

**WORK-RELATED FACTORS AND COPING STRATEGIES AS
DETERMINANTS OF BURNOUT AMONG NURSES AT PUMWANI
MATERNITY HOSPITAL NAIROBI**

BY

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DECLARATION

This project is my original work and has not been presented for a degree in any other university.

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DEDICATION

I dedicate this work to my children Wairimu and Mbugua for their continuous encouragement that saw me through to the completion of this research project.

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ACRONYMS AND ABBREVIATIONS

ANC	Antenatal Clinic
BSN	Bachelor of Science Nurse
CME	Continuous Medical Education
CO	Clinical Officer
CSI	Coping Strategy Indicator
DP	Depersonalization
EE	Emotional Exhaustion
EmOC	Emergency Obstetric Care
EN	Enrolled Nurse
FANC	Focused Antenatal Care
FP	Family Planning
IFAS	Iron and Folic Acid Supplementation
KEPI	Kenya Expanded Programme of Immunization
KNH	Kenyatta National Hospital
LARC	Long Acting Reversible Contraceptives
LSS/BLS	Life Saving Skills /Basic Life Support
MBI-HSS	Maslach Burnout Inventory-Human Services Survey
MN	Midwifery Nurse
MOH	Ministry of Health

MPH	Masters in Public Health
MSC	Master of Science
PA	Personal Accomplishment
PMTCT	Prevention of Mother to Child Transmission
RN/KRN	Registered Nurse/Kenya Registered Nurse
UBT	Uterine Ballon Tamponade
WOC	Ways of Coping Scale

ABSTRACT

The experience of burnout is brought about by continuous exposure to stressors and failure of coping strategies leading to exhaustion. Burnout has detrimental effects to the service provider both physically and psychologically. This study examined work-related factors and coping strategies as determinants of burnout among nurses working in Pumwani Maternity Hospital. Literature review was done on work-related factors, intervening variables and coping strategies in relation to burnout. A descriptive cross-sectional design was used. The study was conducted at Pumwani Maternity Hospital Nairobi. Study period was from August 2015 to December 2016. A total of 96 nurses were included in the study selected through Non-probability sampling. Clustering, Purposive and convenient sampling methods were used to select the sample. A self-administered data collection instrument consisting of socio-demographic data sheet, work related factors questions, Maslach Burnout Inventory -Human Services Survey and coping strategy indicator were used. Data acquired was processed using SPSS version 21, utilizing descriptive and inferential statistics. The theoretical frame work for the study is based on stress and coping by Lazarus and Folkman, (1984) and job demands and resources model Demerouti, Bakker, Nachreiner and Schaufeli (2001). Finding shows that Majority (88.6%) of the respondents were experiencing burn out. Age, gender, marital status, religion education level had a moderate relationship with burn out. Among the coping strategies, avoidance coping was found to be a significant predictor of burnout levels. As avoidance increases burnout increases among the respondents. Among the work related factors role conflict was found to be a significant predictor of burnout. When role conflict increases burnout increases. Extension of shift showed a negative relationship with burnout. Increase in extension of work shift (in hours) led to a decrease in the burnout levels. Work related factors were found to be more significant predictors of burnout than coping strategies. Results will be shared with relevant authorities (Pumwani, KNH-UON ERC, NACOSTI, and County health offices). The implication of the study shows need to implement strategies to reduce the incidence of burnout among nurses working in maternal health care facilities. These relate to increase in number of nurses, reduce workload, provision of resources, proper job description and work schedule, remuneration, training and compensation in hours for extended shifts.

CHAPTER ONE

1.1 Introduction

This chapter addressed background to the study, statement of the problem, purpose of the study, study objectives and research questions, significance of the study, justification of the study, scope of the study and limitation of the study.

1.2 Background Information

Burnout has become a subject of concern for institutions and in many occupation settings globally. This is because it has the potentiality of affecting negatively an individual's psychological and physical health as well as the effectiveness of rendering organizational services. International Classification of Diseases (ICD-10-Cm, 2015) classifies burnout under problems related to difficulties in life management. According to Schaufeli, Leiter, Maslach, (2009) in Sweden and Netherlands burnout is a managed using inter disciplinary approach. Physician, psychologists, psychiatrists, counselors and other social scientists are trained to evaluate and manage burnout (Schaufeli et al., 2009).

Freudenberger introduced burn in early 1970`s and likened burnout to putting out of a candle. This implied fire burning out because of diminishing resources (Freudenberger, 1974). Other associated factors were working long hours and frequent overtime a professional relationship which fails to bring up expected rewards resulting into fatigue or frustration. Maslach (1982) defined burnout as a psychological syndrome that makes one to be exhausted emotional detached, and experience feeling of decreased personal accomplishment occurring as a result of professionals working with other people or patients in challenging situations. According to Leiter (1991) organizational stressors such as workload and role conflict are strong determinants of emotional exhaustion. Work demands leads to emotional exhaustion, which in turn leads to feelings of detachment in the dimension of burnout (Leiter, 1991; Maslach, Schaufeli, Leiter, 2001; Maslach& Leiter 2008).

According job demands resources model (JD-R MODEL) work that requires one to expend both physical and psychological energy, sustained goals and high levels of functioning coupled with insufficient resources trigger negative effects on worker leading to burnout (Demerouti, Bakker, Nachreiner, Schaufeli, 2001)This idea was

further expounded by Bakker and Costa (2014) who put causes of burnout into two categories individual factors (personality; socio-demographic and socioeconomic status) and situational factors work demands and (lack of) work resources. Increase in work demands has been associated with systemic and psychological effects such as increased heart rate and fatigue (Bakker & Costa, 2014). On the physiological aspect it involves the activation of autonomic nervous system and the hypothalamic-pituitary-adrenal cortical-axis important for an individual's potential to adapt to stressful challenges. The constant increase activation of these systems can cause harmful allostatic load leading to heart diseases, muscle and mental problems.

Occupational setting studies done to assess burnout among groups of helping professions such as health care givers, showed burnout to occur more among people whose work involve constant demands and increased interaction with people who have physical and emotional needs (Javier, Carod-Artal & Carolina, 2013). These supported previous studies by Shanafelt, Bradley, Wipf, and Back, (2002) which pointed out that such include the health care professional were leading in high rates of burnout. In comparison with physicians or other health care workers nurses were identified to have higher levels of burnout (Embriaco, Papazian, Kentish-Barnes, Pochard, & Azoulay, 2007).

Coping is term used to denote change in thoughts and behavior in order to deal with either extrinsic or intrinsic demands that are above individual's capability (Lazarus & Folk man, 1986) the style of coping style can either take an active or passive strategy. Active coping strategies are behavioral or psychological actions aimed at altering the thoughts on or nature of the stressor. Passive coping strategies are those that lead people into activities geared towards avoidance or withdrawal from the stressor (Lazarus and Folk man, 1986).

Avoidance coping strategy and emotional exhaustion dimension of burnout were found to have a statistically significant relationship in a study done among Latvian nurses (Angel, Anton & Joan, 2003; Liana, Kristaps, & Inga, 2014). At work settings the prior identification of possible stressors, their cognitive management by workers who have adequate coping strategies can reduce the appearance and progression of burnout syndrome. A study in china revealed that nurses would use active strategies to cope with

feelings of lowered personal achievement but passively if stress was due to working environment, patient issues, Interpersonal and management conflicts Active coping decreases the negative effects of stressors by enabling one to cope efficiently in a challenging situation.

Myendeki (2008) proposes that inadequate and ineffective coping resources predisposes one to burnout .The resources provides a buffering system that interacts with exceeding demands to bring out stable mental status and behavioral out comes. Coping strategies varies with respect to their individual's, psychological and cultural orientation factors of nurses (Way,Keng and Chaur, 2011).Health professionals have been noted to be among groups of workers at risk of using negative coping such as substance abuse and end up with mental health problems such as depression, insomnia or suicidal thoughts. Despite the fact that several researches have been done on burnout among nurses, its causes and prevalence, very few of these have tried to identify coping strategies used by nurses especially in the maternal health facilities.

In African countries few burnout studies have been done and published. Javier et al.,(2003) in Malawi study pointed out lack of increase and upgrading of health facilities and shortage of human resources (vacancies for nurses in Malawi were at 65% in 2011)in a growing populations has caused increased and complicated workload for health care givers. Among those identified included shortages in equipment, physical facilities extended working time leading to in adequate rest to regenerate reduced energy creates demand-resource imbalance leading to burnout which was found to be moderate and high among nurses working in Malawi maternal health care (pregnant, laboring and postnatal women) units. (Javier et al., 2003; Vahey, Aiken, Sloan, Clarke, & Vargas, 2004).In South Africa, a study by Khamisa, Peltzer, & Oldenburg (2013) reported that burnout among nurses was related to poor work schedules, reduced resource and insecurity. Consequently the study showed a positive correlation of these work factors with three dimensions (emotional exhaustion, depersonalization and personal accomplishment).The consequences identified include low levels of productivity, reduced performance and compromised in the quality of patient care. (Khamisa et al., 2013). In Nigerian study by Okwaraji and Aguwa (2014) the factors associated with burnout included inadequate

staff, complicated patients, increased workload, conflict with staff and lack of social support. Burnout manifested with symptoms such as depression, anxiety, irritability, headache and insomnia (Okwaraji & Aguwa, 2014).

There is few published researches on burn out among medical workers in Kenya which brings limitations in documentation and management of burnout syndrome. In Kenya medical workers have been on and off strikes to agitate for better terms of service, provision of resources and better working environments, while some have opted to abandon working in public sector and develop own private practice or migrate to foreign countries .A study by Kokonya, Mburu, Kathuku, and Ndeti, (2014) at Kenyatta national hospital (Nairobi, Kenya) found that medical workers have high levels of burnout. Comparatively nurses working at KNH had higher levels of burnout than other medical cadres. The contributing factors identified by the study included social demographic characteristics and work-related such as work overload, role conflict or ambiguity, lack of opportunities for growth or poor remuneration among others. The ability to cope with the work-related factors was attributed to individual personality, support from supervisors and colleagues (Kokonya et al., 2014).

Maternity health services were declared free of charge in all public health facilities (by the president of Kenya) in June 2013. The aim was to increase accessibility to maternal health care and help reduce maternal and neonatal death. Consequently reduced cost for maternity care led to an increase in the number of people using the maternal health care facilities (*Anonymous* in Daily Impact, July 16, 2013). This has caused an increase in the workload for nurses and without concurrent expansion of facilities, equipment and number of nurses it is likely to lead to burnout. Health services in Kenya have been decentralized from being the responsibility of Ministry of Health to County Governments as a result of the implementation of devolution. The County Governments have the responsibility of equipping the hospital facilities with human and material resources. Among the issues sighted as affecting nurses in tertiary medical institutions were financial problems, lack of social support, disruptive or difficult relationships, and lack of adequate physical facilities, proper equipment, ergonomic issues and overcrowding (Lasebikan & Oyetunde, 2012). There has been dissatisfaction among medical workers

who frequently complain of poor remuneration and working conditions. This has resulted in go slows, nurses going on strike in some of the Counties and has the likelihood of causing burnout. In Pumwani Maternity Hospital nurses went on strike (April 2015) and sighted lack of security as one of their grievances. About 154 nurses provide services at the Pumwani Maternity Hospital and are employees of Nairobi County. (Pumwani Maternity Hospital, Matron`s office records-February 2016).

The nursing profession is highly demanding both physically and psychologically. On the physical aspect, a nurse has to be physically able to move around, stand for long hours or even lift the patients. Psychologically they are required to be humane and empathetic. The society or the recipients of the services also expect the nurse to be culturally and morally sensitive and be proficient. In some cases the facilities are ill equipped in terms of both human and material resources while others have less equipment than the demand of the recipients. In the maternity units, nurses provide care and services before, during and after delivery. They are also called upon to provide services during obstetric emergency, including care for the new born. The imbalance that results between the nurses` duty, resources available and commitment to provide quality care and working in a stressful environment increase risk for burnout (Bradley, Kamwendo, Chipeta, Chimwaza, Pinho and McAuliffe, 2015).

Burnout effects on individual may include elevated blood pressure, digestive problems, skin ailments, flu, lack of or increased sleep and feelings of undefined illness. It can also bring about psychological lack of concentration, reduced concern for clients, reduced motivation and justifying of failure by blaming clients. Social support has been seen to lower the impact of perceived stressors and lessen effects of burnout (Kokonya et al., 2014). It is likely that people working with other people such as health care workers utilize avoidance coping strategies as they are not allowed autonomy in the work place. (Myendeki, 2008). Avoidance coping can lead to difficulties in relations between the worker and clients or with colleagues. Eventually as burnout becomes chronic, it may lead to increased absenteeism from work due to sick offs requisition, use of medications, and use of alcohol or drugs to cope with the burnout. This has spillover effects on quality

of health care, high professional turnover and at times loss of life that could have been prevented.

1.3 Problem Statement

Hospital maternal health care services require the clinical nurse to be highly responsible. Services are given in a high pressure environment, where the care giver must be timely in attending to the client needs. Delivery (child birth) process involves pain and emotion; it has risks for both the mother and the child's health. Obstetric emergencies can arise rapidly and unexpectedly and therefore require close monitoring, professional competency and effective communication skills. A primigravida (mother pregnant for the first time) requires follow up, attention, and support during pregnancy and then through the birth process. Pumwani Maternity Hospital receives more primigravida clients who have not attended antenatal care due to surrounding slum environment. Inadequate human and material resources, poor remuneration and at times role conflict can be overwhelming to the nurses working in maternal health care services(Thorsen, Tharp, & Meguid, 2011) Shortage and increased workload results into people giving too much energy and effort and no time for recovering physically or emotionally. These working conditions could bring about burnout among nurses working in the maternal health care facilities leading to compromise on the quality of care given to the mothers. Burnout has negative health effects (physical, mental health and relationship problems) on the nurse who experiences it. Burnout is preventable if its causes are identified early to enable implementation of protective measures and interventions (Xiaofei, Lili,Hui,& Bo,2014).There is need for change in the perception of burnout as a negative mental state and more input should be given to worker potentialities and facilitation of functioning (Liana et al., 2014).The implementation of free maternity services, devolution, the consequent decentralization of maternal health services from national to county government, and an ongoing `beyond zero` initiative (since January 2014) without concurrent upgrading of both human and material resources may be precipitating factors for burnout among nurses working in Pumwani Maternity Hospital. Documentation is minimal on the relationship between work-related factors and coping strategies and burnout among maternal child health care nurses. This study therefore examined work-related factors and coping strategies as

determinants of burnout, among nurses providing services at Pumwani Maternity Hospital.

1.4 Research Objectives:

The aim of this study is to examine the relationship between work-related factors and coping strategies as determinants of burnout among nurses working in Pumwani Maternity Hospital.

1.4.1 Specific objectives:

1. To determine the relationship between work-related factors and burnout among nurses working in Pumwani Maternity Hospital.
2. To find out the relationship between age, gender, marital status, education level and burnout among nurses working in Pumwani Maternity Hospital.
3. To identify the relationship between coping strategies and burnout among nurses working in Pumwani Maternity Hospital.
4. To assess the relationship between work-related factors and coping strategies and burnout among nurses working in Pumwani Maternity Hospital.

1.5 Research Questions

1. What is the relationship between work-related factors and burnout among Nurses in Pumwani Maternity Hospital?
2. Is there a relationship between age, gender, marital status, education level and burnout among nurses working in Pumwani Maternity Hospital?
3. Is there a relationship between coping strategies and burnout among nurses working in Pumwani Maternity Hospital?
4. What is the relationship between work-related factors and coping strategies and burnout among nurses working in Pumwani Maternity Hospital?

1.6 Justification of the Study

Health facilities and services are of different levels, in terms of physical facilities, service provision and equipment as well as staffing. These are known to vary between developed and developing countries. Developing countries health care delivery system faces challenges that are different from developed country and coping with the challenges is also addressed differently. Health care facilities workers in clinical setup especially nurse

working in critical care areas, have been noted to have high rates of burnout as compared to other health workers.(Pindar, Coker, Wakil,&Morakinyo, 2012).The everyday routine of nurses involves listening to patients, attending to the inpatients as well as offering skilled service, which renders nurses working in maternal health facility to be more vulnerable to stress and therefore burnout. The work involved in a maternal health facility and the environment in which it is done is unique when compared to other sections in a hospital. The delivery process has risks and if compromised can lead to infections, disorders, fatality of mother, child or both. Burnout among nurses has been associated with absenteeism, through sick offs, increased working hours and high turnover therefore increased workload for those who remain on duty. The end result is compromise in quality of services, increase in the number of patients as the new infections and disorders occur. Inevitably it leads to economic loss due to treatment required, migration of trained nurses to other careers and countries. Most of the research done on burnout previously targeted medical workers in general (kokonyaetal.,2014).Researches targeting maternal health care workers are minimal particularly in Kenya in the period of devolution implementation and restructuring of the health care provision and control from central government to the country governments. Shortage increases the workload for the maternity nurse thereby leading to exhaustion. Bradley, Kamwendo, Chipeta, Chimwaza, Pinho ,and McAuliffe (2015) .Nurses look for excuses to escape the work load, while others at work feel disengaged and de motivated ,others may feel sad, guilty or fear that a maternal death would happen and they would lose their certificate (Bradley et al., 2015). This study therefore identified work factors, coping strategies and the relationship between these and burnout among maternal health nurses in order to formulate burnout interventions tailored to uniqueness of the facility.

1.7 Significance of study

This study examined extent of burnout, its work-related factors and coping strategies among nurses attending to maternal health clients in Pumwani Maternity Hospital. There is need for documentation of burnout and related factors in Kenya. The results will be used by health managers in maternal care hospitals to identify work related and coping factors that can lead to burnout among nurses working in maternal health facilities. Health managers can use the information to develop effective interventions to prevent

burnout among their maternal health nursing staff. The study will be a source of information for medical college trainers, nursing practice manual and other researchers on work related factors, coping strategies in relation burnout. Data acquired in this study adds to the existing body of knowledge on burnout as psychological syndrome. Insights gained from the study was used as a basis for needs assessment in continuous medical education for nurses, to suggest work related factors seen to contribute to burnout and therefore their improvement within the maternal child health units.

1.8 Scope of the study

The study sought to explore work-related factors and the coping strategies used by nurses in relation to nurses' burnout experience while providing health care services in Pumwani Maternity Hospital. The work related factors under study include material resources, nurses' workload, and Shift work, shortage of nurses, and conflict. These are factors organizations are capable of addressing if found to contribute to nurse burnout experience. Social demographic factors will include age, gender, marital status, level of education, and remuneration in the organization. Coping strategies will be organized into problem oriented coping, seeking of social support, and avoidance oriented coping. Factors such as age, gender, marital status and level of education, were included in the study as confounding variables for control purposes. This study will be confined to nurses providing maternal health care services within Pumwani Maternity Hospital. The Hospital is the largest specialized facility offering maternal health care exclusively in Kenya. Other hospitals in the country offer a blend of medical services.

1.9 Definition of concepts/terms

Burnout refers to psychological syndrome involving emotional exhaustion, depersonalization and diminished sense of personal accomplishment occurring as a result of human service professionals or working with complex patients in challenging situations. (Maslach et al., 2001, Maslach& Leiter 2008). Burnout is associated with work domain and can be equated to cumulative stress resulting from on-going work related demands.

Coping strategies are behaviors, thoughts and emotions that the worker uses to adjust to the changes that occur in the job environment. The behavioral or psychological responses

are designed to change the nature of the stressor itself or how one thinks about it (Lazarus and Folk man, 1986; Liana et al., 2014).

Depersonalization (cynicism) refers to a negative and excessively detached response to various aspects of the job such as recipients. Reflects an indifferent and distant attitude towards work (clients), disengagement from it, and a lack of enthusiasm. It is a conscious effort to create a degree of separation between oneself and the client by disregarding the characteristics that make them unique (Maslach& Leiter 2008).

Emotional exhaustion refers to an individual being over extended and emotionally drained by others. It leads to the depletion of an individual's resource, reduces service provider's capacity to interact with and address the needs of the client (Maslach& Leiter, 2008).

Reduced professional accomplishment is a general sense of one's inefficiency at work and feelings of lack of professional success and competency. Reflects an individual who feels ineffective at work as has a growing sense of inadequacy (Maslach & Leiter, 1997).Individual looks at self negatively on aspects of ability to perform the task and ability to have positive personal interactions with their fellow workers (Maslach& Leiter 2008).

Work related factors. The work-related factors can be put into two, those that involve job demands and the other job resources. Job demand are aspects of job which require sustained effort and involve physical or psychological cost, job demands include work overload, role conflict , longer shift. Job resources are those aspects of job that help to achieve work goals, reduce job demands or stimulate personal growth and development. Such factors include human resources, security, materials resources and their control. (Demerouti et al., 2001; Bakker et al., 2004; Bakker et al, 2014).

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains reviewed literature on burnout among nurses, particularly those working in the clinical areas of hospital. Comparative studies on burnout levels between nurses and other medical professionals will also be reviewed. Specific reference was on burnout among nurses working in maternal health care, the work related factors and coping strategies in relation to burnout.

2.2 Burnout

Burnout occurs in response to occupational challenges which negatively affects service providers in an organization and eventually leading to negative effects on service provision. According to Maslach (1982) dimensions of burnout include emotional exhaustion, depersonalization and reduced personal accomplishment. Sequential development and occurrence of the three dimensions of burnout is considered important in designing of interventions. Burnout may begin with low feelings of accomplishment and emotional exhaustion and then depersonalization comes as an indirect coping strategy. Depersonalization (detachment) comes about because the psychological wellbeing is damaged as one feels emotionally exhausted and inefficient. Emotional exhaustion and low personal accomplishment are considered to set in if coping strategies are inefficient (Angel et al., 2003). Reduced professional accomplishment is represented by one's inefficiency at work, feelings of lack of professional success and competency.

According to Maslach et al. (2001) excessive workload, time pressure, number of work hours or numbers of clients, role conflict and role ambiguity, undefined job responsibilities, physical environment and shift work, lack of resources, reduced support by in charges and fellow workers increase the likelihood of having burnout. Lack of autonomy/control prevents one from addressing problems that they identify, lack of work appraisals, feedback on performance, meaningful rewards and insecurity are job characteristics associated with burnout (Maslach et al., 2001). Nursing work environment involves emotions; this context may be related to emotional exhaustion outcome in

burnout. This can be explained in the fact that a nurse may need to show emotions that are considered right for the particular interactional context and other times block out own feelings. It requires the nurse to perform emotional labor in order to successfully suppress or evoke of emotions during patient care which can lead to stress. This has been confirmed in a study where high levels of burnout had positive correlation with higher amounts of surface acting or individual nurse frequency in masking emotions and pretending to have feelings that were expected but not felt (Rebecca & Wendy 2008). Burnout among nurses can be determined using Maslach Burnout Inventory-Human Services (MBI-HSS) which has 22-items that describe burnout.

2. 2. 1 Nurses and burnout

Nurses have been grouped as high risk of getting burnout because of work-related factors. Some of the factors include shortage of personnel, increased workload, physical, emotional and moral distress. A study done in a general hospital in Nigeria among nurses reported there was high level of burnout led by of emotional exhaustion (39.1%), depersonalization at 29.2% and 40.0% had reduced personal accomplishment (Lasebikan and Oyetunde 2012). Levels of burnout in terms of emotional exhaustion and personal accomplishment among nurses in China was moderate but had low levels of burnout in the area of depersonalization. These lower levels of burnout were attributed to the Chinese culture of politeness and ways of social interaction (Lin et al., 2008). While In Nigeria tertiary health institution, out of the 210 nurses in a study, 42.9% of them presented with high level of burnout in EE, 47.6% in DP and 53.8% in reduced personal RPA (Okwaragi & Aguwa, 2014).

A cross sectional study done in China involving registered nurses in five hospitals involving clinical nurses showed that those among ages 30-40 years experienced more emotion exhaustion and detachment , majority of these were females. It was also noted that those with degree or above had the highest scores in professional efficiency (Xiaofei et al., 2014). A comparative study by Pindar et al. (2012) in Maiduguri Nigeria among clinical staff, nurses (58.3%) and doctors (28.7%) manifested with higher degree of emotional exhaustion while only 4.4% in physiotherapy and occupational therapy had emotion exhaustion. This was statistically significant ($\chi^2=9.186$, $df=4$ $P=0.044$).

According to Pindar et al.(2012) the associated causes were poorly functioning systems, territorial conflicts and disputes, malfunctioning equipment and working overtime. “Some clinical situations are heart-breaking and frightening which makes the clinical workers to become angry, frustrated and hopeless. The frustrations are directed to people around them including colleagues and patients.” (Pindar et.al.2012).A study done in Malawi referral hospital on maternal health care providers reported that 72% of the respondents’ experienced emotional exhaustion, 43% depersonalization while 74% had reduced personal accomplishment (Thorsen et al., 2011).Systems failure is noted to be one of the causes of burnout among nurses working at maternal health facility. Other factors include lack of flexible duty rosters in maternity ward, insufficient personnel to cope with EmOC and unsupportive managers (Bradley et al., 2015). Burnout study by Kokonya et al. (2014) among nurses working in Kenyatta National Hospital (KNH) in Kenya reported that 94.1% of the respondents had burnout most of these nurses were below 30 years of age. The prevalence rate was found to be higher than other parts of the world such as Australia (58.0%) and England (66.0%) (Kokonya et al., 2014).However unlike most studies which reported that nursing work is highly associated with burnout, a study done in Victoria, Australia demonstrated nurses had lower levels of burnout and majority had job satisfaction (Kent &Lavery2006).

2.1 Work-related factors and burnout

Burnout has been related to work domain and therefore its risk factors are work-related. The factors can be put into two of these that involve work demands and other work resources. Work demands are attributes of job that require constant effort and involve physical energy or psychological cost; work demands include work overload, role conflict, and longer shift. Major stressors that are associated with burnout among nurses include inadequate physical facilities, being in an environment where there are critically ill patients, lack of support from supervisors, interpersonal conflicts, communication problems, lack of knowledge and insufficient social support (Kalemoglu & Keskin 2006). Several researches pointed out that extreme number of patients, heavy workload, extended shift work and long working hours, inadequate remuneration and intensive work that involves emotions as contributing factors of burnout (Circenis & Millere, 2012;

Kalemoglu & Keskin 2006;Schreuder, Plat, Mageroy, Moen, van der Klink, Groothoff, & Roelen, 2011).

In some busy hospital units have too many patients which results in poor patient practitioner bonding. Poorly functioning systems, role conflicts and interpersonal conflicts, run down equipment and frequent overtime lead to the clinical workers get exhausted (Burke & Greenglass, 2001)The continued presence of stressors in daily life diminishes the ability of nurse to cope and therefore relies on defense mechanism(American nurses Association (ANA), 2002) as the stress progresses nurse becomes detached and rigid follows rules and regulations in a rigid way without flexibility leading to withdrawal from others (Kokonya et al., 2014). Burnout effects on the individual may include mental fatigue, anxiety, lack of motivation and absconding from work leading to poor health for both the health care provider and the patient (Xiaofei et al., 2014), when a nurse becomes the patient out of burnout effects it adds to the number of existing patients, leading to strain on health services providers and material resources as well as the economy of the country.

2.3.1 Material resource shortage and burnout

Material resources are those consumable and non-consumable items that help nurses to effective carry out duties and responsibilities. Material resources if provided adequately reduce job demands, stimulate personal growth and professional development for nurses (Bakker et al., 2004).Lack of resources and equipment shortages delay onset of appropriate treatment or emergency intervention making skilled health workers frustrated and angered with the situation. Lack of proper equipment in the maternal health facilities makes the clients lose confidence in a facility and at times bring conflict between clients and service providers. Clients therefore delay to seek for maternity care even when complications arise. (Faye et al., 2011; Space-Laschinger et al., 2001). A proper enabling environment is necessary in the provision of maternal child health services, therefore absence leads to poor clinical care, and this can make women abstain from facility-based delivery making home based deliveries more popular. Home delivery can lead to complications which exacerbate the challenges facing the maternal health nurses. This becomes a source of demoralization and experience of burnout.

2.3.2 Nurses work load and burnout

Working overtime in maternity health care facility increases the number of clients/patient with varying needs that the nurse encounters. There is limited research from sub-Saharan Africa showing the negative effects of workload on burnout (Thorsen et al., 2014). Fatigue –related errors can occur during procedures leading to injury, cross infection as well as wrong judgment leading to fatality. A study in Australia by Kent and Lavery (2006) reported that the number of hours per week a nurse puts into nursing work was significantly related to burnout on the aspects of emotional exhaustion and depersonalization dimensions, especially in situations where nurses are pressured to take overtime. However, voluntary overtime schedules were not shown to have effects on the nurses as their levels of emotional exhaustion and depersonalization was at same level with those who did not work overtime (Kent & Lavery, 2006). According to the daily impact newspaper the waiver on maternal health services has seen a rise in use of maternal health facilities in the counties and therefore increased workload (Daily Impact, July 16 2013).

2.3.3 Shift work and burnout

A shift length is the amount of time taken at work from the start to end of a shift in a day. The traditional eight-hour shift for clinical nurses is subject to change and may be unpredictable as the patient needs fluctuate and unanticipated staffing changes occur (Khamisa, Peltzer, & Oldenburg, 2013). There are also no guidelines used to regulate voluntary overtime hours. In some of the instances nurses may work in two different hospitals one during day and the other night duty. According to Kent & Lavery (2006) in Australia study among registered nurses who were duress to work overtime or expected to work beyond a shift length and not paid for overtime they experienced emotional exhaustion($r=0.41$, $p<0.05$)and depersonalization($r=0.22$, $p<0.05$). Poor remuneration may make nurses to feel more coerced into working the voluntary overtime because of shortage and weak economy promoting them to look for extra income. According to Faye et. al.,(2010) longer shifts have greater likelihood of causing burnout among nurses and less patient satisfaction. Nurses who worked in shifts of more than thirteen hours had higher levels of burnout than nurses who worked shorter shifts. (Faye et al., 2010).A study by Lasebikan and Oyetunde (2012) in Nigeria reported that increased frequency of

night shifts (OR=2.4, 95% CI: 1.5-4.8) was a predictor for burnout on the area of depersonalization. Therefore as the number of hours increased the nurses were more likely to experience burnout in emotional exhaustion and depersonalization dimensions. Working manageable hours has been shown to reduce the levels of burnout (Kent & Lavery 2006).

2.3.4 Shortage of nurses and burnout

According to the bureau of labor statistics (2002) projection the United States would experience shortage by 800,000 registered nurses by the year 2020 and hence the need to understand the causative factors for shortage. According to a study by Vahey et al. (2004) the factors contributing to high turnover include stress, insecurity, exhaustion, frustration and working conditions. Human resource for health crisis has been seen to stifle efforts in reducing maternal mortality. One of the ten nurse midwives in Malawi at the White Ribbon Alliance (WRA) 2012 stakeholders meeting reported“...*Because there are so few midwives, there are times when there is only one midwife to care for six to seven women who are all in labor at the same time*” (WRA 2012).The shortage of staff has significant and negative impact on maternal outcomes. Lacks of enough staff has also made it difficult to achieve millennium development goal (MDG) to reduce the maternal mortality rate and increase the number of deliveries attended by skilled workers by year. A study by Lasebikan and Oyetunde(2012) in Nigeria reported that shortage of nurses (OR=2.6, 95% CI; 1.5-5.1) was a predictor for burnout on the area of emotional exhaustion.

According to Thorsenet.al, in African Countries mid-level health workers form the backbone of the maternal health service, particularly the nurses and nurse-midwives. There is limited research from Africa showing the negative effects of low staffing levels (Thorsen et al., 2014). The WHO (2014) reported there is critical shortage of skilled staff to provide timely quality obstetric care, which impacts on both maternal and neonatal health outcomes (WHO et. al., 2014). In Malawi the ratio was at one nurse midwife to ten (10) women. The recommended ratio by the Nursing Council should be at one midwife to five (5) women. This staff shortage was identified as one of the causes of high neonatal (510 deaths per 100,000 live births) mortality ratio(WHO et al., 2014).A qualitative study

done in Malawi by Bradley et al.(2015) on Obstetric care providers, one of the respondents who was responsible for attending to clients in several wards at night said – “in maternity has at times only one nurse working during the night, covering post-natal ward, nursery, labor ward, ante-natal ward, plus theatre when there is caesarean section - there can be emergencies in all service points at once.” (Bradley et. al., 2015)

2.3. 5 Conflict and burnout

A role conflict arises when the nurse has to perform many roles in maternal health facility within their scope of training and beyond. According to State of the World’s Midwifery report (SoWMY, 2014) developing the field of midwifery can increase the number of lives that are saved and free other cadres in the medical fraternity to focus on other health needs. At times nurses have to try and manage clients to cover up for missing doctors or clinical officers this creates role conflict. In Malawi a study by Bradley et al., (2015) reported that clinical officers trained in reproductive health and doctors can team up with nurses to deliver emergencies care in the maternal health services. However the few available are faced with dilemma of trying to manage many complex cases all at the same time leading to interruptions, incomplete tasks and unnecessary maternal deaths. Therefore the shortage of clinical officers and doctors create role conflict for the nurses. In a qualitative study by Bradley et al. (2015) a clinical officer respondent concludes -“So it pains when you are not able help and a patient dies, it becomes a pathetic situation” leading to emotional exhaustion (Bradley et al., 2015).

A study by Lasebikan and Oyetunde (2012) in Nigeria shows presence of nurse/doctor conflict (OR=6.1, 95% CI: 2.5-13.2) or absence of other health workers (OR=2.6, 95% CL; 1.5-5.1) is associated with burnout among nurses. The nurses would require paying additional attention to the patients or even trying to tackle complex situations beyond their expertise leading to stress. Having a working team has been noted to act as protective factor and therefore lack of it leads burnout among nurses (Lasebikan & Oyetunde, 2012). Conflict can also arise between the nurses and their clients or relatives. Some of such conflicts in maternity hospitals have been reported in Kenya. Nurses in Pumwani Hospital went on strike for two days to protest babies’ theft allegations. In March 2015, nurses in Pumwani Maternity Hospital went on strike to protest allegations

that newborn twins were stolen from the hospital. The nurses demanded to be transferred from the hospital on concern that their reputation had been dented by the baby theft allegations. (Hope Fm march 27, 2015). Such occurrences create nurse –clients conflict as well as moral distress for the nurses and can lead to burnout. An incident regarding nurse –relatives conflict which involved other members of community was documented in the media when a baby born in Pumwani Hospital Maternity Hospital on April 6 2015 died soon after birth and relatives demanded to know the causes of baby’s death. In this event was reported that nurses were terrorized by over 20 angry boys who locked the hospital gate and threatened them. According to Daily Nation Newspaper-Kenya the following morning nurses reporting to work put down their tools demanding to be ensured of their protection as they worked.(Anonymous in Daily Nation Newspaper, April 7, 2015).

2.4 Socio-demographic factors and burnout

The social demographic factors will be included in the study for control of extraneous variables. Burnout levels and experience has been reported to vary with age, gender, marital status, education status and work position among nurses. Socio-demographic factors and work related factors form interactive environment. Prevalence studies done earlier on burnout have reported relationships between burnout and social demographic characteristics (Kokonya et al., 2014; Okwaragi &Aguwa 2014; Rebecca & Wendy 2008; Edwards, Burnard, Hannigan, Cooper, Adams & Juggessur, 2006)

2.4.1 Age and burnout

A study done on Nigeria by Lasebikan and Oyetunde (2012) reported that older nurses experienced high levels of burnout compared to young ones, while more female than male nurses of same age had burnout. (Lasebikan and Oyetunde, 2012) In China, Lin et al.,(2008) reported that younger nurses, who have less work, are at lower levels in the hierarchy of job position do experience less emotional exhaustion as compared to older nurses especially females. Older females have more responsibility than young women in China including working around the house, a majority who work full time to sustain family income. The younger nurses experienced reduced personal accomplishment, this could be associated with the fact that they work at lower levels of career establishments

and have fewer years in work experience. In china society obedience and respect for older persons whether they are correct or not is encouraged, the junior nurse lacks autonomy and therefore the feelings of reduced personal accomplishment (Lin et al., 2008). In study carried out in Kenya (KNH) by Kokonya et al. (2014) to find out the relationship between age and burnout, younger nurses under age of 30 years experienced more burnout as compared to those over 30 years of age. A T-test comparing the means of the two groups showed higher levels of burnout was experienced by younger nurses ($t=-2.06$, $df=827$, $P.05$) than the older nurses. Highest level (97.0%) of burnout in the study was found to be in the age group below 30 years (Kokonya et al., 2014).

A study done in Australia by Kent and Lavery, (2006) reported that the age of nurses and years of working were negatively associated with depersonalization, but age (mean age being 43.94) was significantly associated with emotional exhaustion. Older nurses experienced less burnout. Higher levels of emotional exhaustion and depersonalization among younger nurses could be explained by the fact that they have less years of experience in the field of nursing as well as they may not had a chance to upgrade training or attend continuous medical education and develop interpersonal skills (Kent & Lavery, 2006).In most of the studies young nurses were considered as those with less than 35 years of age and experienced significantly higher levels of burnout in the three components (EE, DP and PA) as compared to those above 35 years of age. Nurses below 30 years of age were more likely to get agitated and less likely to have techniques of managing these feelings and therefore higher levels of burnout. (Okwaragi & Aguwa 2014, Rebecca & Wendy 2008; Edwards et al., 2006)

2.4.2 Gender and burnout

Males and females have been known to respond to stressors differently. This is affirmed by a study in Nigeria by Okwariji and Aguwa (2014) which reported different strategies used by male and female nurses to cope with stress. Female nurses in the study had higher levels of burnout. This could be attributed to the dual role played by females both as the home maker with full household work, caring for children as well as their full time job. While their male counter parts are likely to visit social places instead to ease off the day's tension (Okwariji & Aguwa 2014).

A study in China reported there were no significant differences in the levels of burnout in females and males. (Lin et al 2008). This could be attributed to the different cultural setups that define community gender roles. Both male (96.8%) and female (94.9%) were found to be experiencing burn out in a study done among medical workers in KNH-Kenya (Kokonya et al., 2014).

2.4.3 Marital status and burnout

Marriage brings about responsibility for the health worker and can also be a source of support for the health worker in case they are experiencing stress. According to Adekola (2009) unmarried compared to the married nurses in a Nigeria study experienced higher levels of burnout married. The differences in the levels could be due to the fact that among the unmarried nurses majority are young and therefore likely to be given more workload. The married female nurses are also likely to take maternity leave and therefore get time to recover away from work environment. Married nurses with supportive spouses are also less prone to burnout. (Okwaragi & Aguwa 2014; Adekola 2009). Domestic duties such as taking care of children and spouse can intensify the responsibilities of the health care worker and create distractions that interfere with job performance. As the number of respondent`s children increased there was increase in burnout on the dimension of reduced personal accomplishment. This creates family work conflict at times manifested by expression of detachment and feelings reduced efficacy at work (Thorsen et al., 2014; Proost, De Witte, H., De Witte, K., & Evers, 2004). In a study in Nigeria marriage was found to be a protective factor against high levels of burnout (Lasebikan & Oyetunde, 2012).

2.4.4 Education Level

Nurses who have undergone basic nursing are required to attend midwifery course in order to be registered as nurse-midwives. Lack of this training brings about Shortage of nurses because certain skills are important for one to be able to manage obstetric emergencies. One way that hospitals try to deal with shortages is to hire locum staff to cover shortage. However some of those who take up the locums are not trained in emergency obstetric care (EMOC). In a study by Bradley et.al., (2015) a maternity ward in charge pointed out that it is stressful to know staff failed to resuscitate a baby, did not

know how to deal with a mother who is on delivery and perform vacuum extraction or manual removal of placenta leading to loss of life of the baby, mother or both because of inadequate obstetric skills. (Bradley et al., 2015) Lack of adequate and skilled staff undermines performance and professionalism .It may make the nurse want to follow shortcuts because of being alone and therefore limit the amount of time spent on one client. For example, one may just give antibiotics to post caesarean patient without checking the wound healing. (Thorsen et al., 2014; Bradley et al., 2015). This is coupled with fear of consequences from the registering bodies' such as nursing council. Nurses with higher levels of education are likely to be allocated greater responsibilities. As a result, nurses with more years of education experienced higher levels of burnout (Maslach et al., 2001)

2.4.5 Remuneration and burnout

A study by Lasebikan and Oyetunde (2012) in Nigeria showed that poor pay were significantly associated with burnout in depersonalization ($p=0.04$), emotional exhaustion ($p<0.02$) and in the area of reduced personal accomplishment ($p=0.01$). Nurses in Kenyan counties have constantly agitated for better terms of service and working environment. Some of them have opted to relocate and work in other countries including South Africa and United States. This possibly suggests dissatisfaction at work with burnout as an underlying cause (Kokonya et al., 2014). A study done by Okwaragi and Aguwa, 2014 among nurses in Nigeria, reported that senior nursing officers are normally in supervisory positions and are responsible for ensuring nursing staff compliance with standards and instructional regulation as well as patient satisfaction. This predisposes them to constantly feeling of overstretch leading to burnout. The senior ranking nursing officers experienced higher burnout levels than their juniors (Okwaragi & Aguwa, 2014).

2.5 Coping strategies and burnout

Coping has been defined as changing thoughts and actions for managing the specific extrinsic and/or intrinsic demands judged as exceeding or surpassing the individual's own resource (Lazarus & Folk man; 1986). The coping style can either be active or passive coping. Active coping strategies are reactions designed to change the nature of the challenges or thoughts about them. Passive coping strategies are those that lead people

into withdrawal or avoidance which prevent them from directly addressing the problem. A study in china by View et al. (2005) revealed that nurses cope actively with stress due self-inefficacy, but passively when challenge was due to working environment problem, interpersonal and management conflicts and patient care (View, et. al., 2005). According to Xiaofei et al. (2014) in study on coping and burnout older nurses in terms of age and profession involvement years had more life experiences and may have lower tendencies to use passive coping styles, had high confidence and less burnout. Younger nurses were identified to experience more burn out than their older colleagues (Xiaofeili et al., 2014). Studies show active coping to be negatively associated with emotional exhaustion and depersonalization but positively associated with professional efficacy, where passive coping was increased, emotional exhaustion scores increased accordingly. Active coping can be a positive factor in reducing incidence of burnout because it decreases the negative impact of stressors by strengthening nurse`s efficiency in a specific situation (Xiaofeili et al., 2014).

2.5.1 Problem-oriented coping and burnout

Problem-oriented coping is characterized by confronting the problem, planning for problem-solving and seeking social support. Coping oriented to problem focuses on dealing with the problem or stress situation. A study carried out by Liana et.al (2014) in Latvia reported that the most used way of coping was “planful problem-solving” ($M=1.70.SD=0.47$) in a total sample of 484 nurses. Studies suggest that nurses who use problem-oriented coping have shown to have higher mental health indicators are able to successfully resist and overcome job stressors and therefore display higher job satisfaction (Liana et. al., 2014). Effective control by workers on the resources and abilities necessary for working in a convenient and comfortable environment has been noted as important in reducing effects of work related stress and therefore burnout. Provision of quality maternal health care depends on the health of the nurses providing the care. Individuals experiencing burnout feel psychologically drained and emotionally exhausted, in this event if the coping resources are inadequate and ineffective, a nurse may not effectively provide quality care. (Myendeki, 2008). The resources provide buffering effect that interacts with a challenging situation and therefore contributes to the mental status and behavioral out comes.

2.5.2 Social support and burnout

A study by Lin, Winsome, and Carol,(2009) nurses who receive support from friend have shown to have lower levels of depersonalization while those who receive support from their co-workers or in charges experienced lower levels of emotional exhaustion (Lin et al., 2009) which is consistent with other studies that reported negative relationship between burnout social support and active coping. A positive environment where colleagues support each other and the managers support their nursing staff can be one way of reducing the incidence of burnout (Kent & Lavery, 2006). Younger nurses have higher tendencies of using social support as a coping strategy, which can be associated with having had less experience in work, life and also feelings of insecurity. Older nurses with increased years of experience were reported to experience less emotional exhaustion (Lin et al., 2009; Kent & Lavery, 2006).

The use of religion as a source of, social support brings about emotional support and hope. In a qualitative study in Iran, by Mohammad M.s, Armin, Abbas, & Mohammad S, (2014) nurses were found to use spirituality as way of coping. This was on the basis of their understanding of teaching in Muslim's holy book Quran (Mohammad et al., 2014). The responses given in this study pointed out nursing care as a religious duty where more attention is towards satisfying God and the spiritual rewards in it. Therefore offering nursing care becomes more meaningful as it involves loving, empathizing and helping people. Other Studies revealed that those who use religion as coping strategy at work suffered less depression and anxiety (Ganji & Hossein, 2010; Yuen, 2008). Although the above studies emphasis in the use of religious and spiritual beliefs as way to cope with challenges at work and to make nursing responsibilities more endurable, a study carried out in Kenya (KNH) recorded that Christians who constituted 95.6% of the medical workers and Muslim 2.0%, with a burnout level of 100.0% showed that burnout occurred irrespective of religious faith of care giver (Kokonya et al., 2014). Consequently there is need to acknowledge that religion and spiritual beliefs are more personal and as a coping strategy may only be applicable to those who subscribe to the said religion or spiritual beliefs. The use of specific coping strategy may be different across various regional groups.

2.5.3 Avoidance –oriented coping and burnout

The avoidance-oriented coping may involve person-oriented or task-oriented responses; where an individual faced with stressful situation may seek out other people engaging in social diversion or by engaging in another task to seek distraction. Shortage increases the workload for the maternity nurse thereby leading to exhaustion. The continuous exhaustion has effects on the family life. As a coping mechanism some of the nurses use fake excuses to get away from the work load (Bradley et al., 2015). The use of avoidance/emotion oriented stress coping strategy is associated with psychological competence, self-image of the nurse, professionally significant behavior and personality traits (Liana et al., 2014). Individual differences in coping also exists and they are influenced by the state of health, levels of hardiness a personality construct associated with sense of control of that individual, other influencers include effective problem-solving skills, confidence ,adequate resources and social support (Lazarus & Folk man 1986).It is likely that people working with other people such as health care workers utilize coping oriented to avoidance as they are not allowed resource control in the work place (Lazarus & Folkman, 1986).

Although Kenyan medical workers suffer extremely high levels of burnout as compared to medical workers in other countries, there have been no serious consequences on the individual workers such as those encountered earlier in United Kingdom between 1990 and 1992, where 152 nurses, midwives and other health workers killed themselves. This has been associated with ‘personality hardness’ coupled with good professional leadership relationships, training and team supervision which helps prevent burnout syndrome (Kokonya et al., 2014). In conclusion most of the published literature on burnout among the health care professional is from research done in the western countries. Few are from the sub-Saharan Africa especially in countries deficient of health resources and experiencing growth in population. Researches targeting maternal health care workers are minimal and particularly in Kenya in the period of devolution implementation and restructuring of the health care provision and control from central government to the country governments. As a strategy in meeting millennium goal number 5, on reducing the maternal mortality rates, maternity services have been declared free. Therefore this study endeavored to determine burn out experience, its

relationship with work related factors and coping strategies among nurses working at Pumwani maternity Nairobi, Kenya.

2.6 Conceptual framework

This study intends to examine work related factors and coping strategies in burnout among nurses and the relationship between the three concepts. The conceptual framework for the study is based on theories on perception of stressors and coping by Lazarus and Folkman (1984). The transactional model of coping is useful for primary, secondary and tertiary prevention of burnout. Therefore appropriate for burnout prevention and formulation of intervention strategies among nurses. In this study transactional theory is reflected in the relation between the nurses' burnout, work-related factors and coping strategies. The theory entails primary appraisal which involves person's assessment of the significance of the situation as negative or positive, manageable, challenging or insignificant. Primary appraisal can be described as a subjective evaluation of potential risk. Evaluation may be influenced by factors such as age, gender, marital status and education level. Secondary appraisal is about assessment of the situation controllability, coping resources and options. A failure to use a matching coping strategy to cope with increase in demands and lack of resources can lead to burnout. The theoretical models of burnout agree on that continuous discrepancy between what are expected and unconducive working conditions with dysfunction ways of coping lead to burnout (Lazarus & Folkman 1984; Demerouti et al., 2001; Maslach & Leiter 2008).

Conceptual Framework

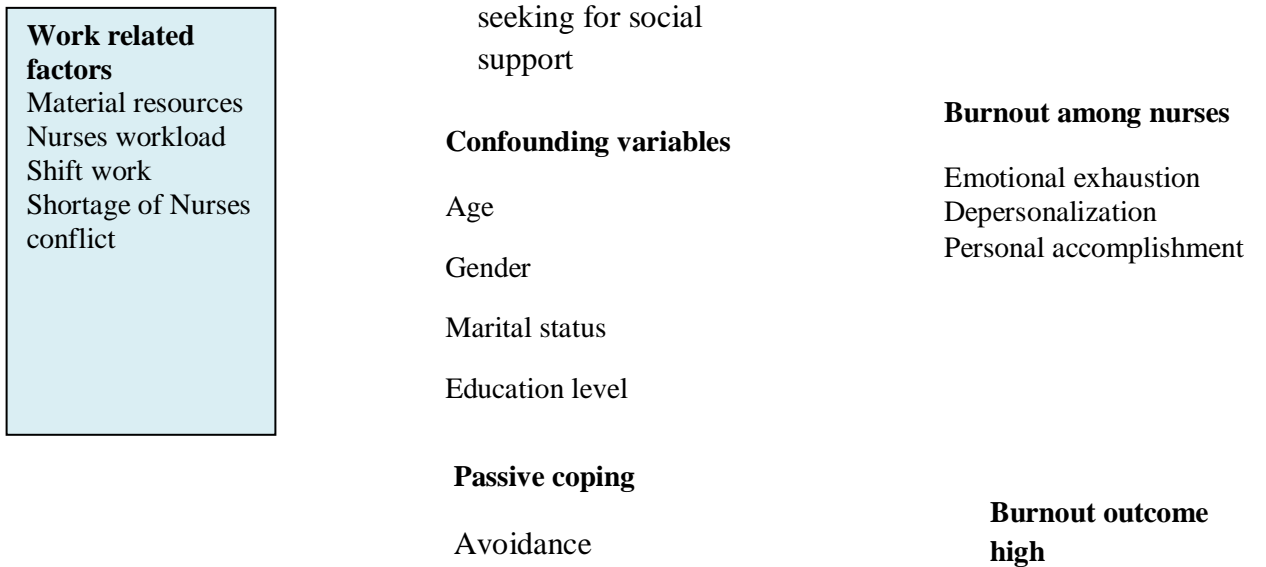


Figure 1: Adopted and modified from Lazarus and Folkman (1984), amplified by Naceur and Zriba, (2015)

2.7 Jobs demands- resources model of burnout

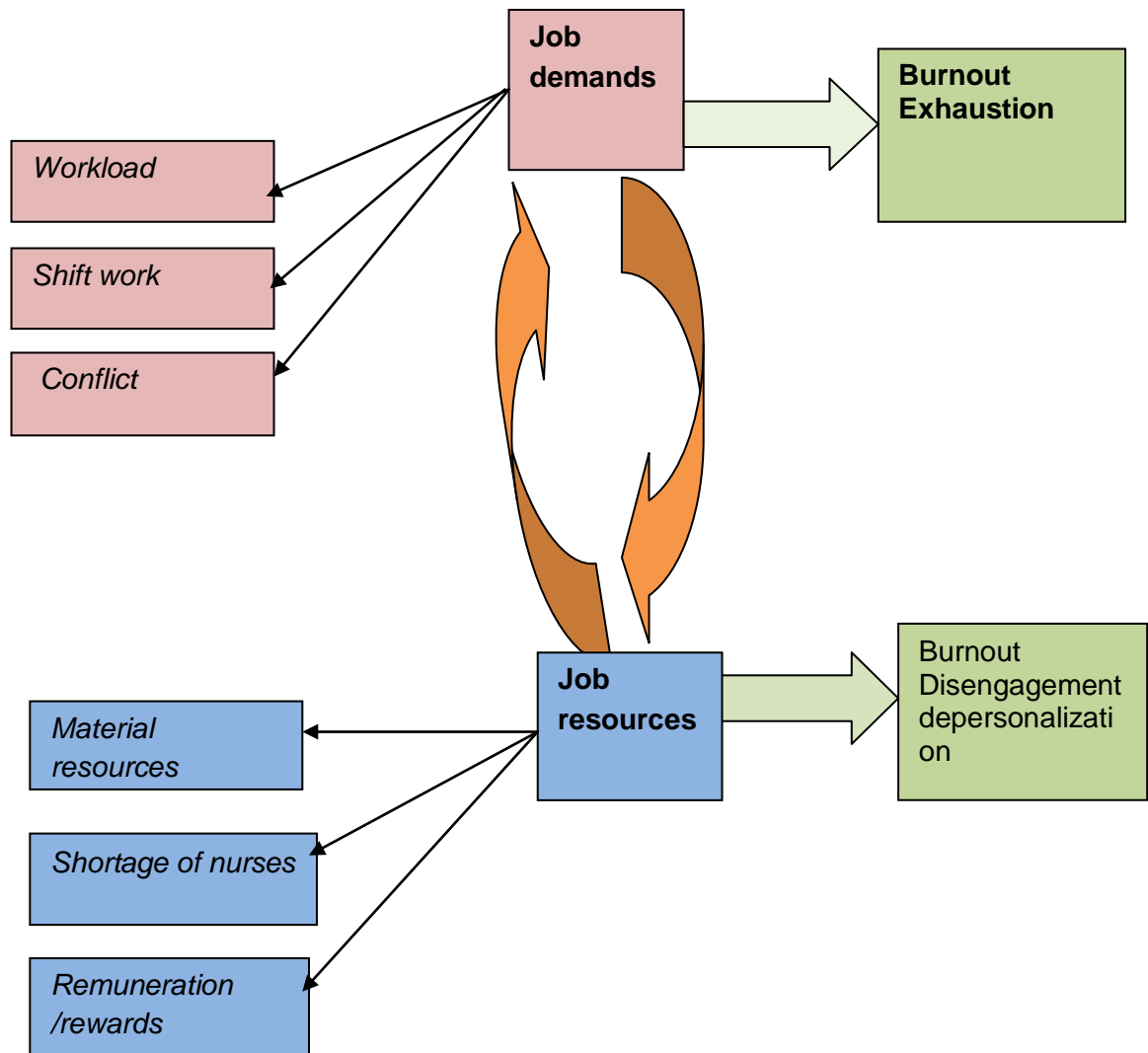


Figure 2: Job demands- Resources model of burnout adopted and modified (Demerouti et al., 2001; Demerouti& Bakker, 2006).

JD –R model of burnout proposes that burnout has two processes. The first process involves the increase of factors related to job demands that constantly over task the worker leading to exhaustion. The second process is where there is lack of resources which makes accomplishing job requirements difficult for the worker leading to withdrawal behavior and consequently disengagement. The JD-R model is validated in occupations where workers are in constant contact with people such as nurses (Demerouti et al., 2001). An imbalance of demands over resources is a contributor to burnout. When

demands increase such as more clients/patients with more intense requirements resources fail to keep pace (Demerouti, 2007). The resources could be insufficient personnel and equipment supplies, or space to meet the demands. Insufficient opportunity to rest and regenerate depleted energy aggravate the exhausting impact of demand-resource imbalances.

2.8 Hypothesis

1. H_0 : There is no relationship between work related factors and burnout among nurses in Pumwani Maternity Hospital.
2. H_0 : There is no relationship between coping strategies and levels of burnout among nurses working in Pumwani Maternity Hospital.
3. H_0 : There is no relationship between age, marital status, and gender and burnout levels among nurses at Pumwani Maternity Hospital.
4. H_0 : There is no relationship between work-related factors and coping strategies and determinants of burnout among nurses working in Pumwani Hospital

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discussed the Research study design that was adopted, Sampling method used, sampling procedure, study area, target population, research instruments, data collection procedure, data analysis as well as presentation and ethical considerations are outlined.

3.2 Research design

This was a hospital based descriptive cross-sectional study which sought to examine work-related factors and coping strategies as determinants of burnout among nurses in the maternal health units, departments and maternity wards. Primary data was obtained from the nurses working at Pumwani Maternity Hospital, while secondary data was obtained from hospital records, published information from journals, books, and internet sources.

3.3 Study Area

Pumwani Maternity Hospital serves as a referral maternity hospital as well as a local maternal child health facility for Nairobi County and the slum dwellers in its environs. It is located on the East of Nairobi City. The Hospital falls under the jurisdiction of Nairobi County. A Pumwani Maternity Management Board that is appointed by County Government oversees its operation. To date the Hospital remains the largest maternity hospital in the Country and in the Sub-Saharan Africa. It is equivalent to a Provincial Hospital in status and is reported to be third busiest maternity hospital in the African continent. Pumwani Maternity Hospital has a total of 154 nurses (Pumwani Maternity Hospital Matron's office records-February 2016) .At the time of study out of 154 nurses deployed in the hospital, 20 were on annual leave,4 on study leave and 3 on maternity leave. Accessible population therefore was 128 nurses. The hospital is organized into two surgical wards, maternal child health/family planning clinic, inpatient wards (labor ward and post-delivery ward), newborn unit, theatre and an accommodation hostel which is used for the women awaiting labor, discharge or with infections.

3.4 Sample selection

Pumwani hospital was purposefully selected because it is the largest maternal health care provider offering only maternity services. The population of interest comprises of nurses

working in Pumwani Maternity Hospital at least for the last six months. These are enrolled nurses (EN), registered nurses (RN), degree holders in nursing (BSN), as well as nurses who have specialized in midwifery (NM). A list of all service points was used to provide a sampling frame. Out of the list, surgical wards, maternal child health/family planning clinic, inpatient wards (labor ward and post-delivery ward), newborn unit and theatre. Nurses working in these areas were selected using Purposive and convenient sampling methods. Non-probability sampling was used because of the size and distribution of the population.

3.4.1 Inclusion /Exclusion Criteria.

Nurses on duty during the data collection period and have worked in the hospital for the last six months were included in the study; however those on part time/locum were excluded from the study to control for other intervening factors outside Pumwani Maternity Hospital practices. Among the service points accommodation hostel was excluded from the study since it is served by student’s nurses.

3.4.2 Sample size estimation

To ensure that the sample is a representative of target population and characteristics or parameters of population are obtained with precision a formula by Yamane (1967, 2001) was used where n” is the sample size, N” is the population size and e” is the level of precision (Amplified by Koc and Dincerol, 2013).

Level of precision (sampling error) e=5 %(0.05)

Confidence level (For social sciences) =95%

Degree of variability 50 %(0.5)

$$n = \frac{N}{1 + N(e^2)} = \frac{128}{1 + 128(.05)^2} \quad \text{SAMPLE SIZE} = 96$$

3.5 Research Instruments

The instruments for the study included Maslach Burnout Inventory-Human Services Survey (Maslach and Jackson, 1986) coping strategies indicator (Amirkhan, 1990) and a

researcher developed questionnaire. The research instrument was presented in the form of a self-administered questionnaire.

3.5.1 Maslach Burnout Inventory-Human Services Survey (MBI-HSS)

The MBI-HSS has 22 items elaborated for health care professionals. It has a likert type response format with options of never (0), a few times per year or less (1), once a month or less (2), a few times per month (3) once per week (4) a few times per week (5) and every day (6). Emotional Exhaustion (EE) - has a nine items includes (1,2,3,4,5,6,8,13,14,16). Has characteristics such as physical wear, exhaustion, fatigue and loss of energy and shows combination between physical and mental. Depersonalization (DP) - has five items (5, 10, 11, 15 and 22) manifests negative aspects of the responses and attitudes involving other individuals, including work mates. Irritability and loss of motivation are also represented. Personal accomplishment (PA) has eight items (4, 7, 9, 12, 17, 19, and 21) shows typical negative responses aimed at respondent and work achievements. All 22 items were considered as one-dimensional in this study. The word recipient was replaced by maternal child health clients to limit the scope of study to maternal health care work. To avoid difficulties in interpretation, callous was replaced by insensitive, exhilarated by refreshed. Burnout was conceptualized as a continuous variable ranging from low to moderate to high degrees. Respondents were classified as experiencing high, moderate or low burnout. High and moderate levels indicate presence of burnout.

3.5.2 Validity and reliability of MBI-HSS

MBI-HSS was examined in study by Cordoba et al. (2011) to establish its psychometric properties of reliability and validity. The results showed that the instrument has good internal consistency ($\alpha=0.767$) (Cordoba et al., 2011). Construct validity of MBI-HSS with regard to its reliability, coefficients of internal consistency of the three subscales varied between 0.82 and 0.90 for EE, 0.82 and 0.89 for DP, and 0.57 for PA (Maslach and Jackson, 1986; Angel et al., 2003).

3.5.3 Coping strategies indicator (CSI)

The coping strategies indicator (Amirkhan, 1990, 1994) is a 33 item self-report measure that is based on ways of coping questionnaire by Lazarus and Folkman (1984) it seeks to

measure three basic coping strategies, problem solving, seeking social support and avoidance. Responses on each of the CSI 33-items are indicated by means of a three point scale: a lot (3), a little (2), or not at all (1). The three subscales each contain 11 items and subscale scores are calculated by summing responses to appropriate items (range 0–33), higher scores indicate greater use of the strategy. Nurses were asked to think of work related problem that occurred within the last 6 months and to consider the manner in which they had coped with it.

3.5.4 Validity and reliability of coping strategies indicator

Cronbach's alpha coefficients indicate adequate internal consistency for each of the subscales ranging from 0.86 to 0.98 for Problem Solving, 0.89 to 0.98 for Seeking Social Support and from 0.77 to 0.96 for Avoidance (Amirkhan, 1990; Bijttebier & Vertommen, 1997; Frota and Zanini, 2013).

3.5.5 Socio demographic and work related factors Questionnaire

Researcher-developed questionnaire includes work-related factors and social-demographic questions. The work related factors questions were used to collect data on material resource shortage, nurses' workload, and shift work, shortage of nurses, and conflict at work environment. The social-demographic part was used to collect data on gender, age, marital status, nursing qualification, education and professional qualification, number of years in nursing profession and maternal health units (antenatal, postnatal, labor ward, theatre and neonate care).

3.5.6 Pilot study

A pilot study was conducted in maternal and child health units in Mbagathi Hospital in Nairobi County. Out of a population of 30 a sample of 20 nurses were used. The purpose of the pilot study was to determine feasibility of the data collection method and validity of instrument. It also helped in identifying any problems encountered when filling the questionnaire and the amount of time taken. The data collected was analyzed to find out whether it is responsive to research questions /objectives. Cronbach's alpha for the instrument was 0.75 and 0.86 for the pilot 0.79 and 0.82 using the group. Questions found to bring problems were modified.

3.6 Data analysis

Data was processed through SPSS version 21. Analysis of data utilized descriptive and inferential statistics. Percentages, means and standard deviation represent descriptive statistics. Analysis of variance (ANOVA) was used to examine differences in coping strategies. Multiple linear regressions was used to determine whether there is a significant relationship/ association between work-related factors, coping strategies and burnout.

3.7 Ethical Considerations

The study was carried out in line with the guidelines stated by the Helsinki declaration on competent persons. Ethical approval was sought from KNH-UoN research and ethics committee. Permission to conduct study was sought from NACOSTI; county director of health (Nairobi County). Permission to collect data was obtained from the Hospital Superintendent in charge of Mbagathi and Pumwani Maternity Hospital, Matron in charge of Pumwani Maternity Hospital as well as nursing officers in charge of various sections. Consent was sought through written requisition attached to the questionnaire. Respondents who agreed to participate in this study signed a consent certificate. To ensure confidentiality coding of participants was used instead of the participants' real names.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents findings and analyses of results within the framework of the set study objectives. The first section shows various descriptive statistics of demographic characteristic, work related factors, coping strategies and burnout levels. The second section presents the results from inferential analysis to determine the relationship between dependent variable and independent variables. This Chapter therefore provides descriptions of the results and the subsequent discussions.

4.2 Response rate

A total of 96 respondents representing 98% response rate were successfully reached during data collection stage of the research. This response rate sufficiently surpassed the minimum threshold sample size of 10 % as suggested by Gay (2005) and the 30% as considered acceptable by (Kothari, 2004). The respondents were distributed equally across Pumwani Maternity Hospital where each respondent had an equal and independent chance and each respondent had only one chance.

4.3 Socio demographics

The demographic information of the study group in regards to gender, age, and level of education, religion, marital status, and professional qualification was follows.

4.3.1 Gender of the respondents

Table 1: Gender of the respondent

Gender:		
	Frequency	Percent (%)
Male	22	23.2
Female	73	76.8
Total	95	100.0

Represents gender, majority of respondents 76.8% (n=73) were females and male were the minority respondents representing 23.2 % (n=22).

4.3.2 Age of the respondents

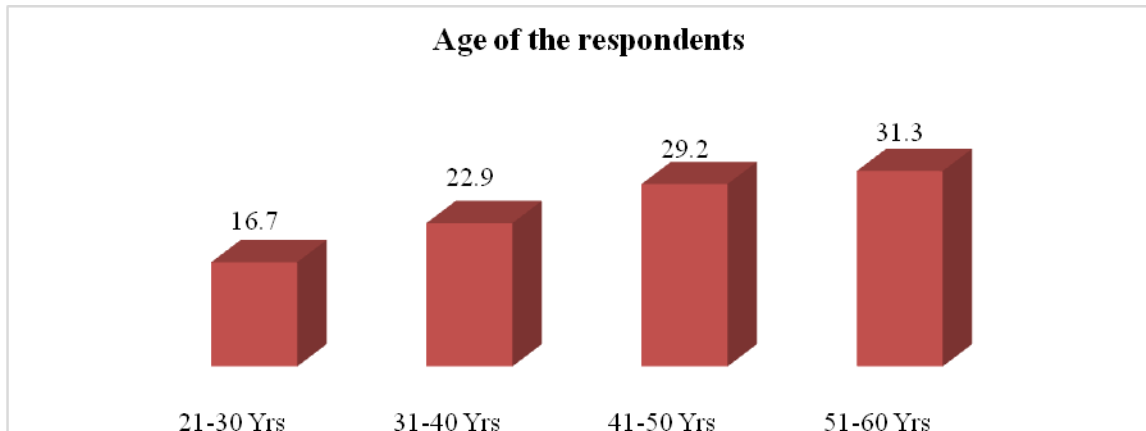


Figure 3: Age of the respondents

Figure 3 represents ages of respondents in years, majority of respondents 31.3% were in the age group 51 to 60 Years followed by 41 to 50 years age group at 29.2% then age group 31 to 40 years at 22.9% and those between 21-30 years of age were minority respondents representing 16.7%.

4.3.3 Level of education of the respondents

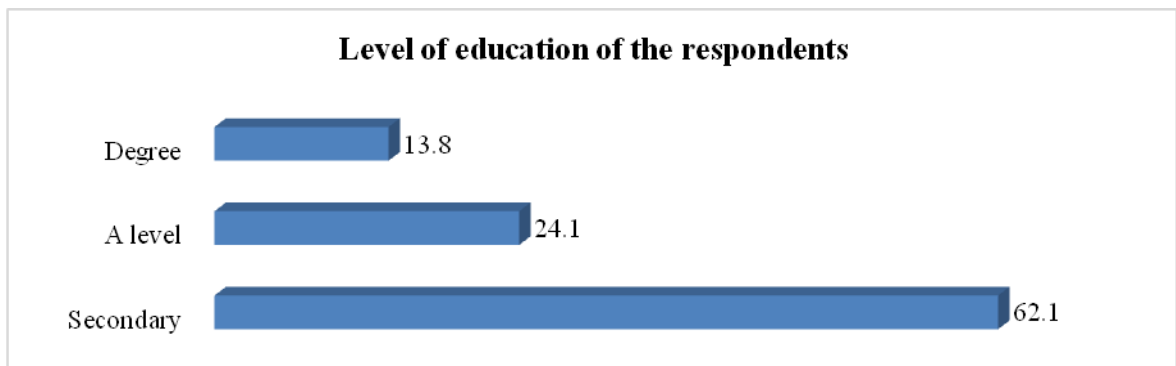


Figure 4 : Level of education of the respondents

Figure 4 represents level of formal education among respondents, majority of respondents (62.1%) had attained secondary education followed by those who had A-level education at 24.1% and those with bachelors' degree education were the minority representing 13.8%.

4.3.4 Marital Status of the respondents

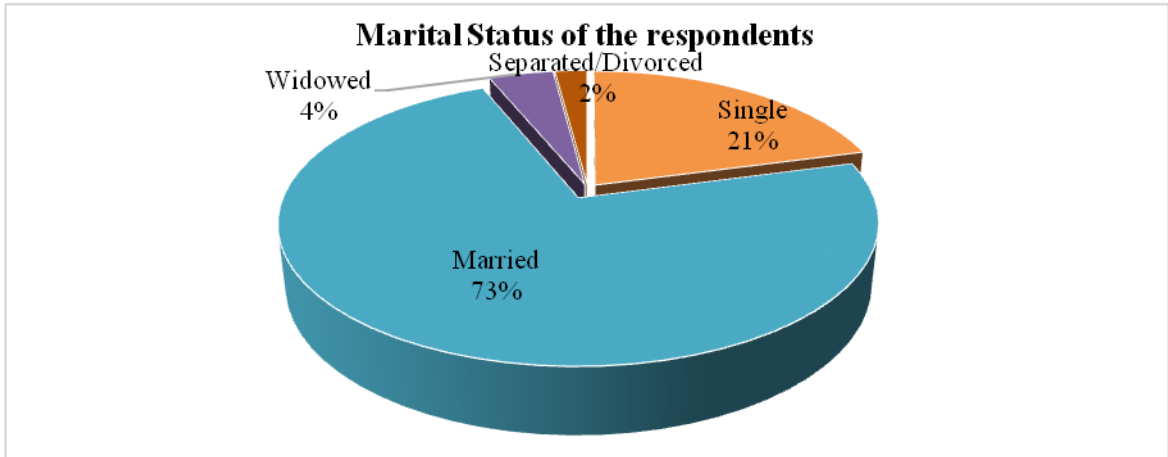


Figure 5 : Marital status of respondent

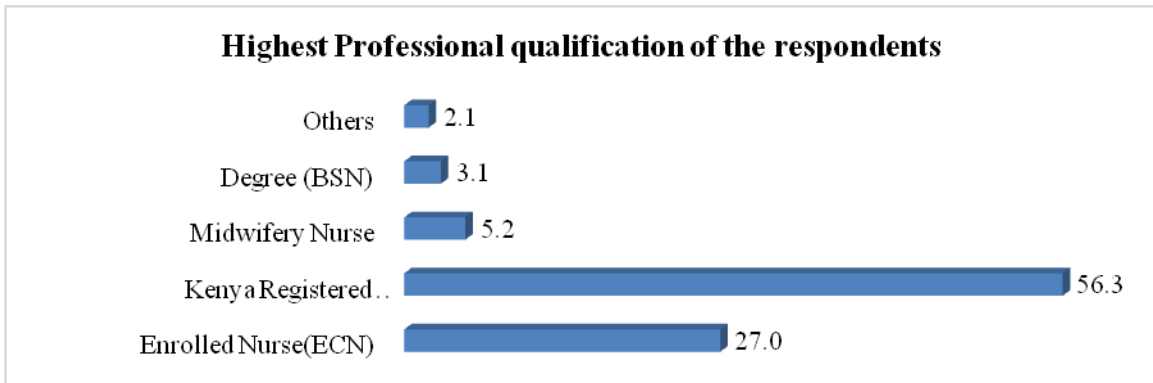
Figure 5 represents marital status of the respondents, majority of respondents (73%) were married followed by those who were single at 21% and then 4% widowed, whereas those widowed/separated were the minority representing 2% of the total respondents.

Table 2: Religion of the respondents

Religion	Frequency (n)	Percent (%)
Muslim	4	4.5
Christian	84	95.5
Total	88	100.0

The table 2 above shows distribution of respondents in various religions, a majority of the respondents were Christians 95.5% (n=84) whereas the Muslims 4.5% (n=4) were just a handful.

4.3.5 Highest Professional qualification of the respondents



NB: Others: - MPH, MSC, KRN, Degree in counseling psychology

Figure 6: Highest professional of the respondents

Figure 6 above shows the highest Professional qualification attained by respondent, majority of respondents (56.3%)were Kenya registered Community Health Nurses followed by enrolled nurses at 27% then followed by midwife nurses at 5.2% then those with degree(BSN) at 3.1% and others (MPH, MSC, Degree in counseling psychology) were the minority respondents representing 2.1 %.

4.3.6 Number of years the nurse has worked in the hospital

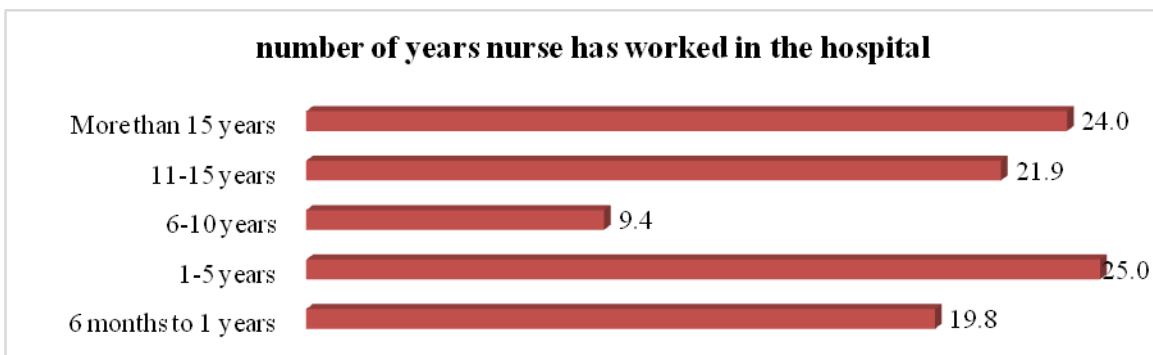


Figure 7: Number of years the nurse has worked in the hospital

Figure 7 above shows number of years the nurses have worked in Pumwani Maternity Hospital, greater number of respondents 25% have worked between 1-5 years followed by those who have worked for more than 15 years at 24%, those who had worked for between 11-15 years were at 21.9%, those who had worked between 6 months and a year at 19.8% and finally those who had worked between 6-10 years at 9.4%

4. 4 Work related factors

Work related factors also called job characteristics are the aspects specific to a job that require knowledge, skills, mental and physical demands and working conditions that can be recognized, defined and assessed. They are workload, number of work hours or numbers of clients, conflict and role ambiguity, job responsibilities, physical environment and shift length, and resources among others. In this study they are limited to the following;

4.4 .1 Roles and responsibilities of the Nurses

Roles and responsibilities are the duties or obligations that individuals perform satisfactorily assigned by someone or created by one's own promise or circumstance to fulfill and which there is a formal or informal sanction for failure. Among the nurses in Pumwani Maternity hospital, the roles and responsibilities of the nurses in regards to their responses are as enlisted below but not limited to the same and include:

Admission of clients; such as admission of postnatal and new mothers, triaging of clients (Case consideration) Ordering of drugs, equipment and intravenous lines; providing health education to mothers, e.g. on breast feeding and hygiene; Carrying out treatment as per doctor's prescription, drug administration, dressing, transfusion, infection control, putting intravenous fluids; transfusing blood, Scrub nurse, monitoring of clients ; taking vital signs, e.g. emp. Pulse, Bp response, doing observations; monitoring of children; Assessing for any deeper signs in labor and reporting to the doctor concerned, assisting doctor during operation ,taking observations for patient's pre and post operatively and management of post operation mothers and complications that may arise.

Providing antenatal care; managing eclampsia treatment of mothers, FANC, Carrying out anti-natal observations and maternal /fetal monitoring. Providing postnatal care and discharging mother home and providing Immunization.

Care of newborn ;such as resuscitation of the newborns, reminding the mothers to go to breast feed, receive babies for new born unit with vapor, do neonates' routine-observation, feeding babies, taking babies for ultra sound.

Conducting deliveries and monitoring mothers in labor and immediately after delivering and up to 4 hrs post-delivery.

Documentation; which involves doing case summary, birth registration, recording investigations, Transfer of patient; to other units, for Special procedures referrals, x-rays, transferring patients from one ward to another and transferring to KNH. Attending to EmOC, Serving meals to patients when necessary; Family planning and attending to mother in counseling, Maintenance of general ward hygiene, are the roles/duties and responsibilities always specified to the nurses by the in charge?

Table 3: Specification on duties on duties and responsibilities

Are your duties and responsibilities always specified?		
	Frequency	Percent (%)
Yes	40	43
No	53	57
Total	93	100.0

The table 3 above shows distribution of the roles/duties and responsibilities, 43% of the respondents have their duties always specified whereas 57% of the respondents have their duties not always specified. This means that most of the roles that the nurses conduct are not assigned but just follow a routine of what is given as a role of a nurse and do what arises as per situation.

In order for nurses to provide the above mentioned quality care and meet their communities' changing health care needs, they must become lifelong learners dedicated to updating their professional knowledge, skills, values, and practice. Nurses continuous trainings therefore encompasses all of the activities that nurses undertake—both formal and informal—to maintain, update, develop, and enhance their professional skills, knowledge, and attitudes. These continuous nurses trainings are a systematic and ongoing process of education, in-service training, learning, and support activities that build on initial education and training to ensure competence, extending knowledge and skills to

new responsibilities or changing roles, and increase personal and professional effectiveness.

While working at Pumwani Maternity Hospital, the nurses attended continuous medical education that varies from one area to another as shown below:

Table 4: Attending any continuous medical education in maternal child health while working in this hospital

While working in this hospital, have you attended any continuous medical education in maternal child health?		
	Frequency	Percent (%)
Yes	74	77.1
No	22	22.9
Total	96	100.0

A majority of the nurses (77.1%) working at Pumwani Maternity Hospital, have attended continuous medical education related to maternal child health which include:

Table 5: Trainings that have been offered in Pumwani maternity hospital

TRAININGS		
	Frequency (n)	Percent (%)
Maternal and Child health(Short courses CME)	33	42.9
Family planning	1	1.3
Emergency Obstetric Care/Emergency neonatal rescue	25	32.5
Disabilities and Abnormalities	13	16.9
Other trainings	5	6.5

Among the trainings that were offered to the nurses, a higher proportion 42.9% had been trained on maternal and child health which comprised of the following courses - postpartum hemorrhage (PPH), immunization, breastfeeding, Prevention of mother-to-child transmission (PMTCT), infection prevention control, new regime in administration of vaccines and immunization (KEPI), delivering instruments (KIWI), anemia in pregnancies, safe motherhood, uterine balloon tamponade (UBT), iron and folic acids supplementation (IFAS), how to prevent low birth weight and maternal audit. 32.5% had

been trained on the Emergency Obstetric Care/Emergency neonatal rescue that included emergency neonatal rescue and neonatal resuscitations.

At 16.9% was the trainings on disabilities and abnormalities that included, birth defects, jaundice and conjoined twins. 6.5% attended other trainings that included Life-saving skills/ Basic life support (LSS/BLS), leadership management and governance in maternal and neonatal health and hospital oriented continuous medical education (CME) and the least (1.3%) was training on family planning such as LARC (long acting reversible contraceptives).

Whereas a minority of the nurses (22.9%) working on the hospital, have never attended continuous medical education in the maternal child health and the reason being is:-

There was always shortage of nursing staff therefore had to remain and work, Continuous medical educations are conducted while on off duty or on night shift, have not been given any chance to go for seminar, high workload in the maternity unit and few staffs, new in the department, was not recommended by supervisor and lack of enough time.

4.4.2 Essentials materials resources

Material resources (MR) are the materials that are used in our day to day workings. In a hospital setting these materials include the consumables products such as sterilizations and disinfection products, drugs/medicines, equipment's, stationeries, protective gears among the many. In Pumwani Hospital, the study sought to find out if nurses are provided with materials and resources required to perform their job.

The responses below answers the question:

Table 6 : Essential material resources that nurses require to carry out their duties, effectively

Are you provided with essential material resources that you require to carry out your duties, effectively,		
	Frequency	Percent (%)
Yes	56	58.9
No	39	41.1
Total	95	100.0

A majority of the nurses (58.9%) have been provided with essential material resources required to carry out your duties, effectively. These materials include:

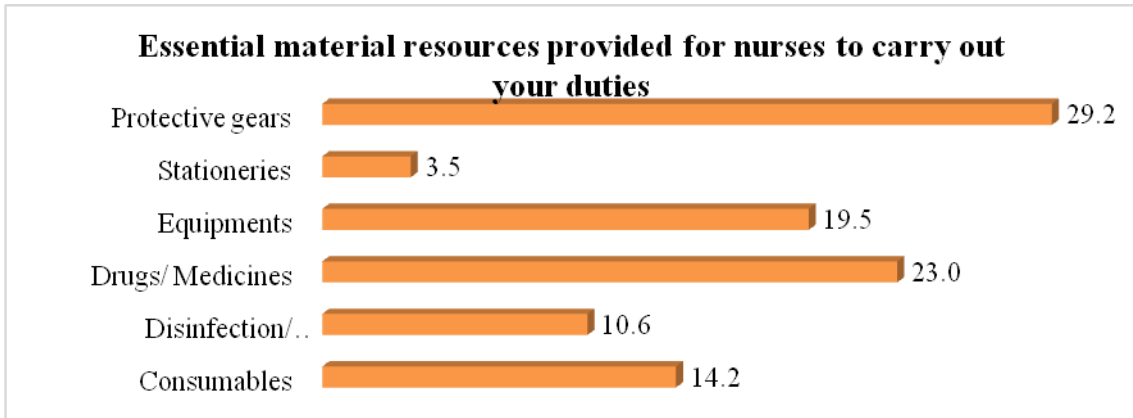


Figure 8: Essential material resources provided for nurses to carry out your duties

A greater proportion (29.2%) of the nurses have been provided with protective gears (gum boots, uniforms, bed sheets, gloves, mackintosh and even linen), followed by drugs and medicines (theatre drugs, vitamin K, iron and folic acids among other drugs) at 23% then at 19.5% were the equipment (thermometers, BP machines, stethoscopes, trolleys, fetal scopes, surgical equipment), then consumables (syringes and needles, delivery packs, V packs, theatre packs, cord clamps, cotton wool, pads among others) at 14.2% then also at 10.6% were disinfections/sterilizations (safety boxes, cleaning materials, detergents; soap, polyethene bags, mask, caps etc.) and finally stationeries (computers, printers, pens, notebooks, airtimes) were the least at just 3.5%. Whereas 42.1% have not been provided with essential material resources that are required to carry out their duties, effectively.

The materials they lacked are:

Enough delivery packs, other medical and pharmaceuticals products, enough Patient's linen, personal protective equipment, Inconsistent supply of theatre drugs, surgical supplies and detergents (such as Endozyme solution) working equipment and in good conditions such as monitors, BP machines, thermometers, protective gears when dealing with patients.

4.4.3 Remuneration

Remuneration is defined as the wages, salary, or any compensation that is being given to an employee in exchange for services that the employee performs for any organization they are inclined to. Employees use basic pay to compare their job offers instead of using intrinsic rewards and other rewards not captured in the formal organizational framework up to including job security. This leads to low levels of staff satisfaction and motivation. In Pumwani Maternity Hospital, the nurses were asked if they consider themselves well remunerated and the responses are as below:

Table 7 : If the nurses are adequately remunerated

Do you consider yourself adequately remunerated for the work you do?		
	Frequency	Percent (%)
Yes	29	31.2
No	64	68.8
Total	93	100.0

The nurses consider themselves not well remunerated (68.8%) whereas a fair number of them consider themselves as well remunerated (31.2%). For those who consider themselves not well remunerated, they recommended that the management do the following with their remuneration: -

Provide allowances for extra duties, avoid delays in promotion. appreciation for good performance; harmonization of the remuneration, to be placed in the right job group and given promotion, Increase of salary and overtime payment, Job evaluation and Promotion, Risk allowance should not be 100 shillings; Extraneous allowance should be given, Non practicing allowance, Good salary to motivate and avoid demonstrations, To be properly designated, Automatic promotions, improve basic pay, Call allowance and job evaluation, Improve salary considering level of training, consider experience and responsibility provide even increment and update promotions.

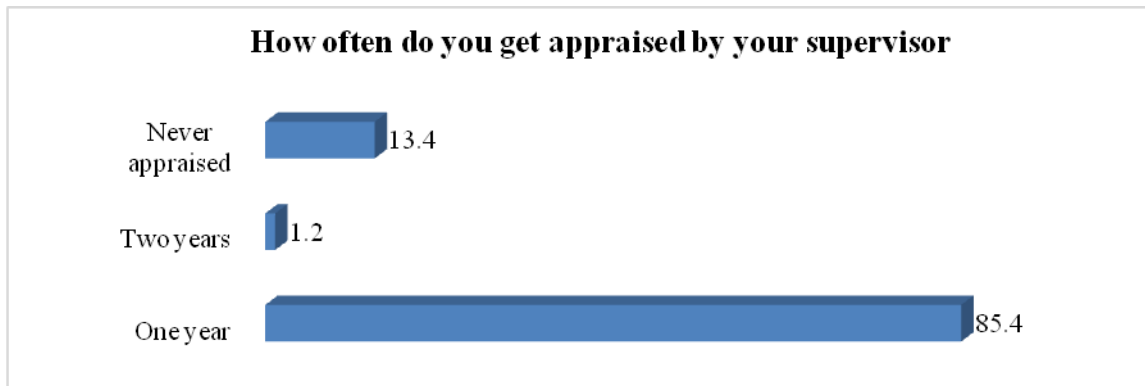


Figure 9 : How frequent the nurses are appraised by their supervisors

Figure 9 shows frequency of nurses’ appraisal. Majority of respondents (85.4%) were appraised yearly followed by those who have never been appraised at 13.4%, those who were appraised after 2 years were the minority respondents representing 1.2%.

4.4 .4 Work shifts and workloads

A shift length is the difference between the start and end time of shift in hours in any normal working day. The traditional eight-hour shift for clinical nurses is subject to change and may be unpredictable as the patient needs fluctuate and unanticipated staffing changes occur. In some of the instances a nurse may work two shifts that is one can be during day and the other one on a night duty.

Among the nurses in Pumwani hospital, the shift length is as below:

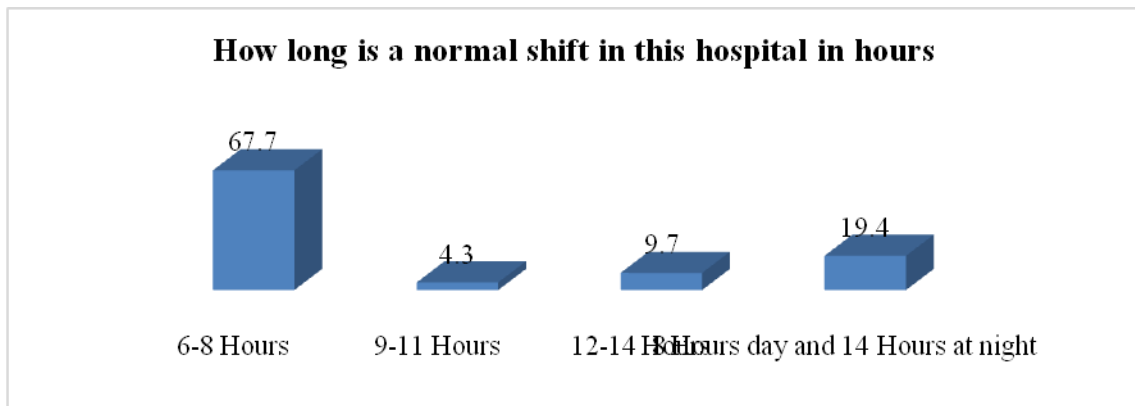


Figure 10: Normal working shift in Pumwani maternity hospital in hours

Figure 10 shows the working shift of the respondent’s, majority of respondents (67.7%) worked for 6 to 8 hours followed by those who work for 8 hours during day shift and 14

hours on night shift at 19.4% then those who worked for 12-14 hours at 9.7% then the minority respondents representing 4.3% worked for 9-11 hours.

4.4.5 Extension of work shift apart from the normal shift

And in the last six months have the nurses extended shift from the normal shift (over time)

Table 8: the extension of work shift apart from the normal shift

In the last six months have you ever extended your shift?		
	Frequency (n)	Percent (%)
Yes	84	87.5
No	12	12.5
Total	96	100.0

Table 8 above shows that in the past six months, 87.5% of the nurses have extended their shifts whereas 12.5% of the nurses have not extended their shifts. Of the total number of the nurses who have in one way or the other in the last six months extended their shift from the normal shift the number of hours were as follows;

Table 9 : Length of the extended shift

If yes, with how many more hours did you extend?

	Frequency (n)	Percent (%)
1 to 3 Hours	28	38.4
4 to 6 Hours	31	42.5
More than 7 Hours	10	13.7
Double shift	4	5.5
Total	73	100.0

On the extended working shift apart from the normal working shift of the respondent's, a majority of respondents (42.5%) worked for 4 to 6 hours followed by those who worked for 1 to 3 hours at 38.4% then followed by those who worked for more than 7 hours (13.7%) and finally the minority (5.5%) respondents represent those who worked for double shifts.

The reasons for the extended working shift apart from the normal working shift of the respondent's (nurses) were:

Carrying out extra duties that had not been completed, A mother came late just when about to close with a sick child, Due to shortage of staff, Emergency emerged when just about to end a shift and staff shortage also combined ,Finishing some packing procedures in maternity unit, Matters that arise like meetings with stakeholders, a colleague didn't turn up, Referral to KNH, Mbagathi and also too many clients in the clinic, a lot of pending work and could not hand all of it over to the one staff reporting next shift thus helped to reduce some of the pending works and Counseling a client who had turned hiv-positive during the ANC visit.

4.4.6 Work load

Increased workload is a situation where there is a lot of work with just a few employees or when there is a lot of work to complete in a short period thus overworking the employees. Therefore number of nurses in the hospital on duty at any one time in the unit/ward/department as one of the indicator of workload among the employees were:

Table 10: Nurses on duty in unit/ward/department at any one time

At any one time how many nurses are on duty in your unit/ward/department

	Frequency	Percent
1 Nurse	18	14.5
2 Nurses	24	19.4
3 Nurses	30	24.2
4 Nurses	18	14.5
5 Nurses	16	12.9
6 Nurses	11	8.9
7 Nurses	7	5.6

The table above shows number of nurses on duty at any one time in the unit/ward/department, majority (24.2%) indicated there were 3 nurses at any shift, followed by those with 2 nurses at a shift signified at 19.4% and then 1 and 4 nurses respectively with 14.5%, then followed by 5 nurses at 12.9% then 6 nurses at 8.9% and the minority (5.6%) had 7 nurses at a given shift respectively.

Are number of nurses at any shift adequate?

Table 11: Whether the nurses consider the number of nurses in the unit/ward/department adequate

Do you consider the number of nurses in your unit/ward/department adequate?		
	Frequency	Percent (%)
Yes	4	4.2
No	92	95.8
Total	96	100.0

Table 11 shows nurses' responses on whether they considered the number adequate, a majority (95.8%) considered the number of nurses as not adequate while a handful (4.2%) of them reported nurse were adequate in any shift.

For those who said the nurses are not adequate, reasons included: -

One of the nurses reported....“According to the nursing council it should be one nurse to 6 babies so 3 nurses managing 80 babies its crazy”, 54 nurses were removed from payroll and have not been replaced and before then employed nurses were not enough, in case of a nurse emergency therefore one has to continue with the next shift. some procedures requires more than one nurse to serve clients well and avoid overworking, Nurse-patient ratio is overwhelming and too many patients compared to nurses on duty, There are many babies compared to the ratio of nurses to take observations, giving treatment, resuscitation and feeding.

4.5 Conflict

Conflict can occur in two ways through interpersonal or role conflicts. A role conflict arises when the nurse has to perform many roles in maternal health facility within their scope of training and beyond whereas interpersonal conflict is the conflict between health workers either verbal or physical and makes the health workers feel unsatisfied.

Are there any conflicts of roles such having two duties at the same among nurse?

Table 12: Role on conflict while carrying out your duties (e.g. have two duties at the same time)

	Frequency	Percent (%)
Yes	59	64.8
No	32	35.2
Total	91	100.0

Table 12 above, A majority of the nurses (64.8%) experienced role conflict while carrying out duties (e.g. have two duties at the same time) whereas 35.2% had no role conflict. A role conflict was brought about by:

A staff falling sick, shortage of nurses, playing the role of deputy in charge, attending meetings, and doing the normal duties when there is no one to help; Attending to patients and serving them their meals from the kitchen; Being in the managerial duties as well as attending to the clients FP or AWC or CWC, the same time being called to discharge patient to post-surgical ward; Nursing care and referral of patients to KNH or taking patients to MLKH for x-rays; Ordering from pharmacy and store at the same time required to do primary nursing to the mothers; Volunteering in department and realize after a while, you had been allocated to go to work in clothes ward. Already you may have worked but you move to the other ward to start all over, you are serving meals or giving medicines suddenly a mother develops eclampsia fits or starts contractions, Triaging and at the same time monitoring and conducting deliveries, attending to emergencies, attending meetings, Make follow ups for issues on maintenance and availability to scrub during surgeries, Stocking and delivery.

Similarly as the nurses are working, have they experienced any interpersonal conflicts?

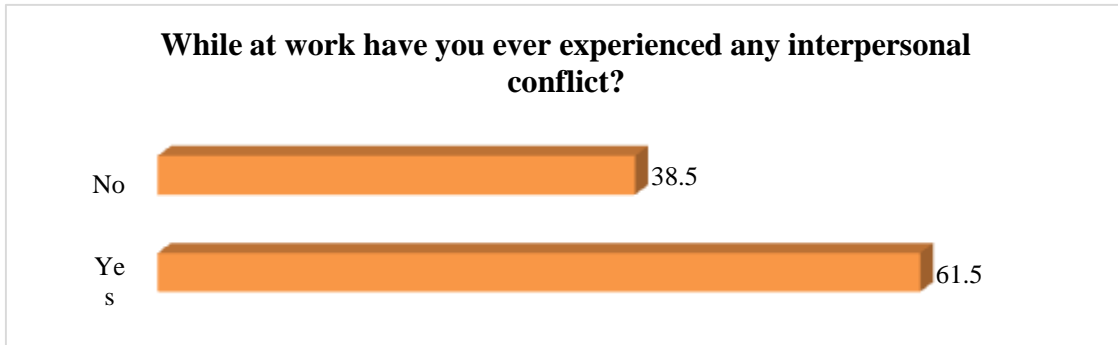


Figure 11 : Interpersonal conflict while carrying out your duties

Figure 11 shows a majority (61.5%) of the nurses have experienced interpersonal conflict while carrying out your duties whereas 38.5% have not experienced interpersonal conflict. These interpersonal conflicts included:

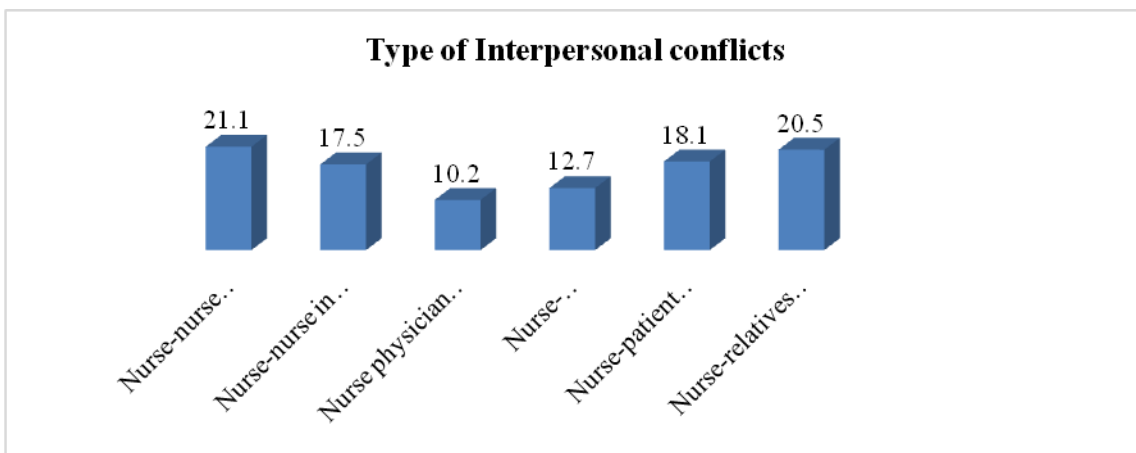


Figure 12 : Type of interpersonal conflict while carrying out your duties

A majority (21.1%) of nurses has experienced nurse-nurse interpersonal conflict in work environment, followed by Nurse-relative conflict at 20.5%, the minimum was 10.2% experienced as nurse-physician conflict in their work environment. Interpersonal conflict was as a result of the following;

A relative was furious that his wife who was to be referred to another facility was a frequent client in the facility and needed to be given all the services there, relatives protesting of either a loss of a loved one or something not done their way. Because several mothers escape away from the ward passed through main gate, Demands, Threats, Relatives arguing ,police relatives who demand for discharge of their patient, Having

intruders in the hospital at night, mothers absconding from hospital and nurse on duty told pay for the absconders, patients absconded from ward and was made to write statement/harassed, Relatives coming to hospital at 2.00 am, wanting to beat nurses on duty because a newborn baby had passed or delivered a still birth baby and relatives do not want to be explained to the reasons why it happened.

4.6 Coping strategies

Coping is the changing cognitive and behavioral efforts developed for managing the specific extrinsic and/or intrinsic demands judged as exceeding or surpassing the individual's own resource. Active coping uses strategies such as problem solving and seeking for social support while passive coping a nurse may use avoidance of the problem or withdraw from colleagues. In this study the coping strategies included social support, problem solving and avoidance.

The descriptive statistics of coping strategies are as below:

Table 13 : Coping Strategies descriptive Statistics

Coping strategies Descriptive Statistics				
	N	Mean	Std. Deviation	Skewness
Social support	96	23.92	4.126	-.365
Problem solving	96	27.71	3.753	-1.149
Avoidance	96	20.36	3.979	.032

Table 13 shows nurses using social support had a mean of 23.92 and a standard deviation of 4.126. Those using problem solving mean of 27.71 and a standard deviation of 3.753, while nurses using avoidance coping strategy a mean of 20.36 and a standard deviation of 3.979. This confirms that most adopted coping strategy was problem solving, followed by social support, while the least used was avoidance by the respondents.

On distribution of the data, social support and problem solving of coping strategies have negative coefficients of Skewness indicating that the distribution of the data is to the left (negatively skewed) but only avoidance attribute had a positive coefficients of Skewness indicating that the distribution of the data is to the right (positively skewed)

4.7 Social support

An environment where colleagues support each other and the managers' support their nursing staff can be one way of increasing coping on the work related challenges.

Table 14 : Social Support descriptive Statistics

Social support Descriptive Statistics				
			Std.	
	N	Mean	Deviation	Skewness
5. Accepted sympathy and understanding from someone	95	2.13	.688	-.169
7. Talked to people about the situation because talking about it made you feel better	94	2.46	.634	-.744
12. Talked about fears and worries to a relative or friend	96	2.27	.624	-.263
14. Told people about the situation because talking about it helped you come up with solutions	96	2.24	.677	-.332
19. Went to someone friend or professional to help you feel better	95	1.87	.718	.193
23. Went to a friend to help you feel better about the problem	94	2.12	.731	-.186
24. Went to a friend for advice about how to change the situation	95	2.24	.710	-.388
25. Accepted sympathy and understanding from friends who had the same problem	94	1.94	.685	.081
31. Accepted help from a friend or relative	93	2.31	.675	-.471
32. Sought reassurance from those who know you best	95	2.27	.706	-.446

On distribution of the data on social support; going to someone friend or professional to help you feel better and accepting sympathy and understanding from friends who had the same problem have positive coefficients of Skewness indicating that the distribution of the data is to the right (positively skewed) but the other social support had a negative coefficients of Skewness indicating that the distribution of the data is to the left (negatively skewed).

It can be observed from the study results in table above that the nurses Accepting sympathy and understanding from someone has a mean of 2.13 and a standard deviation of 0.688, talking to people about the situation because talking about it made you feel better has a mean of 2.46 and a standard deviation of 0.634, Talking about fears and worries to a relative or friend has a mean of 2.24 and a standard deviation of 0.677, telling people about the situation because talking about it helped you come up with solutions has a mean of 2.24 and a standard deviation of 0.677, going to someone friend or professional to help you feel better has a mean of 1.87 and a standard deviation of 0.718, going to a friend to help you feel better about the problem has a mean of 2.12 and a standard deviation of 0.731, going to a friend for advice about how to change the situation has a mean of 2.24 and a standard deviation of 0.710, Accepting sympathy and understanding from friends who had the same problem has a mean of 1.94 and a standard deviation of 0.685, Accepted help from a friend or relative has a mean of 2.31 and a standard deviation of 0.675 and finally Seeking reassurance from those who know you best has a mean of 2.27 and a standard deviation of 0.706. This corresponds to approximately 2 on a Likert scale implying that the frequency of most of the nurses doing the social support is moderate.

4.8 Problem solving

Problem solving coping is characterized by confronting the problem, planning for problem-solving and seeking social support. Coping oriented to problem solving focuses on dealing with the problem or stress situation.

Table 15 : Problem solving descriptive Statistics

Problem Solving Descriptive Statistics	N	Mean	Std. Deviation	Skewness
2.Rearranged things so your problem could be solved	94	2.26	.655	-.317
3. Thought of many ideas before deciding what to do	95	2.56	.648	-1.180
8. Set some goals for yourself to deal with the situation	95	2.62	.549	-1.088
9. Weighed up your options carefully	96	2.72	.517	-1.666
11.Tried different ways to solve the problem until you found one that worked	95	2.48	.634	-.837
15. Thought about what needs to be done to straighten things up	96	2.67	.536	-1.331
16.Turned your full attention to solving the problem	96	2.59	.591	-1.155

17. Formed a plan in your mind	95	2.60	.608	-1.262
20. Stood firm and fought for what you wanted in the situation	96	2.42	.610	-.527
29. Tried to solve the problem	96	2.61	.587	-1.257
33. Tried to carefully plan a course of action rather than acting on impulse	95	2.36	.683	-.594

On distribution of the data on problem solving had a negative coefficients of Skewness indicating that the distribution of the data is to the left (negatively skewed) On Rearranging things so your problem could be solved has a mean of 2.26 and a standard deviation of 0.655, Trying different ways to solve the problem until you found one that worked has a mean of 2.48 and a standard deviation of 0.634, Standing firm and fighting for what you wanted in the situation has a mean of 2.42 and a standard deviation of 0.610 and Trying to carefully plan a course of action rather than acting on impulse has a mean of 2.36 and a standard deviation of 0.683, This corresponds to approximately 2 on a Likert scale implying that the frequency of most of the nurses doing the problem solving is a little.

Whereas Thinking of many ideas before deciding what to do has a mean of 2.56 and a standard deviation of 0.648, Setting some goals for yourself to deal with the situation has a mean of 2.62 and a standard deviation of 0.549, Weighing up your options carefully has a mean of 2.72 and a standard deviation of 0.517, Thinking about what needs to be done to straighten things up has a mean of 2.62 and a standard deviation of 0.549, Turning your full attention to solving the problem has a mean of 2.59 and a standard deviation of 0.591, Forming a plan in your mind has a mean of 2.60 and a standard deviation of 0.608 and finally Trying to solve the problem has a mean of 2.61 and a standard deviation of 0.587 This corresponds to approximately 3 on a Likert scale implying that nurses frequently used problem solving.

4.9 Avoidance

The avoidance coping strategy may involve person-oriented or task-oriented responses; where an individual faced with stressful situation may seek out other people engaging in social diversion or by engaging in another task to seek distraction.

Table 16 : Avoidance descriptive Statistics

Avoidance Descriptive Statistics				
	N	Mean	Std. Deviation	Skewness
4. Tried to distract yourself from the problem	95	2.25	.743	-.447
6. Did all you could to keep others from seeing how bad things really were	92	2.33	.758	-.627
10. Daydreamed about better times	95	2.47	.712	-.988
13. Spent more time than usual alone	95	1.96	.698	.057
18. Watched television more than usual	94	1.56	.597	.524
21. Avoided being with people in general	95	1.58	.693	.788
22. Buried yourself in a hobby or sports activity to avoid the problem	96	1.57	.677	.770
26. Slept more than usual	96	1.60	.732	.779
27. Fantasized about how things could have been different	95	2.11	.765	-.181
28. Identified with characters in movies or novels	96	1.42	.627	1.239
30. Wished that people would just leave you alone	95	1.77	.721	.381

On distribution of the data on the of avoidance; some have positive coefficients of Skewness indicating that the distribution of the data is to the right (positively skewed) but part of them have negative coefficients of Skewness indicating that the distribution of the data is to the left (negatively skewed)

From the data above the means of identifying with characters in movies or novels have a mean of 1.42 and a standard deviation of 0.627. This corresponds to approximately 1 on a Likert scale implying that the frequency of most of the nurses undertaking the avoidance is a lot.

Whereas the others had means ranging from 1.56 to 2.47 and their corresponding standard deviations respectively. This corresponds to approximately 2 on a Likert scale implying that the frequency of most of the nurses under taking the avoidance is a little.

4.10 Burnout

Burnout is associated with work domain and can be equated to cumulative stress resulting from on-going work related demands.

The level of burnout among the nurses vary from one nurse to another due to various characteristics down from personal characteristics, job characteristics and also environmental characteristics and that is to say that nurses have a high, moderate, or low

burnout. Those with high and moderate levels are considered to have burnout while those with low levels have no burnout.

Among the nurses in Pumwani Maternity Hospital, the burnout was as below:

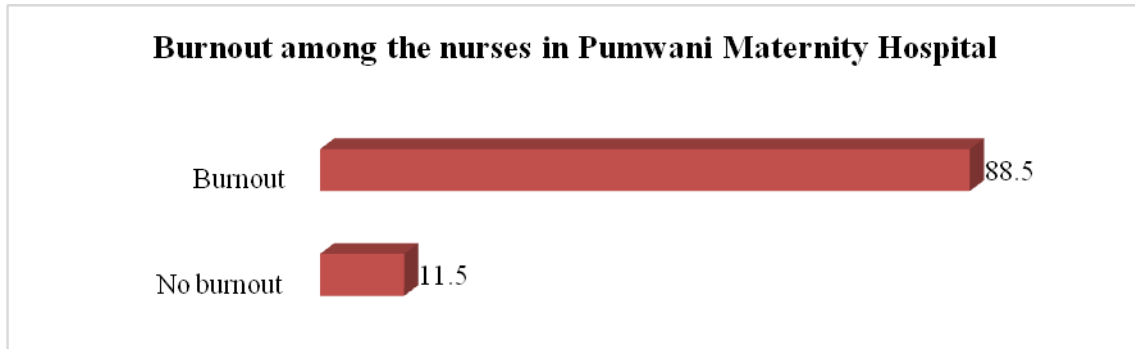


Figure 13 : Burnout among the nurses in Pumwani Maternity Hospital

The above figure shows distribution of burnout among the nurses in Pumwani maternity hospitals, majority of respondents (nurses) 88.5% have burnout level with those who had low burnout levels were the minority respondents representing 11.5%.

4.11 Specific objectives:

Table 17: Relationship between age, gender, marital status, education level and burnout among nurses working in Pumwani maternity hospital.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.409	.167	.110	.302

The correlation $R=0.409$ indicating that there is a moderate relationship between burnout levels on (demographic information) gender, religion, age, marital status and education level. The (R^2) was 0.167 which means that 16.7% of the variations in the burnout levels can be explained by changes on (demographic information) gender, religion, age, marital status and education level and 83.3% of variation in burnout levels can be explained by other factors that are not within the control of the research.

Table 18: Regression on the relationship between age, gender, marital status, education level and burnout among nurses working in Pumwani maternity hospital

	Regression Coefficients				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.207	0.380		5.804	0.000
Gender:	0.106	0.084	0.147	1.254	0.214
Religion	-0.608	0.194	-0.366	-3.139	0.002
Age	-0.03	0.039	-0.099	-0.764	0.447
Marital status	0.053	0.060	0.100	0.888	0.377
Education;	-0.065	0.056	-0.148	-1.157	0.251

a. Dependent Variable: burnout

Using the Standardized Coefficients, gender is found to have the greatest influence on burnout levels ($\beta=0.147$, $t=1.254$, $p=0.214$) and thus, gender is a significant forecaster of burnout levels. The next largest contribution is made by marital status ($\beta=0.100$, $t=0.888$, $p=0.377$). Religion contributes the least ($\beta=-0.366$, $t=-3.139$, $p=0.002$), so is followed by education level ($\beta=-0.148$, $t=-1.157$, $p=0.251$) and then finally age ($\beta=-0.099$, $t=-0.764$, $p=0.447$). In summary, it was established that religion was found to be statistically significant in influencing burnout levels.

Using the unstandardized coefficients, the relationship between demographic information on burnout levels is as shows.

As the males were increased, there is more probable increase in the burnout levels ($\beta=0.106$, $p=0.214$). Since the p value (0.214) is greater than 0.05, thus accept the null hypothesis and conclude that gender has no significant influence on the burnout levels among the nurses in Pumwani Hospital.

Increasing Christians was associated with an increased burnout levels ($\beta=-0.608$, $p=0.002$). Since the p value (0.002) is less than 0.05, thus reject the null hypothesis and conclude that religion has an influence on the burnout levels among the nurses in Pumwani Hospital.

Age of the respondents on burnout levels has a negative regression coefficients ($\beta = -0.03$, $p = 0.447$) indicating a negative relationship between age of respondents on burnout levels meaning every increase in the age of the respondents, there is a decrease in the burnout levels. The p value for age of the respondents is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between ages of respondents on the burnout levels.

Similarly, increase in the married people was associated with an increment in the burnout levels ($\beta = 0.053$, $p = 0.377$). There is no influence of marital status on the burnout levels the null hypothesis is not rejected as the p value (0.377) and more than 0.05.

Education level on burnout levels has a negative regression coefficients ($\beta = -0.065$, $p = 0.251$) indicating a negative relationship between education level and burnout levels. This means that education level increases, there is a decrease in the burnout levels. The p value for education level is more than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between education levels and burnout levels.

Table 19 : ANOVA on the relationship between age, gender, marital status, education level and burnout among nurses working in Pumwani maternity hospital

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	1.331	5	0.266	2.926	.018 ^a
1	Residual	6.643	73	0.091		
	Total	7.975	78			

a. Predictors: (Constant), 5. Education; marital status, Religion, Gender, age

b. Dependent Variable: burnout

The table above shows the output of the ANOVA analysis and whether there is a significant difference statistically between the group means in regards to burnout levels. The significance value (p) is at ($F(5, 73) = 2.926$, $p = 0.018$) which is less than 0.05. And, therefore, there is a statistical significant difference in the mean burnout levels between the different demographic information at 95% confidence level.

Table 20 : Model summary relationship between coping strategies and burnout levels among nurses working in Pumwani maternity hospital

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.239 ^a	0.057	0.026	0.316

a. Predictors: (Constant), Avoidance levels, Problem solving levels, Social support levels

The correlation $R=0.239$ indicates that there is a low relationship between burnout levels on coping strategies (social support, problem solving and avoidance). The (R^2) was 0.057 which means that 5.7% of the variations in the burnout levels can be explained by changes on coping strategies (social support, problem solving and avoidance) and 94.3% of variation in burnout levels can be explained by other factors that are not within the control of the research.

Table 21: Regression on the relationship between coping strategies and burnout levels among nurses working in Pumwani maternity hospital

	Unstandardized		Standardized		t	Sig.
	Coefficients		Coefficients			
	B	Std. Error	Beta			
(Constant)	1.427	0.168			8.518	0
Social support levels	-0.107	0.054	-0.207		-1.974	0.051
Problem solving levels	-0.047	0.054	-0.089		-0.859	0.393
Avoidance levels	0.004	0.062	0.006		0.062	0.951

a. Dependent Variable: burnout

Using the Standardized Coefficients, avoidance is found to have the greatest influence on burnout levels ($\beta=0.006$, $t =0.062$, $p=0.951$). Therefore, avoidance is a significant predictor of burnout levels. Social support makes the least contribution to burnout levels ($\beta= -0.207$ $t=-1.974$, $p= 0.051$) and then finally problem solving ($\beta = -0.089$, $t = -0.859$, $p =0.393$). However, no coping strategy was found to be statistically significant in influencing burnout levels.

Using the unstandardized coefficients, the relationship between coping strategies on burnout levels is as shown below:

Social support and burnout levels has a negative regression coefficients ($\beta = -0.107$, $p = 0.051$) indicating a negative relationship between social support and burnout levels. This means that for every increase in social support, there is a decrease in the burnout levels. The p value for social support is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between social supports on the burnout levels.

Problem solving on burnout levels has a negative regression coefficients ($\beta = -0.047$, $p = 0.393$) indicating a negative relationship between problem solving and burnout levels. This means that for every increase in problem solving, there is a decrease in the burnout levels. The p value for problem solving is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between problem solving on the burnout levels.

Avoidance on burnout levels has a positive regression coefficients ($\beta = 0.004$, $p = 0.951$) indicating a positive relationship between avoidance and burnout levels. This means that for every increase in avoidance, there is an increase in the burnout levels. The p value for problem solving is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between avoidance on the burnout levels.

Table 22 : ANOVA on the relationship between coping strategies and burnout levels among nurses working in Pumwani maternity hospital

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	0.557	3	0.186	1.86	.142 ^a
1	Residual	9.183	92	0.1		
	Total	9.74	95			

a. Predictors: (Constant), Avoidance levels, Problem solving levels, Social support levels

b. Dependent Variable: burnout

Table 22 shows ANOVA analysis and whether there is a significant difference statistically between the group means in regards to burnout levels. The significance value (p) is ($F(3, 92) = 1.86, p = 0.142$), which is greater than 0.05. And, therefore, there is no statistical significant difference in the mean burnout levels between the different coping strategies at 95% confidence level.

Table 23 : Determine the relationship between work-related factors and burnout among nurses working in pumwani maternity hospital

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.241	.058	-.013	.325

The correlation $R=0.241$ indicating that there is a low relationship between work related factors (insecurity, essential material resources, shift extension, remuneration, role conflict, workload) on burnout levels. The (R^2) was 0.058 which means that 5.8% of the variations in the burnout levels can be explained by changes on work related factors (insecurity, essential material resources, shift extension, remuneration, role conflict, workload) and 94.2% of variation in burnout levels can be explained by other factors that are not within the control of the research.

Table 24 : Regression on the relationship between work-related factors and burnout among nurses working in Pumwani maternity hospital

	Regression Coefficients				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.128	0.519		2.175	0.033
Essential material resources	-0.017	0.071	-0.027	-0.241	0.81
Remuneration	-0.014	0.082	-0.020	-0.169	0.866
Extended work shift	-0.142	0.113	-0.148	-1.256	0.213
Workload	0.066	0.206	0.038	0.319	0.75
Role conflict	0.135	0.08	0.197	1.692	0.095

a. Dependent Variable: burnout

Using the Standardized Coefficients, role conflict is found to have the greatest influence on burnout levels ($\beta=0.197$, $t=1.692$, $p=0.095$). Therefore, role conflict is a significant forecaster of burnout levels. Workload is the next work related determinant of burnout levels making a contribution of ($\beta=0.038$, $t=0.319$, $p=0.750$). Extended work shift makes the least contribution ($\beta=-0.148$, $t=-1.256$, $p=0.213$) and then insecurity ($\beta=-0.122$, $t=-0.988$, $p=0.326$), lack of material resources ($\beta=-0.027$, $t=-0.241$, $p=0.810$) and finally remuneration ($\beta=-0.020$, $t=-0.169$, $p=0.866$). However, no work related factors was found to be statistically significant in influencing burnout levels.

Using the unstandardized coefficients, the relationship between work related factors (insecurity, essential material resources, shift extension, remuneration, role conflict, work load) on burnout levels is as shown below:

Essential material resources on burnout levels has a negative regression coefficients ($\beta=-0.017$, $p=0.810$) indicating a negative relationship between essential material resources and burnout levels. This means that for every increase in essential material resources, there is a decrease in the burnout levels. The p value for essential material resources is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between essential material resources on the burnout levels.

Remuneration and burnout levels has a negative regression coefficients ($\beta=-0.014$, $p=0.866$) indicating a negative relationship between remuneration and burnout levels. This means that for every increase in remuneration, there is a decrease in the burnout levels. The p value for remuneration is greater than 0.05 implying that the null hypothesis is not rejected and there is no significant relationship between remuneration and burnout levels.

Extension of work shifts on burnout levels has a negative regression coefficients ($\beta=-0.142$, $p=0.213$) indicating a negative relationship between extension of work shifts and burnout levels. This means that for every increase in extension of work shifts, there is a decrease in the burnout levels. The p value for extension of work shifts is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between extension of work shifts and burnout levels.

Work load on burnout levels has a positive regression coefficients ($\beta= 0.066$, $p= 0.750$) indicating a positive relationship between workload and burnout levels. This means that for every increase in work load, there is an increase in the burnout levels. The p value for Work load is greater than 0.05 implying that the null hypothesis is accepted, there is no significant relationship between Workloads on the burnout levels.

Role conflict on burnout levels has a positive regression coefficients ($\beta= 0.135$, $p= 0.095$) indicating a positive relationship between role conflict and burnout levels. This means that for every increase in role conflict, there is an increase in the burnout levels. The p value for Role conflict is greater than 0.05 implying that the null hypothesis is not rejected since there is no significant relationship between Role conflicts on the burnout levels.

Table 25:ANOVA on the relationship between work-related factors and burnout among nurses working in pumwani maternity hospital

ANOVA						
	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.514	6	.086	.813	.563
	Residual	8.323	79	.105		
	Total	8.837	85			

This is the table shows ANOVA results and whether there is a significant difference statistically between the group means in regards to burnout levels. We can see that the significance value (p) is ($F(6, 79) = 0.813$, $p = 0.563$). Which is greater than 0.05. And, therefore, there is no statistical significant difference in the mean burnout levels between the different work related factors at 95% confidence interval.

Table 26 : To assess the relationship between work-related factors and coping strategies and burnout among nurses working in Pumwani maternity hospital

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.149 ^a	0.022	0.001	0.32

a. Predictors: (Constant), Coping Strategies levels, work related factors

The correlation $R=0.149$ indicates that there is a low relationship between burnout levels and coping strategies and work related factors. The (R^2) was 0.022 which means that 2.2% of the variations in the burnout levels can be explained by changes on coping strategies and work related factors and 97.8% of variation in burnout levels can be explained by other factors.

Table 27 : Regression on the relationship between work-related factors and coping strategies and burnout among nurses working in Pumwani maternity hospital

	Regression Coefficients				
	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
B	Std. Error	Beta			
(Constant)	1.119	0.188		5.941	0
work related factors	0.093	0.079	0.12	1.17	0.245
Coping Strategies levels	-0.053	0.069	-0.08	-0.777	0.439

a. Dependent Variable: burnout

Using the Standardized Coefficients, work related factors is found to have the greatest influence on burnout levels ($\beta=0.120$, $t =1.17$, $p=0.245$). Therefore, work related factors is a significant predictor of burnout levels whereas coping strategies makes the least contribution ($\beta =-0.08$, $t =-0.777$, $p =0.439$). Work related factors and coping strategies were found not to be statistically significant in influencing burnout levels.

Using the unstandardized coefficients, the relationship between work related factors and coping strategies and burnout levels is as shown below:

Coping strategies on burnout levels has a negative regression coefficients ($\beta= -0.053$, $p= 0.439$) indicating a negative relationship between Coping strategies and burnout levels. This means that for every increase in coping strategies, there is a decrease in the burnout levels. The p value for coping strategies is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between coping strategies on the burnout levels.

Work related factors on burnout levels has a positive regression coefficients ($\beta= 0.155$, $p= 0.117$) indicating a positive relationship between Work related factors and burnout levels. This means that for every increase in Work related factors, there is an increase in the burnout levels. The p value for Work related factors is greater than 0.05 implying that the null hypothesis is not rejected and this implies that there is no significant relationship between Work related factors on the burnout levels.

Table 28 : ANOVA on the relationship between work-related factors and coping strategies on burnout among nurses working in Pumwani maternity hospital

		ANOVA ^b				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.217	2	0.108	1.058	.351 ^a
	Residual	9.523	93	0.102		
	Total	9.74	95			

a. Predictors: (Constant), Coping Strategies levels, work related factors

b. Dependent Variable: burnout

Table 28 above shows ANOVA and whether there is a significant difference statistically between the group means in regards to burnout levels. The significance value (p) is ($F(2, 93) = 1.058, p = 0.351$), which is greater than 0.05, therefore, there is no statistical significant difference in the mean burnout levels between the coping strategies and work related factors at 95% confidence interval.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter describes key findings in the study derived from the analyses and discussions on the relationship between socio demographic factors, work related factors, coping strategies and burnout among nurses in Pumwani Maternity Hospital. The chapter recaps on research problem, explicates the meaning of the findings, relates findings to similar studies, includes limitations, conclusion, recommendations and suggestions for further research

5.2 Summary

The study examined the relationship between work-related factors and coping strategies as determinants of burnout among nurses working in Pumwani Maternity Hospital. The research was inspired by the fact that there is limited research on work related factors and more so coping strategies and burnout among nurses working in maternal child health. Comparative studies done earlier among clinical workers reported that nurses had higher burnout levels than other medical workers (Pindar et al.,2012).Burnout has become a concern for organizations because of associated negative effects on health of service provider which eventually affects service provision. Further most of the studies focused on describing the burnout levels and distribution among health workers and not specifically among clinical nurses. Work related factors was selected because burnout is related to work domain and the interaction between work demands and resources has been linked to levels of burnout (Demerouti et al.,2001). Coping strategies were included in the study because burnout occurrence can be determined by how one copes and what coping strategy is used to cope with challenges at work. Few studies targeted coping strategies and burnout among nurses especially in Africa and therefore Kenya.

Chapter one includes background to the study and forms a case for the research study in terms of burnout dimensions, occurrence, effects on clinical workers, work related factors and coping strategies relation with burnout and alludes to researches done previously on burnout.

Chapter two provides profound literature review of related studies on burnout occurrence the relationship between socio demographic factors, work related factors, coping strategies and burnout among nurses with specific reference to researches carried out among nurses in maternal child health facilities. The chapter also provides a conceptual framework and theoretical model showing the interaction between independent and dependent variables.

Chapter three provides a framework on research methodology that contains research design, sample size, sample selection, data collection instruments, data analysis and ethical considerations.

Chapter four contains the results of study inform of descriptive and inferential statistics and discussions on socio demographic factors, work related factors (work load, conflict, and shortage of nurses, shift length and material resources) and coping strategies in relation to burnout.

This study concludes with Chapter five, which presents a summary, major findings conclusions and recommendations.

5.1.1 Major Findings

The socio demographic information of the study shows that, most of the respondents were females, married, and above 30 years of age. Majority of the respondents had attained secondary school education and were Kenya Registered Community Health Nurses. Majority (42%) of the respondents had attended continuous medical education related maternal child health and 32% had been trained EmOC. Most of the respondents were Christians. Majority of the respondents (more than 50%) had worked in Pumwani Maternity Hospital for more than 6 years.

On work related factors, the respondents duties and responsibilities included but not limited to; Admission of clients; triaging of clients (case consideration); Ordering of drugs, equipment and intravenous lines; providing health education to mothers, e.g. On breast feeding and hygiene; Carrying out treatment ;putting intravenous fluids; transfusing blood; Monitoring of clients ; Assessing for any deeper signs in labor and reporting to the doctor concerned, assisting doctor during operation , Providing antenatal care; Providing postnatal care and discharging mother home and providing

Immunization. Care of newborn; resuscitation of the newborns, conducting deliveries and monitoring mothers in labor and immediately after delivering and up to 4 hours post-delivery. Documentation Transfer of patient to other units and hospitals, attending to EmOC; serving meals to patients when necessary; Family planning and attending to mother in counseling mothers and maintenance of general ward hygiene. More than 50% of the respondents reported that their duties and responsibilities were not always specified, but rather depended on situation that arises.

Material resources that were provided for the respondents (59%) at work included protective gear, equipment, drugs/medicines. Approximately 41% of the respondents reported they were not provided with essential materials for work such as sterilization products, some equipment were not in good working conditions and there was inconsistent supply of drugs and inadequate surgical supplies.

On remuneration 64% of respondents felt they were not adequately remunerated noting that majority of respondents (85%) reported they were appraised yearly. The reasons attributed to feelings of poor remuneration included; lack of allowances for extra duties, no job promotions, lack of extraneous allowances and proper designation and higher levels of training not being considered among others.

Most of the respondents had at one time extended their working shift (87%) in the last six months. More than 50% of these had extended shift by 4 hours or more. Some reasons for extension of shift included due to nurses' shortage, emergencies, transferring patients, and colleagues who do not report on duty and when clearing pending work.

On workload, majority of the services point (unit /ward /department) reported there were 3 nurses at any one point and 95.8% of the respondents considered that nurses allocated to service points were not adequate. Some of the reasons the respondents quoted included, that the ratio by nursing council is at 1 nurse to 6 babies and they had a ratio of 3 nurses to 80 babies. *"The average number of deliveries in a day in pumwani maternity hospital ranges from between 55 to 70 deliveries."*

Role Conflict was reported by 64.8% of respondents. This was attributed to having two duties at the same time such as being an in charge, attending meetings as well as working

with patients at the same time. Other conflicting roles included triaging, ordering supplies and attending to mothers in labor and at the same time required to transfer a patient to another hospital for specialized treatment all to be done at the same time. Interpersonal conflict was also reported by respondents, 61% of respondents had experienced interpersonal conflict. Most conflict was between nurse - nurse and nurse - relative. Incidents that brought conflict included, mothers absconding from hospital, relatives protesting due to death of mother or child; Relatives making demands or threats to the nurses or attempting physical assault of the nurses.

The coping strategy commonly used by the respondents was problem solving with a mean of 27.71 followed by social support with a mean of 23.92, avoidance was least with a mean of 20.36. Among the coping strategies (problem solving, social support and avoidance) Avoidance coping was found to be a significant predictor of burnout levels. As avoidance increases burnout increases among the respondents. Both social support and problem solving showed negative relationship with burnout, indicating that as social support or problem solving coping strategy increased burnout levels decreased.

Majority (88.6%) of the respondents were experiencing burn out. This is shown by 79.2% who had moderate burnout and 9.4% who had high burnout. Age, gender, marital status, religion education level had a moderate relationship with burn out. Religion was found to have a significance relationship with burnout. Being a Christian was associated with increase in burnout levels. There was a negative relationship between age and burnout, as the age increases, burnout decreases while being married was found to increase the levels of burnout. Education level had a negative relationship with burn out. The more educated the respondent less the burnout.

Among the work related factors role conflict was found to be a significant predictor of burnout. When role conflict increases burnout increases. Extension of shift showed a negative relationship with burnout. Increase in extension of work shift (in hours) led to a decrease in the burn out levels. Work related factors were found to be more significant predictor of burnout than coping strategies.

5.3 Similar findings and in relation to the study findings

Nurses have been grouped as at high risk of burnout (Lasebikan and Oyetunde 2012) among the health professionals. According to Kokonya et al. (2014), nurses in KNH were found to have high levels of burnout. In this study more than 80% of the respondents were found to have burnout.

Studies on have reported that socio demographic factors influence burnout. Kokonya et al., 2014; Okwaragi & Aguwa 2014; Rebecca & Wendy 2008; Edwards, Burnard, Hannigan, Cooper, Adams, & Juggessur, 2006). This study concurred with previous study in that more the age in years the less the burnout, females had high burnout. Younger nurses may have less experience and less education years and therefore experience more burnout. Gender allocated roles in African community settings could be used to explain the higher levels of burnout among females, where besides being employed in formal setting females are expected to be care givers at family and community level.

Several researches pointed out that extreme number of patients, heavy workload, and, shift work and long working hours, inadequate remuneration and intensive work are factors that contributes to burnout (Circenis & Millere, 2012; Kalemoglu & Keskin 2006;Schreuder et al., 2011). In this study, workload, remuneration, role conflict, shortage of staff and inadequate material resources were shown to contribute to burnout. In this study, increase in workload, role conflict and shortage of nurses were led to increase in burnout.

Material resources include consumable and non-consumable items that help nurses to effective carry out duties and responsibilities and when adequately provided reduce job demands, stimulate personal growth and professional development for nurses (Bakker et al., 2004).Lack of resources and equipment shortages delay onset of appropriate treatment or emergency intervention making skilled health workers frustrated and angered with the situation increase the risk for burnout. In this study although material resources were provided, 41% of the respondents reported that the materials were inadequate. Material resources and burnout showed a negative relationship. Increase in provision of material resources led to decrease in burnout.

Active coping (problem solving and social support strategies) is a positive factor in combating burnout because it decreases the negative impact of stressors by strengthening nurse`s efficiency in a specific situation, while passive coping (avoidance coping strategy) increases the risk for burnout (Xiaofei et al., 2014). In this study increased problem solving and social support were related to decrease in burnout while increased avoidance increased levels of burnout.

Most of the findings in this study conformed to previous studies findings. However on work related factors, extension of shift and education levels influence on burnout did not conform to other previous findings by other researchers. According to Thorsen et al. (2014) and Bradley et al. (2015) nurses with higher levels of education experienced high levels of burnout this was attributed to increased responsibilities. In this study the higher the education level the less the burnout. This could be explained by that nurses who had more education had higher confidence in performing procedures and lack of job specifications in Pumwani Maternity Hospital.

Extension of work shift showed a negative relationship with burnout, as the number of hours of extension increased, burnout decreased. This could be explained by the reason that a nurse who extended shift by more than 4 hours was compensated with 1 day off therefore allows the nurse to rest and also view of day off as an alternative to monetary compensation. Previous studies reported that registered nurses who were under duress to work overtime or expected to work beyond a shift length and not paid for overtime had higher levels of burnout (Kent & Lavery, 2006).

5.4 Importance of the findings

Findings in this study provide background information on extent of burnout, its relationship with work-related factors and coping strategies among nurses attending to maternal health clients in Pumwani Maternity Hospital.

In addition, this study adds to the existing body of knowledge on burnout as psychological syndrome. Insights gained from the study will be used as a basis for needs assessment for continuous medical education for nurses.

Similarly, the results will be used by health managers in Pumwani Maternal Hospitals to identify work related and coping factors that can lead to burnout and used as basis for interventions implementation. This study will be a source of information for medical college trainers, nursing practice manual and other researchers on work related factors, coping strategies in relation to burnout among nurses working in maternal child health facilities.

5.5 Limitations of the study

There was a doctors` strike during the data collection period which affected the number of clients attending Pumwani Maternity Hospital and thus some nurses who had accumulated off duties were advised to take during that time thus prolonging the data collection period.

5.6 Suggestions for further research

The study respondents were nurses working in Pumwani Maternity Hospital in Nairobi County. A follow up study can be conducted in Pumwani Maternity Hospital to assess the effects of burnout among the nurses.

Similarly, a more comprehensive study targeting nurses in other Counties can be conducted to inform National health policy. This study can be extended to other cadres in health sector, and also among other ministries dealing with human services providers.

5.7 Conclusion

1. Majority of respondents were female, married, Christians and above 30 years of age, the younger the nurse, the higher the levels of burnout.
2. There was moderate relationship between socio demographic factors and burnout. The higher the education and remuneration the less burnout among nurses.
3. Work related factors influences the levels of burnout. Increase in workload, role conflict and shortage of nurses` increase, burnout levels, while increase in material resources decrease burnout.

4. Extension of shift showed a negative relationship with burnout. Increase in extension of work shift (in hours) decreases burnout levels, extension with 4hours and above was compensated with 1 day off.
5. There was shortage of nurses in Pumwani Maternity Hospital. *“According to the nursing council it should be 1 nurse to 6 babies so 3 nurses managing 80 babies it’s crazy” 54 nurses were removed from payroll and have not been replaced.*
6. Problem solving and social support coping strategies were related to decrease in burnout while increased avoidance coping increased levels of burnout.
7. Work related factors were found to be more significant predictors of burnout than coping strategies.

5.8 Recommendation

1. Primary burnout preventive approaches needs to be instituted such as modification of work environment related to work demands and work resources.
2. Increase the number of nurses in the Hospital which would lead to reduction of workload and role conflict among nurses at Pumwani Maternity Hospital. Duties and responsibilities to be specified for nurses to reduce role conflict.
3. Training on maternal child health and continuous medical education including coping strategies for all nurses. Younger nurses below age 30 years should be trained on maternal child health, seeking social support and problem solving skills.
4. Proper remuneration and designation of nurses with consideration of education level, duties and responsibilities of the nurses.

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SCHEDULE OF ACTIVITIES

ACTIVITY/MONTH	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV
Concept paper development													
Concept paper presentation													
Proposal development													
Proposal defense and corrections													
Submission of proposal to NACOSTI,KNH-UON ERC for clearance													
Pre-test of data collection instrument													
Data collection													
Data analysis													
Report writing													
Presentation of report													

BUDGET

UNIT	UNIT ITEM	COST
PROPOSAL PREPARATION	Proposal typing and printing	Kshs. 3,000.00
	Photocopies	Kshs. 4,000.00
	KNH-UON ERC, NACOSTI, COUNTY OFFICE, PUMWANI HOSPITAL FEES	Kshs. 10,000.00
	MBAGATHI HOSPITAL	Kshs. 2,000.00
MATERIALS	10 pens	Kshs. 2500.00
	10 folders	Kshs. 500.00
	1 stapler AND Staples (2 packets)	Kshs.1000 .00
	3 Flash disks	Kshs.3000.00
QUESTIONNAIRES	Typing and printing	Kshs. 200.00
	Photocopying 160 subjects x Kshs.2.00 Per page x 20 pages	Kshs. 6,500.00
HUMAN RESOURCES	Researcher (15 days x Kshs. 4,000/ day)	Kshs. 60,000.00
	Biostatistician	Kshs. 50,000.00
	Proposal preparation	Kshs. 3,000.00
	Telephone/ email	Kshs. 3,000.00
DATA PROCESSING	Typing preliminary results	Kshs. 3,000.00
	Final draft (Typing)	Kshs. 3,000.00
RESEARCH BOOKLETS	Photocopies for relevant authorities	Kshs. 5,000.00
	Printing and binding final report	Kshs. 5,000.00
	Binding of 10 books	Kshs. 5,000.00
	TOTALS	Kshs. 169,700.00
CONTINGENCY (10%)		Kshs.16,970.00
GRAND TOTAL		Kshs. 186,670.00

APPENDIX I
CONSENT EXPLANATION

**WORK-RELATED FACTORS AND COPING STRATEGIES AS
DETERMINANTS OF BURNOUT AMONG NURSES AT PUMWANI
MATERNITY HOSPITAL NAIROBI.**

Dear Respondent

My name is Jane Muriithi, a Lecturer at the Kenya Medical Training College, undertaking a Masters programme in Health Psychology at the University of Nairobi. I am carrying out a study on work-related factors and coping strategies as determinants of burnout among nurses and kindly request you to participate in this study.

Purpose: The researcher is interested in nurses working at a maternity hospital in order to examine work-related factors and coping strategies used and how these relate to either the decrease or increase of burnout levels.

Procedure: kindly answer all the questions without consulting others. There is no right or wrong answers and your honesty is of great value to the researcher. If there are any questions about the study, such as how to fill the questionnaires or complains on the research project, please do not hesitate to call the researcher on 0722657882.

Risk/discomforts: There are no risks associated with participating in this research; your responses will only be available to the researcher. Your participation is completely voluntary and you have a right to withdraw from participation at any level of filling the questionnaire.

Confidentiality: Do not write any personal identification on the questionnaire. The responses you give to the questions will remain confidential and anonymous. All respondents' forms are coded and your responses will not be used to identify you. The information provided even if published will not be used to identify you in any way and hence anonymity is assured.

RESEARCHER: Jane Muriithi (Tel.0722657882)

Master of Psychology Student

Department of Psychology

University of Nairobi

SUPERVISOR : Prof .Priscilla W. Kariuki (Tel.0722721507)

Department of Psychology

University of Nairobi

Reviewed by: KNH-UoN ETHICS AND RESEARCH COMMITTEE

TEL: 2726300 EXT 44102.

E-MAIL: uonknh_erc@uonbi.ac.ke

CONSENT CERTIFICATE

I do understand that there are no risks associated with participating in this research. I voluntarily give my consent to participate in this study.

Respondent Signature.....date.....

Researcher signature.....date.....

Thank you for taking the time to participate in this study.

APPENDIX II

**SOCIO DEMOGRAPHIC AND WORK-RELATED FACTORS
QUESTIONNAIRE**

CODE NUMBER.....

UNIT/WARD/DEPARTMENT.....

1. Gender: Male Female

2. Religion Muslim Christian other (specify).....

3. Your age

21-30years

31-40years

41-50years

51-60years

61-70years

4. Your marital status

Single

Married

Widowed

Separated/divorced

5. (a) Education secondary A-level Degree

(b) Your highest professional qualification

(a) Enrolled nurse (ECN)

(b) Kenya Registered Community Health Nurse (KRCHN)

(c) Midwifery nurse

- (d) Degree (BSN)
- (e) Any other (specify)

6. How long have you worked in Pumwani Maternity Hospital?

- (a) Less than six months
- (b) 6 months -1 year
- (c) 1-5 years
- (d) 6-10 years
- (e) 11-15 years
- (f) More than 15 years

7. For the last six months, have you been in any management position? Yes No

If yes specify

8. Are you provided with essential material resources that you require to carry out your duties, effectively, Yes No

If **yes**, specify the material resources that enabled you to effectively carry out your work

.....
.....
.....

If **no**, specify which materials were missing and were essential for you to carry out your work

.....
.....
.....

9. (a) Do you consider yourself adequately remunerated for the work you do?

Yes No

If **no**, what would you want done about your remuneration.....

b) How often do you get appraised by your supervisor, every:-

- (a) One year

- (b) Two years
- (c) Three years
- (d) Four years
- (e) Five years
- (f) Never appraised
- (g) Any other specify.....

10. While working in this hospital, have you attended any continuous medical education in maternal child health?

Yes No

If **yes** specify.....

.....

If **No** give reasons why.....

.....

11. (a) How long is a normal shift in this hospital in hours

(b) In the last six months have you ever extended your shift?

Yes No

(i) If **yes**, with how many more hours did you extend.....

(ii) Give reasons why the shift was extended

.....

.....

12. (a) At any one time how many nurses are on duty in your unit/ward/department

.....

.....

(b) Do you consider the number of nurses in your unit/ward/department adequate?

Yes No

If **No**, give reasons why

13. (a) What are your daily assigned duties in this unit/ward/department?

.....
.....

(b) Are you able to complete all assigned duties

Yes No

If **no** give reasons

why.....

(ii) What would help you to complete the assigned duties

.....
.....

14.(a) Are your duties and responsibilities always specified Yes No

(b) While carrying out your duties have you experienced any role conflict? (e.g. have two duties at the same time) Yes NO

If YES, specify:

.....
.....
.....

(c) While at work have you ever experienced any interpersonal conflict? Yes No

If **yes**, which one(s) of these

Nurse – nurse conflict

Nurse – nurse in charge conflict

Nurse-physician conflict

Nurse – supportive staff conflict

Nurse – patient conflict

Nurse –relative(s) conflict

Give your comments

.....
.....

15.(a) While at work have you experienced any incidents of insecurity either affecting you or colleague(s) Yes No

If yes explain.....
.....

Coping Strategy Indicator (CSI)

Please read the following statements and indicate how often you have done what the statement says.

(Tick appropriately)

	How often have you have you done the following?	A lot	A little	Not at all
1	Described your feelings to a friend			
2	Rearranged things so your problem could be solved			
3	Thought of many ideas before deciding what to do			
4	Tried to distract yourself from the problem			
5	Accepted sympathy and understanding from someone			
6	Did all you could to keep others from seeing how bad things really were			
7	Talked to people about the situation because talking about it made you feel better			
8	Set some goals for yourself to deal with the situation			
9	Weighed up your options carefully			
10	Daydreamed about better times			
11	Tried different ways to solve the problem until you found one that worked			

12	Talked about fears and worries to a relative or friend			
13	Spent more time than usual alone			
14	Told people about the situation because talking about it helped you come up with solutions			
15	Thought about what needs to be done to straighten things up			
16	Turned your full attention to solving the problem			
17	Formed a plan in your mind			
18	Watched television more than usual			
19	Went to someone friend or professional to help you feel better			
20	Stood firm and fought for what you wanted in the situation			
21	Avoided being with people in general			
22	Buried yourself in a hobby or sports activity to avoid the problem			
23	Went to a friend to help you feel better about the problem			
24	Went to a friend for advice about how to change the situation			
25	Accepted sympathy and understanding from friends who had the same problem			
26	Slept more than usual			
27	Fantasized about how things could have been different			
28	Identified with characters in movies or novels			
29	Tried to solve the problem			
30	Wished that people would just leave you alone			
31	Accepted help from a friend or relative			
32	Sought reassurance from those who know you best			
33	Tried to carefully plan a course of action rather than acting on impulse			

Original CSI by Amirkhan (1990)

MASLACH BURNOUT INVENTORY-HUMAN SERVICES SURVEY(MBI-HSS)

The following statements talk about job related feelings. Read statement and indicate how often you had the feeling. *(Tick appropriately)*

	How often have you done/felt the following?	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day
1	I feel emotionally drained from my work							
2	I feel used up at the end of the workday							
3	I feel fatigued when I get up in the morning and have to face another day on the job							
4	I can easily understand how my clients/patients feel about things							
5	I feel I treat some clients/patients 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 clients/patients							
8	I feel burned out from my work							
9	I feel I'm positively influencing other people's lives through my work							
10	I've become more callous (unsympathetic) toward people since I took this job							
11	I worry that this job is hardening me emotionally							

12	I feel very energetic							
13	I feel frustrated by my job							
14	I feel I'm working too hard on my job							
15	I don't really care what happens to some clients/patients							
16	Working with people directly puts too much stress on me							
17	I can easily create a relaxed atmosphere with my clients/patients							
18	I feel exhilarated after working closely with my clients/patients							
19	I have accomplished many worthwhile things in this job							
20	I feel like I'm at the end of my rope (can no longer take it)							
21	In my work, I deal with emotional problems very calmly							
22	I feel clients/patients blame me for some of their problems							

APPENDIX 111
LETTERS OF AUTHORIZATION