

UNIVERSITY OF BOTSWANA



FACULTY OF HEALTH SCIENCES

SCHOOL OF NURSING

RESEARCH ESSAY

TOPIC: Stress among Nurses Working in Intensive Care Units in Selected Hospitals.

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SUPERVISOR: Dr. M.B. Mmule Magama

Running head: STRESS AMONG NURSES WORKING IN INTENSIVE CARE UNITS
IN SELECTED HOSPITALS

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TABLE OF CONTENTS

APPROVAL PAGE	i
STATEMENT OF ORIGINALITY	ii
ACKNOWLEDGEMENTS	iii
DEDICATED TO:	iv
ABSTRACT	v
CHAPTER ONE	1
1.0 Introduction	1
1.1 Background	1
1.2 Statement of the Problem	4
1.4 Purpose of the study	6
1.5 Research Objectives and Research questions	6
1.6 Operational definitions.....	7
1.7 Conceptual framework.....	8
CHAPTER TWO - LITERATURE REVIEW	12
2.1 Job Demands and Job Resources of Nurses Working In ICU	12
2.2 Effects of stress among nurses working in ICU.....	18
2.3 Possible intervention strategies.....	19
CHAPTER THREE - METHODOLOGY	23
3.1 Research Design.....	23
3.2 Settings.....	24
3.3 Population, Sampling and Sample size.....	25
3.31 Inclusive criteria.....	26
3.32 Exclusive criteria	26
3.4 Procedures.....	26
3.5 Data Collection Tools	27
3.6 Ethical consideration.....	28
3.7 Reliability.....	29
3.8 Validity	30

3.9 Rigour	30
3.10 Data management and analysis	31
4.0 REFERENCES	33
APPENDICES	40
5.1 APPENDIX 1: Consent form.....	41
5.2 APPENDIX 2: Questionnaire	43
5.3 APPENDIX 3: Interview guide	51
5.4 APPENDIX 4: Request for Consent from the Hospital Authorities.....	54
5.5 APPENDIX 5: Budget	57

APPROVAL PAGE

Supervisor: _____

Date: _____

Internal Examiner: _____

Date: _____

External Examiner: _____

Date: _____

STATEMENT OF ORIGINALITY

This statement serves to declare that this research proposal has been prepared and compiled by Tsholofelo Gaobotlhoko. It is submitted in fulfillment of Master in Nursing Sciences, specializing in Community Health Nursing at the University of Botswana.

Signature: _____

Date: _____

Tsholofelo Gaobotlhoko

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I am grateful to my research supervisor; Dr. Mmule Magama who has been giving me unlimited guidance throughout the research proposal process; her commitment and patience has enabled me to successfully complete this document.

I will further extend my sincere gratitude to my family, especially my husband Mr. M. Gaobotlhoko for encouraging me to pursue my goal and for provision of financial and emotional support through this journey. Above all, I will like to give thanks to the one who created everything, who gives wisdom and strength, God, the Almighty.

DEDICATED TO:

This Research Proposal is dedicated to my parents; Mr. and Mrs. Ditirafalo, who have always been a source of courage and faith in my life since I was born. They taught me that perseverance and endurance is the root of success.

I also dedicate this proposal to my Husband and my children. I appreciate these family members for the encouragement and support provided throughout the process of carrying out the research project.

ABSTRACT

Introduction: Occupational stress has been an evident phenomenon in the nursing profession. This is probably due to the nature of nursing duties which are hectic and challenging. Despite the overwhelming stress that nurses may be facing, inadequate effort has been made towards helping the nurses to cope with stress.

Purpose: The purpose of this study is to explore stress among nurses working in the Intensive Care Units. The causes of stress and effects of stress will be explored; coping abilities as well as the suggested measures for improving the situation will be investigated.

Methodology: A convergent parallel mixed method approach will be used. The study will be conducted in four hospitals in Botswana; these will include one government referral hospital, one government district hospital, one private hospital and one mine hospital which is not profit making. The population of interest are the nurses working in Intensive care units in selected hospitals in Botswana and purposive sampling will be used in this study.

Permission will be sought from the Ethical Review Boards: a) the university of Botswana and b) Ministry of Health in order to ensure protection of participants' dignity, rights, and safety. Informed consent shall be sought from the study population by first explaining the objectives of the study, the risks and the benefits of the study. The consent form will be provided for signing to those who will choose to participate in the study. Confidentiality will also be ensured so as to protect identity of the respondents and the rights of the individuals will be respected to avoid exploitation.

The Job Demands-Resources conceptual framework developed by Demerouti Bakker, Nachreiner and Schaufeli (2001) was used to guide the development of this proposal. The researcher used the model as a guide for literature review and development of a questionnaire and interview guide that assesses the job demands and job resources for the nurses working in the selected Intensive Care Units.

CHAPTER ONE

1.0 Introduction

Increased workloads, uncondusive work environments and poor resources is stressful for many workers. Occupational stress may not only impacts on the employees' health, it might also affects the quality of care delivered. This chapter deliberates on the introductory part of the research essay which aims at discussing stress among nurses working in Intensive Care Units (ICU) in selected hospitals in Botswana. The subtopics covered under the chapter includes discussion of the background of the study, statement of the problem with the purpose and importance of the study. The conceptual framework guiding the study processes will also be discussed.

1.1 Background

Occupational stress among nurses is an evident phenomenon, probably because of the nature of nursing duties which are hectic and challenging. Despite the overwhelming stress that nurses may be facing, less effort has been made towards helping the nurses to cope with stress. Seyle (1976), viewed stress as the result of all adaptive reactions in the body and equated complete freedom from stress to death. According to the author, although stress is viewed as healthy, it can have a negative effects on an individual.

The National Institute for Occupational Safety and Health (NIOSH) (2008) defines stress as the sensitive disturbance of the body which normally affects the physical, mental or emotional wellbeing of an individual. It is a response caused by any situation or thought that makes one feel frustrated, angry, nervous or anxious. According to the author, the reaction occurs when the requirements of the job do not match capabilities, resources or needs of the worker. In support of this, Hassard and Cox (2011) indicated that, extreme or persistent pressure and job demands that

go beyond the employee's resources are elements that define work related stress. Mosadeghrad, Ferlie and Rosenberg (2013) also highlighted that, job stress is a serious threat to the quality of work of the health care employees. The study further affirmed that stress can lead to hostility, aggression, absenteeism, high turnover and reduced productivity.

Ayed, Eqtaivt, Fashafsheh, Basheer, Aqel, Nassar and Omary (2014), identified work-related stress among the Palestinian nurses working at ICUs as the most common challenge because, in addition to the workload, these nurses deal with issues of death and dying. Zeller and Levin (2013) also indicated that, workplace stress affects health and safety of nurses and that, stress interferes with nurses' ability to provide quality patient care. In a descriptive study by Sayed and Ibrahim (2012), the highest mean score of stressors among nurses in government hospital was found to be 72.7 % as compared to 56.95% in non-governmental hospital. The findings in this study suggest that, nurses in the government hospitals were more likely to be stressed up than those working in non-governmental hospitals. The absence of experts and poor working conditions were found to be traumatic and causing stress among the nurses.

Likewise, in India, Jose and Bhat (2013) conducted a descriptive study on coping of the nurses working in selected hospitals. The study confirmed that 60.38% of the sampled population experienced low stress, 38.46% experienced moderate stress and only 1.15% of the population had the highest level of stress. Another study which explored the prevalence of stress and the coping mechanism of ICU nurses by Lexshimi, Tahir, Santhna and Md Nizam (2007) confirmed that nurses do experience physical and psychological stress.

A descriptive study purposed to investigate feelings of suffering among the American nurses working in ICUs by Martins and Robazzi (2009), also highlighted that working in ICU is unbearable and stressful. Taking care of the critically ill patients and their families has been

linked with the stress. The study recommended adoption of strategies that can reduce stress in these settings. Similarly, Chiou, Chiang, Huang, Wu and Chiene, (2013) recommended that there is need to develop strategies for prevention of stress among nurses and to devise measures necessary for assisting nurses to cope with stress in critical care nursing.

Botswana on the other hand has no study specific to stress among ICU nurses, but Fako, Forcheh and Linn, (2004) explored the correlates of work place stress among Botswana nurses. The study has shown that stress was related to dissatisfaction with workstation, inadequate telecommunication facilities, dissatisfaction with salary, unhappiness with the job and lack of chance for in-service education were some of the identified factors. Moreover, Sinha and Onyatseng (2012) indicated that, nurses in Botswana are overwhelmed by high workload and the mandate in the health sector. The authors further alluded that the workload has been increasing over the years but is not matched by increase in the number of nurses and this mismatch has led to dissatisfaction among nurses. The study also revealed that the nurses are dissatisfied by the poor working conditions and they are not happy with their salaries.

According to the Ministry of Health (2013), the health care system structure of Botswana consists of referral hospitals (0.5%), district (2%), primary hospitals (3%), clinics (43%), and health posts (52%). Out of the list discussed above, only two (2) referral hospitals have fully functional Intensive care units (ICUs), three (3) district hospitals have just started providing critical care nursing services. It is worth noting that, the three district hospitals' ICUs are newly established, and not yet fully functional. There are also two mining hospitals which are offering high care services (intensive care services) and the services are mainly for the mine employees and the few general public around the hospital locality. Additionally, there are two private hospitals which are offering ICU services in the southern part of the country.

The discussion above reveals that, the intensive care units in Botswana are few and mainly situated in the southern part of the country. It is also marked that very few hospitals have capacity of fully providing critical care services, while majority are still at an infancy stage. This could probably mean that there are few numbers of nurses mending these hospitals, and they could be overwhelmed by a large number of referrals from the less resourced hospitals who do not offer critical care services. Therefore, it is essential to explore stress in the ICUs to determine the extent to which nurses in these environments are affected by stress, and their response to stressful situations. Insights from this study will provide a foundation for initiation of intervention strategies necessary for alleviation of stress.

1.2 Statement of the Problem

It is noticeable that work related stress is a serious challenge nurses working in the intensive care units. Basing on the studies cited above, several factors such as taking care of a critically ill patients and dealing with traumatic conditions have been implicated as the source of stress for the nurses. While some studies explored stress among the general population of Botswana nurses; there has never been a study that focused on nurses working in the intensive care units, hence the need conduct this study.

The researcher's observation is that nurses working in the ICU take care of patients and relatives who experience severe physical, psychological and emotional trauma. As the nurses perform duties in the ICUs, there may be a tendency to sympathize with patients and this may be stressful for them. Factors such as work load and shortage of human resource may also contribute to the stress that nurses face on daily basis.

According to the Botswana Ministry of Health survey report (2006), it is necessary to have a national programme that cares for health workers. The goal of the programme is to

provide support services that enhance staff retention, improve the well-being and enhance job satisfaction of health workers. This would in turn have a positive impact on provision of care to patient since Botswana's health care system seems to be more focused on the patient as opposed to caregivers.

About thirty (30%) of the hospitals in Botswana are offering intensive care services in Botswana; two are private-profit making hospitals and the cost is not affordable to everyone. Ten percent (10%) of these hospitals with ICU wards are newly established and are not fully functional. This may indicate that, the ICU services may be inadequate, causing an overwhelming strain and stress on few nurses who provide this specialized service. The situation may also translate to overcrowding and provision of poor quality of service in the hospitals offering intensive care.

A documented report by Toka (04/10/2009), on the Sunday Standard newspaper, conveyed that migration of nurses to other countries was due to poor working conditions in Botswana. The response by, the then Minister of Health, Lesego Motsumi was that, "the departure of nurses for alternative opportunities, whether abroad or elsewhere, is a normal phenomenon experienced by every organization". Concerning the same issue, Thupayagale-Tshweneagae and Feringa (2009), in the study whose findings were presented at the 2009 International Council of Nursing (ICN) Quadrennial Congress, showed that around 7.4% (600) of the nurses had migrated to developed countries. The study revealed that the main reason for the nurse's migration was unfavorable remuneration, job dissatisfaction, poor quality of life and poor working conditions.

Considering the discussions above, most of the studies carried out locally were not specific to ICU nurses, but they disclosed that nurses in general were somehow dissatisfied by

their working conditions. It is also evident that, there might be an imbalance between the job demands and the job resources in ICU services in Botswana, hence the need to explore whether nurses in the ICU experience work related stress, factors that contribute to the stress and strategies that could be adopted to alleviate stress among nurses working in the intensive care unit.

1.3 Significance of the Study

The results of this study will benefit nurses working in the intensive care units; it will add value to the nursing profession to improve nursing practice through addressing nursing issues determined. The stress management strategies identified in the study could be incorporated into nursing education and nursing in-service education in order to prevent and control stress in the ICUs. The study will also provide insight for policy makers in the development of policies and procedures necessary for improving quality of care to patients and protection of nurses as service providers.

1.4 Purpose of the study

The purpose of this study is to explore stress among nurses working in the Intensive Care Units. The causes of stress and effects of stress will be explored; coping abilities as well as the suggested measures for improving the situation will be investigated.

1.5 Objectives and Research Questions

Polit and Beck (2012), indicates that the objectives of the research outline the specific matters that need to be addressed so as to achieve the purpose of the study. They are more specific than the purpose and are relevant to the goal of research. Research questions on the other hand are more specific than the research objectives and specify what needs to be done in order to achieve the objectives.

Objectives

The objectives of the study in support of the purpose are to:

1. investigate the nature of stress amongst nurses working in the Intensive care units.
2. evaluate the effects of stress amongst nurses working in the ICUs.
3. outline measures necessary for alleviation of stress among the selected population.

Research Questions

The following research questions will be used to address the above objectives:

1. What is stress?
2. What are the job demands in the Intensive care units?
3. What are the effects of stress on the nurses working in the ICU?
4. How do nurses cope with stress in the ICU?
5. What are the possible intervention strategies necessary for alleviation of stress in the ICU?

1.6 Operational Definitions

- Stress – the level of pressure people feel on their minds, body and souls brought about by the demands of their jobs, relationships and responsibilities in their personal lives.
- Burnout – is an extended exposure to chronic sensitive job/occupational stressors leading to extreme exhaustion and poor performance at work.
- Job satisfaction - is the level of gratification a person feels regarding his or her job. The feeling is mainly based on an individual's perception of approval.
- Job demands - are all physical, psychological, social or organizational aspects of a job that require continuous physical and/or psychological effort, (Schaufeli and Bakker, 2004).

- Job resources - contain all physical, psychological, social or organizational aspects of a job that either reduce job demands; the associated costs that are functional in achieving work goals or stimulate personal growth, learning and development (Schaufeli and Bakker, 2004).

1.7 Conceptual framework

The conceptual framework that will guide this study is the Job Demands-Resources model. The model was developed by Demerouti, Bakker, Nachreiner and Schaufeli in 2001. It was built around the assumption that each job has risk factors that are associated to job stress. According to Bakker and Demerouti, (2007), this model predicts employee's stress, engagement and organizational performance.

The model was developed in an attempt to remove some of the limitations of earlier models in explaining positive aspects of work, like Karasek's (1979) Job Demands-Control model which focuses on workload and strain. Demerouti, Bakker, Nachreiner and Schaufeli, (2001) on the other hand view and examine positive job characteristics along with negative work-related factors.

The Job Demands-Resources model includes a variety of work-related factors while other models were designed for a limited number of job characteristics. The assumption of the model is that, all job characteristics associated with the work environment can be classified into two categories; the job demands and job resources (Demerouti et. al, 2001).

The Job demands are viewed as causes of health issues whilst job resources influence the motivation of the employees (Demerouti et. al, 2001). The high job demands drain employees' general health, leading to general exhaustion and health problems. Examples of job demands

include role overload, unfavorable environmental conditions, emotional demands, time constraints and high work pressure (Bakker and Demerouti, 2007).

Job resources comprise of the social, psychological, physical and organizational aspects that reduce the costs associated with job demands. They facilitate the achievement of work goals and stimulate personal growth and development (Bakker and Demerouti, 2007). The job resources are responsible for reducing the impact of job demands and motivate employees when the job demand levels are high. The assumption also indicates that job resources may lead to positive outcomes such as increased job satisfaction and work engagement (Bakker and Demerouti, 2007)

The theory also suggests that job demands and resources interact in predicting occupational health and safety. In this case, the demands and resources may have a combined effect on wellbeing and indirectly influence performance. The job resources buffer the impact of job demands; therefore, improving job resources such as social support, autonomy, performance feedback and providing opportunities for development will alleviate the pressure of job stress. This implies that, employees who have many job resources available can cope better with their daily job demands. Nielsen, Randall, Yarker, & Brenner (2008), have shown that employees achieve the best job performance in challenging and resourceful work environments, and this confirms that, organizations ought to offer employees sufficient job challenges with adequate job resources to motivate them.

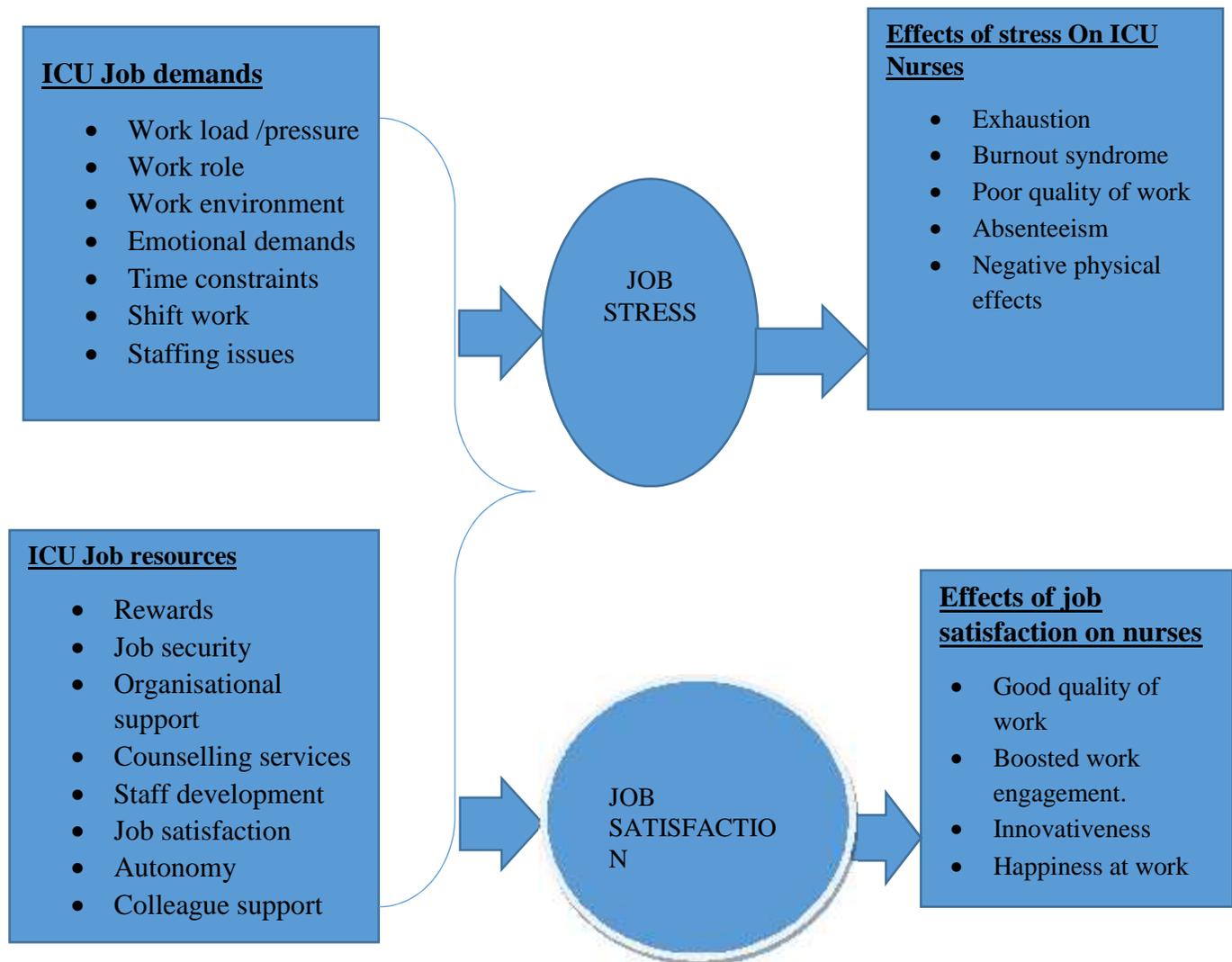
Application of the model

This study will therefore use the model to determine the relationship between job demands and job resources in the ICU and investigate how this impact on nurses working in critical care unit.. The job demands that the study will evaluate includes the ICU nurses' roles,

the work load, the environment and staffing. The researcher will determine if the nurses are not being overworked and whether the staff is enough and relevant for ICU services. The job resources that will be considered by the study includes the workers rewards system, job security in ICUs, staff development and the support given to ICU nurses. The study will further explore the effects of the job resources and job demands on the quality of the nursing practice and on the lives of nurses working in the ICUs.

The association between job stress or job satisfaction, the job demands and job resources will also be determined. According to the model, in cases where the job demands are high, the job resources have to be increased as a way of intervening and this is expected to motivate the employees to do their work well. On the other hand if the job resources are poor or inadequate, the quality of work might be negatively affected and this may lead to stress. Figure 1 below, provides a summary of the model and how it will be used to guide this study.

Figure 1: Job Demands-Resources Model - Application to ICU



Adopted and Modified from: (Demerouti, Bakker, Nachreiner and Schaufeli, 2001)

Conclusion

Nurses in the intensive care units may be prone to stress because of high workload, shortage of staff and handling of critically ill patients who might be very sick, non-communicative and on mechanical ventilation. The study seeks to explore whether nurses in the intensive care units are affected by workplace stress, the kind of stressors they face and measures which can be adopted to alleviate stress. The Job Demands-Resources model will be used to guide the study is discussed.

CHAPTER TWO - LITERATURE REVIEW

2.0 Introduction

This chapter discusses literature of studies related to occupational stress affecting nurses working in the Intensive Care Units. The subsections of the chapter will explore the job demands and job resources of the nurses working in Intensive care units, the effects of stress among nurses working in ICU and the possible intervention strategies.

2.1 Job Demands and Job Resources of Nurses Working In ICU

According to Kahn, Wolfe and Quinn (1964), stress has been viewed as work place hazard since the mid-1950s. The authors also highlighted that workplace stress in nursing was first assessed in 1960 when Menzies acknowledged that nursing is stress filled occupation because the professionals are involved in high workload; exposed to human suffering, work long hours, experience shortage of staff and interpersonal conflicts.

Saini, Kaur and Das, (2011), studied twenty five nurses working in main Intensive care unit at Nehru Hospital in Chandigarh using convenience sampling. The study aimed at assessing various causes of stress and burnout among nurses working in the unit. The results revealed that 92% nurses experienced average levels of stress whilst the remaining 8% were extremely stressed. Likewise, issues such as workload, decreased job autonomy, inadequate supervisor support, less opportunities of learning on job and inappropriate feedback were identified as the major predictors of stress among nurses.

On the other hand, Gelinas, Fillion, Robitaille and Truchon, (2012), conducted a descriptive qualitative study purposed to define stressors experienced by nurses providing end-of-life palliative care in Intensive care units. The researchers used a sample of 42 nurses from 5 ICUs in Canada. The results were divided into three categories being; organizational,

professional, and emotional. Poor palliative care approach, lack of continuity in life-support and treatment plans and conflicting demands were identified as the major organizational stressors. Professional stressors included lack of competencies, difficulty in communicating with families and lack of teamwork. Conflicts, lack of emotional support and clients' suffering were identified as emotional stressors among the nurses.

Furthermore, Merlani, Verdon, Businger, Domenighetti, Pargger and Ricou, (2011) supposed that stressful work environment of ICUs can lead to burnout. The authors therefore carried out a study aimed at exploring the factors related to burnout on a national level in order to determine the predisposing factors. They conducted a multicenter, observational survey amongst the caregivers within 74 of the 92 Swiss Intensive Care Units. Ninety five percent of the female nurses among the team were associated with a decreased risk of high burnout. The factors linked with a high risk of burnout were being a nurse-assistant, being a male, having no children and being under 40 years old.

Similarly, Zhang, Huang and Guan (2014) conducted a multicentre cross-sectional study from fourteen (14) adult Intensive care units in North Eastern China. The study revealed high degree of burnout among one-quarter of the nurses who worked as registered nurses for 5–10 years in the units. The study also discovered that nurses who held a junior college diploma had a higher depersonalization score when compared with those of higher qualifications. The researchers pointed out that holding a higher qualification in relation to the individual's job, reduces the effects of the work stress.

A descriptive study conducted by Lexshimi, Tahir, Santhna and Nizam (2007) explored the prevalence of stress and coping mechanism among sixty seven staff nurses in the Intensive Care Unit at Malaysia. Results revealed that, the nurses experienced high level of stress due to

lack of knowledge, lack of work experience and caring for the critically ill patients. Sixty seven point one percent (67.1%) of the nurses expressed that being in an environment with sophisticated machines is very stressful. By the same token, Martins and Robazzi (2009) examined the feelings of suffering among eight nurses working in intensive care units using the qualitative study design. The authors established that work shifts and absenteeism contributed to stress. The two stressors are related since if nurses are not happy with the work shifts it is possible for them absent themselves from work.

In Nepal, Mehta and Singh (2014) also studied stress among nurses working in critical care areas at Nepal teaching hospital. A descriptive explorative design was used to conduct the study among fifty staff nurses who had at least one year of critical care experience. Random sampling technique was used and self-administered structured questionnaire and Modified Expanded Nursing Stress Scale were used. Lack of opportunity to discuss problems with peers and inadequate emotional support were among the most distressing factors. Shortage of staff was found to be very stressful (82%) followed by shortage of equipment supplies and irrational demands made by clients.

Likewise, Sharma, Davey, Shukla, Shrivastara and Bansal (2014) investigated work related stress in a cross sectional study among hundred staff nurses in India and documented that 80% of the nurses stated that nursing duties are hectic and that they had no time for rest. Forty three percent of the nurses reported to be severely stressed, 45% reported that the job is tiring and 75% cited inadequate salaries as stressful. The studies discussed so far, suggest that nurses are stressed and similar contributory factors are alluded to despite the different settings in which the studies have been conducted.

Another cross sectional study of one thousand nurses conducted by Milutinovic, Golubovic, Brkic and Prokes (2012), analyzed occupational stressors among ICU nurses in Serbia. The results specified that, the physical and psychological working environments were the most stressful situations whilst the social working environment was labelled as less stressful. Smith and Mark (2011) also confirmed that, there is a strong link between job demands, social support, rewards and the level of anxiety which nurses experience.

Similarly, Inoue and Versa (2014), conducted a cross sectional cohort study in order to identify stress levels among sixty (60) intensive care nurses who work in the municipality of Western Parana, Brazil. The researchers discovered medium levels of stress among the nurses primarily because of high job demand in ICU. Twenty five (25) of the participants reported to be satisfied with the salary, nineteen (19) were somewhat satisfied, eight (8) were somewhat dissatisfied, and four (4) each were very dissatisfied. Satisfaction that has been expressed by the participants might be demonstrating gratification gained from the salary despite the high work demand.

Ali and Clint (2012) utilized an exploratory, cross-sectional survey design to examine the relationship between registered nurses' job satisfaction and their intention to leave critical care nursing in Saudi Arabia. Convenience sample of 182 nurses working in critical care units were included. Perceived workload, poor organisational support and low salary and prospects for promotion were found to be strongly associated with intention to leave.

Likewise, Li Tao, Ellenbecker, Wang and Li (2015), intended to determine ICU nurses' perspectives on the causes of job satisfaction and whether or not to continue working in the ICU. The study sample consisted of nine ICU nurses were asked five open-ended questions. The researchers identified excessive workload, ICU work environment and lack of respect and

recognition for the nurses' work as major influences on job dissatisfaction. The above studies are all confirming that high job demands such as workload leads to stress among ICU nurses. There is also consistency in the studies in revealing the poor job resources as the contributory factor to stress among the participants. Wu, Ge, Sun, Wang and Wang (2011), also carried out a cross sectional study investigating the relationship between depressive symptoms and occupational stress in female nurses. The researchers concluded that role overload and role ambiguity had negative effects on the nurses. Shortage of nurses, patient demands and evolution of the nursing care were found to be some of the contributing factors to nursing stress.

In a qualitative study which involved thirty one nurses by Shorideh, Ashktorab and Yaghmaei (2012), unnecessary hospitalization of patients in the ICU and ambiguous job descriptions caused stress for the Iranian nurses. Lack of motivation, job security, inadequate income, shortage of nurses were also found to be the contributory factors to stress and resulted in poor nursing care. The factors cited in the study as causes of stress suggests that the ICU nurses were stressed because of the overwhelming job requirement and lack of proper resources.

Consistently, Li and Lambert (2008) carried out a cross sectional study which consisted of hundred and two (102) nurses working in various Intensive care units from four hospitals in Central China to examine workplace stressors. The study was using four self-administered questionnaire. The most frequently cited stressor was workload and the researchers highlighted that planning was a common and effective strategy for coping.

Lai, Lin, Chang, Wang, Liu, Lee, Peng and Chang (2008) in a cross-sectional predictive study also proposed to understand the factors related to intention to leave the job among hundred and thirty (130) ICU nurses in Eastern Taiwan. Forty eight percent (48.9%) desired to leave job due to depression, lack of job satisfaction and poor sleep quality. Surgical ICU nurses were more

likely to leave the job than medical ICU nurses. Authors suggested the need to develop appropriate measures to improve quality of life for nurses' for the purpose of job retention.

According to a qualitative study of two hundred and sixty three Brazilian ICU nurses, sources of stress included time constraints, dealing with critically ill patients and the dying of patients, (Guerrer and Bianchi, 2011). Similarly, Shorter and Stayt (2010) explored experiences of grief and coping strategies among eight critical care nurses through a Heideggerian phenomenological approach, at United Kingdom. The researchers found out that death of a patient was reported to be less distressing when death was perceived to be proper and expected. Patient's death was distressing when it was sudden and when nurses had a 'meaningful engagement' with the patient or patient's relatives.

Monte, Lima, Neves, Studart, & Dantas, (2013) conducted a cross-sectional study of twenty two (22) nurses at the intensive therapy unit of a public pediatric Hospital aiming at assessing stress in the work environment of professional nurses inside Intensive Care Units and identifying the stressing factors according to the Bianchi Stress Scale. The study have revealed issues such as activities performed at the units, caring for the critical patients, anxiety due to the unit's emergencies and the patient's death being very stressful. The results also displays that stressors are even more stressful when cases or death is unexpected or comes as a crisis.

Locally, specific studies regarding stress among Intensive care nurses has not been done but Fako, Debra, Wilson, Linn and Forcheh (2013) studied 201 nurses who provided HIV and AIDS care on regular basis in a quantitative study in Botswana. Evidence revealed that nurses experience significant stress due to work environment, role demand, job control and shift work. Though the study was not specific to ICU nurses it does not necessarily exclude them from

others, but the study may be used to assume that the ICU nurses might also be prone to stress related to their job demands and job resources.

In a quantitative descriptive survey, Rampa (2000) explored Work satisfaction among three hundred and two (320) nurses in three Botswana Hospitals. The study confirmed that level of work satisfaction among nurses was low. The reasons advanced for the nurses' dissatisfaction were low salary pays, poor opportunities for further education and promotion and too much paper work required of the nursing personnel. Poor interpersonal relationships, shortage of staff and lack of induction were viewed as stressful by the nurses. The Botswana Ministry of Health survey report of (2006) also showed that causes of work-related stress among nurses in Botswana included attending to many patients, too much work and shortage of staff and caring for HIV/AIDS patients. The results of the local studies are consistent with the global ones since they also suggest that high job demands and lack of resources are contributory factors to job stress. Although the local studies are not specific to ICU nurses, the above results might be used as a hint that ICU nurses in Botswana might be affected by occupational stress because the nature of their work.

2.2 Effects of stress among nurses working in ICU

It is imperative to note that occupational stress always come along with some effects that affect the individual's performance of the daily work and personal activities. To verify this, Moustaka and Constantinidis (2010) highlighted that stress can affect the individual physically and cause illnesses such as heart disease, migraines, hypertension, irritable bowel syndrome, muscle, back and joint pain, and duodenal ulcer. The study also indicated that, stress may impair job performance and create workplace errors. With these signs and symptoms, an individual's competence might be reduced and performance and productivity be negatively affected.

Similarly, a cross sectional study at Israelite Hospital Albert Einstein revealed a high relationship between the level of stress and cardiovascular symptoms, digestive disorders and musculoskeletal disorders among seventy five nurses, (Cavalheiro, Moura and Lopes, 2008). Martins and Robazzi (2009) also emphasized that when looking after patients in ICUs, nurses identify with the relatives, feel sorry for the patients and sometimes feeling powerless when they have limitations in helping the patients and this creates stress for the nurses.

A descriptive study by Lexshimi et. al (2007) identified that, out of 67 ICU nurses studied, 98.6% experienced headache, 60% complained of abdominal pain and 57.1% had chest pains as a result of stress in the workplace. Other symptoms experienced were viral infection, sleeping problems, weight loss and loss of libido. The studies suggests that the effects of stress can affect the social, physical and psychological being of the ICU nurses.

According to the Ministry of Health report (2006), in the needs assessment for the national strategy for Caring for the health workers, 89% of the 219 respondents indicated they sometimes feel stressed by their work; 37% indicated experience of sadness, irritability, sleeplessness and forgetfulness. About one-third of respondents reported symptoms such as physical pain and headache and back pain.

2.3 Possible intervention strategies

Wu et al (2007) suggested that it is vital to reduce work related stress among nurses and to reinforce their coping mechanisms so as to prevent burnout. The study recommended job restructuring, adjustment of work shifts and provision of occupational health education.

Mealer, Jones and Moss, (2012) purposed to identify mechanisms employed by highly resilient ICU nurses to develop preventative therapies of posttraumatic stress disorder (PSTD) through a qualitative study in Intensive Care Nurses. The researchers used semi-

structured telephone interviews with randomly selected ICU nurses in the United States of America. Spirituality, a supportive social network, positivity and having a resilient role model as characteristics used to cope with stress in their work environment as the effective coping strategies. The study also revealed that the nurses with a diagnosis of PTSD presented with symptoms such as poor social linkage, nonexistence of a role model, disturbing thoughts and negativity.

Gholamzadeh, Sharif and Rad (2011), conducted a descriptive survey among ninety (90) nurses working in Accident and emergency in three teaching hospitals in Iran. The researchers found out that the most common approach used by nurses was self-control and positive judgment. The study suggested spirituality intervention, and highlighted that this method seem to play a major role in stress management.

Moreover, Milutinovic, Golubovic, Brkic and Prokes (2012) suggested that creating a supportive work environment is important in prevention of nursing stress. The study also recommended decreasing role conflicts and being considerate to the views of the staff as another effective strategy of dealing with stress. Doef et. al. (2012) revealed that, improving nurses work conditions, through increasing staff ratios and investing in the purchase and maintenance of equipment and materials would reduce stress in the nursing profession.

Meanwhile Martins and Robazzi (2009) in a descriptive study in Brazil highlighted that being faithful and prayerful are useful when dealing with stress. The authors also suggested that physical activities, such as walking and attending health clubs as strategies for stress reduction. They also indicted that nurses used withdrawal from the patient when there was no more hope of survival so as to avoid stress and tried not to get intensely involved with the relatives so that they can avoid suffering with them.

Likewise, a descriptive study conducted in Malaysia by Lexshimi, Tahir, Santhna and Nizam (2007) highlighted that prayers and relaxation approaches were the common in dealing with stress among the ICU nurses. Thirty five point seven (35.7%) of the nurses used physical exercises and 60% relied on expressing their feelings and sharing their problems with others. Ramezanli, Koshkaki, Talebizadeh, Jahromi and Jahromi, (2015), provided that nurses working in intensive care units tend to apply emotion-focused coping strategies more than problem-focused strategies.

Shorter and Stayt (2010), adopted a Heideggerian phenomenological approach, where eight critical care nurses were interviewed at the United Kingdom. The study results highlighted that the nurses denied getting any formal support; these nurses acknowledged that informal chats with colleagues usually help them in coping with stressful situations. Participants revealed signs of normalizing death and described how they dis-associated themselves emotionally from dying patients.

A longitudinal study by Quenot, Rigaud, Barbar, Pavon, Hamet, Jacquot, Blettery, Herve and Charles (2012) involving sixty two (62) care givers , suggested that implementation of an active intensive communication strategy regarding end-of-life care in the ICU was associated with a significant reduction in the rate of burnout syndrome and depression in a stable population of caregiving staff.

Conclusion

The literature above clearly indicates that occupational stress is a health hazard that may predispose nurses to numerous health hazards. Global studies clearly suggest that the ICU nurses are seriously affected by stress and hence encounter some negative effects due to stress. Stress among ICU nurses has been extensively explored internationally and regionally; but no studies

have been done on stress among ICU nurses locally. However, very few studies were carried out on stress among general nurses locally. Both high job demands and inadequate job resources were identified as common factors that contribute to stress for nurses working in the ICU. It is also evident that stressors have negative effects on the nurses' productivity and quality nursing care provided.

CHAPTER THREE - METHODOLOGY

3.0 Introduction

This chapter serves to discuss the methods which will be used to conduct the study. The study design, data collection tools, sampling techniques and ethical considerations that the researcher intends to use will be described.

3.1 Research Design

The qualitative and quantitative study designs will be simultaneously (mixed methods) used in the study because they will complement each other. While quantitative method rapidly and efficiently captures large amounts of data from the participants, the qualitative approach is primarily concerned with gaining direct experience of the client. The approach provides contextual information and facilitates understanding and interpretation of the quantitative data (Mann, 2013). The mixed methods approach is suitable for the study since the two methods will address the inefficiencies of each of the methods adopted. Creswell and Clark (2011) highlighted that, mixed method provides strengths to offset the weakness of either of the two designs because the method enables the use of all the tools of data collection rather than using one method.

According to Creswell (2014), there are three basic types of mixed methods designs; a) Convergent parallel mixed methods design, b) Explanatory sequential mixed methods design and, c) Exploratory sequential mixed methods design. The convergent parallel mixed methods design is the most common in which the researcher collects both quantitative and qualitative data, analyzes them separately, and then compares the results to see if the findings approve or disapprove each other. The approach assumes that the two designs provide different types of information but should complement each other.

The explanatory sequential mixed methods on the other hand involves a two-phase project in which the researcher collects quantitative data in the first phase, analyzes the results and then uses the results to plan qualitative phase. The overall intent of this design is to have the qualitative data help explain in more detail the initial quantitative results. An exploratory sequential mixed method is a design in which the researcher first begins by exploring with qualitative data and analyses the results, and then uses the findings in a second quantitative phase. Like the explanatory sequential approach, the second database builds on the results of the initial method. In this study, a convergent parallel design has been selected as an appropriate mixed method because it saves time by applying two approaches concurrently. The method is therefore expected to adequately produce logical descriptions of the causative factors and effects of stress as perceived by nurses working in ICUs.

3.2 Settings

Out of the ten (10) hospitals offering intensive care services in Botswana, the study will be conducted in four hospitals; these include one government referral hospital, one government district hospital, one private for profit hospital and one mine hospital (not profit making). The government hospitals are chosen to represent nurses working in ICUs in both referral and district hospitals. The two government hospitals chosen are offering the ICU services at different magnitudes and hence the nurses in these hospitals might not be facing the same experiences or the same challenges. The results of the two hospitals will therefore be comparable in relation to the different settings.

The private for profit hospital on the other hand is chosen because it is one of the main private hospitals in the country which provides ICU services at a cost. The ICU services for this hospital are offered at a cost and can only be afforded and accessed by some people. The mine

hospital have also been chosen for the fact that they also provide the High Care services (a label used by the hospital and referring to Intensive care). All hospitals have been purposively chosen for comparison purposes because they provide similar services, hence nurses in these areas are likely to face similar challenges. Moreover, the services offered by the chosen ICUs might be similar, but the job resources and the job demands may possibly differ in one way or the other. There might also be some differences in the logistics of the units since they are managed by different systems. The findings of the four hospitals will therefore be compared in relation to their similarities and differences in job resources and job demands.

3.3 Population, Sampling and Sample size

The population of interest in this study is the nurses who are working in Intensive care units. The average number of nurses working in each ICU of the chosen hospitals is sixteen; making a total study population of about sixty four nurses. The researcher has deliberately chosen this population as these nurses provide intensive care services to clients. Purposive sampling will therefore be used in this study. According to Polit and Beck (2012), the purposive sampling method involves selecting participants or cases that will most benefit the study. Remler and Ryzin (2011) further mentioned that purposive sampling involves choosing the individuals who have unique standpoint or who perform significant roles related to the study. Researcher's choice is based on the premises that, nurses working in the Intensive care units are more experienced with the challenges and issues prevalent in ICU than other nurses working elsewhere. They are in a position to relate well the ICU job demands, the job resources and the interaction between the two. Respondents will be selected conveniently by gathering information from nurses who will be found on duty during data collection.

Qualitative sampling and sample size: An in-depth interview will be conducted in each of the chosen hospital until saturation is achieved. Polit and Beck (2012), shows that qualitative sample sizes need to be large enough to generalize the findings of the study. Saturation occurs when more participants more are added.

Quantitative sampling and sample size: Since the population of nurses working in the intensive care units is small, the researcher will use a simplified formula for proportions and finally use the finite population correction for proportions formula to calculate appropriate sample size (Yamane, 1967). Using the total number of 64 nurses, the calculated proportion is 55 and the final calculated sample size applying the above formulas will therefore be 29.9 rounded to 30. Therefore the sample size for the study will be a total of 30 nurses for the four hospitals and between seven and eight nurses for each hospital.

Inclusive criteria

Both male and female nurses of all age groups who are working in the Intensive care units will be included as a study population. Respondents should have worked in the ICU anywhere in the country for more than 3 months

Exclusive criteria

Nurses who are working in any setting other than ICU will be excluded because they have no experience of the ICU and hence will not yield the required study results. The nurses with ICU experience from other countries will be excluded. Any nurse who have worked for less than three months will also be excluded.

3.4 Procedures

Recruitment technique will involve sharing the research topic with the nurses working in the ICUs at the above mentioned hospitals; all procedures will be explained to them. Participants

will be allowed to seek clarity by asking questions after which they will freely choose whether they will or will not participate in the study. Respondents who wish to participate in the study will be offered the consent form to sign. The recruitment strategy will ensure protection of the participants' rights as it gives them freedom of choice.

An in-depth interview will be conducted in each ICU utilizing an interview guide to direct the discussions. Note taking and audio tapping will be used to record data during discussions. Prior to recording, permission will be sought from the participants to avoid violation of respondents' rights. Participants will be reassured of proper management of the tape, that audio tapping will be essential for counter checking the transcribed information (Brikci & Green 2007).

The interviews will last between 20-30 minutes per participants. They will be held in quiet, comfortable place so that participants feel relaxed and free to speak. Formal, controlled, pre-arranged time and place will be organized before the meeting is held. The researcher will facilitate and lead the discussion using the interview guide, in order to direct and focus the discussions. During quantitative data collection, the availed structured questionnaire shall be used and issued to the participants to fill. Collected data, together with the audio tapes will be kept and locked in a save place, where it can only be accessed by the researcher so as to ensure confidentiality.

3.5 Data Collection Tools

A self-administered questionnaire (Appendix 2) will be used to collect data utilizing a modified General Social Survey 2010 (Section D) tool, adopted from the Quality of Work Life Module NIOSH. The tool has been modified to suit the study; some of the questions were restructured to suit the topic. The variables of the study will include age, gender, number of years working in Intensive care unit, working shifts, years of experience and finally the views of

the population of interest on their work environment. The questionnaire has two sections namely, section A and section B. Section A is about the participant's demographic data, whilst section B is the one that has been adopted from NIOSH and the researcher has selected sixty (62) items (Appendix 2). Most of the items in the questionnaire are measured using Likert-scale; there are items measured by continuous scale, ranging from strongly agree to strongly disagree and not true at all to very true. Categorical scale has also been used in some items, where work-related stress is measured by enquiring whether or not the indicated situation had happened to the participant. The selected questions are chosen because they are considered to be relevant to the study. Since the study uses a mixed method approach, an interview guide will also be used for the in depth interviews. The guide consist of six open ended questions (Appendix 3).

3.6 Ethical consideration

Permission will be sought from Ethical Review Boards: a) the university of Botswana and b) Ministry of Health in order to ensure protection of participants' dignity, rights, and safety. Consent has also been sought from the selected hospitals (Appendix 4). According to Polit and Beck (2012), the main purpose of involving the ethical review board is to ensure that the proposed plans meet the requirements for ethical research. Informed consent shall be sought from the study participants by first explaining the objectives of the study, the risks and the benefits of the study. Shahnazarian, Hagemann, Aburto, and Rose, (2009), define informed consent as a process in which the subject has an understanding of the research and its risks. The participants will also be allowed to ask questions they might have so as to allow them to clear their concerns regarding the study. The consent form (appendix 1) will therefore be provided for them to sign once they fully understand the study purpose and agree to participate. The consent form assures the participants that the study will be used for academic purposes and for policy

development so as to improve the working conditions and reduce occupational stress. The consent also indicates that the researcher will guard against any harm to the participants and minimize risks by managing the data appropriately and protecting their rights.

Confidentiality will also be ensured so as to protect identity of the respondents and the rights of the individuals will be respected to avoid exploitation. Jamison (2007), defines confidentiality as an assurance by a researcher to a participant in research that any information provided to the researcher cannot be attributed back to that participant. The assurance of confidentiality carries with it the additional implication that participant's identity cannot be discovered. Confidentiality and safety of data shall therefore be ensured. Data will only be accessible to the researcher and shared with the personnel involved in the study in order to protect the rights of respondents.

The study will be used for academic purposes and by policy makers to improve the working conditions and reduce occupational stress. The researcher will guard against any chance that may harm the participants and minimize risks associated with the research through considering participants rights protection.

3.7 Reliability

Davis and Dodd (2002), indicates that accuracy and dependability of the studies rely on the reliability and the validity of the study. Reliability refers to the ability to replicate the study processes and the results. In an effort to ensure reliability, the researcher triangulated different data sources by converging qualitative and quantitative methods to gather information from participants. Piloting of the study tools will be conducted at Scottish Livingstone Hospital to check the trustworthiness of the instruments for the study. The questionnaire which has been adopted from the Quality of Work Life Module NIOSH (2010) General Social Survey (Section

D) tool, has been modified by selecting the items that are relevant to the study so as to ensure to ensure it yields reliable findings. Since the questionnaire has not been modified and therefore not standardized, there is no reliability test of the tool. Research specialists from the University of Botswana and externally have reviewed the study proposal to evaluate and critique the study tools. A close supervision from the UB evaluated content clarity and appropriateness of the items. The same was modified basing on the comments.

3.8 Validity

According to Waterman (2013), validity in qualitative research is about the appropriateness and relevance of the tools, processes and data. Exploring occupational stress among ICU nurses is a relevant topic and the methodology chosen for the study is relevant for answering the research question. Purposive sampling has been utilized and it is also suitable for the study. The results and conclusions are therefore expected to be valid for the context since the right study population and the right methods of enquiry have been applied. According to Creswell (2014), ensuring validity in convergent approach is based on using both quantitative and qualitative procedures. Validity has also been guaranteed by using the same concepts and variables on both quantitative and qualitative, so that the findings can be easily compared and merged. Furthermore, the ethical review boards will be involved to check if the planned methodology meets the study objective. The study piloting has been planned to check the tools' relevance, reliability and to confirm dependability.

3.9 Rigor

Rigor refers to a process of absolutely and comprehensively adhering to research without leaving any room for inconsistencies. In order to establish rigor, the researcher selected

methodological approaches (mixed methods) and research model that provided guidance throughout the study. The research tools selected are suitable for answering the research objectives and questions provide a deeper exploration to reach the level of precision required. The type of questions used in the tools are simple, clear and free from jargon. While some questions in the tool involve recall, some questions involved acquisition of skills and required thinking and reasoning. During data analysis, the researcher will compare and contrast the information collected (refer data analysis section). In an effort to reach reliable conclusions, data will be sorted and individual pieces of information will be inspected to establish patterns and relationships between variables.

Trustworthiness has been ensured basing on the following components: credibility, transferability, dependability and conformability, (Pitney and Parker 2009). The authors defined credibility as ensuring the findings are accurate and realistic. Mixed methods approach will also guarantee credibility by confirming the results of each of the study designs in answering the research questions. Transferability on the other hand is defined as the ability to generalize the study findings to other situations and contexts. To ensure that the findings can be generalized in this study, purposive sampling will be used. Purposive sampling warrants the sample used are directly related and relevant to the research questions hence making the study findings transferable. Pitney and Parker (2009), indicates that dependability can be achieved through external audit to make the study trustworthy. In an attempt to ensure dependability, the research proposal has been evaluated on several occasions by the supervisor and internal examiner from the University of Botswana and the external examiner.

3.10 Data Management and Analysis

Before starting any formal analysis, questionnaire data will be checked for errors and any obvious inaccuracies will be rectified. Descriptive statistics using SPSS will be used to describe characteristics of the study participants and the study variables. Cross-tabulation procedures will be conducted among variables to determine odds ratios. Logistic regression analysis using the stepwise method will be applied to identify associations between work demands, work resources and stress among nurses working in the ICUs.

Data review and analysis for the focus group discussions will be done in conjunction with data collection. According Hennink, Hutter and Bailey (2011), it is essential to begin data analysis as soon as first data has been collected because this can help shape data collection. Transcribed tape recorded information will be compared and contrasted with field notes; the two will be finally merged, coded and analyzed thematically to make conclusions.

Conclusion

The researcher plans to use the mixed method in carrying out the research. The population of interest is the nurses working in Intensive care units in Botswana and participants' rights will be respected. Purposive sampling will be utilized so as to ensure relevant information is collected but ICU nurses will be allowed to decide whether they wish to participate in the study or not.

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APPENDICES

5.1 Appendix 1: Consent form

5.2 Appendix 2: Questionnaire

5.3 Appendix 3: Interview guide

5.4 Appendix 4: Request for Consent from the Hospital Authorities

5.5 Appendix 5: Budget

5.1 APPENDIX 1: Consent Form

Project Title: Study on Stress among Nurses Working In Intensive Care Units in Selected Hospitals

Principal Investigator Tsholofelo Gaobotlhoko

Phone number(s): 3186777 / 71920151

What you should know about this research study:

- You are given this informed consent document so that you may read about the purpose, risks, and benefits of this research study.
- You have the right to refuse to take part or agree to take part now and change your mind later.
- Please review this consent form carefully. Ask any questions before you make a decision.
- Your participation is voluntary.

Purpose

You are being asked to participate in a research study which seeks to explore stress among nurses working in Intensive care units in selected hospitals. You have been selected as a possible participant in this study because the study population is nurses working in the Intensive care units. Before you sign this form, please ask any questions on any aspect of this study that is unclear to you. You may take as much time as necessary to think it over.

Procedures

If you decide to participate, you will be invited to fill a self-administered questionnaire consisting of section A and section B. The questionnaire entails of sixty (62) items from section B. The study also has an interview guide which will also be used for the in depth interviews. The guide consist of six open ended questions

Risks and discomforts

The study will be used for academic purposes and by policy makers to improve the working conditions and reduce occupational stress. The researcher will guard against any chance that may harm the participants and minimize risks associated with the research through considering participants rights protection

Benefits of the study

The findings from this study may help to understand stress among nurses working in Intensive care units and hence inform policy makers in the prevention and management of stress among nurses. This can help to reduce the rate of occupation stress among the nurses and hence improve the quality of care.

Confidentiality

The data from this investigation will be used for research purpose only and will be treated with utmost confidentiality. None of these will be used for commercial use.

Voluntary Participation

Participation in this study is voluntary. If you decide not to participate in this study, your decision will not affect your future relations with the University of Botswana, its personnel, and associated institutions. If you decide to participate, you are free to withdraw your consent and to discontinue participation at any time without penalty. Any refusal to observe and meet appointments agreed upon with the researcher will be considered as implicit withdrawal and therefore will terminate the participant's involvement in the study without his/her prior request.

AUTHORIZATION

You are making a decision whether or not to participate in this study. Your signature indicates that you have read and understood the information provided above, have had all your questions answered, and have decided to participate.

_____	_____
Name of Research Participant (please print)	Date
_____	_____
Signature of Staff Obtaining Consent	Date
(Optional)	

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP.

If you have any questions concerning this study or consent form beyond those answered by the researcher, including questions about the research, your rights as a research participant; or if you feel that you have been treated unfairly and would like to talk to someone other than a member of the researcher, please feel free to contact the Office of Research and Development, University of Botswana, Phone: Ms Dimpho Njadingwe on 355-2900, E-mail: research@mopipi.ub.bw, Telefax: [0267] 395-7573.

5.2 APPENDIX 2: Questionnaire

Study on Stress among Nurses Working In Intensive Care Units in Selected Hospitals

Name and Address of the researcher: Ms T. Gaobotlhoko

University of Botswana, Gaborone

School of Nursing Department

SECTION A: Questions on demographic data

1. Age (as at last birthday): _____
2. Gender: _____
3. Nursing Education: (Mark highest level reached)
 - Diploma: _____
 - Associate: _____
 - Baccalaureate: _____
 - Master's: _____
 - Doctorate: _____
 - Presently in School: _____

Please tick to identify where you work:

- Princess Marina Hospital: _____
- Nyangabwe Referral Hospital: _____
- Jwaneng Mine Hospital: _____
- Orapa Mine Hospital: _____
- Bokamoso Private Hospital: _____
- Gaborone Private Hospital: _____

Section B

General Social Survey 2010 Section D: Quality of Work Life Module NIOSH

1. How would you describe your work arrangement in your main job?
 - a. I am employed on temporary basis.
 - b. I work for a contractor who provides workers and services to others under contract
 - c. I am a regular, permanent employee.

2. How long have you worked in ICU?
 - a. Less than 6 months
 - b. 6-12 months
 - c. Enter years: _____

3. In your main job, are you salaried, paid by the hour, or what?
 - a. Salaried
 - b. Paid by the hour
 - c. Other (*Specify*): _____

4. Which of the following best describes your usual work schedule?
 - a. Normal working hours
 - b. Rotating shifts
 - c. Night shifts only
 - d. Others (*specify*) _____

5. How many days per month do you work extra hours beyond your usual schedule?
 - a. Enter days _____

6. When you work extra hours on your main job, is it mandatory (required by your employer)?
 - a. Yes
 - b. No

7. How often are you allowed to change your starting and quitting times on a daily basis?
 - a. Often
 - b. Sometimes
 - c. Rarely
 - d. Never

8. How often do you work at home as part of your job?
 - a. Never
 - b. A few times a year
 - c. About once a month
 - d. About once a week
 - e. More than once a week
 - f. Worker works mainly at home

(This question applies only to people who indicate that they work at home as part of their job.)

9. When you work at home, is it part of your primary job at another location, are you taking work home to catch up?
 - a. Worker is working at home as part of his/her primary job at another location
 - b. Worker is taking work home to catch up
 - c. Other reasons or combination of these reasons

10. How hard is it to take time off during your work to take care of personal or family matters?
 - a. Not at all hard
 - b. Not too hard
 - c. Somewhat hard
 - d. Very hard

11. How often do the demands of your job interfere with your family life?
 - a. Often
 - b. Sometimes
 - c. Rarely
 - d. Never

12. How often do the demands of your family interfere with your work on the job?
 - a. Often
 - b. Sometimes
 - c. Rarely
 - d. Never

13. After an average work day, about how many hours do you have to relax or pursue activities that you enjoy?
 - a. Number of hours: _____

14. Do you have any jobs besides your main job or do any other work for pay?
 - a. Yes
 - b. No

15. Do you supervise others at work as a part of your job?
 - a. Yes
 - b. No

The following list of statements might or might not describe your main job (Questions 16-31). Please *indicate by a tick* whether you strongly agree, agree, disagree, or strongly disagree with each of these statements.

Questions/Statements	Strongly Agree	Agree	Disagree	Strongly Disagree
16. My job requires that I keep learning new things				
17. My job requires that I work very fast				
18. I get to do a number of different things on my job				
19. I have too much work and have to do everything well				
20. On my job, I know exactly what is expected of me				
21. My job lets me use my skills and abilities				
22. I trust the management at the place where I work				
23. The safety of workers is a high priority with management where I work				
24. There are no significant compromises or shortcuts taken when worker safety is at stake				
25. Where I work, employees and management work together to ensure the safest possible working conditions				
26. The safety and health conditions where I work are good				
27. Conditions on my job allow me to be about as productive as I could be				
28. The place where I work is run in a smooth and effective manner				
29. Workers need strong trade unions to protect their interests				

30. In your job, how often do you take part with others in making decisions that affect you?
- a. Often
 - b. Sometimes
 - c. Rarely
 - d. Never

31. How often are there not enough people or staff to get all the work done?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

For each question/statement below, please indicate if it is very true, somewhat true, not too true, or not at all true with respect to the work you do. Remove the word question because these are not questions.

Questions/Statements	Very True	Somewhat True	Not Too True	Not True At All
32. The chances for promotion are good				
33. I have an opportunity to develop my own special abilities				
34. I receive enough help and equipment to get the job done				
35. I am given a lot of freedom to decide how to do my own work				
36. My fringe benefits are good				
37. My supervisor is concerned about the welfare of those under him or her				
38. I am free from the conflicting demands that other people make of me				
39. Promotions are handled fairly.				
40. The people I work with take a personal interest in me				
41. My supervisor treats me fairly.				
42. The job security is good.				
43. My supervisor is helpful to me in getting the job done				
44. I have enough time to get the job done				
45. The people I work with can be relied on when I need help				

46. Do you have access to stress management or stress reduction programs at your current workplace?
- Yes
 - No
- If yes, what programs are available? _____
-
47. In general, how would you describe relations in your work place between management and employees?
- Very good
 - Quite good
 - Neither good nor bad
 - Quite bad
 - Very bad
48. Does your job regularly require you to perform repetitive or forceful hand movements or involve awkward postures?
- Yes
 - No
- If so what kind of activity requires you to do that? _____
-
49. When you do your job well, are you likely to be praised by your supervisor or employer?
- yes
 - May be
 - No
50. How fair is what you earn on your job in comparison to others doing the similar type of work elsewhere?
- Much less than you deserve
 - About as much as you deserve
 - Much more than you deserve
51. How easy would it be for you to find a job with another employer with approximately the same income and fringe benefits as you have now?
- Very easy to find similar job
 - Somewhat easy to find similar job
 - Not easy at all to find similar job
52. What is the likelihood of you living the job you are doing now?
- Less than 2years from now
 - 2years to 5 years
 - 5years to 10years
 - 10years or more
- If you stay longer than 5years, what would be your greater motivation? _____
-

53. What would be your main reason for leaving the job?

- a. Heavy workload
- b. Equipment malfunctioning
- c. Poor relationship with my supervisor
- d. Poor management styles
- e. Poor communication

Other, specify: _____

54. Do you feel in any way discriminated against on your job?

- a. Yes
- b. No

55. In the last 12 months, were you threatened or harassed in any other way by anyone while you were on the job?

- a. Yes
- b. No

If yes, who harassed you?

- a. Patient
- b. Coworker
- c. Unit manager

Other, specify: _____

56. Would you say that in general your health is Excellent, Very good, Good, Fair, or Poor?

- a. Excellent
- b. Very good
- c. Good
- d. Fair
- e. Poor

If fair or poor, what health condition/s you are suffering from?

57. During the past 12 months, how often have you had trouble going to sleep or staying asleep?

- a. Often
- b. Sometimes
- c. Rarely
- d. Never

58. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 6 months was your physical health not good?
- a. Number of days: _____
59. How many days did you abstain from work within the past year because of ill health?
- a. Never
 - b. 1 – 2 days
 - c. 2 - 5 days
 - d. 5 – 10 days
60. How often do you find your work stressful?
- a. Always
 - b. Often
 - c. Sometimes
 - d. Hardly ever
 - e. Never
61. In the past 12 months, have you had back pain every day for a week or more?
- a. Yes
 - b. No
62. All in all, how satisfied would you say you are with your job?
- a. Very satisfied
 - b. Somewhat satisfied
 - c. Not too satisfied
 - d. Not at all satisfied

What do you think can be done for the ICU nurses to help them cope with the ICU job demands?

Adopted from: General Social Survey 2010 Section D: Quality of Work Life Module NIOSH
(Modified by the researcher to suit the study)

5.3 INTERVIEW GUIDE

TOPIC: Stress among Nurses Working in Intensive Care Units in Selected Hospitals.

1. What do you understand by stress

2. What are your major responsibilities in ICU?

3. Discuss/determine skills and level of expertise related to position title in ICU.

4. What pressures do you feel in your job? Give example of the challenges you have experienced in ICU.

5. How do you cope with stressors in your job?

6. What would you consider to be motivating factors in your job?

5.4 APPENDIX 4: Request for Consent from the Hospital Authorities

P.O. Box 2579
Gaborone

02/05/2016

Permanent Secretary
Ministry of Health
P.O. Box 0038
Gaborone

Dear Sir

Request for permission to conduct Research in selected Hospitals

I am hereby requesting for permission to conduct research in selected Hospitals ICUs (namely Princess Marina Hospital in Gaborone and Scottish Livingstone Hospital in Molepolole). The study is about; Stress among nurses working in Intensive Care Units in Selected Hospitals in Botswana.

The study is done for the fulfillment of the of the researcher's Master's Degree in Community Health Nursing at the University.

Thank you.

Yours sincerely

T. Gaobotlhoko
MNS – Community Health Nursing Student
University of Botswana

P.O. Box 2579
Gaborone

02/05/2016

The Hospital Superintendent
Scottish Livingstone Hospital
Molepolole

Dear Sir

Request for permission to conduct Research in Scottish Livingstone Hospitals

I am hereby requesting for permission to conduct research in Intensive Care Unit in Scottish Livingstone Hospital in Molepolole. The study is about; Stress among nurses working in Intensive Care Units in Selected Hospitals in Botswana.

The study is done for the fulfillment of the of the researcher's Master's Degree in Community Health Nursing at the University.

Thank you.

Yours sincerely

T. Gaobotlhoko
MNS – Community Health Nursing Student
University of Botswana

P.O. Box 2579
Gaborone

02/05/2016

The Hospital Superintendent
Princess Marina Hospital
Gaborone

Dear Sir

Request for permission to conduct Research in Princess Marina Hospital

I am hereby requesting for permission to conduct research in Intensive Care Unit in Princess Marina Hospital in Gaborone. The study is about; Stress among nurses working in Intensive Care Units in Selected Hospitals in Botswana.

The study is done for the fulfillment of the of the researcher's Master's Degree in Community Health Nursing at the University.

Thank you.

Yours sincerely

T. Gaobotlhoko
MNS – Community Health Nursing Student
University of Botswana

P.O. Box 2579
Gaborone

02/05/2016

The Hospital Manager
Bokamoso Private Hospital
Private Bag 00205
Gaborone

Dear Sir

Request for permission to conduct Research in Bokamoso Private Hospital

I am hereby requesting for permission to conduct research in Bokamoso Private Hospital. The study is about, Stress among nurses working in Intensive Care Units in Selected Hospitals in Botswana.

The study is done for the fulfillment of the of the researcher's Master's Degree in Community Health Nursing at the University.

Thank you.

Yours sincerely

T. Gaobotlhoko
MNS – Community Health Nursing Student
University of Botswana

P.O. Box 2579
Gaborone

02/05/2016

The Hospital Manager
Private Bag 002
Jwaneng Mine Hospital
Jwaneng

Dear Sir

Request for permission to conduct Research in Jwaneng Mine Hospital

I am hereby requesting for permission to conduct research in Jwaneng Mine Hospital. The study is about, Stress among nurses working in Intensive Care Units in Selected Hospitals in Botswana.

The study is done for the fulfillment of the of the researcher's Master's Degree in Community Health Nursing at the University.

Thank you.

Yours sincerely,

T. Gaobotlhoko
MNS – Community Health Nursing Student
University of Botswana

5.5 APPENDIX 5: Budget

Item Description	Quantity	Unit Costing	Total price
Research assistants wages	2	P2 500.00	P5 000.00
Computers	1	P4 000.00	P4 000.00
Printer and accessories.	1	P3 000.00	P3 000.00
Internet		P1 200.00	P1 200.00
Stationery		P1 000.00	P1 000.00
Photocopying		P1 000.00	P1 000.00
Typing and printing		P1 000.00	P1 000,00
Traveling expenses		P1 500.00	P1 500.00
Accommodation expenses		P2 000.00	P2 000.00
TOTAL			P19 700.00