2001), reported that workload, time pressure, demands (such as number of hours worked and number of clients) were found to be consistently related to burnout, especially the emotional exhaustion dimension.

Similarly in South Africa workload was associated with high rates of EE which gradually negatively affected healthcare workers' performance. In the same vein staff shortages, long workinghours and heavy workloads, lack of autonomy and feedback, poor participation in decision making were associated with higher burnout in Rwandan nurses(Engelbrecht et al., 2008; Paul, 2012). However, in Lilongwe, Malawi (Thorsen et al., 2011) reported that EE was not associated with any of their variables. This could

be because this type of data were not collected or analysed in this study and another possibility could be because the rates of moderate and high EE were quite high in the current study which may have limited the variance.

In multivariate analysis, high burnout rate on reduced PA category was found to be associated with health facility, poor communication on issues from hospital management, low job satisfaction and working in the antenatal and labour wards. The results of this study are consistent with findings of a Ugandan study of Paul, (2012)whichfound poor communication between hospital managers and staff beingthe most consistent association with burnout.Dissimilar to our findings they found that poor communication was consistent with all the burnout categories EE (OR 6.7, P<0.001) DP (OR 6.3, P <0.001) and low PA (OR 3.93, P0.007). Poor communication on policies and issues affecting healthcare workers makes healthcare workers feel less control over what is happening around them. External focus of control creates low self-esteem in individuals and these constitute a profile of a stress-prone individual thereby burnout occurs(Maslach et al., 2001). However, Thorsen et al. (2011), found that PA was associated with number of children a healthcare worker has. In this study and in another study in Nigeria number of dependants or children was not associated with any of the burnout categories(Lasebikan & Oyetunde, 2012).

In this study healthcare workers working in labour and antennal wards had a high burnout rate on PA category. This is expected since most labour and antenatal wards in Malawi are busy departments with fewer healthcare workers than other departments hence healthcare workers experience high workloads. Thorsen et al. 2011, indicated that burnout appears to be more common among maternity healthcare workers

than their colleagues working in other medical settings. An in-depth country analysis of the state of midwifery in Malawi found that there isunequal distribution of midwives in the country. The analysis found that there were 3,420 bedside midwives in Malawi handling approximately 4 million women of reproductive age group. Such ratios display work overload among Malawian healthcare workers hence low job satisfaction and high burnout rates(Prime health Consulting and Services, 2016).However, in Rwanda no significant differences of burnout were found among paediatric and maternity departments and this could be because both are very busy departments(Paul, 2012).

Absenteeism of fellow healthcare worker was the only factor associated with depersonalisation {adjusted OR (P-value) 9.94(0.05)} in multivariate analysis. Working whilst your fellow healthcare workers are absent was putting the healthcare workers at ground 9 times more risk of burnout DP category than working with your colleagues present. Absenteeism of healthcare workers increases workload on the healthcare workers that are present.InSouth Africa, a study on predictors on nurse's burnout found similar results that workload contributed highly on DP category(Engelbrecht et al., 2008). Different to these findings in Italy, a study on healthcare workers showed that work overload was related to emotional exhaustion. However they found a sequential link between exhaustion and depersonalisation. They found that excessive exhaustion caused depersonalisation, meaning depersonalisation co depend on emotional exhaustion (Portoghese et al., 2014).The discrepancy between the findings could be because of differences in healthcare settings between African countries and Italy. In Italy the work overload experienced by healthcare workers cannot be similar to what healthcare workers from African countries experience. Due

to differences in population and healthcare structures, healthcare workers from Italy can experience lesser workload than those in African countries.

Measures in addressing burnout

The third objective was to explore measures that can address burnout in the facilities. Healthcare worker burnout has severe negative effects on job performance and is linked to high infection rates, high mortality, turnover and high costs (Cimoitti& Aiken et al 2012). Burnout interventions should focus on both individual and organisational solutions. This is so particularly because the factors of burnout are paradoxical in nature. Research has found that situational and organizational factors play a bigger role in burnout than individual factors alone. Interventions on the individual involves enhancing individual coping mechanisms and relaxation techniques, while organisational solutions involve ensuring that occupational health requirements are met(Maslach et al., 2001).

Managers should examine workplace demands and provide resources to healthcare workers to reduce or help them cope with work demands i.e. ensuring proper nurse patient ratios are according to WHO standards (Ndaula 2012: Schaufeli 2001). Healthcare managers should develop ways aimed at reducing workload of healthcare workers and increasing their sense of control. In places like Malawi, reducing workers' workload when job resources are limited can pose major challenges to health care managers. Therefore, in such instances where managers have inadequate human and material resources, managers can provisionally reduce the workload by providing a flexible schedule to the employees such as a floating workforce. Healthcare managers may improve workers' sense of control by promoting their autonomy in the workplace.

Job autonomy is considered as an important coping mechanism in decreasing job stress(Portoghese et al., 2014).

In this study three quarters 75(83%) of the healthcare workers thought that discussing workplace stress with a qualified counsellor can help in alleviating burnout. The councillors can teach them relaxation techniques, coping mechanisms and how to manage professional demands which can help reduce burnout. Applying individual coping skills reduces emotional exhaustion in some cases. Focus on the job environment as well as personal coping skillsareessential in reducing burnout. Changes in the managerial practices as well as individual coping skills are ideal in managing burnout (Schaufeli 2001).

Morethan half 47(52%) of the health care workers reported that there is poor communication from managers on policy and work related issues. The role of management in supporting employees through effective communicationis necessary in reducing work stress. A Cochrane review of preventing occupation stress by applying work-directed interventions concluded that interventions that included communication or nursing delivery change are effective in reducing burnout, stress and general symptoms in healthcare workers when compared to no intervention (Marine A. et al. 2006). Managers must ensure that they increase participation rates of healthcare workers by using a participatory process to involve workers and their representatives in the preparation and execution of interventions. This way interventions have a better chance of being effective because the workers and their representatives were part of the decision making.

Study limitations, recommendations and conclusion

Study Limitations

The study has a number of potential limitations.

- The sample size was small and this was necessitated by the fact that the number of healthcare workers working in the obstetrics and gynaecology department of both facilities is also small.
- There is also a possibility of selection bias in this study. The doctors may not be representative of the target population of Malawian doctors working in public hospitals. A lager sample could be considered in future studies.
- There was much focus on the healthcare workers rather than patients, thus patients' factors were not included in the analysis which can be considered in future studies.
- The study results cannot differentiate cause and effect due to its cross-sectional nature. Individuals with a negative distress may perceive their work context more damaging, which would then strengthen the relations between burnout symptoms and work environment.

However, the findings may provide useful insight and basic knowledge regarding burnout among maternal health care workers. Nonetheless the results will need to be used with caution.

Recommendations

Recommendations have been formulated in order to address some of the factors that have been identified to be associated with healthcare worker burnout. The recommendations have been categorised under practice, policy and research.

Practice

Hospital managers and the ministry of health should consider reorganising work processes in the hospitals to:

- Reduce working hours and workload of healthcare workers by employing more staff.
- Reinforce measures to avoid healthcare worker absenteeism.
- Establish mechanisms to strengthen mentorship of nurses by experienced nurses, in order to promote self-confidence.
- Improve communication of policy and work issues at organisation level.
- Have special on site councillors for healthcare workers.
- Ensure that healthcare workers are autonomous.
- Develop appropriate nurse to patient ratios according to WHO standards.

Research

Future studies to focus on:

- Comprehensivemanagement of healthcare worker burnout.
- Patient factors associated with healthcare worker burnout.
- Relationship between organisation performance and healthcare worker burnout.

Policy

The following points have been recommended on policy:

- Decisionmakers in the Ministry of Health must among others monitorhealth facilities on number of employees the facilities have and consider early deployment of staff.
- Policy makers should develop hospital based policies on the recommended nurse to patient ratio based on World Health Organisation standard

Conclusion

Burnout isa common problem among healthcare workers, with high levels affecting more than half of this study's healthcare workers. However,there is substantial variation between countries, with higher percentages in developing countries and lower percentages in developed countries.High burnout were more likely to be associated with several of the variables under study; absenteeism of fellow healthcare worker, poor communication of work policy changes and issues by hospital management, being a permanent healthcare worker, work overload, poor department supervision by supervisors and low job satisfaction. Focus on the job environment as well as personal coping skills is essential in reducing burnout. Changes in the managerial practices as well as individual coping skills are ideal in managing burnout. Since the burnout phenomenon is new in Malawi more research studies are required.

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Appendices

Appendix 1: Participants Information Sheet

Dear participant,

My name is FikileKhangamwa, currently registered as a student at University of Malawi, Kamuzu College of Nursing for Master of Science degree in Midwifery. I am conducting a research project on "**assessing the level of burnout among maternity healthcare workers at Zomba and Lilongwe Malawi"** as part of the partial fulfilment of the requirement of the master's degree. I would like to ask you to participate in my study.

The aim of the study is to evaluate the magnitude of burnout among maternal healthcare workers at Zomba central hospital maternity unit and Bwaila maternity unit. Assessing burnout will help us have insight of the presence and degree of burnout at the hospital and its associated factors. This can help us in drawing management plan for burnout at the facility.

Participation in the study is entirely voluntary. You will be given a questionnaire which you will be required to answer at your own free time. This will take less than 15 minutes to be completed. You may choose to participate or withdraw from the study at any time, which will not have any effects on you. Furthermore, the study does not have any foreseeable physical harm (risks); however there might be few questions that are sensitive to some. It is possible to skip or stop answering those questions. In cases of any emotional or psychological harm you may forward your concern and complaints to the researcher at Kamuzu College of Nursing.

I appreciate that you will derive no benefit from participating in the study. No names will be used and the individual responses will be encoded to be kept confidential. Reports in this study will not identify you in any way and results of the study will be

given to you should you wish so. Should you agree to participate, I will ask you to sign a consent form or put a finger print on the space provided to indicate that you have accepted to be interviewed.

Participants

signature……Date……..

The study has been approved by College of Medicine Research Ethics Committee (COMREC) and Zomba Central Hospital.

Thank you for taking time to read this information letter.

Should you require any further information regarding the study or your rights as study participant you are free to contact me on the following number:

FikileKhangamwa 0996242949 or The chairperson, COMREC Secretariat, P/Bag 360, Chichiri, Blantyre 3.

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Appendix 2: Informed Consent Form

PLEASE READ AND SIGN THE FORM IF YOU ARE TAKING PART IN THIS STUDY

I……(Name/ Thumb Print), voluntarily give permission to participate in the study.

I have read and understood the content of the information letter and I have been given the opportunity to ask questions, where deemed necessary, about the study.

I understand that the information I give will be kept confidential and will only be accessed by the researcher and/or those people who are directly concerned with the study.

I know that I do not have to suffer any injury or harm during the research process and the information that I will give to the researcher will not be used against me in future.

…… …….

Participant's Signature Date

....

Researcher's Signature Date

Should you have any further inquiries please contact: The Chairperson, COMREC Secretariat P/Bag 360, Chichiri, Blantyre 3 or you may call on 01 989 766.

Appendix 3: Data Collection Instrument

ASSESSING THE LEVEL OF BURNOUT AMONG MATERNITY HEALTHCARE WORKERS IN ZOMBA AND LILONGWE MALAWI

1. Date: DD/MM/YYRR……../……/……..
2. Name of facility
    a. Bwaila Maternity Unity
    b. Zomba Central Hospital
3. Participant's ID (……/…/….)
4. Are you a permanent or temporary worker at the facility?
    a. Permanent
    b. temporary
5. Age in years ……..
6. Gender
    a. Male
    b. Female
7. What is your marital status?
    a. Single
    b. Married
    c. Divorced
    d. Separated
    e. Widow/Widower
    f. Other
8. How many dependants do you have? …….

9. What is your cadre?
    a. nurse
    b. clinical officer
    c. medical doctor
10. What is your highest level of education?
    a. Certificate
    b. Diploma
    c. Bachelor's degree
    d. Postgraduate degree
11. In which department are you currently working?
    a. Labour ward
    b. Antenatal ward
    c. Postnatal ward
12. How many months have you been working at this facility?…….
13. In the last week, how many hours have you worked in total? …….....(hours)
14. How many times in a week do you experience shortage of staff? .....
15. In the last month, did you have any of your colleagues being unexpectedly absent from work? …../…… (yes/no)

In the following questions about your job please rate your feelings from strongly disagree to strongly agree

	Strongly disagree	Disagree	Not sure	Agree	Strongly agree
16. I am confident about my ability to do my job					
17. There are enough nursing staff to do the work in this unit					
18. We are poorly informed about policy changes affecting our work					
19. I participate regularly in discussions with other colleagues about the work situation in this unit					
20. We are short of maternity staff in this unit					
21. Poor communication from Hospital management to staff on work related issues in this hospital					
22. The amount of work I have to do is too demanding					
23. There is enough supervision by supervisors in this department					
24. Suggestions made by staff on how to improve their work are usually ignored by hospital management					
25. I would welcome more opportunities to discuss work related stress with a qualified counsellor					
26. I am satisfied with my job					
27. In this hospital there are sometimes conflict between nurses and Doctors					

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

Section A – Emotional exhaustion

	Never	A few times per year	Once a month	A few times a month	Once a week	A few times a week	Every day
1. I feel emotionally drained by my work							
2. I feel used up at the end of the workday							
3. I feel tired when I get up in the morning and have to face another day at work							
4. I can easily understand how my recipients feel about things							
5. I feel I treat some patients/clients as if they were impersonal objects.							
6. Working with people all day is really a strain for me.							
7. I deal very effectively with the problems of my patients/clients.							
8. I feel burned out from my work.							

9. Through my work, I feel that I have a positive influence on people							

Section B – Depersonalisation

	Never	A few times a per year	Once a month	A few times per month	Once a week	A few times a week	Every day
10. I have become more insensitive to people since I've been working							
11. I'm afraid that this job is making me uncaring							
12. I feel full of energy I really don't care about what happens to some of my patients/clients							
13. I feel frustrated by my job							
14. I feel I work too hard at my job							

Section C- Personal accomplishment

	Never	A few times per year	Once a month	A few times per month	Once a week	A few times a week	Every day
15. I really don't care about what happens to patients/clients							
16. It stresses me too much to work in direct contact with people							
17. I am easily able to create a relaxed atmosphere with my patients/clients							
18. I feel refreshed/happy when I have been close to my patients/clients							
19. I have accomplished many worthwhile things in this job.							
20. I feel like I'm at the end of my rope.							
21. In my work I handle emotional problems calmly							
22. I feel recipients blame me for some of their problems.							

Appendix 4: Letter to the Director of ZCH

University of Malawi

Kamuzu College of Nursing

P.O. Box 415,

BLANTYRE.

18th October 2016.

The Hospital Director

Zomba Central Hospital

P.O. Box21

Zomba.

Dear Sir/ Madam

REQUEST FOR AUTHORIZATION TO CONDUCT A HEALTH RESEARCH AT ZOMBA CENTRAL HOSPITAL (ZCH).

I write to seek permission to conduct a research study at ZCH, maternity department (antenatal clinic plus ward, labour ward, and postnatal ward).

I am a student currently pursuing a Master of Science Degree in Midwifery at the above institution. In partial fulfilment for the degree, I am supposed to carry out a research study related to midwifery practice. The title of the research project I intend to carry out is **"assessing the level of burnout among maternity healthcare workers at Zomba and Lilongwe Malawi ".**Literature reveals that shortage of human and material resources among others are the major causes of healthcare worker burnout. Malawi faces a crisis of inadequate human and material resources due to population increase and inadequate health services funding. White ribbon alliance 2016, indicated that midwife patient ratio is currently at 1 midwife per 1200 women which falls outside

the recommended World Health Organisation (WHO) ratio of midwife to women of reproductive age group of 1:175.

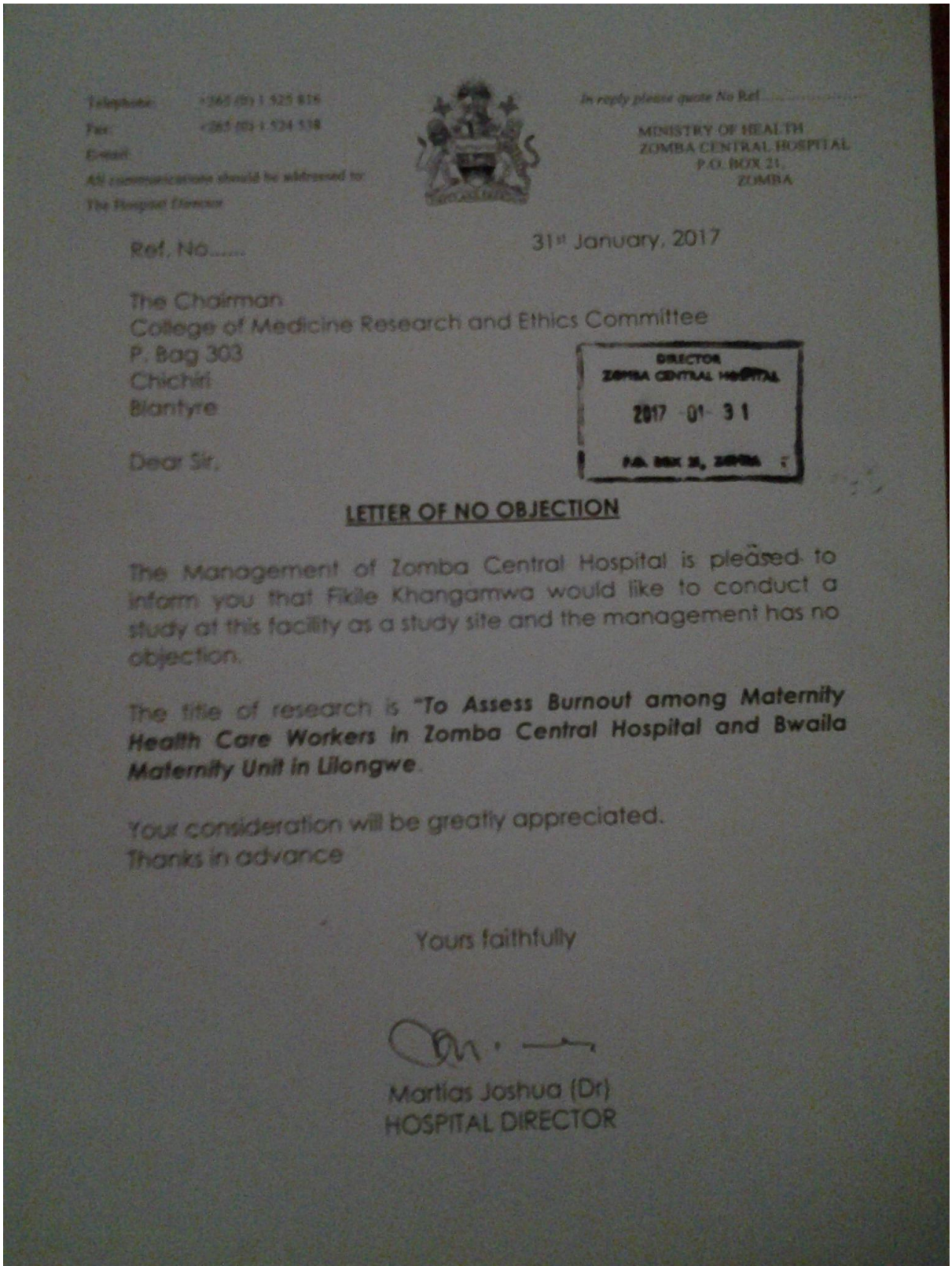
Health care workers working under such conditions are prone to burnout. Burnout among health care workers has negative effect on the health service delivery which leads to poor patient outcomes and reduces organisational performance. Therefore, it is important to assess the patterns of burnout among healthcare workers.

The results of the study will be used to find interventions that will be tailored to improve on the factors inducing burnout at facility level. Enclosed is the research proposal. I look forward to your favourable consideration.

Yours Faithfully.

FIKILE KHANGAMWA.

Appendix 5 : Acceptance Letter from Zomba Central Hospital



Telephone: +265 (0) 1 525 815
Fax: +265 (0) 1 524 518
E-mail:
All communications should be addressed to:
The Hospital Director

In reply please quote No Ref.....

MINISTRY OF HEALTH
ZOMBA CENTRAL HOSPITAL
P.O. BOX 21,
ZOMBA

Ref. No.....

31st January, 2017

The Chairman
College of Medicine Research and Ethics Committee
P. Bag 303
Chichiri
Blantyre

DIRECTOR
ZOMBA CENTRAL HOSPITAL
2017 -01- 31
P.O. BOX 21, ZOMBA

Dear Sir,

LETTER OF NO OBJECTION

The Management of Zomba Central Hospital is pleased to inform you that Fikile Khangamwa would like to conduct a study at this facility as a study site and the management has no objection.

The title of research is **"To Assess Burnout among Maternity Health Care Workers in Zomba Central Hospital and Bwaila Maternity Unit in Lilongwe**.

Your consideration will be greatly appreciated.
Thanks in advance

Yours faithfully

Martias Joshua (Dr)
HOSPITAL DIRECTOR

Appendix 6: Letter to the District Health Officer (Zomba)

University of Malawi

Kamuzu College of Nursing

Post Office Box 415,

Blantyre 3.

18th October 2016.

The District health Officer

P/Bag 18

Zomba.

Dear Sir/ Madam,

REQUEST FOR PERMISSION TO PRE-TEST A REASERCH STUDY

I write to seek permission to conduct a pre-test at Matawale Health Centre, maternity department. The main research study will be conducted at Zomba Central Hospital, maternity department and Bwaila Maternity Unit.

I am a student currently pursuing a Master of Science Degree in Midwifery at the above institution. In partial fulfilment for the degree, I am supposed to carry out a research study related to midwifery practice. The title of the research project I intent to carry out is **"assessing the level of burnout among maternity healthcare workers at Zomba and Lilongwe Malawi ''.**The pre-test study will be conducted in February 2017. Five health workers working in the maternity department will answer a questionnaire of the research study. This will help to check if the tool used is reliable and valid.

I look forward to your favourable consideration.

Yours Faithfully,

FIKILE KHANGAMWA SINGANO.

Appendix 7: Acceptance Letter to Conduct Pre-test at Matawale Health Centre

Reply please quote Ref No:
Telephone: 01 1575030
Fax:
Communications should be addressed to:
DISTRICT HEALTH OFFICER

gkwalazira@yahoo.co.uk

Zomba DHO
Private bag 19
ZOMBA

27th January,2017

College Of Medicine Research and Ethics Committee
P/Bag 360
Chichiri
Blantyre

Dear Sir/Madam,

LETTER OF SUPPORT FOR A STUDY ENTITLED ASSESSING BURN OUT PATERN AMONG MATERNAL HEALTH CARE WORKERS.

I am writing in support to the health research proposal entitled, **ASSESSING BURNOUT PATTERN AMONG MATERNITY HEALTH CARE WORKERS IN ZOMBA AND LILONGWE, MALAWI** which will be submitted to your office for approval.

This office is fully aware and in support of the health research proposal.

Please assist the researcher accordingly. Your favorable response on this subject matter will be highly appreciated.

Sincerely,

Dr Gift Kwalazira

DISTRICT HEALTH OFFICER

MINISTRY OF HEALTH
DISTRICT HEALTH OFFICER
ZOMBA -01- 17
PRIVATE BAG 19
ZOMBA

Appendix 8: Letter to the District Health Officer Lilongwe

University of Malawi

Kamuzu College of Nursing

Post Office Box 415,

Blantyre 3.

18th October 2016.

The District health Officer

Lilongwe DHO

Post Office Box1274

Lilongwe.

Dear Sir/ Madam

REQUEST FOR AUTHORIZATION CONDUCT A HEALTH RESEARCH AT BWAILA MATERNITY WING

I write to seek permission to pre-test and conduct a research study at Bwaila maternity (antenatal clinic plus ward, labour ward, and postnatal ward). I am a student currently pursuing a Master of Science Degree in Midwifery at the above institution. In partial fulfilment for the degree, I am supposed to carry out a research study related to midwifery practice. The title of the research project is **"assessing the level of burnout among maternity healthcare workers at Zomba and Lilongwe Malawi ''.** Literature reveals that shortage of human and material resources among others are the major causes of healthcare worker burnout. Malawi faces a crisis of inadequate human and material resources due to population increase and inadequate health services funding. White ribbon alliance 2016, indicated that midwife patient ratio is currently at 1 midwife per 1200 women which falls outside the recommended World Health Organisation (WHO) ratio of midwife to women of reproductive age group of 1:175.

Healthcare workers working under such conditions are prone to burnout. Burnout among healthcare workers has negative effect on the health service delivery which leads to poor patient outcomes and reduces organisational performance. Therefore, it is important to assess the patterns of burnout among health care workers.

The results of the study will be used to find interventions that will be tailored to improve on the factors inducing burnout at facility level. Enclosed is the research proposal. I look forward to your favourable consideration.

Yours Faithfully.

FIKILE KHANGAMWA.

Appendix 9: Acceptance Letter to Conduct Research at Bwaila Maternity Wing