UNIVERSITY FOR DEVELOPMENT STUDIES, TAMALE

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STRESS AND ANXIETY LEVELS AMONG NURSES IN THE TAMALE METROPOLIS, GHANA

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BY

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MARCH, 2019

DECLARATION

Student

I hereby declare that this thesis is the result of my own original work and that no part of it has been presented for another degree in this University or elsewhere.

Candidate's Signature: ……. Date: ……

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Supervisor

I hereby declare that the preparation and presentation of the thesis was supervised in accordance with the guidelines on supervision laid down by the University for Development Studies.

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ABSTRACT

Nursing has been known as a stressful profession that influences the quality of health care delivery and patient safety as it requires a high level of skill, team working in a variety of situations and provide 24-hour delivery of care to clients of various needs of medical attention. The purpose of this study was to assess the level of stress and anxiety among nurses working in the Tamale metropolis, Ghana.

A descriptive cross-sectional survey was conducted among three hundred and eighty-four (384) nurses at both hospitals consisting of Eighty (80) Enrolled Nurses, sixty (60) Community Health, One Hundred Eighty-Six (186) Registered Nurses and fifty-eighty (58) Nursing Officers were recruited for this study. Both quantitative and qualitative techniques were used. Data was collected through the administration of self-administered semi-structured questionnaires. These questionnaires consisted of socio-demographic data, stress assessment using the perceived stress scale, anxiety assessment using the Kessler Psychological Distress Scale (K10) and stress reducing management techniques assessments. The data was analyzed using Statistical Package for Social Scientists (SPSS) version 22 and inferential statistics.

The study found that 62.2% of the nurses were moderately stressed and 54.2% were found to have severe anxiety. Low to moderate stress and moderate to severe anxiety were associated with age, marital status and educational levels. Again, the study found that lack of good night sleep, inadequate resources to work with, conflicting demand of people around the nurse and over-burden with workload among others as the common workplace stressors of nurses. Effective stress management strategies or techniques are essential steps to produce efficient nursing and to reduce or control the level of stress among nurses. The study further found that, the common stress management strategies such as I recognize my work, I seek support and advice from colleagues and I resort to my hobbies among others were used by nurses.

In conclusion, majority of nurses are moderately stressed with severe anxiety. The findings of this study recommended that managers and supervisors should identify and develop reinforcement strategies to reduce stress and anxiety and promote the quality of working conditions for nurses.

Table of Contents

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DEDICATION

I dedicate this work to my parents Mr. Mumuni Mohammed and Arishetu Mohammed, my wife and children 'Sulemena Zenabu, Abdul-Samed Salwa Wumtima and Abdul-Samed Nasira Nasara for their support, encouragement and prayers throughout my academic life.

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

TCH: Tamale Central Hospital

TWH: Tamale West Hospital

GAS: General Adaptation Syndrome

NIOSH: National Institute for Occupational Safety and Health

U.S.A: United States of America

WHO: World Health Organization

EPI-INFO: Expanded Programme of Immunization

WOSS: Weinman Occupational Stress Scale

SD: Standard Deviation

OPD: Out-Patient Department

NICU: Neonatal Intensive Care Unit

CHW: Central Health Worker

WHW: West Health Worker

DASS: Depression Anxiety Stress Scale

RCH: Reproductive and Child Health

CSSD: Central Sterile Service Department

SDA: Seven-Day Adventist

PSS: Perceived Stress Scale

CHW: Central Health Worker

WHW: West Health Worker

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND INFORMATION

According to Eleni et al. (2010) occupational stress is the second in frequency as a health problem related with occupation affecting 28% of employees. Stress is defined as an unpleasant experience that has negative effect on emotional and physical condition of a person (Salovey, Rothman, Detweiler, & Steward, 2000). Among different circumstances of life, stress is often associated with the workplace. Zhou and Gong (2015) argue that normally stress is more common among employees at lower levels, since they have lower control over their work situation. This is not surprising because of the amount of time spent at workplace and changes that affect the nature of work (Beh & Loo, 2012). No doubt, Dewe, O'Driscoll, and Cooper (2012) observe that stress is an unavoidable consequence of modern life. It is also the major health threat in modern work place. Stress is believed to be responsible for physical illnesses, family problems, alcohol and substance abuse among many workers. In addition, it causes absenteeism from work, accidents at work and low productivity (Akbar, Elahi, Mohammadi, & Khoshknab, 2016). Cost of stress is estimated to be millions of dollars every year for employer organizations (Blaug, Kenyon, & Lekhi, 2007).

Over the last decade, occupational stress has been a major source of concern. A survey conducted by health and safety executive showed that in 2005, 50,000 people in UK experienced work stress at a high level and 245,000 people felt work-related stress, anxiety and depression in previous 12 months (Cousins & Donnell, 2011). Another

survey by a life insurance company in United States showed that, around 46% of the employees thought that their job contained a lot of stress. In addition, one out of every three Americans has left his/her job because of stress (Jennings, 2008; MacKusick & Minick, 2010). Stress as an interdisciplinary concept has become an area of concern and interest for many individuals, companies and organizations since its effect can lead to job fatigues, absenteeism and low productivity.

According to Stoppler (2011) generally stress is said to contain external and internal factors. External factors comprise the physical atmosphere such as challenges, difficulties and expectations confronted by people on a day-to-day basis. Internal factors confirm body's ability to respond to and cope with the external stress inducing factors. Internal factors that influence the power to handle stress consist of the nutritional standing, overall health and fitness level, emotional wellbeing and the quality of sleep and rest that a person get among other things. In most cases, stress occurs in situations when people are in danger or facing a problem. However, in contemporary societies, stress is commonly experience as a part of everyday life, either to a smaller or larger extent. In terms of psychology, stress is an "innate weapon" of the human body, which is use for protection in cases when the brain perceives that the person is in danger, even when the "danger" is a potential success in a test, or something else that the person considered to be important. Scientifically, stress is a kind of unpleasant emotion manifested by fear, tension and anxiety and in many cases, accompanied by physical and mental symptoms. However, not all people experience stress in the same way and extent. According to Selye (1956), stress is an automatic biological response of a person's organism to various external stimuli. Furthermore, he supported that the

stress reaction occurs only if a person feels unable to meet the demand of a situation. According to Rothmann (2008), occupational stress can be related to poor working conditions, high workload, involuntary overtime, inflexible working hours, excessive demands, very difficult changes or wearisomeness.

To add to this, occupational stress has been interrelated with demographic characteristics, such as gender and age, Barkat and Asma (1999) years of experience, educational level, position held and marital status (Elahi & Apoova, 2012). Among the most serious consequences of occupational stress, researches have distinguished are fatigue, headaches and sensitivity of the immune system, depression and smoking or alcohol addiction (Chovwen, 2013).

Furthermore, research conducted in the field of education have revealed that teachers are very likely to feel exhausted both during and at the end of the day due to working conditions and bad structure of the school context Koustelios and Kousteliou (2001) low teaching effectiveness Ling (1991) and individual factors (Anagnostopoulos & Papadatou, 1992). The results are similar for university professors and academic administrators who seen to experience high levels of stress and tension, which negatively affecting their job performance (Peretomode, 2012). According to Balogun and Olowodunoye (2012) employees' turnover is likely to lead to psychological distress, decrease in productivity and quality of service, as well as mistrust, disruptions in work flow and further turnover. Thus, it can be supported that occupational stress is a worldwide phenomenon, observed in many occupational settings and affecting thousands of people of every age, gender and nationality.

According to researchers at the University College London, stressful work conditions, such as long working hours can double a person's risk of stress and anxiety. A Gallup of poll of nearly 240,000 full-time workers found that 10.8 percent of U.S. full-time workers have received a depression diagnosis (Bixby, 2014).

The stress level of employees differs for different types of jobs. Some professions tend to have higher level of stress. Jobs such as teaching, social work, nursing, police officers, fire fighting, surgeons, and enlisted military personnel have high level of stress (Sahraian, Davidi, Bazrafshan, & Javadpour, 2013). The specialties and work settings for nurses vary greatly. Nurses are required to provide both medical and emotional support to patients and their families whiles hiding their negative emotions and that's a big responsibility that causes big amount of stress (Sahraian et al., 2013). The nursing role is rapidly changing, as nurses are assigned to wider range of health care responsibilities and caring for the patients has definitely become more complicated. Stress arises when individuals perceive a discrepancy between the physical and psychological demands of a situation and the resource of his or her biological, psychological and social systems (Sarafino, 2012). Anxiety is a normal response to stress. However, extreme stress can be very harmful and can cause anxiety disorder. A person with anxiety disorder is very worried and reacts harshly to stressful situations or triggers. Anxiety disorder also leads to physically illness (Wells, 2013). The rate of depression and anxiety is high among nurses, since they are exposed to too much stress that affects their psychological status. Many studies (Abbas, Abu Zaid, Hussaein, Bakheet, & AlHamdan, 2012; Khalid, Irfan, Sheikh, & Faisal, 2010) among others,

found that depression and anxiety were common conditions among nurses as a result of stress.

On the other hand, stress management according to Melinda and Robert is all about taking charge of your thoughts, emotions, schedule and the way you deal with problems. Management of stress starts with identifying the source of it in your life and this is not as easy as it sounds. The true sources of stress of any individual are not always obvious and it is very easy for you to overlook your own stress inducing feelings, thoughts and behaviors. To identify your true sources of stress, you need to look closely at your habits, attitudes and excuses and this will make it easy for you to manage stress and reduce the stress inducing factors upon yourself in order to promote good health by way of emotional and psychological stability.

The setting, nature of the nurses' work and the ratio of nurse to patients in the Northern Region and Tamale Central and West Hospitals in particular expose nurses to occupational stress and anxiety. These among others are the reasons for this study to assess the level of stress and anxiety among Nurses in Tamale Central Hospital (TCH) and Tamale West Hospital (TWH) in the Tamale Metropolis, Ghana.

1.2 PROBLEM STATEMENT

Occupational stress has long been considered an occupational hazard among nurses. The four identified causes of stress among nurses, include patient care, decision making, taking responsibility, and change. It is interesting to note that nurses experience workplace stress at higher rates than most other professions. The stressors

affecting the nurse as a professional include physical demands, management issues, lack of resources, and difficulty balancing home and work responsibilities (Association, 2011).

Nurse stress is defined as the emotional and physical reactions resulting from the interactions between the nurse and her/his work environment where the demand of the job exceed capabilities and resources(Tzeng, 2002).

According to Code of Ethics for Nurses, "nurse promotes, advocates for, and protects the rights, health, and safety of the patient", but stress can have a negative impact on the quality of patient care (International Council of Nurses, 2012). Working as a nurse is an inherently stressful as a result of heavy workloads, difficult clients or patients and conflicting demands of work. The physical and psychological demands of nurses made them vulnerable to working longer hours and caring for difficult and demanding clients or patients.

Anecdotal evidence suggests that stress among nurses in Ghana is an increasing challenge which causes setback in the health delivery system. The situation is often associated with poor attitude and behavior towards patients, poor quality of service, high labor turnover, negligence, poor nursing care outcomes, and negative effects on patient safety, accidents, absenteeism, and conflict within the health system.

Casual discussions and especially the social media suggest that nurses in Ghana complain over the years about a number of stressors in professional nursing in Ghana. These include the negative effects of long working hours on the human body and psychosocial stress, working in shifts, working at night, poor interrelationships, the lack of information, and also accidental cuts and stabs at work. Casual discussions suggest

that one major stressor is the relationship between the nurse as a professional within the health setting and other health professions. Nurses express a general lack of respect from other health professionals including doctors especially and that their skills are undervalued as members of the health team. As advocates for the patient, nurses complain that their comparative status and legitimate level of authority associated with nursing as a profession acting as the 'middleman' between the patient and other health professions is a major source of stress. The cultural setting, nature of the work of nurses and the ratio of nurse to patients in the Northern Region and Tamale Metropolis in particular have also been seen by nurses as major sources of occupational stress and anxiety among them.

Despite these complaints, there is to date no systematic empirical research to establish the basic causes of stress and anxiety among nurses in Northern Ghana. The main objective of this research study therefore is to assess the level of stress and anxiety among nurses in primary and secondary healthcare in Tamale central and west hospitals in the Tamale Metropolis.

1.3 RESEARCH QUESTIONS

The research questions of this study are as follows:

1. What socio-demographics factors are associated with stress and anxiety among nurse employees?
2. What is the level of stress and anxiety among nurses in the Tamale central and west hospitals?
3. What is the effect of stress and anxiety on the work turnover and health of the

nurse employees?

4. What management strategies or techniques are helpful for reducing stress and anxiety among nurse employees?

1.4 RESEARCH OBJECTIVES

1.4.1 Main Research Objective

The main objective of this study is to:

1. Assess the level of stress and anxiety among nurses in the Tamale Central and West Hospital in Tamale Metropolis.

1.4.2 Specific Objectives

The specific objectives of this study were:

1. Examine the socio-demographic factors associated with stress and anxiety among nurses.
2. Assess the level of stress and anxiety among nurses of the Tamale Central and West Hospitals in Tamale.
3. Determine the most common occupational stressors among nurses in the Tamale central and west hospitals in Tamale Metropolis
4. Examine strategy-oriented guidelines to the managements of hospitals to reduce the level of stress and anxiety among their nurses' employees.

1.5 SIGNIFICANCE OF THE STUDY

Every human being has experienced the feeling of distress, anxiety or uncertainty, which usually accompanies a difficult situation. In most cases, stress occurs in situations when people are in danger or facing a problem. The purpose of this study is to assess the level

of stress and anxiety among nurses in the Tamale metropolis. This study is necessary because it will help us to discover the consequences of stress and anxiety on the psychological and physiological as well as the psychosocial on the personal well-being of nurse employees. Occupational stress is an increasingly important occupational health problem and a significant cause of economic loss. Occupational stress may produce both overt psychological and physiologic disabilities. However, it may also cause subtle manifestation of morbidity that can affect personal well-being and productivity (Quick, Murphy, Hurrell Jr, & Orman, 1992). A job stressed individual is likely to have greater job dissatisfaction, increased absenteeism, increased frequency of drinking and smoking, increase in negative psychological symptoms and reduced aspirations and self-esteem (Jick & Payne, 1980).

This study seeks to establish the basic causes of stress and examine the symptoms of stress and burnout among nurses in primary and secondary healthcare in TCH and TWH and come out with strategies and interventions that can be applied by managements and employees to manage stress and anxiety effectively at the hospitals in the Tamale Metropolis of Ghana.

1.6 SCOPE OF THE STUDY

The study was conducted in Tamale Central Hospital and Tamale West Hospital in the Tamale Metropolis among nurses. Information was elicited from the nurses through the use of closed structured and semi closed structured questionnaires whiles some ward in charges were interviewed to elicit information on the level of stress and anxiety among nurses.

1.7 CONCEPTUAL FRAMEWORK

Occupational stress is a whole process including the environmental sources of stress and the individual's perception of them. Stress and the resulting strains appreciation are explained as a snowball effect-negative feeling increase level of stress. Severe depression, alcoholism, unemployment, and diseases may follow the buildup of physiological, psychological and behavioral strains (Koval, 2016). Stress can be triggered by any type of situation at the work place and any type of person can suffer from it. The figure below shows the causes and consequences of occupational stress.

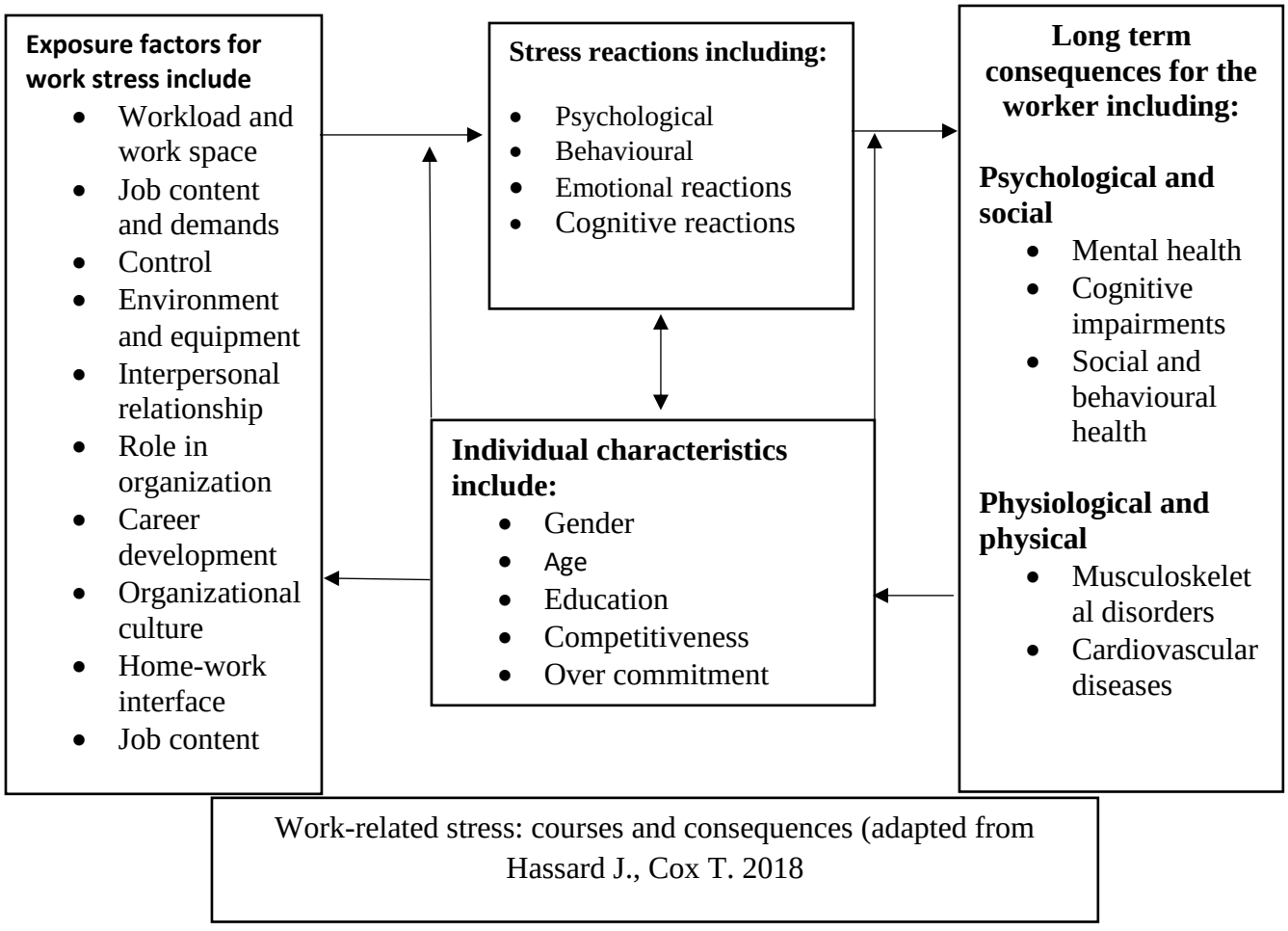


Fig 1.1, Conceptual framework.

1.7.1 The Job Demand-Control (JDC) Model

According to Karasek Jr (1979) job demands-control model is one of the most widely studied models of occupational stress. This model recognizes two important aspects of work environments: job demand and job control. Karasek Jr (1979), noted that job demands are: the psychological stressors involved in achieving the workload, stressors related to unpredicted tasks, and stressors of job-related personal encounter that can have an impact on stress levels (psychological strain). Job control referred to as decision autonomy of working employees to control their tasks and their comportment during the working day.

Occupational stress depends on the work content, which is divided into two components: job demands and job control. In circumstances where there are high demands, there is very low control and strong level of strain. This condition then produces great level of occupational stress (Bickford, 2005).

1.8 ORGANIZATION OF THE THESIS

This dissertation was organized into six chapters.

Chapter one contains the introduction and background to the study, the problem statement, the study objectives, the significance of the study, conceptual framework and job-demand control model of the study.

The second chapter reviewed relevant literature in relation to the study. The literature reviewed was based strictly on the study objectives and the study variables. Chapter three was made up of the methodology, which comprises the study design, a description of the study area, study variables (independent and dependent variables), study

population, sample size determination, sampling techniques, source of data, data collection procedures, quality control measures, reliability and validity as well as ethical considerations.

The fourth chapter contains the results and findings of the study whilst the discussion of the results and findings of the study was done in chapter five. The conclusion and recommendations of the study was presented in chapter six. The appendices of the study comprise of the references, sample of the study questionnaires and tables that was referenced to in the work.

CHAPTER TWO

LITERATURE REVIEW

2.0 INTRODUCTION

In this chapter, theoretical data as well as data from works in relation to the subject under study that has been done will be reviewed. Relevant literature related to the study from several sources such as journals, articles, internet sources and textbooks are reviewed in this chapter. The review provides an overview of stress and anxiety with reference to definitions and effects among nurses. The intervening effects of gender, family and personality traits are used to clarify to nurses and provide evidence on the lessening of stress and anxiety among their profession. Again, the role of work relationships and management style are described, the impact of stressors among nurses in the hospitals and finally strategies or methods used in the management of stress and anxiety arising from stressors to reduce stress and anxiety are explored.

2.1 OVERVIEW OF STRESS AND ANXIETY

According to Selye (1936) stress is defined as the non-specific response of the body to any demand for change. Stress is a natural phenomenon that everyone experiences in his or her life time and is often caused by stress factors or stressors (Selye, 1956). Some studies have shown that stress is harmful for mental and physical health. Constant stress brings about changes in the balance of hormones in the body which may lead to the situation where an individual feel angry, nervous or anxious (Stetson, 1997). Stress is seen as a response to noxious stimuli or environment stressors and defined as the nonspecific response of the body to noxious stimuli (Seyle, 1980). Thus, Seyle (1936)

defined stress as a response and it became the dependent variable in stress research. The work of Seyle (1956) focuses on describing and explaining a physiological response pattern known as the general adaptation syndrome (GAS) that was focused on attaining homeostasis, which refer to the stability of physiological system that maintain life. The basic premise is as follows:

(I) The stress response (GAS) is an offensive response that does not depend upon the nature of the stressor.

(II) The GAS as a defensive reaction, progress in three well defined stages (alarm, resistance and exhaustion).

(III) if the GAS is severe enough and or prolong, disease states could results in death or in the so called disease of adaptation (Selye, 1956).

Generally, many people talk about stress in relation to the pressure they are feeling from the social environment. Parents may talk about the stress of raising their children and the financial burden of running a house hold. Lecturers may talk about it in relation to the pressure of maintaining professional standards while still managing to keep on top of duties connected to teaching. Students may talk about being under stress from an approaching deadline for a major paper or submission of an important work. Lawyers, Doctors, Nurses and Therapist talk about stress in relation to meeting the endless demand of their patients and clients (Abdulai, 2011; Rice, 1992).

Unfortunate events such as the death of a loved or dear one or the loss of a job can be extremely stressful and overstretch our abilities to cope. However, stress naturally is not always harmful. Each individual‘s perceptions and interpretations give meaning to

events and determine whether such events are hostile or positive (Abdulai, 2011; Lazarus & Folkman, 1984). Personality traits are therefore remarkable intervening variables in the stress equation because what may be overstretching to one person may be terrifying to another (Abdulai, 2011; French & Caplan, 1972).

Whilst positive events such as gaining admission to the university or starting a new job invariably require us to handle new responsibilities or adjust to a new environment, they can also be exciting, joyful or delightful. The birth of a child is often a source of great joy to its parents but may also raise the level of stress that the parents experience in terms of the responsibilities couple with the financial burden. According, to a Canadian researcher, Seyle (1980), small or ordinary amounts of stress can be good to keep us alert and engaged. This good stress is referred as eustress. However, intense, enduring stress can have a harmful effect on our ability to adjust as well as our physical health (Seyle, 1980).

There are many different sources of stress. Some of them include biological (e.g. toxins, heat, cold), psychological (e.g. threats to self-esteem, depression), sociological (e.g. unemployment, death of a loved one, birth of a child), and others philosophical (e.g. use of time, purpose in life). Researchers have identified various sources of stress to include daily hassles, life changes, physical pain and discomfort, frustration and conflict and natural and technological disasters. Regardless of the stressor, the human body always react (Greenberg, 1990).

Anxiety on the other hand, is one's body's natural response to stress. It is a feeling of fear and apprehension about what is to come. For example, taking a test, the first day of

school, going for a job interview, the nature of work load, caring for difficult clients may cause most people to feel fearful and nervous. Anxiety feels differently in different people or individuals in a sense that, whiles some people may have a general feeling of fear and worry or fear a specific place or event, others may experience nightmares, panic, painful thoughts or memories that they cannot control (Scogin, Floyd, & Forde, 2000).

Normal anxiety is unpleasant but it may motivate you to work harder and to do a better job. Normal anxiety is a feeling that comes and goes, but does not interfere with your everyday life. The symptoms of general anxiety include: Rapid breathing, Increased heart rate, Restlessness, Trouble concentrating and Difficult falling asleep (Wells, 2013).

If the feelings of anxiety become extreme, last for longer than six months and are interfering with your life, you may have an anxiety disorder (Rathnayake & Ekanayaka, 2016).

2.2 Concept of Occupational Stress

Stress has been studied from many different viewpoints. Stress has been classified as a stimulus, as a response and as an interaction. Selye (1956), proposed a physiological approach that supports studying the stress by examining the association between the stress and illness. In his research, first published in his classic book “The Stress of Life” Hans Selye, popularly known and called the Father of Stress, summarized reaction to stress as a three-phase process which he called the general adaptation syndrome (GAS):

In Phase 1: which he refers to as the Alarm Reaction, the body shows some characteristic changes of first exposure to the stressor and at the same time its resistance is diminished. If the stressor is sufficiently strong (such as severe burns, extreme temperature, etc.) death may result. In Phase 2: which he calls the Stage of Resistance, resistance proceeds only if continued exposure to the stressor is compatible with adaptation. At this stage the bodily signs characteristic of the alarm reaction virtually disappears and resistance rises above normal. In Phase 3: which he refers to as Stage of Exhaustion follows prolong exposure to the stressor and at this point, the body's adaptation energy is exhausted. The signs of the alarm reaction reappear, but now they are irreversible, and the individual dies (Selye, 1956).

Contrary to the viewpoint proposed by Selye, Holmes and Rahe (1967) and Lazarus (1984) promoted a psychological assessment in which they saw stress as a particular relationship between the person and the environment that is assessed by the person as thought provoking or beyond his or her resources and endangering his or her well-being (Holmes & Rahe, 1967; Lazarus, 1984). In their psychological viewpoint, the most common stressors to our live involves our adaptation to life changing incidence or our experiences of daily hassles. Thomas Holmes and Richard Rahe focused on life changes as sources of stress and these life changes by their nature are often isolated and uncommon happenings in our lives. Some life changes could even be beneficial and enticing. For example, life changing incidents such as marriage, childbirth, owning a house or car, going to university, among others are quite agreeable experiences. Others are very disagreeable such as separation, divorce, loss of a dear one, earthquakes, and wars among others. Since they conceptualized stress as adapting to change, Holmes

and Rahe viewed more change as equivalent to more stress and consequently, more illness and disease. According to and Holmes Rahe (1967), the more significant changes a person had in his or her life, the greater the chance that he or she would contract some physical or psychological illness.

According to Lazarus and Folkman (1984), the daily hassles a person experiences are more harmful to his or her health than are the significant life changes that concerned Holmes and Rahe. They believe that these daily events are more damaging to health because of their frequency of occurrence as compared to the major life changing events that Holmes and Rahe researched, which are usually encountered only rarely. Common daily hassles as a source of stress are an unavoidable part of our daily life. They are the obvious daily irritations and incidents that endanger peoples well-being (Lazarus & Folkman, 1984). The daily hassles of life were later classified as follows:

Household hassles (e.g. making meals, shopping and keeping the home in order), health hassles (e.g. physical sickness, concerns about medical care, and side effects of medicine), time Pressure hassles (e.g. having to get too many things done, too many obligations and not enough time to get it done), inner concern hassles (e.g. feelings of loneliness, fears of social confrontations and concerns about the meaning of one's daily activities), environmental hassles (e.g. air pollutions, traffic congestion, traffic noise, neighborhood deterioration, and crime), financial hassles (e.g. concerns about debts, rent, and sending children to school) and future-security hassles (e.g. concerns about job security, property investments, and getting to retirement). Lazarus and Folkman found that the frequency of experiencing life hassles was strongly associated with

negative outcomes such as nervousness, worrying, lack of energy, sadness, and feelings of isolation (Lazarus & Folkman, 1984).

This notwithstanding, not all of us react to daily hassles in the same manner. Some of us use active coping skills that minimize the effect of these petty annoyances. For instance, we may be able to focus not on the negative portion of traffic delays but instead use the time to plan other activities we may want to do that day (Steber, 1998).

However, it apparently appeared that daily hassles and disagreeable life changes affect us psychologically by causing worry and dampening our moods. Apart from Holmes and Rahe (1967), other researchers have reported a link between non-work stress and physical illness. Some have found that marital disruption in the form of separation and divorce was linked to emotional problems and higher rates of physical illness (Abdulai, 2011). Life changes have also been found to account for problems ranging from heart disease to incidents of school failures and relapses among people with schizophrenia (Lloyd, Alexander, Rice, & Greenfield, 1980).

Stress is known to exist in all professions (Dragano, Verde, & Siegrist, 2005; Pelletier, Coutu, & Lamonde, 1996; Pflanz & Sonnek, 2002; Todd & Deery-Schmitt, 1996). The difficulty in measuring work stress lies in the fact that work life is not independent from family life, the two domains often conflict (Near, Rice, & Hunt, 1980; Pearlin, 1983). In some cases, non-work stress may even be more at play at the workplace than work stress itself (Pearlin, 1983).

2.3 OCCUPATIONAL STRESS

Stress according to Rathaus and Nevid is described as a demand on an organism to adjust, cope and adapt (Rathaus & Nevid, 1991). In view of this, occupational stress can also be described as a workplace demand on the employee to adjust, cope and adapt. According to American National Institute for Occupational Safety and Health (NIOSH) in its publication of 2002 defined work stress as the harmful physical and emotional responses of the worker when the requirements of the job do not match his or her capabilities, resources or needs (NIOSH, 2002). For instance, the individual before going to the workplace would have already encountered incidents and irritations that threaten his or her physical health and psychological lucidity.

The individual characteristics at the workplace add to further determining the nature of occupational stress. Individual difference may put him or her at a greater or lesser risk of experiencing occupational stress. According to Greenberg (1990), the level of one's desire to succeed and achieve results, ability to cope with his or her need for urgency, how much one feels able to influence and control events and the extent to which one plans ahead and manage his or her time to deal with problems are some of the individual differences that predispose workers to responding lesser or greater risk from work stressors (Greenberg, 1990).

Work stressors include; the volume or strain of work one must deal with, how well an individual gets along with fellow workers, the extent to which the worker feels the need to have his or her achievements recognized and the day-to-day irritants in the work place (Steber, 1998). Occupational stress is therefore said to be the combined effect of the non-work stress, individual characteristics and work stressors.

According to Abdulai (2011), occupational stress is also defined as the rising tension caused in us by any characteristics of the job environment, be it excessive demands or insufficient resources to meet a need and whose intensity and enduring nature can have a detrimental effect on our ability to adjust as well as our physical health (Abdulai, 2011). This definition is supported by Rice (1992), that occupational stress comes as a result of job features that pose a threat to the individual due to either excessive job demand or insufficient supplies to meet employee's needs. Job overloads occurs when too much work is require to be done within a short period and non-existence of things such as salary, satisfaction, promotion and growth on the job may lead to supplied deficits (Rice, 1992).

The state of physical, emotional and mental exhaustion followed by cynicism towards one's work which is created in the worker as he or she responds to long-lasting organizational stressors. In this state, the worker feels depressed, trapped and helpless. Everything including family and friends becomes just one more demand on him or her in terms of time, patient and resilience to pressure (Reichel & Neumann, 1993).

The nature of the work of health professionals in which nurses, physicians and hospital administrations are involve in providing health to people experiencing life crisis contribute to the higher level of stress in health service (Tyson & Pongruengphant, 2004). Occupational stress significantly affects the health of nurses which results into risk of health as well as wellbeing of healthcare professional. Research have shown that nurses working at the private hospitals are more prone to job stress and burnout (Lwin, Cheerawitratanapan & Orapinlaosee, 2015).

High expectation of job performance also leads to high level of occupational stress among employees. This is evident in the fact that there is an inverse proportional relationship between job stress and job performance. This implies, when job stress increases job performance decreases and vice versa. In addition to this, job stress adversely affects employees' health and well-being as well as workers burnout and this leads to high employee turnover in the nursing profession resulting in overload on the remaining nurses which impact on the service delivery of health care(Chou, Li, & Hu, 2014).

2.3.1 Types of Occupational Stress

According to Legg et al. (2016), there are three types of occupational stress, namely; acute, episodic acute and chronic stress depending upon its causes, symptoms and impact.

2.3.2 Acute Stress

This is the most common type of stress that may come from demands and pressures of the recent past and the nearest future. This stress relates to the immediate reaction of the person to a new event, challenge or demand and it triggers one's responds. This stress may occur at any time to anyone because of the situation one finds himself or herself. The stress may be positive or negative depending on the individual personality. For instance, facing a new challenge in one's job may mean differently to different employees. For one it may be an opportunity to learn and prove on new things to boss but for another it may become a point of stress. This stress does not cause excessive damage because of its short-term in nature (Koval, 2016).

2.3.3 Episodic Acute Stress

Episodic stress unlike acute stress comes frequently and often observe in people at the work place. People who lag behind in technical and interpersonal skills as well as fail to cope with new job challenges and responsibilities experience this type of tress. This category of people is short-tempered, anxious and always see the negative side of every change. They suffer from episodic acute stress because of their pessimist stands (APA, 2015; Koval, 2016).

2.3.4 Chronic Stress

This stress occurs when acute stress is not resolved and begin to increase or last for long period of time. This stress does not go away and takes a constant shape in the life of the individual. For instance, chronic stress arises out of new employee policy, change in working conditions, frequent transfers, job profile change etc. Chronic stress destroys bodies, minds and lives. It's the stress of poverty, of dysfunctional families, of being trapped in an unhappy marriage or in a hated job or career of the never-ending "troubles" (Koval, 2016; APA, 2015).

2.4 Cause of Stress in Nursing Profession

Stress is a state of psychological and physiological imbalance resulting from the disparity between situational demand and the individual ability and motivation to meet those needs. Stress arises from various sources and means differently to different people. Stress is a highly personalized phenomenon and it varies widely in individuals even in identical situations (The American Institute of Stress, 2016).

The sources of job stress in the nursing profession are among others include; workload, conflict at work place, lack of emotional support at workplace, salary/pay, dealing with death and dying, role ambiguity, inadequate staff, exposure to hazardous substances and organizational decisions. Workload at work place is a major source of job stress and in order to meet the job-related work load, employees spent long working hours at work place which ultimately affect their work life balance (Salik & Kamal, 2007). Work place conflict also increase the level of job stress and affect job satisfaction (Smith & Bourke, 2002).

2.5 Effect of Occupational Stress

In America, a three-year study among 14,337 middle-aged men was conducted and there was no strong evidence that job demands or job train were predictors of coronary heart diseases (De Bacquer et al., 2005). However, their findings did confirm that a supportive work environment helped reduce coronary heart diseases. The rational of work support was supported in a study of 1,786 lower-ranking American soldiers whereby support helped decrease psychological strain from job demands (Bliese & Castro, 2000).

Increasingly, work stress has become a serious concern to both employee and employer in terms of health and financial well-being. In 2015, organizations in the United States occupational stress was found to be largely responsible for poor work performance, employee burnout and acute and chronic health problems (Ivancevich, Matteson, Freedman, & Phillips, 1990; Kohler & Kamp, 1992).

In 1996, the U.K. Health and Safety Executive estimated that at least half of the 360 million working days lost through sickness each year at an estimated cost of £8 billion

(Sigman, 1992), were due to occupational stress (Steber, 1998). According to Kohler and Kamp, (1992), found that the United States economy loses an estimated 300 billion dollars annually to preventable workplace stress. In their study they estimated that the 5% of the total labor force which accounted for reduced productivity in the country suffered from preventable stress and that occupational stress caused 50% of all absenteeism and 40% of all turnovers (Kohler & Kamp, 1992).

The effects of job stress can be physical, cognitive, emotional and behavioral as indicated in the table below.

Table 2.1: Effects of job stress

Cognitive effects	**Emotional effects**
• Memory problems • Inability to concentrate • Poor judgement • Anxious • Constant worrying	• Depression • Anxiety and agitation • Moodiness, irritability or anger • Feeling overwhelmed • Mental or emotional Health problems
Physical effects	**Behavioral effects**
• Headaches • Diarrhea or constipation • Nausea and dizziness • Chest pain, rapid heart rate • Upset stomach • Frequent colds or flu	• Eating more or less • Sleeping too much or too little • Withdrawing from others • Using alcohol, cigarette or drugs to relax • Nervous habits • Procrastinating or neglecting responsivities

The above-mentioned effects are very serious in nature (Mathur, Motwani, & Shastri, 2018).

2.6 Socio-Demographic Characteristics Associated with Stress and Anxiety of Respondents

A study conducted to determine the prevalence of stress, anxiety and sleeping disorders among nurses using a cross-sectional study design in Tamale central hospital in Tamale Metropolis indicated that 127 (52.26%) were females and 116 (74.74%) were males (Amidu et al., 2018). A similar study conducted by Kyreaa (2014), on the causes of stress among nurses in the Greater Accra Region using descriptive survey design on a study sample of 369 respondents found majority of the participants 261 (70.7%) were females and 108 (29.3%) were males (Kyreaa, 2014). A descriptive survey design used to collect and analyzed the data of a sample of 68 respondents of Goaso Government Hospital to determine occupational stress in health care workers revealed that 38 (56%) of the participants were females and 30 (44%) were males (Abdulai, 2011).

A study conducted to assess the level of stress and coping behaviors and to evaluate the effectiveness of selected coping strategies among students' nurses in selected institutions of Tamil Nadu in India using the quasi-experimental study design on a sample size of 245 shown an overwhelming percentage (86%) of the participants were Hindus, (2%) were Muslims and (16%) were Christians (DAISY, 2012).

A study conducted to determine the prevalence of stress, anxiety and sleeping disorders among nurses using a cross-sectional study design in Tamale central hospital in Tamale Metropolis indicated that, majority of the participants 131 (53.91%) were diploma certificate holders followed 61 (25.10%) were degree holders and the least being the masters certificate holders 1 (0.41%) (Amidu et al., 2018).

2.7 Level of Stress and Anxiety among Nurses

The nursing profession is associated with a wide range of potential workplace stressors. This is because nursing requires a high level of skills, team work, long working hours (24-hour delivery of care) and input of what is often referred to as 'emotional labor' (Phillips, 1996). Stress is your body's way of responding to any kind of demand or threat (Selye, 1982). Nursing is among the most stressful professions in the world Rathnayake and Ekanayaka (2016) and compared to other professions, nurses experienced the highest degree of job stress (Payami, 2001). Numerous studies have shown different levels of job burnout among nurses and expert find it to be associated to daily stress due to mismanagements, role ambiguity, role conflict and lack of positive reinforcement at the workplace (Malach-Pines, 2000).

The relationship between stress and anxiety are closed to the extent that anxiety alone is an ambiguous discomfort defined as a sense of skepticism towards the unknown factors. This uncomfortable sense maybe associated with physiological, emotional and psychological symptoms and exhibited as a sense of intense emotion (Brunner, Smeltzer, Bare, Hinkle, & Cheever, 2014).

Stress is also defined as the emotional and physical response an individual experience when he perceives an imbalance between demands place on him and his resources at a time when coping is important (Brunero, Cowan, Grochulski, & Garvey, 2006). This implies that an individual experience stress whenever he or she is faced with an event or situation that he or she perceive as challenging to his or her ability to cope.

In addition, the signs and symptoms of stress can range from a major physical crisis like a heart attack, to a minor symptom like tiredness and loss of appetite. Some examples of signs and symptoms of stress include: tiredness, fatigue, increased pulse rate and blood pressure, rapid respirations, muscular tension, loss of appetite, overeating, indigestion, constipation, diarrhea, nausea, dry mouth, nail-biting, increased use of alcohol or other drugs, irritability and impatience, frequent worry and anxiety, moodiness, feeling sad or upset, poor concentration, memory lapses among others (Brunero et al., 2006).

Furthermore, nurses are exposed to various degrees of environmental, social, economic, cultural and family stressors during work hours Bigdeli and Karimzade (2007) and in contrast to a positive level of stress, which serves as a motivating factor for learning and maintaining physical and mental health; excessive stress has a negative influence across the life span. In fact, frequent and prolonged exposure to high level stress depending on the individual's adaptation can cause significant maladjustment with anxiety and depression being the general indicators to measure the status of mental health. Stress can cause several physical and emotional problems including dissatisfaction with self, a sense of failure, severe anxiety, tension, frustration and depression (Kang, Choi, & Ryu, 2009).

A study conducted in the U.S.A revealed that, the relationships among work stress, job satisfaction, mental health and healthy life style behaviors of newly graduate nurses attending the nurses athlete program demonstrated that higher levels of work place stress were associated with higher levels of depression and anxiety as well as lower levels of

resiliency, job satisfaction and healthy life style beliefs (Melnyk, Hrabe, & Szalacha, 2013). Shapiro, Astin, Bishop, and Cordova (2005), in their study stated that stress may harm professional competence through decreased attention and concentration, inability to use problem solving skills and poor communication with patients.

According to Vernekar and Shah (2018), nursing by nature is a stressful job and the role of nursing is associated with multiple and conflicting demands imposed by nurse supervisors and managers and by medical and administrative staff. The objective of a study conducted at a 1000 bedded tertiary care hospital, Bambolim Goa to determine the level of work-related stress among registered nurses working in wards of a tertiary care hospital where the Expanded Nursing Scale was used in assessing the level and source of stress among them in a cross-sectional study. The results of the study showed that 59.3% of nurses experienced moderate, 36.8% severe and 2.4% experienced very severe stress levels. The death and dying and workload subscales show the highest mean scores of (2.35±0.61) and (2.11±0.53) respectively. The study further revealed that the nurses working in the casualty and general wards were more stress as well as young nurses becoming more stress in dealing with death of patients. (Vernekar & Shah, 2018).

Descriptive cross-sectional study conducted to determine sources of stress and coping strategies in student nurses studying at the Iran Faculty of Nursing and midwifery. All undergraduate students enrolled in years 1-4 during academic year 2004-2005 were include in this study. Results of the study revealed that first year students' nurses are exposed to a variety of stressors. The results also provided important clues for

establishing a student support system during the first year and improving it through nursing school is necessary to equip student nurses with effective coping skills (Seyedfatemi, Tafreshi, & Hagani, 2007).

A study conducted among 37 General Nursing and Midwifery 1st year students of one of the private institutions in Punjab affiliated to Baba Farid University of Health Sciences, Faridkot to determine factors associated with stress among nursing students. The results revealed that different kind of stressors such as pressure of academics with an obligation to succeed, an uncertain future difficulty of integrating into the system. In first phase, the level sting standardizes scale and the factors contributing to stress were assessed using in subjects with moderate and severe by using a validated tool. 97% of the subjects had moderate level of stress whereas 3% had severe stress. (Sharma & Kaur, 2011).

A study was conducted among health workers at the emergency department in the Kingdom of Saudi Arabia to assess the anxiety level among the workers using generalized anxiety disorder – 7 tools. It consists of emergency physician, nurses, and other emergency medical services workers. The results of this study indicated that 48% of the subjects were observed without an anxiety disorder. However, moderate to mild degrees of anxiety disorder was identified among 20.7% and 23.7% of the subjects respectively (Alharthy, Alrajeh, Almutairi, & Alhajri, 2017).

Another study conducted using cross-sectional method on stress management among health care professionals: psychological methods and coping technics in Dubai, 2011

informed that, 26.2% from 282 of participants have a high level of total job stress (Koval, 2016).

A relationship between stress in college students and poor health behaviors has been documented in several studies. Hudd et al. (2000), surveyed 145 undergraduate students for a study in an attempt to answer three important questions:

1. Are students in a certain demographic group more prone to experiences higher level of stress than others?

2. Is there a relationship between stress and healthy or unhealthy behaviors?

3. Do students experiencing higher levels of stress have lower levels of self-esteem and perceive themselves to be less healthy. The results of the survey indicate that women are stresses more often than men. The results further indicate that students that report higher stress levels are more prone to unhealthy behaviors such as poor dietary habits, poor sleeping habits and less exercise. It was also found that students reporting higher stress levels perceive themselves to be less healthy and less satisfied with a variety of life factors such as their grade point average, weight and fitness level. This dissatisfaction with various life factors may lead to decreased self-esteem. The study concluded and recommended that universities design programs in time management and coordinating multiple tasks that would be adapted to the needs of students as they progress through their academic careers.

Another study conducted to determine stress, anxiety and sleeping disorders among nurses using a cross-sectional study design in Tamale Metropolis of the Tamale Central

Tamale West hospitals indicated that, sixty-three percent (63%) of the total sample size of three hundred and nineteen (319) nurses were found to be stressed whiles eighty three percent (83%) of them were found to have anxiety (Amidu et al., 2018).

According to Godwin, Suuk, and Selorm (2016), the prevalence of occupational stress among nurses is an endemic problem. A study carried out at St. Dominic hospital in Akwatia to determine the current level of occupational stress experienced by nurses thorough the use of the Weiman Occupational Stress Scale as well as determine the most common stressors and stress reducing strategies identified by the nurses. The purposive sampling technique and self-administered questionnaires were used to select seventy-three 73 nurses from the department of nursing and midwifery in the hospital and the stress level of the nurses were measured through the use of Weiman Occupational Stress Scale and other measuring tools of occupational stress. The overview of the data generated by the population was analyzed and presented through the use of descriptive statistics. The study reveal that nurses of the Akwatia hospital were found to experience above average level of occupational stress with the mean score and individual average score of 37.01 and 2.47 indicating a 10% higher than the established Weiman Occupational Stress Scale mean score of 33. 75 and individual average score of 2.25. The study results strengthened the proposition that nurses of the St. Dominic hospital at Akwatia in Ghana experienced work-related stress above average and therefore recommended that nurses should be well educated to understand that the healthcare – specific operational demands are part of their work (Godwin et al., 2016). Li et al. (2016), evaluated life events, anxiety and depression among 412 nurses and doctors from the department emergency in eleven grade-3 and grade-2 general hospitals in

Human Province, China. More negative than positive life events (mean total score: 14.13 VS. 6.41) were experiences by both doctors and nurses from the emergency department. Life events such as among all family, work and social life events, high pressure of work was the most frequently reported as the negative life events. The suggestive anxiety symptoms were found to be 6.34% (5.65% in doctors and 6.60% in nurses) and the suggestive depression symptoms were revealed as 17.73% (14.5% in doctors and 18.8% in nurses). The negative life events correlated with symptoms of anxiety and depression revealed that doctors experience much more work-related negative events than nurses. However, nurses showed higher level of anxiety and depression than doctors (Li et al., 2016).

According to Khamisa, Peltzer, Ilic, and Oldenburg (2016) the research gaps on work related stress, burnout, job satisfaction and general health of nurses is obvious within developing contexts like South Africa, Ghana, among others. A total of 1,200 nurses sampled from four hospitals participated in this cross-sectional study in which variables such as work-related stress, burnout, job satisfaction and general health of nurses were identified through the use of a multiple linear regression analysis. The significant relationships between the variables revealed that, job satisfaction and staff issues were associated with burnouts and this shows the highest amount of variance in mental health of nurses. Security risks in the workplace affect job satisfaction and general health of nurses. Occupational stress, burnout, job satisfaction and general health of nurses' compromise productivity and performance as well as affect the quality of patient care. Even though these are more prominent in developing contexts it is important to develop

strategies and interventions programs towards improving nurse and patient related outcomes.

A descriptive study conducted among 180 nurses working in teaching hospitals affiliated to Zahedan University of medical sciences with the aim of investigating job stress among nurses working in teaching hospitals using HSE standard job stress survey as a means of data collection. The study results reveal that, the average age and working experience of nurses was 30.97 ± 6.49 and 7.31 ± 5.95 respectively and 136 nurses were female. Moderate stress was experience by 142 nurses with a mean moderate score of 115.79 ± 44 and 38 nurses were experiencing high stress. There was not significant relationship between age, gender and experience with job stress. The study concluded that, there was moderate stress level among nurses working in teaching hospitals affiliated to Zahedan University of Medical Sciences and suggested that since nursing is recognized as a stressful job, authorities put in place measures to eliminate stressful factors and make the work environment calm and conducive for effective work (Mohite, Shinde, & Gulavani, 2014).

Stress, depression and anxiety can interfere with learning, affect academic performance and impair clinical practice performance. Studies have generally revealed an increase in the severity of and extend of mental health problems among university nursing students. Academic and personal sources of stress and coping efforts with the emphasis on the stress and anxiety associated with clinical practice are the causes of mental health distress among nursing students (Chernomas & Shapiro, 2013).

The physical or emotional nature of stress as a state of response which is always present in a person because he/she is alive. As a result of internal or external environmental

change or threat, the non-specific response to stress is intensified. A descriptive study conducted in Raipur to assess the level of occupational stress among staff nurses at selected private hospitals with inferential statistics used to analysis the data using selected socio-demographic variables. The results revealed that 78% of the staff nurses on the average are having frequent stress and 22% of the nurses are having neutral stress (Nair, 2016).

A hospital based cross sectional study conducted among randomly selected 87 staff nurses working in two tertiary care teaching hospitals in Central Delhi using pre-tested and self-administered questionnaires to assess socio-demographic profile, stressors in daily life, stressors at work stations and total stress levels. The data was analyzed using WHO's EPI-INFO 2005 software. The results revealed that 87.4% of the nurses from the sample reported prevalence of occupational stress with 'time pressure' as the most stressful whereas 'discrimination' was found as the least stressful out of the given possible sources of stress in everyday life whereas 32.2% reporting severe or extreme stress levels. Handling various issues of life simultaneously with occupation such as caring for own children or parents, own work situation and personal responsivities are the other highly sources of stress according to the study. Other significant work-related stressors include the fact that the nursing job required them to learn new things and also attend to many patients at the same time. The study concluded that, there is high prevalence of stress found amongst nurses and suggested the need for stress reduction strategies targeting specific important stressors (Bhatia, Kishore, Anand, & Jiloha, 2010).

According to Carson (1996), anxiety is an intense feeling of fear or dread due to an uncertain cause. It is a vague feeling of uneasiness, uncertainty and helplessness (Morrison & Valfre, 1997). Anxiety encompasses a feeling of intense and indeterminate fear, accompanied by physical disturbances due to autonomic nervous system stimuli, such as sweating or palpitations. What distinguishes anxiety from stress is that the former affects perception and cognition, representing a reaction to an unknown, unclear, or unconscious fear (Sadock & Sadock, 2010). Anxiety is often under-diagnosed, misdiagnosed, and inappropriately treated Kasper (2006), and has not been well researched (Scogin, Floyd, & Forde, 2000).

Rahmani, Behshid, Zamanzadeh, and Rahmani (2010), reported that nurses mainly experienced anxiety due to job stress, which led to burnout. A study among nursing professionals revealed that situations in the work environment can provoke anxiety, mainly among countless circumstances, the instability or aggravation of patients' health condition, lack of material, equipment and staff, relation with patients' relatives, as well as nursing care systemization difficulties and high-complexity procedures (Barros, Humerez, Fakih, & Michel, 2003).

A study conducted by Edimansyah et al. (2008) revealed that psychological job demand, job insecurity and hazardous condition were strongly associated with DASS-Depression, DASS-Anxiety and DASS-Stress after controlling for age, education, salary, duration of work, and marital status. The authors also reported that job insecurity, as assessed by steady work, job security, recent layoff, career possibilities and skills

valuable, was strongly associated with the DASS Depression, DASS-Anxiety and DASS-Stress.

Haynes et al. (2005) in their study on alcohol consumption as a risk factor for anxiety and depression and reported that men who binge drank (on at least a monthly basis) had a threefold increased odd of anxiety and depression at follow-up compared with men who did not binge drink

2.8 Most Common Occupational Stressors

The main factors that cause stress at the work place, according to APA, are low salaries, heavy workloads, lack of opportunity for growth and advancement, unrealistic job expectations, job security and lack of participation in a decision-making (Stress Advocate, 2009). Moreover, we could add such factors as under-staffing, lack or old equipment, poor working environment in countries with a lower level of economics. According to Geuens et al. (2015) more examples of environmental stressors to which healthcare professionals are exposed on a regular basis are pain, suffering, death, ethical issues.

A study carried out at St. Dominic hospital in Akwatia to determine the current level of occupational stress experienced by nurses thorough the use of the Weiman Occupational Stress Scale as well as determine the most common stressors and stress reducing strategies identified by the nurses through the use of purposive sampling technique and self-administered questionnaires to select seventy-three 73 nurses from the department of nursing and midwifery in the hospital. It was found that the most stressors were workload, inadequate resources and conflicting demands, however, high stressors may

nonetheless continue to pose risk and these can be handled through the institution of formalized peer support and clinical guidance system within the hospital (Godwin et al., 2016).

According to Vernekar and Shah (2018) in a study conducted at a 1000 bedded tertiary care hospital, Bambolim Goa to determine the level of work-related stress among registered nurses working in wards of a tertiary care hospital where the Expanded Nursing Scale was used in assessing the level and source of stress among nurses in a cross-sectional design study. The study revealed that the nurses working in the casualty and general wards were more stress as well as young nurses becoming more stress in dealing with death of patients. The study concluded that workload and death of patient were the major contributors of stress (Vernekar & Shah, 2018).

A study conducted among 37 General Nursing and Midwifery 1st year students of one of the private institutions in Punjab affiliated to Baba Farid University of Health Sciences, Faridkot to determine factors associated with stress among nursing students. The results revealed that different kind of stressors such as pressure of academics with an obligation to succeed, an uncertain future difficulty of integrating into the system. In first phase, the level sting standardizes scale and the factors contributing to stress were assessed using in subjects with moderate and severe by using a validated tool. The academic factors had only 19% contribution whereas the intrapersonal factors contributed minimally. The study concluded and recommended the designing of suitable stress management programs for nursing students which shall include the conflict management training, time management training and the social skill training (Sharma & Kaur, 2011)

Job related stress increasing among employees of any organization of which nurses are not an exception. Stress among nurses increasingly cause a large disorder which comes with a cost for individuals in terms of health, wellbeing and for organization in term of absenteeism and turnover which affect quality of care indirectly. In this light, a study was conducted at Krishna hospital and medical research center in Karad City to assess occupational stress among nurses working at selected tertiary care hospital on 100 staff nurses using modified expanded nurses stress scale reveal that 49% of the nurses had reported frequent of stress as a result of uncertainty concerning treatment whereas 48% of nurses reported frequent occurrence of stress due to dealing with clients/patients. In the same study, majority of 59% of the nurses complain of stress as a result of workload whereas stress caused by inadequate emotional preparation is reported by 68% of the nurses. Occasional and frequent occurrence of stress among nurses are 24% and 8% respectively. Frequent occurrence of stress among nurses because of conflicts with doctors and supervisors are 49% and 52% respectively as causes of stress and 50% of nurses reported extreme occurrence of stress because of death and dying as cause of stress. Occasional, frequent and extreme existence of stress among nurse because of conflict with peers and discrimination is reported by 50% and 48% nurses respectively as causes of stress. The study concluded that frequent occurrence of stress among nurses could have negative impact on the organizational climate and out of the factors known to be responsible for causing frequent occurrence of stress among the majority of nurses are the workload and supervisors (Mohite et al., 2014).

Stress negatively affect health care providers. Stress in nursing is increasing because of the changing nature of the profession. Stress comes from both external and internal

sources and this decreases job satisfaction of the nurses resulting in many undesirable consequences. The stressors that causes stressful situations of nurses were death and dying, workload and patients and their families. Stress is a global problem for nurses and nurse managers should take appropriate actions to decrease helping their nurses to work effacement and effectively (AbuRuz, 2014).

A study conducted among 105 nurses in the Ridge and Pantang Hospitals at Accra with the aim of finding out the main causes of stress and the level of job satisfaction among them in both hospitals using the Expanded Nurses Stress Scale as instrument for data collection. The statistical test like the t-test, ANOVA and correlation were used to analyzed the data and the findings revealed that the causes of stress among nurses in both Pantang and Ridge Hospitals were the same with the exception of workload (M= 2.70, SD = 3.31) was found to have a significant difference between Pantang and Ridge at 0.05 level of significant F (1,104) = 8.639, p = 0.004, which suggests that workload causes more stress at the Ridge Hospital than Pantang Hospital (Rita, Atindanbila, Portia, & Abepuoring, 2013).

According to Onasoga Olayinka, Osamudiamen, and Ojo (2013) stress is an endemic problem in the nursing profession which contributes to health problems and decrease the efficiency of nurses. The study by Onasoga et al. (2013) among nurses in selected hospitals in Benin City reveal that the major causes of stress identified by nurses were poor salary (82%), handling a large number of patients alone, lack of incentives (83%) and job security among others. The stress experience by nurses as a result were headache (49%) in a form of physical stress, anger as emotional stress and psychological stress were experienced in a form of lack of concentration and forgetfulness.

In European Union according to Eleni et al. (2010), occupational stress is the second in frequency as a health problem related with occupation affecting 28% of employees. Occupational stress is a psychosocial risk factor in occupational field and it is present when occupational demands overcome the ability to address or control the situation.

A study of occupational stress conducted among 140 nurses and nursing assistants in a General University Hospital of Athens and a regional General University Hospital with the data statistically analyzed and the results revealed that nurses suffer from occupational stress as a result of increased workload and conflict between professional and family roles without any significant difference between the two samples. Preventing occupational stress and occupational health in general as well as dealing with safety hazards should be an integral part of management policies for the improvement of health care quality (Eleni et al., 2010).

A descriptive study conducted among 369 sampled nurse respondents to ascertain the causes of stress among them in the Greater Accra Region of Ghana using self-administered questionnaires to elicit responses from the nurses. The results found out that, the most predominant cause of stress was the number of hours that nurse use to work. This was followed by financial difficulties and the death of patients whereas the least cause of stress revealed by the study was the lack of control over the work of nurses. The study concluded that more programs such as workshops, seminars and symposia be undertaken by counsellors and other stakeholders in the nursing profession to address the causes of stress of nurses (Kyreaa, 2014).

The study was aimed at finding the causes of stress among nurses, coping strategies that could be used in controlling stressful events and to build the awareness and knowledge

of nurses about stress, its causes and the way to reduce it once it occurs. The theory used for this study is the transactional model of stress and coping by Lazarus and Folkman (1984) and the method used to analyze the data was the inductive qualitative content analysis. The study reveals that the major factors that causes stress among nurses are workload and leadership (Kurki, 2018).

2.9 Stress Management Strategies or Techniques

The nursing profession influences the quality of health care delivering and patient safety is known as a stress profession. The study was aimed at finding the causes of stress among nurses, coping strategies that could be used in controlling stressful events and to build the awareness and knowledge of nurses about stress, its causes and the way to reduce it once it occurs. The theory used for this study is the transactional model of stress and coping by Lazarus and Folkman (1984), and the method used to analyze the data was the inductive qualitative content analysis. The study concluded with recommendation to managers and supervisors to develop strategies to address and promote the quality of working conditions for nursing profession (Kurki, 2018).

The American Psychological Association suggests a range of ways that a working environment can be changed to help reduce stress: workloads in the same line as worker's capabilities and resources, clearly defined worker's roles and responsibilities, communication and opportunities for social interaction among workers. Each organization could have own stress reducing program, according to the policy and resources (APA, 2012).

According to a study conducted by Godwin et al. (2016) among 73 nurses at Akwatia hospital in Ghana, it was noted that, the most common strategies the nurses used for managing stress were resorting to hobbies, I identifying the source of stress and avoiding unnecessary stress, managing time better, adjusting to standards and attitudes and expressing their feelings instead of bottling them up.

Doctors and nurses experienced more work-related negative life events than positive life events and these negative life events may have harmful impact on their mental health (depression and anxiety). It is therefore important to develop a range of coping strategies for reducing the harmful effects of those negative life events and minimizing the occurrence of anxiety and depression symptoms for doctors and nurses in hospitals (Li et al., 2016).

With regards to occupational stress management Onasoga Olayinka et al. (2013) argued that identification of the source of stress and avoidance of unnecessary stress (90%) as one best way of managing occupational stress. The study added that adjusting their standards and attitude, expressed their feelings instead of bottling them, go on break, exercise and relax are interventional measures through which nurses manage occupational stress.

A correlation study between students' academic stress and the individual's anxiety, time management and leisure satisfaction was conducted by Misra and McKean (2000) to investigate the relationship among these variables in 249 undergraduate university students. The study hypothesized that a student's academic stress would show a positive association seem to lower academic stress with anxiety and a negative association with self-reported time management behaviors and leisure satisfaction. The study reported

that effective time management skills seem to lower academic stress and anxiety. However, a strong association between leisure satisfaction and perceived academic stress was not demonstrated. It does appear from the findings of the study that women have higher perceived stress levels than men, even though they reported higher effective time management skills. Furthermore, students in the freshman and sophomore classes reported much higher stress levels than juniors and seniors. The researcher attributed this fact to the lack of strong social support networks and that freshman and sophomore are yet to develop the coping skills of junior and senior students. The study recommended that faculty should encourage all students to attend time management seminars as well as stress management programs early in their academic careers.

Descriptive cross-sectional study was conducted to determine sources of stress and coping strategies in student nurses studying at Iran faculty of Nursing and Midwifery. All undergraduate student nurses enrolled in year 1-4 during academic year 204-2005 were include in this study. Results of the study revealed that most students reported "finding new friends" (76.2%), "working with people they did not known" (63.4%) as interpersonal source of stress, "new responsibilities" (72.1%), "started college" (65.8%) as intrapersonal sources of stress more than others. The most frequent academic source of stress was "increased class workload" (66.9%) and the most frequent environmental source of stress were being "placed in unfamiliar situations" (64.2%) and "waiting in long lines" (60.4%). Interpersonal and environmental sources of stress were reported more frequently than intrapersonal and academic sources. Mean interpersonal (P=0.04) and environmental (P=0.04) sources of stress were significantly greater in first year than in fourth year students. Among coping strategies in 12 areas, the family problem solving

strategies, “trying to reason with parents and compromise” (73.0%) and “going along with family rules” (68.0%) were used “often or always” by most students. To cope with demanding activity, students often or always used “trying to figure out how to deal with problems” (66.4%) and “trying to improve themselves (64.5%). The self-reliance strategy, “trying to make their own decisions” (62.0%), the social support strategy, “apologizing to people” (59.6%), “trying to help other people solve their problems” (56.3%) and “trying to keep up friends or make new friends” (54.4%), the spiritual strategy, "praying" (65.8%); the seeking diversions strategy, "listening to music" (57.7%), the relaxing strategy "day dreaming" (52.5%), and the effort to "be close with someone cares about you" (50.5%) were each used "often or always" by a majority of students. Most students reported that the avoiding strategies "smoking" (93.7%) and "drinking beer or wine" (92.9%), the ventilating strategies "saying mean things to people" and "swearing" (85.8%), the professional support strategies "getting professional counseling" (74.6%) and "talking to a teacher or counselor" (67.2%) and the humorous strategy "joking and keeping a sense of humor" (51.9%) were used "seldom or never". First year student nurses are exposed to a variety of stressors. Establishing a student support system during the first year and improving it throughout nursing school is necessary to equip student nurses with effective coping skills. Efforts should include counselling helpers and their teachers, strategies that can be called upon in these students' future nursing careers (Seyedfatemi et al., 2007).

CHAPTER THREE

METHODOLOGY

3.0 INTRODUCTION

This chapter emphases on the methodology used in the study. The chapter starts with a description of the study area, the study type, study population, sample, sample size, sampling techniques, data collection technique and tools, data entering and cleaning, data analysis, ethical consideration and limitations of the study.

3.1 STUDY AREA

Tamale Metropolis is one of the twenty-six (26) districts in the Northern Region. It is located in the central part of the region and shares boundaries with the Sagnarigu District to the west and north, Mion District to the east, East Gonja District to the south and Central Gonja District to the south-west. The Metropolis has a total estimated land size of 646.90180sqkm (Ghana Statistical Service, 2010). Geographically, the Metropolis lies between latitude 9^{o} 16 and 9^{o} 34 North and longitude 0^{o} 36 and 0^{o} 75 West.

Tamale is strategically located in the Northern Region and by this strategic location, the Metropolis has a market potential for local goods from the agricultural and commence sectors from the other districts in the region. Besides the comparative location of the Metropolis within the region, the area stands to gain from markets within the West African region from countries such as Burikina Faso, Niger, Mali and the northern part of Togo as well as en-route through the area to the southern part of Ghana (GSS, 2014). There are one hundred and fifteen (115) communities in the Metropolis. Most of the

rural communities have a large area of land for agricultural activities and serve as the food basket for the Metropolis. However, these communities still lack basic social and economic infrastructure such as good road networks, school blocks, hospitals, markets and recreational centers, thereby hindering socio-economic development, poverty reduction and general phenomenon of rural-urban migration (GSS, 2014).

The population of Tamale Metropolis, according to the 2010 Ghana Population and Housing Census, is 223,252 representing 9.4 percent of the region's population. Males constitute 49.7 percent and females represent 50.3 percent. The proportion of the population living in urban localities (80.8%) is higher than that living in rural localities (19.1%) of the metropolis.

About 63.3 percent of the population aged fifteen (15) years and above in the metropolis are economically active and 36.7 percent are economically not active. Of the economically active population, 92.6 percent are employed while 7.4 percent are unemployed. About five out of ten (52.9) of unemployed persons in the metropolis are seeking work for the first time. Of the employed population in the Tamale Metropolis, the highest proportion (33.0%) is engaged as service and sales workers. The second largest occupation is craft and related trade workers who constitute 21.5 percent of the employed population. The number of skilled agricultural, forestry and fishery workers represent 17.6 percent of the employed population. Those employed as professionals constitute only 8.1 percent (GSS, 2014).

In urban Tamale, there is ethnic diversity, but the Dagombas constitute almost 80% of the total population. Islam is the most predominant religion in the Metropolis with about

84% of the population affiliated to it. Christians constitute 13.6% (with Catholics forming 43.7%), traditional worshipers constitute about 1.6% and others forming less than 1% (GSS, 2010).

3.1.1 Tamale Central Hospital

The Tamale Central Hospital has commitment to deliver quality healthcare and also serves as a referral facility to several districts in the Northern Region. The Mission Statement of the hospitals is to provide quality health care services accessible to all people living within the Tamale Metropolis and beyond. Tamale Central Hospital provide a range of service such as Reproductive and Child Health services, Diagnostic services (Laboratory and ultrasound), Pharmaceutical Services, Outpatient consultation, In-patient Services, Emergency services Surgical services, Fistula repairs, ART/PMTCT/Counseling, Eye care, Diabetes and Hypertension clinics, ENT Clinic and Mortuary services. The hospital is endowed with medical practitioners such as the general surgeon, gynecologist, physician assistant, pharmacist and host of nurses and midwifes. (Tamale Central Hospital Annual Report, 2016).

Tamale Central Hospitals (TCH) is located at the central part of the Tamale Metropolis in the Northern Region of Ghana. The Tamale Central Hospital provides 24-hour service and currently has approximately four hundred and eighty-one (481) staff of which nursing staff of all categories constituting three hundred and ninety-eight (398). The hospital has eight functional wards and seven units. The wards include: children's, female, male, labour, maternity, fistula/surgical, Neonatal Intensive Care and emergency wards with the units comprising outpatient department/unit, psychiatric unit, antennal care unit, reproductive and child health (RCH) and family planning unit, CSSD

unit, X ray service unit, Blood Bank and Laboratory services units (Tamale Central Hospital Annual Report, 2016).

3.1.2 Tamale West Hospital

On the other hand, Tamale West Hospital (TWH) is located at the north west part of the Tamale Metropolis with a total land mass of about 8.87 acres. TWH provide 24-hours service to the people of Tamale and its surroundings with a range of services such as laboratory, mortuary, outpatient's consultations, accident and emergency services, in-patients services, ultrasound and x-ray, eye services, psychiatric, reproductive and child health (RCH) and pharmaceutical services. TWH has seven functional wards including the children, male, female, surgical, maternity, Labour and emergency wards. TWH has total staff strength of three hundred and seventy-six (376), out of which the total nursing staff of all category of nurses stands at two hundred and ninety (290) representing 77% of the hospital staff strength (Tamale West Hospital Annual Report, 2016).

3.2 STUDY DESIGN

The study used a cross-sectional descriptive design in which both qualitative and quantitative approaches were employed to examine one variable in different groups that are similar in all other characteristics. Cross-sectional survey involves using different groups of people who differ in the variable of interest but share other characteristics, such as socio-economics status, educational background and ethnicity (Nashiru, 2017). Data instruments such as structured and semi-structured questionnaires and face to face interviews were used with the help of an interview guide. A combination of purposive and random sampling techniques were used to select the respondents. The purposive

sampling technique was used to select the respondents with the needed information- ward in-charges- from both hospitals for the face-to-face interviews whiles the simple random sampling was used to select the respondents from both hospitals to answer the questionnaires. The participants were selected from both hospitals in a proportion of 65% for Tamale Central and 35% for Tamale West base on their nursing staff strength. For data analysis and presentation, the study adapted mainly descriptive statistics by using tables, frequencies and cross tabulations.

3.3 STUDY POPULATION

Targeted population refers to the entire group of individuals or objects to which the research is interested in generalizing the conclusion. The targeted population usually have varying characteristics and it is also known as the theoretical population (Nashiru, 2017).

The target population also refers to the entire set of individuals who meet the sampling criteria (Levy & Lemeshow, 2013). This population refers to all nurses working at the Tamale Central and Tamale West hospitals. An accessible population is the portion of the target population to which the researcher has reasonable access (Levy & Lemeshow, 2013). The accessible population for this study includes all nurses in Tamale Central and Tamale West hospitals who were available and responded to the research questionnaires. Tamale Central and Tamale West hospitals have an estimated staff nurses' population of 398 and 290 respectively. These nurses work in different wards and units of the hospitals. They are of different levels of education and also work in day and night shifts.

3.4 SAMPLE SIZE DETERMINATION

The sample size for the study was determined using the Snedecor and Cochran (1989) formula for a point estimate sample. Estimated prevalence of stress is 50%. The sample size was calculated from the expression as:

$$n = \frac{p(1-p)t^2}{m^2}$$

Where:

n= Required sample size

t= Confidence level at 95% (standard value of 1.96)

p= Estimated prevalence of stress among nurses as 50% (0.5).

m= Margin of error at 5% (standard value of 0.05)

$$n = \frac{0.5(1-0.5)\ x\ 1.96^2}{0.05^2}$$

n = 384.16 (which is approximately 384 persons).

Using the information in the formula above the total sample size for my study was 384 persons. The 384 respondents for the study was divided among Tamale Central Hospital and Tamale West Hospital in a proportion of 65% and 35% respectively based on the staff strength of the hospitals. A total of 384 participants responded to the questionnaires and 5 participants were interviewed face-to-face with the help of an interview guide.

3.5 SAMPLING TECHNIQUE

The sampling technique used in the study was the multistage sampling technique. This sampling technique employ the use of many sampling techniques in the selection of the respondents. The respondents in the two hospitals work in different wards and are different in terms of rank and qualifications. The hospitals are clustered into wards and depending on the number of nurses in each ward, a proportional percentage is used to calculate the number of nurses to be selected from each ward for the study using the simple random technique. This gives every nurse in each cluster an equal opportunity to be part of the study. The nurses were stratified according to the Hospitals and the various wards. The purposive sampling technique was used to select the respondents with the needed information relevant for the study.

3.6 VARIABLES (DEPENDENT AND INDEPENDENT)

These are factors or determinants of the study.

3.6.1 Dependent Variables

These variables include; stress and anxiety.

3.6.2 Independent Variables

These variables include; depression, workload, long working hours, absenteeism, job dissatisfaction, drinking and smoking, role conflict and degree of responsibility among others.

3.7 SOURCES OF DATA

The researcher collected data from both secondary and primary sources. The secondary data sources were mainly from the two Hospitals annual reports, Ghana Health Service Regional Health Directorate and previous works on the topic under discussion.

The primary data source were all categories of permanent nurses from the two Hospitals. The nurses responded to structured questionnaires designed in four sections. Respondents such as ward in charges were interviewed orally on face-to-face using interview guide**.**

3.8 QUALITY CONTROL

Many steps were adopted to ensure quality control in the study. In order to clear all uncertainties and any ambiguity, 20 questionnaires were pre-tested on participants with similar characteristics in SDA hospital in the Tamale Metropolis to determine the suitability of the instruments and to modify or make changes to the questionnaires where necessary. Some of the questionnaires were modified by the feedback from the pre-testing. Two research assistants were trained on the data collection instruments and its administration. The analysis of the data was harmonized through coding and to eliminate potential errors in data analysis.

3.9 DATA COLLECTION PROCEDURE

The study used questionnaires as the major data collection method. The questionnaires were designed in four parts. The caliber of participants of the study include; registered nurses, nursing officers, community health nurses and enrolled nurses. The first part

comprises items that solicited information on the socio-demographics features of the participants. The second and third part of the questionnaire contained stress and anxiety assessments respectively. The fourth part measured the management strategies or techniques used by nurses or hospital managements to overcome stress and anxiety among nurses. This had fifteen items formatted in a Likert form (1=Seldom, 2=Sometimes, 3= Frequently, 4= More Frequently and 5=Most Frequently) for the respondents to select which option best describe his or her rating for each question. With regards to the ward in charges, interview guide was used to obtain the data. Permission was sort from the respondent(s) in order to record the interview which was later transcribed verbatim for the purpose of analysis.

3.9.1 Part I: Socio-Demographic Data

This first part of the questionnaires was concerned with the socio-demographic data of the study participants such as age, gender, marital status, religion, educational levels and number of years of work as a nurse.

3.9.2 Part II: Stress Scale

The development of the scale for this part of the questionnaires was based on the perceived stress scale (PSS).

The Perceived Stress Scale (PSS) is the most widely used psychological instrument for measuring the perception of stress. It is a measure of the degree to which situations in one's life are appraised as stressful. Items were designed to tap how unpredictable, uncontrollable, and overloaded respondents find their lives. The scale also includes a number of direct queries about current levels of experienced stress. The PSS was

designed for use in community samples with at least a junior high school education. The items are easy to understand, and the response alternatives are simple to grasp. Moreover, the questions are of a general nature and hence are relatively free of content specific to any subpopulation group. The questions in the PSS ask about feelings and thoughts during the last month. In each case, respondents are asked how often they felt a certain way. PSS scores are obtained by reversing responses (e.g., 0 = 4, 1 = 3, 2 = 2, 3 = 1 & 4 = 0) to the four positively stated items (items 4, 5, 7, & 8) and then summing across all scale items (Cohen, Kamarck, & Mermelstein, 1994).

3.9.3 Part III: Anxiety Scale

The development for this scale in this part of the questionnaire was based on the Kessler Psychological distress scale (K10). The questions in the K10 focus on anxiety and depression, the usual focus of scales that measure psychological distress. The scale used a five-value response option for each question (none of the time, a little of the time, some of the time, most of the time and all of the time) that were scored from one (1) through to five (5) (Andrews & Slade, 2001).

3.9.4 Part IV: Management Strategies or Techniques Assessment

The aim of this part of the assessment was to determine which of the stress management strategy or strategies are frequently used by the study participants by way of preference in order for them to stay active throughout the working period.

3.10 RELIABILITY AND VALIDITY

The analysis of the data was horizontal through coding to eliminate potential errors. The data was analyzed using the SPSS system and the Cronbach's Alpha of the reliability of the scale is greater than 7.00 for all the three variables. The variable with the highest level of reliability and validity is the stress assessment which is equal to the WASS reliability coefficient of 0.900 with the least being the anxiety assessment with a reliability value of 0.848 as illustrated in the Table 3.1 below.

Table 3.1: Cronbach's Alpha of the Reliability of the Scale.

Variables	**Number of items**	**Cronbach's Coefficient Alpha**
Stress Assessment	22	0.900
Anxiety Assessment	10	0.848
Management Strategies	15	0.885

Source: Field Data 2018

3.11 INCLUSION AND EXCLUSION CRITERIA

3.11.1 Inclusion Criteria

The study included all nurses working at the Tamale Central and West Hospitals and are registered and licensed by the Ghana Nurses and Midwifes Council. All nurses who were present during the period of data collection and were willing to participate in the study.

3.11.2 Exclusion Criteria

During the period of data collection, nurses who were not present and those who were present but not willing to participate in the study were excluded. Also, trainee nurses from the various nursing training institutions and nurses who were on national service and were present at the time of data collection were not included in the study.

3.12 Data Analysis and Presentation of Results

Data was coded, and analyzed using SPSS Version 22 appropriate statistical methods. The analysis of the data was conducted quantitatively using descriptive and inferential statistics and results obtained was displayed using graphs and tables. Chi-square and Fishers test were used to compare categorical variables and a p-value of .05 was considered statistically significant.

Quantitative data was coded, fed into the computer and analyzed using the statistical package for social sciences (SPSS Version 22) software appropriate statistical methods. The analysis of the data was conducted quantitatively using descriptive and inferential statistics and results obtained was displayed using graphs and tables. Chi-square and Fishers test were used to compare categorical variables and a p-value of .05 was considered statistically significant. With regards to the qualitative data, thematic content analysis was used to report the views of participants word for word. The validation of information helped the researcher in recognizing the point at which no new information emerged from the interview leading to saturation of the data. Following this, various themes that emerged were development. This was achieved by reading the verbatim transcripts over and over to ensure that they were representative of the exact expression

by the respondents regarding the phenomenon under investigation. The transcribed data was first read thoroughly for meaning and understanding. Coding of the data was done by identifying similar words, phrases, sentences, ideas and concepts. In word document, headings for the various themes were created, categorized, coded, while excerpts and identity to quotes were also cited.

3.13 ETHICAL CONSIDERATION

The study was carried out in compliance with ethical principles. Approval to conduct the study was sought from the University for Development Studies prior to onset of data collection. The purpose of the study was explained to the Northern Regional Director of Health Service through the introductory letter from the University. The Regional Director granted permission and introduce me to the management of the two facilities to allow me collect data for the research. The consent of respondents were obtained and approval granted to access their views on the topic. The respondent's identity was not disclosed in the study questionnaires. The right and privacy of the respondents were maintained during the study at all times.

CHAPTER FOUR

RESULTS AND ANALYSIS

4.0 INTRODUCTION

This chapter presents on the results and analysis of the study. The data was gathered on three hundred and eighty-four (384) nurses at both Tamale Central and West hospitals respectively.

The data presented is in two categories. Firstly, quantitative data was obtained from the questionnaires and analyzed using the descriptive statistics and presented in the form of frequencies and percentages. The findings or results cover the socio-demographic characteristics, general characteristics stratified by gender, level of stress and anxiety assessments, most common occupational stressors and stress managements techniques or strategies among nurses. The results or findings are organized and presented according to the study objectives. Secondly, qualitative data was obtained from face-to-face in-depth interviews with the help of an interview guide. The data was analyzed through content analysis into themes and presented in accordance with the study objectives.

4.1 THE SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE PARTICIPANTS

This segment reports on the characteristics of participants that were involved in the data collection. Variables that were captured under this segment of the study include age of participants, gender, marital status, religion and educational level.

Table 4.1: ***Socio demographic characteristics of study participants (n=384)***

Variable	Total	Male (181)	Female (203)	P-Value
Hospital				
Tamale Central Hospital	231 (65.8%)	120 (66.3%)	111 (54.7%)	*.0219*
Tamale West Hospital	153 (34.2%)	61 (33.7%)	92 (45.3%)	*.0219*
Age				
15-20	43 (11.2%)	22 (12.2%)	21 (10.3%)	*.6283*
21-25	150 (39.1%)	70 (38.7%)	80 (39.4%)	*.9167*
26-30	98 (25.5%)	42 (23.2%)	56 (27.6%)	*.3496*
31-35	42 (10.9%)	23 (12.7%)	19 (9.4%)	*.3279*
36-40	20 (5.2%)	5 (2.8%)	15 (7.4%)	*.0634*
41-45	14 (3.6%)	8 (4.4%)	6 (3.0%)	*.5874*
46-50	11 (2.9%)	8 (4.4%)	3 (1.5%)	*.1242*
51-55	6 (1.6%)	3 (1.7%)	3 (1.5%)	*1.0000*
Marital Status				
Married	138 (35.9%)	59 (32.6%)	79 (38.9%)	*.2032*
Cohabitating	8 (2.1%)	5 (2.8%)	3 (1.5%)	*.4835*
Single	220 (57.3%)	110 (60.8%)	110 (54.2%)	*.2153*
Divorced	8 (2.1%)	2 (1.1%)	6 (3.0%)	*.2904*
Widowed	10 (2.6%)	5 (2.8%)	5 (2.5%)	*1.0000*
Religion				
Muslim	239 (62.2%)	121 (66.9%)	118 (58.1%)	*.0001*
Christian	135 (35.2%)	54 (29.8%)	81 (39.9%)	*.0424*
Traditionalist	8 (2.1%)	5 (2.8%)	3 (1.5%)	*.4835*
Non-religion	2 (0.5%)	1 (0.6%)	1 (0.5%)	*1.0000*
Educational Level				
Certificate	140 (36.5%)	62 (34.3%)	78 (38.4%)	*.4573*
Diploma	186 (48.4%)	88 (48.6%)	98 (48.3%)	*1.0000*
Degree	49 (12.8%)	28 (15.5%)	21 (10.3%)	*.1676*
Masters	9 (2.3%)	3 (1.7%)	6 (3.0%)	*.5092*

Source: Field Data 2018,

The socio-demographic characteristics of the 384 subjects participated in the study are shown in Table 4.1 above. Out of this number, majority of the participants 203 (52.9%) were females whiles 181 (47.1%) were males. It is evident from the Table 4.1 that majority of the participants (65.8%) work at Tamale Central Hospital (Hospital A) whereas the remaining (34.2%) work at Tamale West Hospital (Hospital B). The age range of the participants in this study is from 15 to 55. The distribution of the age of the participants indicated that, greater number of the participants 150 (39.1%) fall within

the age 21-25 years, followed by 26-30 years which is 98 (25.5%) while a small percentage of the participants 43 (11.2%), 42 (10.9%) and 20 (5.2%) fall within 15-20 years, 31-35 years and 36-40 years respectively. The least of the participants 14 (3.6%) and 11 (2.9%) fall within 41-45 and 46-50 years respectively with the very least of participants 6 (1.6%) falls within 51-55 years.

A slightly more than half of the participants 220 (57.3%) were single and a reasonable number of the participants 135 (35.2%) were married whiles the list number of the participants 10 (2.6%) and 8 (2.1%) were widowed or divorced and cohabitating respectively. In the religious categorization, overwhelming majority of the participants 239 (62.2%) were Muslims followed by Christians 135 (35.2%) with only 8 (2.1%) been traditionalist.

Out of the total number of nurses interviewed, almost half of them 186 (48.4%) had attained Diploma Certificate. A sizeable number of the participants 140 (36.5%) had obtained Nursing Certificate with very small numbers 49 (12.8%) and 9 (2.3%) of the participants had first and master's degrees respectively.

4.1.1 General Socio-Demographic Characteristics Stratified by Gender

The general characteristics captured as part of this segment include part-time job of participants, number of years of work, hours of work in a week, cigarette smoke, alcoholic beverage intake, energy drink intake, how often participants exercise and what participants do in their free time.

Table 4.2: General Characteristics Stratified by Gender (n=384)

Variable	Male (181)	Female (203)	Chi-Square	*P-Value*
Years of work				
Less than 5 years	125 (69.1%)	124 (61.1%)	2.6710	*.1022*
5-10 years	37 (20.4%)	62 (30.5%)	5.1010	*.0239*
11-15 years	11 (6.1%)	9 (4.4%)	0.5237	*.4693*
16-20 years	5 (2.8%)	6 (3.0%)	0.01284	*.9098*
21 years and above	3 (1.7%)	2 (1.0%)	0.3365	*.5619*
Hours of work in a week				
Less than 40 hours	81 (44.8%)	84 (41.4%)	0.444	*.5052*
40-50 hours	71 (39.2%)	81 (39.9%)	0.01823	*.8926*
51 hours and above	29 (16.0%)	38 (18.7%)	0.4832	*.4870*
Smoke Cigarette				
Yes	23 (12.7%)	6 (3.0%)	13.03	*.0003*
No	158 (87.3%)	197 (97.0%)	13.03	*.0003*
Alcoholic Beverages				
Yes	40 (22.1%)	21 (10.3%)	9.894	*.0017*
No	141 (77.9%)	182 (89.7%)	9.894	*.0017*
Energy Drink				
Yes	103 (56.9%)	77 (37.9%)	13.83	*.0002*
No	78 (43.1%)	126 (62.1%)	13.83	*.0002*
Exercising				
Never	21(11.6%)	27 (13.3%)	0.2523	*.6154*
Seldom	34 (18.8%)	21 (10.3%)	5.554	*.0184*
Sometime	92 (50.8%)	118 (58.2%)	2.057	*.1515*
Often	12 (6.6%)	15 (7.4%)	0.0844	*.7714*
Always	22 (12.2%)	22 (10.8%)	0.1636	*.6858*
Free time Choice of activity	**Total (250)**	**Total (267)**	**Chi-Square**	***P-Value***
Listening to music	63 (25.2%)	56 (21.0%)	1.301	*.2540*
Reading	52 (20.8%)	82 (30.7%)	6.606	*.0102*
Watching TV	70 (28.0%)	98 (36.7%)	4.459	*.0347*
Playing sport	30 (12.0%)	5 (1.9%)	20.98	*.0001*
Go out with friends	5 (2.0%)	13 (4.9%)	3.162	*.0754*
Nothing	30 (12.0)	13 (4.9%)	8.61	*.0033*

Source: Field Data 2018

Table 4.2 above shows that more than half of the participants in the study 249 (64.8%) had worked less than 5 years, followed by a sizeable number of the participants 99

(25.8%) had worked between 5-10 years at workplace whilst 20 (5.2%), 11 (2.9%) and as little as 5 (1.3%) of participants had worked between 11-15 years, 16-20 years and 21-25 years and above respectively. More females had worked between 5-10 years than males with a p-value of *.0239* which is statistically significant.

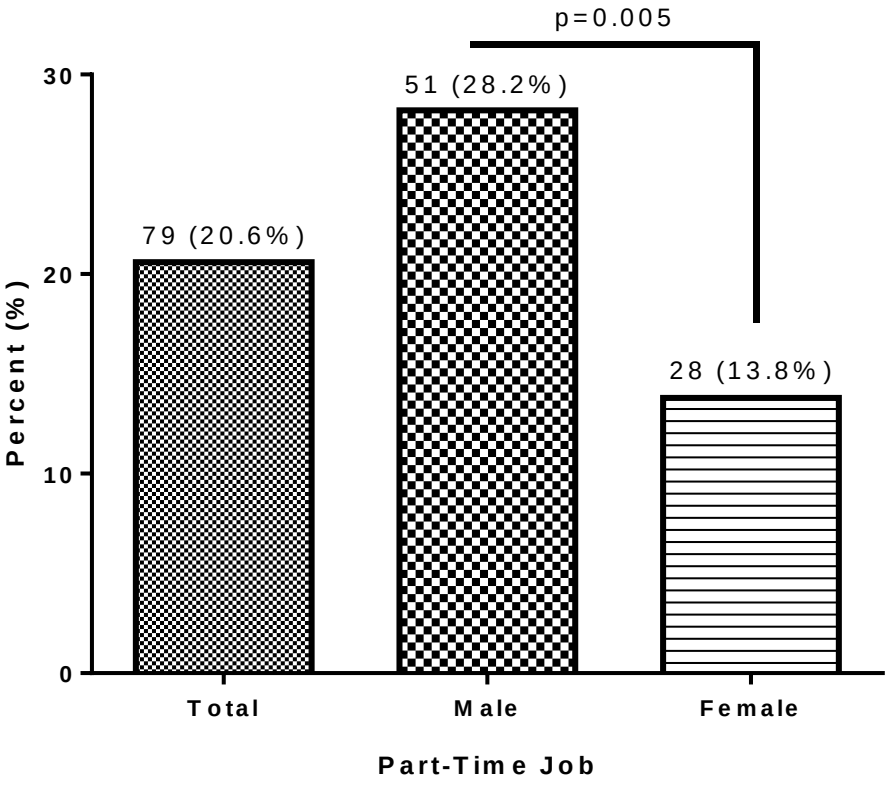
It is revealed further in Table 4.2 above that, slightly high number of the participants 165 (43.0%) worked less than 40 hours in a week whereas 152 (39.2%) and 67 (17.4%) worked between 40-50 hours and 51 hours and above in a week respectively with a p-value of *.4870* which is statistically not significant.

An overwhelming majority of the participants 355 (92.4%) were not involved in smoking cigarette. In terms of gender stratification, more males were found to have involved in cigarette smoking than females with *p= .0003* which is statistically very significant. With regards to drinking, a greater number of the participants 323 (84.1%) were reported not to be taking alcoholic beverages.

Out of 384 participants, slightly more than half of the participants 204 (53.1%) do not take in energy drink. With statistically significant *p-value* of *.0002*, more females than males were reported not to be involved in alcoholic beverages and energy drink intake. Again, it is seen in the Table 4.2 above that, a slightly more than half of the participants 210 (54.7%) occasionally involved in exercise, 55 (14.3%) hardly exercise, 44 (11.5%) and 27 (7.0%) always and often exercise respectively. A reasonable number of the participants 48 (12.5%) do not exercise at all. Majority of males as compared to females hardly exercise with a p-value of *.0184*.

In reference to the free time choice of activity of participants, in which case the participants can select more than one activity. A reasonable number of the participants 168 (32.5%) watched television set and a very small number 18 (3.5%) do nothing at their free time.

Figure 4.1 Distribution of extra work as part of the regular work



Source: Field Data 2018

Figure 4.1 above shows the part-time job engaged in as an additional work of the participants, a small number 79 (20.6%) had part-time job in addition to their regular nursing work. Out of this number, 51 (28.2%) of the participants were males whiles 28 (13.8%) of the participants were females. With the population stratified based on

gender, there were more males than females with part-time job with a p-value of *.005* which is statistically very significant.

4.2.0 Level of Stress and Anxiety Assessment among Nurses

4.2.1 Distribution of Stress Stratified by Hospital

Data collected on the distribution of stress stratified by facility is presented on Table 4.3

Table 4.3: ***Level of Stress Assessment Stratified by Hospital (n = 384)***

	Hospital		
Variable	**Central (n=231)**	**West (n=153)**	***P-value***
Get upset with happenings unexpectedly			
Low Stress	129 (55.8%)	21(13.7%)	0.0001
Moderate Strass	71(30.7%)	104(68.0%)	0.0001
Severe Stress	31 (13.4%)	28(18.3%)	0.1972
Often get nervous and stressed			
Low Stress	179 (77.5%)	128(83.7%)	0.1534
Moderate Strass	52 (22.5%)	19 (12.4%)	0.0153
Severe Stress	0 (0.0%)	6 (3.9%)	0.0072
Over-burden with workload			
Low Stress	111 (48.1%)	117 (76.5%)	0.0001
Moderate Strass	110 (47.6%)	36 (23.5%)	0.0001
Severe Stress	10 (4.3%)	0 (0.0%)	0.0072
Work schedule affect your outside relationship			
Low Stress	21 (9.1%)	34 (22.2%)	0.0005
Moderate Strass	158 (68.4%)	75 (49.0%)	0.0002
Severe Stress	52 (22.5%)	44 (28.8%)	0.1860
Enjoy a good night sleep without worrying about work			
Low Stress	23 (10.0%)	11 (11.8%)	0.4634
Moderate Strass	133 (57.6%)	94 (61.4%)	0.4602
Severe Stress	75 (32.5%)	41 (26.8%)	0.2574
Lack of resources affect your job			
Low Stress	28 (12.1%)	19 (12.4%)	1.0000
Moderate Strass	132 (57.1%)	96 (62.7%)	0.2900
Severe Stress	71 (30.7%)	38 (24.8%)	0.2477
Little authority to carry out your work			
Low Stress	35 (15.2%)	43 (28.1%)	0.0028
Moderate Strass	141 (61.0%)	72 (47.1%)	0.0087
Severe Stress	55 (23.8%)	38 (24.8%)	0.9032

Results from Table 4.3 on stress assessment reveals that less than half of the participants 71 (30.7%) in hospital A and more than half 104 (68.0%) in hospital B experience moderate stress levels in respect of the participants getting upset with unexpected happenings whiles a good number of hospital A participants 129 (55.8%) and a small number of hospital B participants 21 (13.7%) reported low stress levels which is statistically significant with p=.0001. Some participants from both hospital A and B 31 (13.4%) and 28 (18.3%) respectively experience severe levels of stress with *p=.1972*, which is statistically not significant.

With regards to the frequency of participants often get nervous and stressful in their work, majority of the participants 179 (77.5%) in hospital A and overwhelming majority of participates 128 (83.7%) in hospital B reported low level of stress, 52 (22.5%) and 19 (12.4%) of participants in hospital A and B respectively revealed moderate stress levels with a very small number of participants 6 (3.6%) in hospital B experienced severe stress levels which is statistically significant with p-*value* of *.0072*.

Out of 384 participants in respect to participants being over burden with workload, majority of participants 111 (48.1%) and 117 (76.5%) in hospital A and B respectively reported low level of stress whiles reasonable numbers of participants 110 (47.6%) and 36 (23.5%) in hospital A and B respectively experienced moderate levels of stress. The least number of participants 10 (4.3%) of hospital A revealed severe stress levels, which is statistically very significant with p-*value* of *.0001*.

With regards to participants work schedule affecting their outside relationship, small number of participants 21 (9.1%) in hospital A and less than quarter of the participants

34 (22.2%) in hospital B experience low stress level whiles more than half of participants 158 (68.4%) and 75 (49.0%) in hospital A and B respectively reported moderate level of stress with reasonable number of participants 52 (22.5%) of hospital A and 44 (28.8%) of hospital B revealed severe stress levels, which is statistically significant with *p=.0005*.

On the part of participants enjoying a good night sleep without worrying about work, a small number of the participants 23 (10.0%) of hospital A and 11 (1.8%) of hospital B reported severe level of stress whiles more than half of participants 133 (57.6%) and 94 (61.4%) of hospital A and B respectively experience moderate stress levels. A reasonable number of participants 75 (32.5%) of hospital A and 41 (26.8%) of hospital B reported low stress levels with a p-value of *.2574* which is statistically not significant.

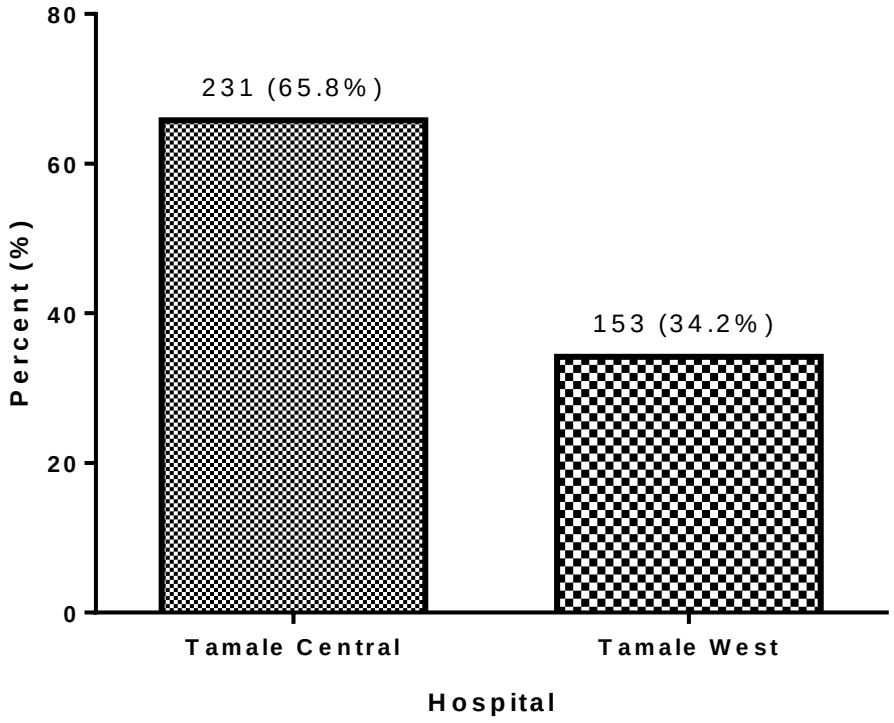
Furthermore, lack of resources affecting the work of the participants, very small number of participants 28 (12.1%) and 19 (12.4%) of both hospital A and B respectively reported low stress levels whiles slightly higher than half of the participants 132 (57.1%) of hospital A and 96 (62.7%) of hospital B said they experience moderate stress level. A slightly significant number of participants 71 (30.7%) and 38 (24.8%) of hospital A and B respectively reported severe stress levels, which is statistically not significant of p-value of *.2477*.

The data from Table 4.3 also reveal that more than half of the participants 141 (61.0%) in hospital A and less than half in hospital B participants 72 (47.1%) revealed moderate levels of stress with regards to the little authority nurses have to carry out their work whiles almost quarter of the participants 55 (23.8%) and 38 (24.8%) from both hospital

A and B respectively reported severe stress levels. However, a reasonable number of participants 35 (15.2%) of hospital A and 43 (28.1%) of hospital B reported low level of stress, which is statistically significant with *p=0.0028*.

Reliability analysis done for the Occupational Stress Scale in Part B of the questionnaire as shown in Table 3.1 yielded a Cronbach's Alpha coefficient of 0.90 indicating a very good internal consistency which is excellent as compared to the Weinman Occupational Stress Scale (WOSS) coefficient of 0.90. The total score obtained in this survey of 384 participants was 27,892 points. This computes into a mean score of 72.64 (13.35sd) per participant which translates into an individual mean score of 3.30 on the five-point scale. Comparing the survey participants mean and the individual score to the mean score of 33.75 and individual score of 2.25 established by the WOSS to estimate the level of stress indicates that the participants of the study experience high stress level.

Figure 4.2: Distribution of participants from the hospital



Source: Field Data 2018.

Figure 4.2 above illustrates the distribution of participants from TCH and TWH classified as hospital A and B. Hospital A recorded the highest number of participants 231 (65.8%) whiles hospital B contributed 153 (43.2%) of participants.

4.2.2 Distribution of Anxiety Stratified by Hospital

Reliability analysis done on the survey questionnaires part C for the anxiety Scale produced a Cronbach's Alpha coefficient of 0.857 which, indicate a good internal consistency of the anxiety assessment.

Table 4.4: ***Level of Anxiety Assessment Stratified by Hospital (n = 384)***

	Hospital		
Variable	**A (n=231)**	**B (n=153)**	***P-value***
Feel tired for no good reason			
None	0 (0.0%)	3(2.0%)	*.0625*
Moderate	88 (38.1%)	52 (34.0%)	*.4491*
Severe	143 (61.9%)	98 (64.1%)	*.7465*
Feel so nervous that nothing can calm you down			
None	0 (0.0%)	0 (0.0%)	*1.0000*
Moderate	111 (48.1%)	62 (40.5%)	*.1732*
Severe	120 (51.9%)	91 (59.5%)	*.1732*
Restless or fidgety that you could not sit still			
None	29 (12.6%)	3 (2.0%)	*.0001*
Moderate	98 (42.4%)	74 (30.7%)	*.3576*
Severe	104 (45.0%)	103 (67.3%)	*.0001*
Do you feel worthless			
None	3 (1.3%)	3 (2.0%)	*.6861*
Moderate	65 (28.1%)	61 (39.8%)	*.0197*
Severe	163 (70.6%)	89 (58.2%)	*.0023*
Feel hopeless			
None	0 (0.0%)	0 (0.0%)	*1.0000*
Moderate	68 (29.4%)	69 (45.1%)	*.0023*
Severe	163 (70.6%)	84 (54.9%)	*.0023*
Feel that everything is an effort			
None	3 (1.3%)	16 (10.5%)	*.0001*
Moderate	63 (27.3%)	69 (45.1%)	*.00304*
Severe	165 (74.1%)	68 (44.4%)	*.0001*
Feel so sad that nothing could cheer you up?			
None	3 (1.3%)	3 (2.0%)	*.6861*
Moderate	90 (39.0%)	41 (26.8%)	*.0156*
Severe	138 (59.7%)	109 (71.2%)	*.0003*

Source: Field Data 2018.

Table 4.4 above showed data collected on anxiety assessment stratified by hospital. The total score of the 384 participants in the survey is 14,068 with a mean score of 36.64 (6.85sd) which translates into an individual score of 3.664. The participants mean score and individual score is compared with the established WOSS mean score of 33.75 and individual score of 2.25 in order to tell the level of anxiety among the study population. The result of the anxiety assessment of the study reveals that, more than half of the participants 143 (61.9%) and 98 (64.1%) of hospital A and B said to be severely anxious for feeling tired for no good reason whiles a reasonable number of the participants 88 (38.1%) and 52 (34.0%) of both hospital A and B respectively said to be moderate anxiety which is not statistically significant with *p-value* of *.4491*.

With regards to participants feeling nervous that nothing can calm them down shows that a greater number of hospital A participants 120 (51.9%) and more than half of hospital B participants 91 (59.5%) revealed they severely feel anxious whiles almost half of the participants 111 (48.1%) and 62 (40.5%) of hospital A and B respectively reported moderate feeling of anxiety with p-value of 0.1732 which is not statistically significant.

In addition to this, almost half of the participants 104 (45.0%) of hospital A and more than half of the participants 103 (67.3%) of hospital B reported that, they feel severe anxiety whiles more than quarter of the participants 98 (42.4%) of hospital A and 74 (30.7%) of hospital B revealed moderate anxiety feeling of restless that they could not sit still. However, a small number of the participants 29 (12.6%) and 3 (2.0%) of both

hospital A and B respectively reported none feeling of anxiety with statistically significant *p=.0001*.

In respect of how worthless participants often feel, majority of the participants 163 (70.6%) and 89 (58.2%) respectively in hospital A and B reveal that, they experience severe anxiety whiles a reasonable number of the participants 65 (28.1%) in hospital A and 61 (39.8%) in hospital B experience moderate anxiety. However, an insignificant number of participants 3 (1.3%) revealed none anxiety which is statistically significant with *p=.0023.*

From Table 4.4, out of 384 a significantly high number of participants 163 (70.6%) and 84 (54.9%) of hospital A and B respectively revealed severe anxiety feeling of hopeless whiles more than quarter of the participants 68 (29.4%) and 69 (45.1%) reported moderate feeling of anxiety with *p=.0023* which is statistically very significant.

In responds to the feeling by nurses that everything at the work side is an effort, more than half of the participants 165 (74.1%) in hospital A and less than half 68 (44.4%) in hospital B said they experience severe anxiety whiles a reasonable number of participants 63 (27.3%) and 69 (45.1%) in both hospital A and B respectively reveal moderate anxiety. Small number of participants 3 (1.3%) and 16 (10.5%) in both hospital A and B respectively reported none anxiety which is statistically very significant with *p= .0001*.

With regards to feeling so sad that nothing could cheer you up, more than half of the participants 138 (59.7%) and 109 (71.2%) of hospital A and B respectively reported they severely feel anxious whiles more than quarter of the participants 90 (39.0%) and

41 (26.8%) said they are moderately anxious. However, a very small number of the participants 3 (2.0%) reveal none anxiety with a p-value of *.0003* which is statistically very significant.

4.2.3 Distribution of Stress and Anxiety Stratified by Hospital

The data analyzed on the distribution of stress and anxiety among the study participants as shown in Table 4.5.

Table 4.5: Distribution of Stress and Anxiety Stratified by Hospital (n=384)

Variable	Total (n=384)	TCH (n=231)	TWH (n=153)	p-value
Stress category				
Low	52 (13.6%)	34 (14.7%)	18 (11.8%)	0.4489
Moderate	239 (62.2%)	146 (63.2%)	93 (60.8%)	0.6677
Severe	93 (24.2%)	51 (22.1%)	42 (27.5%)	0.3885
Anxiety category				
None	20 (5.2%)	11 (4.8%)	9 (4.8%)	0.6451
Moderate	156 (40.6%)	87 (37.7%)	69 (45.1%)	0.1678
Severe	208 (54.2%)	133 (57.6%)	75 (49.0%)	0.1166

Source: Field Data 2018.

From the above Table, overwhelming majority of the participants 239 (62.2%) experienced moderate stress. The low and severe stress were revealed by 52 (13.6%) and 93 (24.2%) participants respectively. However, more than half of the participants 208 (54.2%) reported severe anxiety whereas reasonable number of participants 156 (40.6%) and 20 (5.2%) experienced moderate and none anxiety respectively.

4.2.4 Distribution of Stress Stratified by Age

This analysis was done to show how stress is distributed among the age groups of the participants in the study.

Table 4.6: Level of Stress assessment stratified by Age (n=384)

	Age			
Variable	15-30 (n=291)	31-45 (n=76)	46 and above (n=17)	*p-value*
Get upset with happenings unexpectedly				
Low Stress	112 (38.5%)	28 (36.8%)	10 (58.8%)	*.2270*
Moderate Strass	134 (46.0%)	36 (47.4%)	5 (29.4%)	*.3838*
Severe Stress	45 (15.5%)	12 (15.8%)	2 (11.8%)	*.9129*
Over-burden with workload				
Low Stress	178 (61.2%)	43 (56.6%)	7 (41.2%)	*.2267*
Moderate Strass	105 (36.1%)	31 (40.8%)	10 (58.8%)	*.1471*
Severe Stress	8 (2.7%)	2 (2.6%)	0 (0.0%)	*.7871*
Work schedule affect your outside relationship				
Low Stress	48 (16.5%)	5 (6.6%)	2 (11.8%)	*.0853*
Moderate Strass	171 (58.8%)	50 (65.8%)	12 (70.6%)	*.0553*
Severe Stress	72 (24.7%)	21 (27.6%)	3 (17.6%)	*.6766*
Enjoy a good night sleep without worrying about work				
Low Stress	28 (9.6%)	11 (14.5%)	2 (11.8%)	*.4702*
Moderate Strass	173 (59.5%)	45 (59.2%)	9 (52.9%)	*.8685*
Severe Stress	90 (30.9%)	20 (26.3%)	6 (35.3%)	*.6616*
Lack of resources affect your job				
Low Stress	39 (13.4%)	6 (7.9%)	2 (11.8%)	*.1470*
Moderate Stress	174 (59.8%)	43 (56.6%)	11 (64.7%)	*.7915*
Severe Stress	78 (26.8%)	27 (35.5%)	4 (23.5%)	*.2921*
Get worried about co-workers not doing their work				
Low Stress	38 (13.1%)	12 (15.8%)	2 (11.8%)	*.8058*
Moderate Stress	185 (63.6%)	42 (55.3%)	12 (70.6%)	*.3169*
Severe Stress	68 (23.4%)	22 (28.9%)	3 (17.6%)	*.4866*

Source: Field Data 2018.

The age groups of the participants in the study have been recorded into three categories as indicated in Table 4.6 above. Results from Table 4.6 shows that, majority of the participants 134 (46.0%) from 15-30 years and a small number of 46 and above years 10 (58.8%) as well as more than quarter of the 31-45 years 36 (47.4%) experienced moderate stress levels whiles more than quarter of the participants 112 (38.5%) and 28 (36.8%) of 15-30 and 31-45 years respectively revealed low stress levels with regards to getting upset with unexpected happenings. A very small number of participants 45 (15.5%), 12 (15.8%) and 2 (11.8%) of all the age groups said they experienced severe stress levels. This is however not statistically significant with a p-value of .9129.

Furthermore, more than half of 15-30 years participants 178 (61.2%) and 31-45 years 43 (56.6%) as well as more than quarter of 46 and above years reported low stress level in responds to being over-burden with workload whiles 105 (36.1%), 31 (40.8%) and 10 (58.8%) respectively revealed moderate stress levels. The least number of 15-30- and 31-45-years of participants 8 (2.7%) and 2 (2.6%) respectively experience severe stress levels with statistically not significant *p-value* of *.7871*.

In responds to work schedule affecting the outside relationship of the nurse, more than half of 15-30 years participants 171 (58.8%) reported moderate stress level whiles close to quarter of participants 72 (24.7%) revealed severe stress levels with less than quarter of participants 48 (16.5%) said they experienced low stress levels. With respect to age 31-45 years, more than half of the participants 50 (65.8%) reported moderate stress level with only 21 (27.6%) and 5 (6.6%) of the participants revealed severe and low stress levels respectively. With regards to age 46 and above years old, majority of participants

12 (70.6%) said they experienced moderate stress level. A very small number of participants 3 (17.6%) and 2 (11.8%) reported severe and low stress levels respectively with *p-value* of *.6766* which is statistically not significant.

With regards to enjoying a good night sleep without worrying about work, majority of participants 173 (59.5%) within 15-30 years reported moderate stress whiles reasonable number of participants 90 (30.9%) and 28 (9.6%) experienced severe and low stress respectively. For those within the 31-45 years old, a greater number of participants 45 (59.2%) revealed moderate stress levels whereas a good number of participants 20 (26.3%) and 11 (14.5%) reported severe and low stress levels respectively. The participants within the age of 46 and above years, small number of participants 9 (52.9%) experienced moderate stress levels whereas 6 (35.3%) revealed severe levels of stress. An insignificant number of participants 2 (11.8%) reported low stress levels with a p-value of *.6616* which is statistically not significant.

On the part of lack of resources affecting the work of the nurse, as indicated in Table 4.6 below, majority of the participants 174 (59.8%) within the age of 15-30 years revealed moderate level of stress whiles 78 (26.8%) and 39 (13.4%) said they experienced severe and low levels of stress respectively. With reference to 31-45 years old, a good number of the participants 43 (56.6%) experienced moderate stress whereas small number of participants 27 (35.5%) and 6 (7.9%) reported severe and low stress respectively. A very small number of participants within age 46 and above 11 (64.7%) and 11 (64.7%) revealed moderate and severe stress respectively which is statistically not significant with p-value of *.4866.*

4.2.5 Distribution of Anxiety Stratified by Age

Table 4.7 show the anxiety distribution analysis done among the study participants.

Table 4.7: ***Level of Anxiety Assessment Stratified by Age (n=384)***

	Age			
Variable	**15-30 (n=291)**	**31-45 (n=76)**	**46 and above (n=17)**	***p-value***
Feel tired for no good reason				
None	1 (0.3%)	2 (2.6%)	0 (0.0%)	*.1219*
Moderate	111 (38.1%)	19 (25.0%)	10 (58.8%)	*.0155*
Severe	179 (61.5%)	55 (72.4%)	7 (41.2%)	*.0372*
Feel so nervous that nothing can calm you down				
None	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Moderate	133 (45.7%)	31 (40.8%)	9 (52.9%)	*.5959*
Severe	158 (54.3%)	45 (59.2%)	8 (47.1%)	*.5959*
Restless or fidgety that you could not sit still				
None	18 (6.2%)	11 (14.5%)	3 (17.6%)	*.0242*
Moderate	115 (39.5%)	22 (28.9%)	8 (47.1%)	*.1720*
Severe	158 (54.3%)	43 (56.6%)	6 (35.3%)	*.2717*
Do you feel worthless				
None	4 (1.4%)	2 (2.6%)	0 (0.0%)	*.6372*
Moderate	103 (35.4%)	21 (27.6%)	2 (11.8%)	*.0735*
Severe	184 (63.2%)	53 (69.7%)	15 (88.2%)	*.0757*
Feel hopeless				
None	0 (0.0%)	0 (0.0%)	0 (0.0%)	
Moderate	101 (34.7%)	31 (40.8%)	5 (29.4%)	*.5285*
Severe	190 (65.3%)	45 (59.2%)	12 (70.6%)	*.5285*
Feel that everything is an effort				
None	17 (5.8%)	2 (2.6%)	0 (0.0%)	*.3252*
Moderate	109 (37.5%)	21 (27.6%)	2 (11.8%)	*.0367*
Severe	165 (56.7%)	53 (69.7%)	15 (88.2%)	*.0069*
Feel so sad that nothing could cheer you up				< 0.0001
None	4 (1.4%)	2 (2.6%)	0 (0.0%)	
Moderate	93 (32.0%)	30 (39.5%)	8 (47.1%)	*.2417*
Severe	194 (66.7%)	44 (57.9%)	9 (52.9%)	*.2204*

The ages of the participants have been categories into three as indicated on Table 4.7 above. The results with regards to feeling tired for no good reason, majority of the participants 179 (61.5%) within the age of 15-30 years reported severe anxiety followed by 111 (38.1%) of participants experienced moderate anxiety. A reasonable number of the participants 55 (72.4%) within 31-45 years old revealed severe anxiety whereas a small number of participants 19 (25.0%) said moderate anxiety. With reference to 46 and above years old, a very small number of participants 7 (41.2%) and 10 (58.8%) revealed severe and moderate anxiety respectively with a *p-value* of *.0372* which is statistically significant.

A little more than half of the participants 158 (54.3%) within the 15-30 years of age in responds to being restless or fidgety that you could not sit still reported severe anxiety whiles more than quarter of the participants 115 (39.5%) experienced moderate anxiety with as small as 18 (6.2%) participants reported none anxiety. For those within the age of 31-45 years, more than half of the participants 43 (56.6%) responded to severe anxiety whiles 22 (28.9%) and 11 (14.5%) revealed moderate and none anxiety respectively. In reference to participants who fall within the age of 46 and above years, almost half 8 (47.1%) of them said moderate anxiety whereas 6 (35.3%) and 3 (17.6%) responded to severe and none anxiety respectively with a p-value of *.07570* which is statistically not significant.

From Table 4.7 with reference to feeling hopeless, an overwhelming majority of participants 184 (63.2%) within the age of 15-30 years revealed severe anxiety whereas more than quarter of participants 103 (35.4%) and an insignificant number 4 (1.4%)

reported moderate and none anxiety respectively. The participants within the age category of 31-45 years, more than half of the participants 53 (69.7%) responded to have experienced severe anxiety leaving a small number of the participants 21 (27.6%) and 2 (2.6%) said moderate and none anxiety respectively. The 46 and above age category participants, a whopping majority 15 (88.2%) revealed severe anxiety whiles as little as 2 (11.8%) of the participants reported moderate anxiety which is statistically not significant with *p= .5285*.

With regards to the feeling that everything is an effort, more than half of the participants 165 (56.7%) within the age group of 15-30 years revealed severe anxiety whiles more than quarter of participants 109 (37.5%) reported moderate anxiety with a small number of participants 17 (5.8%) revealed none anxiety. The 31-45 years age group of participants, majority 53 (69.7%) experienced severe anxiety with a little more than quarter 21 (27.6%) and as small as 2 (2.6%) reported moderate and none anxiety respectively. The age category of 46 and above years saw the same pattern of responds, where an overwhelming majority 15 (88.2%) revealed moderate anxiety whiles 2 (11.8%) said none with a p-value of *.0069* which is statistically significant.

The 15-30 years of age participants saw more than half of them 194 (66.7%) reported severe anxiety in response to feeling so sad that nothing could cheer them up whiles 94 (32.0%) and 4 (1.4%) revealed moderate and none anxiety respectively. The 31-45 age group of participants 44 (57.9%) revealed severe anxiety whereas 30 (39.5%) and 2 (2.6%) revealed moderate and normal anxiety respectively. The participants within the

age of 46 and above years, 9 (52.9%) and 8 (47.1%) said severe and moderate anxiety respectively with a *p-value* of *.0001* which is statistically very significant.

4.2.6 Distribution of Stress and Anxiety Stratified by Age

Table 4.8 below illustrate the distribution of stress and anxiety stratified by age of the participants.

Table 4.8: Distribution of Stress and Anxiety Stratified by Age (n=384)

Variable	Total (n=384)	15-30 (n=291)	31-45 (n=76)	46 And above (17)	p-value
Stress category					
Low	307 (79.9%)	232 (79.7%)	63 (82.9%)	12 (70.6%)	0.5092
Moderate	71 (18.5%)	54 (18.6%)	12 (15.8%)	5 (29.4%)	0.4244
Severe	6 (1.6%)	5 (1.7%)	1 (1.3%)	0 (0.0%)	0.8412
Anxiety category					
None	20 (5.2%)	15 (5.2%)	5 (6.6%)	0 (0.0%)	0.5420
Moderate	156 (40.6%)	116 (39.9%)	32 (42.1%)	8 (47.1%)	0.8062
Severe	208 (54.2%)	160 (55.0%)	39 (51.3%)	9 (52.9%)	0.8449

Source: Field Data 2018.

Out of a total of 384 subjects participated in the study, overwhelming majority of the participants 307 (79.9%) experienced low stress whiles a little above half of them 208 (54.2%) revealed severe anxiety which is not statistically significant.

Furthermore, a reasonable number of the participants 71 (18.5%) were moderately stressed whereas more than quarter of them 156 (40.6%) were also moderate on anxiety. On the other hand, an insignificant number of participants 6 (1.6%) reported severe stress whiles a good number of the participants 20 (5.2%) were none on anxiety but is not statistically significant.

4.2.7 Distribution of Stress Stratified by Marital Status

From Table 4.9, data collected on marital status of the participants were cross tabulated with the data collected on stress assessment.

Table 4.9: Distribution of Stress Assessment Stratified by Marital Status (n=384)

	Marital Status				
Variable	**Married (n=146)**	**Single (n=220)**	**Widow or Divorce (n=18)**	**Chi-Square**	***p-Value***
Get upset with happenings unexpectedly					
Low Stress	65 (44.5%)	75 (34.1%)	10 (55.6%)	6.169	*.0458*
Moderate Strass	54 (37.0%)	113 (51.4%)	8 (44.4%)	7.323	*.0257*
Severe Stress	27 (18.5%)	32 (14.5%)	0 (0.0%)	4.480	*.1065*
Over-burden with workload					
Low Stress	80 (54.8%)	142 (64.5%)	6 (33.3%)	8.769	*.0125*
Moderate Strass	62 (42.5%)	73 (33.2%)	11 (61.1%)	7.483	*.0237*
Severe Stress	4 (2.7%)	5 (2.3%)	1 (5.6%)	0.724	*.6963*
Work schedule affect your outside relationship					
Low Stress	14 (9.6%)	40 (18.2%)	1 (5.6%)	6.463	*.0395*
Moderate Strass	100 (68.5%)	122 (55.5%)	11 (61.1%)	6.254	*.0438*
Severe Stress	32 (21.9%)	58 (26.4%)	6 (33.3%)	1.625	*.4438*
Enjoy a good night sleep without worrying about work					
Low Stress	13 (8.9%)	27 (12.3%)	1 (5.6%)	1.564	*.4576*
Moderate Strass	89 (61.0%)	129 (58.6%)	9 (50.0%)	0.4912	*.7823*
Severe Stress	44 (30.1%)	64 (29.1%)	8 (44.4%)	1.861	*.3944*
Lack of resources affect your job					
Low Stress	15 (10.3%)	30 (13.6%)	2 (11.1%)	0.9461	*.6231*
Moderate Stress	88 (60.3%)	129 (58.6%)	11 (61.1%)	3.458	*.1775*
Severe Stress	43 (29.5%)	61 (27.7%)	5 (27.8%)	0.1319	*.9363*
Get worried about co-workers not doing their work					
Low Stress	17 (11.6%)	33 (15.0%)	2 (11.1%)	0.9396	*.6251*
Moderate Stress	92 (63.0%)	136 (61.8%)	11 (61.1%)	0.06360	*.9687*
Severe Stress	37 (25.3%)	51 (23.2%)	5 (27.8%)	0.3536	*.8380*

Source: Field Data 2018.

Out of 146 married participants in the study, 54 (37.0%) of the participants reported moderate stress with regards to getting upset with unexpected happenings as compared to 113 (51.4%) of the single participants who feel the same way with a chi-square value of 6.169 and a p-value of *.0458* which is statistically significant.

Closed to half of the married participants 62 (42.5%) said they experienced moderate stress in responds to feeling over-burden with work whiles a little more than half of the married participants 80 (54.8%) reported low stress with a very small number of participants 4 (2.7%) said severe stress. However, 73 (33.2%) and 142 (64.5%) of the single participants said they experienced moderate and low stress respectively. More than half of the participants 11 (61.1%) of the divorced or widowed category experienced moderate stress with as small as 6 (33.3%) and 1 (5.6%) reported severe and low stress respectively. This is statistically significant with p-value of .0237 and a chi-square value of 7.483.

Furthermore, majority of the married participants 100 (68.5%) revealed moderate stress whiles 32 (21.9%) said severe stress with a small number of them 14 (9.6%) reported low stress in responds to the work schedule affecting their outside relationship. On the other hand, 122 (55.5%) and 58 (26.4%) single participants reported to have experienced moderate and severe stress respectively whereas 40 (18.2%) of the same participants revealed low stress. With regards to divorced or widowed participants, 11 (61.1%) revealed moderate stress whiles 6 (33.3%) and 1 (5.6%) responded to severe and low stress respectively with a chi-square of 6.254 and a *p-value* of *.0438* which is statistically significant.

On the part of one enjoying a good night sleep without worrying about work, more than half of the married participants 89 (61.0%) acknowledge moderate stress whiles 44 (30.1%) said severe stress and a very small number of participants 13 (8.9%) reported low stress. On the other hand, 129 (58.6%) of the participants who are single said they experienced moderate stress whereas 64 (27.7%) and 27 (12.3%) of the single participants reported severe and low stress respectively. With the divorced or widowed participants, 9 (50.0%) experienced moderate stress whiles 8 (44.4%) and 1 (5.6%) responded to severe and low stress respectively. This is statistically not significant with a p-value of *.3944* and a chi-square value of *1.861*.

In addition to this, a reasonable number of the married participants 88 (60.3%) reported moderate stress whiles 43 (29.5%) and 15 (10.3%) said they experienced severe and low stress respectively in responds to the lack of resource affecting their job. Majority of the single participants 129 (58.6%) revealed moderate stress whereas 61 (27.7%) and 30 (13.6%) of them reported severe and low stress respectively. More than half of the divorced or widowed participants 11 (61.1%) experienced moderate stress whiles more than quarter of them 5 (27.8%) and less than quarter 2 (11.1%) reported severe and low stress respectively with a chi-square value of 3.458 which is statistically not significant with p-value of *.1775*.

A significant number of married participants 92 (63.0%) and 136 (61.8%) of the single participants as well as 11 (61.1%) of the divorce or widow participants respectively reveal from the study that they experienced moderate stress with regards to them getting worried about co-workers not doing their work whereas a little more than quarter of the

participants 37 (25.3%) of the married, 51 (23.2%) of the single and 5 (27.8%) of the divorced or widowed participants acknowledge that they are severely stress. Less than quarter of the married, single and divorced or widowed participants 17 (11.6%), 33 (15.0%) and 2 (11.1%) reported low stress which is not statistically significant with a chi-square and *p-value* of 0.9396 and *.6251* respectively.

4.2.8 Distribution of Anxiety Stratified by Marital Status

Data collected on anxiety distribution stratified by marital status is presented below.

Table 4.10: Distribution of Anxiety assessment stratified by Marital Status (n=384)

	Marital Status				
Variable	**Married (n=146)**	**Singles (n=220)**	**Widow or divorce (n=18)**	**Chi-Square**	***p-Value***
Feel tired for no good reason					
None	0 (0.0%)	3 (1.4%)	0 (0.0%)	2.254	*.3240*
Moderate	52 (35.6%)	80 (36.4%)	8 (44.4%)	0.5411	*.7630*
Severe	94 (64.4%)	137 (62.3%)	10 (55.6%)	0.5868	*.7457*
Feel so nervous that nothing can calm you down					
None	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Moderate	67 (45.9%)	99 (45.0%)	7 (38.9%)	0.3179	*.8530*
Severe	79 (54.1%)	121 (55.0%)	11 (61.1%)	0.3179	*.8530*
Restless or fidgety that you could not sit still					
None	11 (7.5%)	18 (8.2%)	3 (16.7%)	1.765	*.4137*
Moderate	51 (34.9%)	86 (39.1%)	8 (44.4%)	1.005	*.6050*
Severe	84 (57.5%)	116 (52.7%)	7 (38.9%)	2.530	*.2822*
Do you feel worthless					
None	1 (0.7%)	5 (2.3%)	0 (0%)	1.721	*.4230*
Moderate	42 (28.8%)	80 (36.4%)	4 (22.2%)	3.258	*.1961*
Severe	103 (70.5%)	135 (61.4%)	14 (77.8%)	4.518	*.1045*
Feel that everything is an effort					
None	7 (4.8%)	12 (5.5%)	0 (0.0%)	1.064	*.5873*
Moderate	39 (26.7%)	89 (40.5%)	4 (22.2%)	8.583	*.0137*
Severe	100 (68.5%)	119 (54.1%)	14 (77.8%)	9.944	*.0069*
Feel so sad that nothing could cheer you up					
None	1 (0.7%)	5 (2.3%)	0 (0.0%)	1.738	*.4193*
Moderate	55 (37.7%)	71 (32.3%)	5 (27.8%)	1.475	*.4782*
Severe	90 (61.6%)	144 (65.5%)	13 (72.2%)	1.069	*.5860*

Source: Field Data 2018.

Results from the study revealed that more than half of the married, single and divorced or widowed participants 94 (64.4%), 137 (62.3%) and 10 (55.6%) respectively

experience severe anxiety for feeling tired for no good reason whereas a good number of each of them 52 (35.6%), 80 (36.4%) and 8 (44.4%) reported moderate anxiety. A very small number of the single participants 3 (1.4%) revealed none anxiety with a chi-square value of 2.254 and a p-value of *.3240* which is statistically not significant.

With regards the respondents feeling so nervous that nothing can calm them down, a good number of the married, single and divorced or widowed participants 79 (54.1%), 121 (55.0%) and 11 (61.1%) respectively revealed severe anxiety whiles a reasonable number of each of them 67 (45.9%), 99 (45.0%) and 7 (38.9%) respectively said they experienced moderate anxiety with 0.3179 chi-square and a p-value of 0.8530 which is statistically not significant.

The results from Table 4.10 in responses to the participants feeling worthless, overwhelming majority from the married, single and divorced or widowed participants 103 (70.5%), 135 (61.4%) and 14 (77.8%) reported severe anxiety respectively whiles a little above quarter of the first two marital status categories 42 (28.8%) and 80 (36.4%) as well as less than quarter of the third category 4 (22.2%) revealed moderate anxiety. Very insignificant participants of the married and single participants 1 (0.7%) and 5 (2.3%) respectively said they experience none anxiety with a chi-square and p-value of 1.721 and *.4230* respectively which is statistically not significant.

Furthermore, the results with regards to feeling that everything is an effort, a very good number of the participants 100 (68.5%), 119 (54.1%) and 14 (77.8%) from the married, single and divorced or widowed respectively experience severe anxiety whereas a reasonable number of them 39 (26.7%), 89 (40.5%) and 4 (22.2%) revealed moderate

anxiety. Small number of participants 7 (4.8%) and 12 (5.5%) responded to none anxiety with a chi-square value of 9.944 and p-value of *.0069* which is statistically significant. The results in reference to participants feeling so sad that nothing could cheer them up, more than half of the married, single and divorced or widowed participants 90 (61.6%), 144 (65.5%) 13 (72.2%) respectively revealed severe anxiety whereas a good number of each of them 53 (37.7%), 71 (32.3%) and 5 (27.8%) respectively experienced moderate anxiety whereas very small number of each of the participants 1 (0.7%), 5 (2.3%) and 0 (0.0%) revealed none anxiety which is statistically not significant *p-value* of *.4193* and a chi-square of 1.738.

4.2.9 Distribution of Stress and Anxiety Stratified by Marital Status

Table 4. 11: Distribution of Stress and Anxiety Stratified by Marital Status (n=384)

Variable	Total (n=384)	Married (n=146)	Single (n=220)	Divorced (n=18)	p-value
Stress category					
Low	307 (79.9%)	118 (80.8%)	175 (79.5%)	14 (77.8%)	0.1447
Moderate	71 (18.5%)	26 (17.8%)	41 (18.6%)	4 (22.2%)	0.2145
Severe	6 (1.6%)	2 (1.4%)	4 (1.8%)	0 (0.0%)	0.8128
Anxiety category					
None	20 (5.2%)	7 (4.8%)	12 (5.5%)	1 (5.6%)	0.9598
Moderate	156 (40.6%)	54 (37.0%)	96 (43.6%)	6 (33.3%)	0.3633
Severe	208 (54.2%)	85 (58.2%)	112 (50.9%)	11 (61.1%)	0.3237

Source: Field Data 2018.

As shown in table 4.11above, a greater number of the participants 307 (79.9%) recorded low stress levels whereas an insignificant number 6 (1.6%) reported severe stress levels. Less than quarter of the participants 71 (18.5%) experienced moderate stress levels which is not statistically significant (p=*.8128*).

Furthermore, a little more than half of the participants 208 (54.2%) revealed severe anxiety level. The moderate and none anxiety levels were recorded by more than quarter and far less than quarter of the participants 156 (40.6%) and 20 (5.2%) respectively but it is not statistically significant (p=.*3633*).

4.2.10 Stress Distribution Stratified by Educational Level

Table 4.12: Distribution of Stress assessment stratified by Educational Level

	Educational Level (n=384)				
Variable	**Certificate (n=140)**	**Diploma (n=186)**	**Degree and Above (n=58)**	**F-test**	***p-value***
Feel nervous and stressed					
Low Stress	114 (81.4%)	144 (77.4%)	49 (84.5%)	0.4403	*.6631*
Moderate Stress	23 (16.4%)	39 (21.0%)	9 (15.5%)	0.4403	*.6631*
Severe Stress	3 (2.1%)	3 (1.6%)	0 (0.0%)	0.4403	*.6631*
Over-burden with workload					
Low Stress	82 (58.6%)	118 (63.4%)	28 (48.3%)	0.8407	*.4766*
Moderate Stress	55 (39.3%)	62 (33.3%)	29 (50.0%)	0.8407	*.4766*
Severe Stress	3 (2.1%)	6 (3.2%)	1 (1.7%)	0.8407	*.4766*
Work schedule affect your outside relationship					
Low Stress	25 (17.9%)	23 (12.4%)	7 (12.1%)	1.316	*.3359*
Moderate Stress	80 (57.1%)	108 (58.1%)	45 (77.6%)	1.316	*.3359*
Severe Stress	35 (25.0%)	55 (29.6%)	6 (10.3%)	1.316	*.3359*
Enjoy a good night sleep without worrying about work					
Low Stress	13 (9.3%)	23 (12.4%)	5 (8.6%)	1.287	*.3428*
Moderate Stress	90 (64.3%)	96 (51.6%)	41 (70.7%)	1.287	*.3428*
Severe Stress	37 (26.4%)	67 (36.0%)	12 (20.7%)	1.287	*.3428*
Lack of resources affect your job					
Low Stress	19 (13.6%)	23 (12.4%)	5 (8.6%)	1.340	*.3303*
Moderate Stress	82 (58.6%)	107 (57.5%)	39 (67.2%)	1.340	*.3303*
Severe Stress	39 (27.9%)	56 (30.1%)	14 (24.1%)	1.340	*.3303*
Get worried about co-workers not doing their work					
Low Stress	19 (13.6%)	28 (15.1%)	5 (8.6%)	1.214	*.3608*
Moderate Stress	85 (60.7%)	110 (59.1%)	44 (75.9%)	1.214	*.3608*
Severe Stress	36 (25.7%)	48 (25.8%)	9 (15.5%)	1.214	*.3608*

Source: Field Data 2018.

The analysis in Table 4.12 above was carried out to compare the level of stress distributions among nurses with different educational levels. In respect to nurses getting nervous and stressed, more than half of the certificate, diploma and degree and above holders' participants 114 (81.4%), 144 (77.4%) and 49 (84.5%) revealed low stress whereas very small numbers of them 23 (16.4%), 39 (21.0%) and 9 (15.5%) responded to moderate stress. Very insignificant number of all the participants 3 (2.1%) and 3 (1.6%) said they experience severe stress which is statistically not significant p-value of *.6631* with *F=0.4403*.

With respect to how often nurses are being over-burden with workload, a reasonably good number of participants 82 (58.6%), 118 (63.4%) and 28 (48.3%) of all the educational level categories reported low stress whereas less than half of the certificate and diploma holders and exactly half of the degree and above holders' participants 55 (39.3%), 62 (33.3%) and 29 (50.0%) revealed moderate stress. A very insignificant number of all the three educational level category participants 3 (2.1%), 6 (3.2%) and 1 (1.7%) suggested severe stress with *F=0.8407* and *p=.4766* which is statistically not significant.

From Table 4.12, the results of how often nurses work schedule affect their outside relationship suggest that, more than half of all the three educational level category participants 80 (57.1%), 108 (58.1%) and 45 (77.6%) experience moderate stress levels while a good number of them 35 (25.0%), 55 (29.6%) and 6 (10.3%) revealed severe stress levels. Less than quarter of them 25 (17.9%), 23 (12.4%) and 7 (12.1%) reported low stress levels with statistically not significant p-value of *.3359* and *F=1.316*.

The analysis results on how often lack of resources affect the nurses' job, largely more than half of all the educational level category participants 82 (58.6%), 107 (57.5%) and 39 (67.2%) experience moderate stress whereas less than quarter of all of them 19 (13.6%), 23 (12.4%) and 5 (8.6%) reported law stress. The severe stress was experienced by a reasonable number of the three category participants 39 (27.9%), 56 (30.1%) and 14 (24.1%) with a statistically not significant *p-value* of *.3303* and *F=1.340*.

The analyzed results on Table 4.12 on the participants getting worried about co-workers not doing their work, a little more than quarter of the certificate and diploma participants 36 (25.7%) and 48 (25.8%) as well as less than quarter 9 (15.5%) of the degree and above participants reported severe stress whiles more than half of all the category participants 85 (60.7%), 110 (59.1%) and 44 (75.9%) revealed moderate stress. Small number of participants 19 (13.6%), 28 (15.1%) and 5 (8.6%) of all the educational levels reported low stress with *F=1.214* with no statistically significant p-value of *.3608*.

4.2.11 Anxiety Distribution Stratified by Educational Level

Table 4.13 provide information to compare the effect of anxiety distribution among nurse participants stratified by educational levels with regards to certain feelings in the line of their duties.

Table 4.13: Distribution of Anxiety assessment stratified by Educational Level

	Educational Level (n=384)				
Variable	**Certificate**	**Diploma**	**Degree and above**	**F-test**	***p -value***
Feel tired for no good reason					
None	1 (0.7%)	2 (1.1%)	0 (0.0%)	0.7391	*.5165*
Moderate	44 (31.4%)	70 (37.6%)	26 (44.8%)	0.7391	*.5165*
Severe	95 (67.9%)	114 (61.3%)	32 (55.2%)	0.7391	*.5165*
Feel so nervous that nothing can calm you down					
None	0 (0.0%)	0 (0.0%)	0 (0.0%)		
Moderate	58 (41.4%)	85 (45.7%)	30 (51.7%)	0.8398	*.4769*
Severe	82 (58.6%)	101 (54.3%)	28 (48.3%)	0.8398	*.4769*
Do you feel depressed					
None	4 (2.9%)	15 (8.1%)	1 (1.7%)	1.197	*.3653*
Moderate	60 (42.9%)	74 (39.8%)	22 (37.9%)	1.197	*.3653*
Severe	76 (54.3%)	97 (52.2%)	35 (60.3%)	1.197	*.3653*
Do you feel worthless					
None	2 (1.4%)	4 (2.2%)	0 (0.0%)	0.7067	*.5301*
Moderate	51 (36.4%)	56 (30.1%)	19 (32.8%)	0.7067	*.5301*
Severe	87 (62.1%)	126 (67.7%)	39 (67.2%)	0.7067	*.5301*
Feel that everything is an effort					
None	9 (6.4%)	10 (5.4%)	0 (0.0%)	0.9281	*.4455*
Moderate	54 (38.6%)	57 (30.6%)	21 (36.2%)	0.9281	*.4455*
Severe	77 (55.0%)	119 (64.0%)	37 (63.8%)	0.9281	*.4455*
Feel so sad that nothing could cheer you up					
None	2 (1.4%)	4 (2.2%)	0 (0.0)	0.7148	*.5267*
Moderate	47 (33.6%)	58 (31.2%)	26 (44.8%)	0.7148	*.5267*
Severe	91 (65.0%)	124 (66.7%)	32 (55.2%)	0.7148	*.5267*

Source: Field Data 2018.

The results in responds to nurses feeling tired for no good reason, majority of the participants from the three educational level categories, 95 (67.9%), 114 (61.3%) and 32 (55.2%) said they experience severe anxiety with more than quarter of all of them 44 (31.4%), 70 (37.6%) and 26 (44.8%) revealed moderate anxiety. A very insignificant number of certificate and diploma holders 1 (0.7%) and 2 (1.1%) reported none anxiety with *F=0.7391* and *p=.5165* which is statistically not significant.

More so, the analyzed results on the feeling of restless or fidgety of nurses that they could not sit still, majority of the participants of all the three educational level category 76 (54.3%), 104 (55.9%) and 27 (46.6%) suggested severe anxiety while a very good number of them 56 (40.0%), 62 (33.3%) and 27 (46.6%) revealed moderate anxiety. Small numbers of the certificate, diploma and degree and above participants 8 (5.7%), 20 (10.8%) and 4 (6.9%) respectively experienced none anxiety which is statistically not significant with a p-value of *.3327* and *F=1.330*.

With regards to the nurse feeling depressed, more than half of the certificate, diploma and degree and above holders' participants 76 (54.3%), 97 (52.2%) and 35 (60.3%) reported severe anxiety respectively whereas more than quarter of each of them 60 (42.9%), 74 (39.8%) and 22 (37.9%) said they experienced moderate anxiety. Some of each of the educational level category participants 4 (2.9%), 15 (8.1%) and 1 (1.7%) revealed none anxiety respectively with a *p-value* of *.3653* which is statistically not significant with *F=1.197*.

In reference to how worthless nurses often feel, majority of participants of the three educational levels 87 (62.1%), 126 (67.7%) and 39 (67.2%) suggested that, they are severely anxious while more than quarter of each of them 51 (36.4%), 56 (30.1%) and

19 (32.8%) said they experienced moderate anxiety respectively. Those among the certificate and diploma participants 2 (1.4%) and 4 (2.2%) respectively revealed normal anxiety with *F=0.7067* and *p=0.5301* which is not statistically significant.

From the analysis on Table 4.10, more than half of all the educational level category participants 91 (65.0%), 124 (66.7%) and 32 (55.2%) respectively said they are severely anxious with regards to how often they feel so sad that nothing could cheer them up while more than quarter of each of them 47 (33.6%), 58 (31.2%) and 26 (44.8%) revealed moderate anxiety. Very few certificate and diploma holders' participants 2 (1.4%) and 4 (2.2%) respectively reported none anxiety with statistically not significant p-value of *.5267* and *F=0.7148*.

4.2.12 Distribution of Stress and Anxiety Stratified by Educational Level

Table 4.14: Distribution of Stress and Anxiety Stratified by Educational Level (n=384)

Variable	Total (n=384)	Certificate (n=140)	Diploma (n=186)	Degree and Above (n=58)	p-value
Stress Category					
Low	150 (39.0%)	54 (38.6%)	69 (37.1%)	27 (15.1%)	*.4147*
Moderate	175 (45.6%)	63 (45.0%)	89 (47.8%)	23 (39.7%)	*.4116*
Severe	59 (15.4%)	23 (16.4%)	28 (15.1%)	8 (13.8%)	*.8843*
Anxiety Category					
None	32 (8.3%)	8 (5.7%)	20 (10.8%)	4 (6.9%)	*.2418*
Moderate	145 (37.8%)	56 (40.0%)	62 (33.3%)	27 (46.6%)	*.1528*
Severe	207 (53.9%)	76 (54.3%)	104 (55.9%)	27 (46.6%)	*.4556*

Source: Field Data 2018.

The data analyzed on Table 4.14 above shows that majority of the participants 175 (45.6%) revealed moderate stress level whiles a very good number of them 150 (39.0%) recorded low stress levels. A very small number of them 59 (15.4%) experienced severe stress level which is not statistically significant.

On the other hand, a little more than half of the participants 207 (53.9%) reported severe anxiety whiles a little above quarter of the participants 145 (37.8%) experienced moderate stress level. A small number of the participants 32 (8.3%) out of a total number of 384 respondents recorded none anxiety which is however not statistically significant with p=*.2418*.

4.3 THE MOST COMMON OCCUPATIONAL STRESSORS

Table 4.15 show the most common occupational stressors among participants of the study.

Table 4.15: Most Common Occupational Stressors (n=384)

Variables	N	Mean	Std. Deviation
Lack of good night sleep.	384	2.1953	0.60965
Inadequate resources to work with.	384	2.1615	0.61739
Conflicting demand of people around you.	384	2.1354	0.63196
Work schedule affect your outside relationship	384	2.1068	0.61873
Get worried over work not done by peers.	384	2.1068	0.60594
Little authority to carry out your responsibility at work.	384	2.0391	0.66704
Being upset with happenings unexpectedly at work.	384	1.7630	0.69956
Over-burden with workload.	384	1.4323	0.54615
Unable to control your irritations at work.	384	1.4323	0.42416
Being nervous and stressed.	384	1.2161	0.44855

Source: Field data 2018

This analysis is carried out to determine which of the variables serves as a common source of stress to nurses working in both hospital A and B. The results from the analysis

in Table 4.15 indicate that the most common occupational stressor according to the participants is the item "how often do you enjoy a good night sleep without worrying about work" (M=2.1953, SD=0.60965), indicating that the inability of the nurse to enjoy a good night sleep without warrying about work serve us the greatest source of stress to them. This was closely followed by lack of resources or logistics (M=2.1615, SD=0.61739). The results also revealed that the third greatest cause of stress among nurses is the conflicting demand of various people around you that you find difficult satisfy (M=2.1354, SD=0.63196) since everyone wants you to attend to his or her needs within a given time. The fourth and fifth cause of stress revealed by the result among the nurse are the work schedule affecting their outside relationship and getting worried about co-workers not doing their work (M=2.1068, SD=0.61873) and (M=2.1068, SD=060594) respectively.

The results of the study further revealed that the least cause of stress among nurses is how often do you get nervous and stress (M=1.2161, SD=0.44855). The overall mean score of the most common stressors according to the results is 35.2.

4.4 THE MOST COMMON STRESS MANAGEMENT TECHNIQUES / STRATEGIES

The analysis done on Table 4.16 is aimed at finding from the study participants the most common techniques used in coping with or reducing occupational stress.

Table 4.16: Management Strategies or Techniques Assessment (n=384)

Variable	Mean	Std Deviation	Rank Order
I recognize my work	2.1536	±0.65145	(1)
I seek support and advice from colleagues	2.0885	±0.67206	(2)
I resort to my hobbies	1.9349	±0.63281	(3)
I talk about it with my colleagues and to understanding friends	1.8438	±0.67136	(4)
I set priorities and deal with problems accordingly	1.8958	±0.64195	(5)
I use rules and regulations	1.8438	±0.67136	(6)
I just try not to let the stress show	1.8802	±0.63921	(7)
I delegate work and responsibility	1.8516	±0.65145	(8)
I keep myself occupied	1.8516	±0.65145	(9)
I plan ahead	1.8906	±0.61191	(10)
I simply try to avoid the situation	1.8906	±0.61191	(11)
I effectively manage my time	1.8932	±0.60161	(12)
I concentrate on the specific problem	1.9245	±0.59328	(13)
I look for the funny side of the problem	1.8646	±0.60234	(14)
I try to deal with the situation objectively without emotions	1.8411	±0.6031	(15)

Source: Field Data 2018

A stress management or reducing survey instrument was administered and participants were required to rank in an order of 1-5 their most frequently used stress management

techniques. The results of the top five (5) stress management or reducing techniques among nurses of hospital A and B are shown in Table 4.16 among others.

The results from Table 4.16 indicate that majority of the participants manage or reduce stress by recognizing and doing their work, which has a mean and a standard deviation of 2.1536 and ±0.65145 respectively. This is followed per the ranking with reference to stress management of the study subjects through seeking support and advice from colleagues which has a mean of 2.0885 and a standard deviation of ±0.67206.

The third rank stress management strategy frequently used by participants of the study is 'I resort to my hobbies' as means of managing stress with a mean and standard deviation of 1.9349 and ±0.63281 respectively. The fourth and fifth most frequently used as stress management or reducing techniques are 'I talk about it with my colleagues and to understanding friends' and 'I set priorities and deal with problems accordingly'. The mean and standard deviation of the fourth and fifth techniques are 1.8438±0.67136 and 1.8958±0.64195 respectively among others.

4.5.0 FINDINGS FROM KEY INFORMANT INTERVIEWS

4.5.1 Themes and Categories

The findings of the qualitative study were aggregated into categories, which were then further merged into themes. Eleven themes were identified, and they are discussed below.

4.5.2 General Characteristics of Health Staffs Interviewed

In other to have adequate reasons to support some of the information obtained in the qualitative analysis in other to make issues clearer and more meaningful, key informant interviews were conducted among five (5) health workers mainly ward in-charges selected from hospital A and B. The in-charges interviewed were from OPD, labor, children, male, female, pediatrics and NICU wards for the study. Data on the background characteristics of the health workers participants was analyzed manually and presented in Table 4.17.

Table 4.17 below indicates that, more than half of the participants 3 (60%) interviewed had between six to ten years whiles a quarter had above eleven years working experience in the Ghana Health Service. All the staff interviewed had some experiences with regards to stress and anxiety.

Table 4.17 Background Characteristics of Health Staff. (n=5)

Variable	Frequency	Percentage (%)
Age		
25-30	2	40
31-35	3	60
Number of years of worked		
1-5	1	20
6-10	3	60
>11	1	20
Marital Status		
Married	3	60
Single	2	40
Educational Level		
Degree	3	60
Masters	2	40
Hours work per week		
35-39	2	40
40-44	1	20
45-49	2	40

Source: Field data 2018

4.5.3 Level of Stress Assessment among Nurses

In order to determine the level of stress of the ward in-charges, participants in the key informant interviews were asked what makes them stressful, how often do they feel

about; somethings happening unexpectedly, inability to control important things, cope with all things you have to do, control irritations, difficulties are piling up beyond your control, your outside relationships are suffering because of work, busy that it is difficult to concentrate on job at hand, have a good night sleep without worrying of work, have little authority to carry out your responsibilities at work, unable to satisfy the conflicting demands of various people around you, unable to get information needed to carry out your job, unable to get resources needed to carry out your job and worried about co-workers not doing their work. The responses revealed that all the ward in-charges are often stressed and the level of their stress varied from day to day. The key informants provide the following responses:

> "*I feel bad but cope with them and strategies. By prioritizing the important things, I will know how to control them. I manage with it, I sweat, sometimes you may be angry but the anger should not take over you, I pause and think through, some do but some understand my situation, it difficult to control it, I sometimes feel bad, no, there is plenty work for me to do, I will just have to succumb to whatever they ask me to do, sometimes. But not very often, most of the time, I am unable to satisfy them and they make me stress up, some are available, but some you have to improvise, I feel very worried''. (**CHW 1)***

As articulated by CHW1, it very clear that stress during work affect his mood. The in-charge acknowledged it and does take steps to avoid it but sometimes it goes off and the nurse can become very emotional. Nurses sometimes would have to work within

their own power just to avoid humiliation by superiors which leads to the nurse unable to satisfy the patients though not most often. In our part of the world, infrastructural development and equipment for more effective intervention it woefully inadequate in our hospital settings. CHW1 confirm the scarcity of some of these materials including consumables such as gloves, cotton etc. which forces them to improvise most of the time in caring for their patient. The nurses have very little to do when it comes to providing wards with equipment.

> *"I hate surprises, it depends on what happens, if I am able to handle it fine, if it is beyond me, I don't like it. I feel bad, I try as much as possible not to get stressed up. So, I prepare for almost everything, I feel okay, I access the situation. Then I look at how to make things better to my advantage, I try to as much as possible prevent that. No, I am never busy. I always have time for everything. No, as soon as I close work is over. Sometimes, but not very often. I feel bad. It's stressful, because I want to satisfy everyone. But with time I have realized I can't satisfy everyone the way I want to. It's very annoying stressful to lack information needed to do your work, I sit down and breathe in and out. I feel worried and disturb and co-workers' attitude towards work''.* ***(WHW 2)***

Contrary to the views of CHW1, Health worker 2 did not believe he could get stressed up by anything he however do not like surprises. If stress does happen, he said he is able to contain it, if it goes above him, he just forgets about it and moves on. WHW2 attends to more pressing needs of patient and leave the rest to avoid being stressed up. He is

able to draw a distinction between work and family issues and stress from work does not affect his relationship in any way. He is said to be able to make time for everything and so does not have any feelings towards being busy. WHW2 attitude of trying to help everybody has been changed due to lack of authority and so to avoid feeling bad he has come to understand that, satisfying everybody isn't the best way to go. Just like CHW1, client sees lack of information as being stressful in the hospital. He feels worried about his colleague not putting their best when on duty. The net effect is that when you are in a shift and others are not working you have to do everything all by yourself which can be very stressful.

> *"… Ummmm Stress! My own understanding stress is something like emm you are sought of worn out of energy, you have used all your energy and you nothing on you maybe to do anything else. So, you lose your energy or exhaustion of you own energy that's what I can say about stress.., Hmm talking about stress or when things happen unexpectedly sometimes I feel sad, is like erhmm you expect that things should go normal for you, when you come in the morning you start work what you pray for is the day to end well and things to go on well; but when you come and things happens unexpectedly, sometimes you are so surprised and sad and sometimes it tends to demoralizes you. Hmm talking about coping, it is actually not easy to cope with and looking at the way is too small we have mixed of people as you said, sometimes is very difficult for you to blend taking through, managing critical cases, and doing other office work. So, at these, let me say that, we have developed strategies*

for taking these things. For me in person I try not to over stretch myself; along the line you see me cracking jokes so that people would laugh and the stress goes off. That's what I normally do, so you crack joke and people laugh you take your mind off the stress and I have to also strategies by locating which time for students, which time for workers and all that when you allocate time like that you are not always stressed up that much or you are able to reduce some of the unnecessary stress that you get and I also assign duties to some nurses so that they would be able to do some.. So, they are actually. that one deeei there is um a lot of confusion and things and sometimes you come to work and closing time you are not sure of the time you are closing even though we are supposed to work the normal hours six to eight hours a day uh sometimes you over work, yesterday like this I closed around 6pm and imagine me going home to cook, and then take care of the family. I got home and my children were very hungry and feeling unrest and that one sometimes makes me uncomfortable, how can you just leave your kids and be at work and go home 6pm. and sometimes of issues things not done well in the house and so in fact is really a challenge and disturbing. hmmm sometimes I can even sleep depending on the cases I leave in the ward and go home, Yesterday for instance I could not sleep because I left some bad cases in the ward; some preterm, precious babies, people delivery and losing them, In fact one of the mothers even delivered 5 times and all the 4 are gone and the one she delivered yesterday was not also trying

to cope so when I got home I was just reflecting and thinking about them and I had to even call the night nurses to find out how the babies were doing and so sometimes is really difficult for me to sleep when you see some cases and you leave and you are at home,, so you always wonder whether the cases are in good hands it disturbs the sleep'' ***(CHW3).***

Similar to above, CHW3 believe that the activities in the ward ideally are normal and so when events happen unexpectedly, he sometimes feels bad which demoralizes him and hence affecting his activities for the day. Coping with stress is usually very difficult in the hospital setting due to the nurse patient ratio, there is almost no time and so blending, coping and meeting the diverse needs of the patient and also combining administrative work can be stressful most of the time. The net effect is that there is going to be inefficiency at work. He acknowledges the need to devise strategies to cope with stress just like the other key informants. By way of coping with stress, CHW3 suggested that, comedy could divert his attention from being stress. Sometimes depending on the time, you close it may affect your relationship with your family. The bond between you and your family may be decreasing gradually. Sometimes your children may starve or eat very late. He attributed this act to nature of the work which may destroy your relationship with others and influences the quality of sleep you have at night. The quality of sleep also could influence your next shift negatively if you have had not enough sleep.

"Sometimes you just try. Though sometimes it is stressful managing those things, is part of the work so you try to balance it. I get worried, something you think you could have done but you realize that you are

not able to do it. Initially, I get nervous but you realize that where we find ourselves you can't go without these things. It happens. Getting nervous and stressful is part of our daily routine, so we try and manage, I try to balance it. Since the others are at work you try to get help from others. Instantly, if I think it is so irritating and I can't be at the scene I get off and if I am ok, I get back to work. I get worried, because I can't do anything about it. Once in a while, we have a condition you think you need a doctor or somebody to come and review for you and he is not coming and you try all available means and you are not just getting any help. Yes, sometimes you get admissions they come and you feel that there is this particular person you should have paid much attention to, but the ward is just becoming busy is becoming unbecoming. Yes, when I get home unless I get a call from work if not if I get home work is done and I do my other things. I can get tired to the extent that I cannot sleep. It is worrying and stressful. It is quite irritative, because you think that this one you could have done it that way. But because you think that you don't have the mandate. You have to seek permission from someone before you are able to carry out that activity. It wastes time and unnecessary tiring. There are certain things that you feel as a ward or something you could have been able to do for those you are working with but the resources are not there it is difficult. At times you feel like you are not being the leader you are supposed to be. It usually happens when someone gives birth and you can't do anything and there is this occasion

you can't attend. It is very irritating. Mostly, if the people around you can be of help, we use them. If the person you are supposed to reach out is not there, you try to reach the available person who can help. Unable to get the needed resources to do your work increases your stress level".

(WHW4)

WHW4 believed that coping with stress is in itself stressful. He acknowledges that stress is part of the nursing profession and stress relating to the work of nursing could not be avoided and so they are becoming use to it. Some nurses even shy away their duties until such time that she has cope with stress. Sometime tiredness makes some nurses unable to sleep. Sometimes too, some powers make some cases goes bad before they are attended to. Thus, there are some intervention which by training you can do but you would need a superior to recommend before you go ahead. In situations where the superior is not readily available this may get complicated and very rare instance death could even occur. In the Labor ward sometimes, you are in a middle of assisting a laboring woman to put to bed and you may need extra hands but the other members may not be there or also engaged somewhere. Unavailability of resources such as gloves, necessary equipment's at the Labor ward etc. as stated above only added up to the stress build up.

"*I feel anxious about somethings happening unexpectedly. If I can control important things in my life it does hurt me sometime but I usually would seek guidance from my creator. That one, like, because of the system I will just manage with that but it stressful. When I'm nervous and*

stress up, I will just go, sit down for some time, rest small and do some refreshment for some time. Most of the time, I feel good anytime am through with that emotional irritations. Sometimes I feel bad about things that are outside my control, because, you have to call people to call others to help and if they are not around immediately it hurt and can be frustrating. Sometimes if for instance, two or three patients need oxygen within a particular time and the oxygen cylinders are not all that much, you have to run to other wards to look for some and come and sustain. It stresses you because sometimes your mind and sometimes you will be tired, because you will be confused. I feel confused when difficulties are piling up beyond my control so you have to just take time to relax yourself. Yes, my relationship suffers because of my work, sometimes my wife complains especially when she needs me and I have to also go to work. Yes, sometimes I cannot sleep because of work, for instance, when you come to your workplace and close but they are life threatening cases in your work, you may be thinking about the patient which could eventually affect your sleep. Sometimes I feel bad that I cannot concentrate on the job at hand because of so much work. Rarely to you find coworkers not doing their work because everybody is assigned to a certain task and so it would be sad to manage your task and someone's task as well. Work load, quarrels among patient and sometimes among clients, sanity in the ward may also contribute to stress at the work place". ***(CHW5)***

CHW5 in response to the questions assessing the levels of stress he incorporated the sense of religion into the stress. He acknowledged that unexpended events could make one anxious but he believes nothing is done without the knowledge of God. So, whenever he is stressed up, he does his part and leave the rest to God. Sometimes some dilemmas in the hospital are beyond one man doing everything and so calling people who may not be available at sight may be frustrating, very annoying and confusing as to who even start with since all other patient relatives would want you to save the lives of the clients. Contrary to views as expressed by some key informant on how coworkers not doing their work could affect the nurse, he opined that it rare to see someone not performing his or her duty. This is because everybody is assigned to his responsibilities and if there are faults in the duty assigned to you, you shall be accountable. This system helps to make nurses very conscious of their work and making health workers to proceed smoothly with their work.

4.5.4 Level of Anxiety Assessment among Nurses

These refer to the feeling of the participants with regards to some psychological and emotional behavior. The in-charges were asked to respondent to questions such as; how often do you feel: tired for no reason; nervous that nothing could calm you down' feel hopeless; restless and depressed. The participants were also asked how often you feel, they said they feel so sad that nothing could cheer you up and how often do you feel worthless. The responses from the in-charges are as follows:

" I have this experience rarely, but its normal to be tired sometimes it mostly a buildup of stress from previous days; I have never been such

nervous that nothing can cold me down, am I not a human being?, I have to get ways to cool myself down or else it would be affecting my way of doing things within the day and beyond; hopelessness is the last thing I would ever give up on, the reason being as a Christian we know that God is the doer of all things and so no matter the circumstances am facing I just believe of God and move on; yes, most of the time, our nature of the work is such that when you come on duty no matter what you have to work to satisfy the patient needs and so there is always a buildup of stress in us. This workload including my house chores makes it even not easy for me. So, for restlessness is occur to me almost every day; worthless?? I do not feel that way and I have never had it." WHW2

WHW2 believes that considering the workload of nursing coupled the nurse patient ratio inadequacy, it is normal to be tired. He acknowledges that everybody can get nervous but our human nature makes us contain it. On hopeless he twisted it with a religious perspective saying God does all things and so He alone can give hope. The nature of the work and home activities makes him restless most of the time. He is not too sure he could ever feel worthless no matter the circumstances.

"Yes, stress will make you tired for no reason; I have never felt so nervous that no one could calm me down; I do not feel hopeless; sometimes I feel depressed, usually when am over whelmed by work; I have not never felt worthless" ***CHW1***

CHW1 believes when he gets exhausted, he is said to easily get agitated but when he gets such feelings, he is able to resolve it without having his activities affected. He said workload could make him depressed but said he always have enough resources on him and so cannot be valueless.

> *"Yes, stress will make you tired for no reason; I have never been depressed; sometimes I feel nervous that I feel nothing could help but it has never happened to me whilst in the hospital; I have never felt hopeless, I have no reason but that is me, I mostly fell restless, the nature of the work in itself is very tiring and so being restless has become a part of my life and we have become use to it; I have not been in a situation that I felt worthless"* ***CHW3***

CHW3 agreed he has been pressured for no reason. He accepted being perturbed but not when he is in the work settings (hospital). He is unable to explain why he cannot be hopeless. He believes it's just his personal characteristics. HW3 rational stress as being part of the nurses' life and so being professionals, they have now normalized stress. In summary, he sees stress as normal once he agrees to be a nurse.

> *"I feel being tired for no reason, rarely it occurs to me this part of nature; I don't feel good when it happens; I feel like am lost; I feed bad when am restless and it occur very rarely; rarely feels worthless, it makes me feel bad"* ***WHW4***

WHW4 argue that rarely he gets stress up for no obvious reason but sees it as being part of nature. He does not like it when it happens. He feels being lost when he feels hopelessness. Restless happens to him rarely when it occurs, he feels bad.

> *"Once a while, maybe once in two weeks; It doesn't really happen with me, not at all; I do not feel hopeless, am always positive about this events; Whenever I have a problem I talk over it I become ok and so I usually would not feel depressed; It has been a long time it doesn't really happen, I do not need anyone to cheer me up, never in my life have I felt worthless, No"* **C*HW5***

She is said to be positive about every happening and so she does not see herself being hopeless on any day. Unlike the other key informant, CHW5 talk about her issues with trusted friends and take advice from them just to free her mind. However, she said it's been long she has been depressed. Contrary to above, she did not believe friends could cheer her up and have never felt valueless.

4.6 Management of Stress and Anxiety Among Nurses

In order to determine the management techniques or stress reducing strategies employed by nurses in managing stress and anxiety, the ward in-charges during the key informant interviews were asked to respond to questions such as which of the following do they engage in when confronted with stress and anxiety events; Recognize my work; Resort to my hobbies; Deal with situations with emotions; Effectively manage my time; Suppress stress; Talk about it with colleagues and friends; Occupied myself; Plan ahead

;Concentrate on specific problem; Use rules and regulations; Delegate work; Simply avoid the situation. The responses from the in-charges are as follows:

> *"Yes, I recognize my work but it's not always the case since we do not work in isolation; yes, I resort to playing games sometimes when I need to relieve stress; I usually plan my activities to avoid being stressed; well I do not suppress I deal with it; yes I do talk with some friends; am not sure occupying myself would make me cope with stress and anxiety it rather reduce my productivity; I plan all the time to utilized my time; yes, we have rules and regulation to guide our conduct whilst on duty so it does help me to resolve any issue that comes up in the ward; as the in charge dedication of work is a part of my work and so all I need to do is to monitor to be sure everything is ongoing well; I do not avoid situation by way managing stress I tackle issues head on"* ***CHW1***

He argues that unlike other professions, nurses work in collaboration to complement each other's roles on duty. So, recognizing ones isn't enough to manage stress and anxiety. Games and others serve as sources to which he resorts to when he need to relieve himself of stress or anxiety. He believes planning and going by one's plan could help you avoid being stressed up and so effective use of time is very paramount to managing stress and/ or anxiety. He approaches his problem head-on because occupying himself in the name of forgetting the anxious or stressful situations make him very ineffective which led to very low output. Sharing problems with friends and genuinely discussing them for common solution is very useful in managing stress or anxiety he

cautioned however that, not all friends can be of help and so one must be mindful of who they confess with their problems. The in charge is the one who see to it that the daily running of the ward is moving smoothly. He therefore dedicates work to the staff of the ward and follow up to ensure the various task has been performed. This help him to focus on other administrative duties without necessarily being stress up or anxious.

> *"I recognize my work as a nurse; not all the time but am a fun of music and so sometimes when am not too happy I resort to listening Music or engage myself into reading a novel; most of the time, I ensure every bit of my time is put into useful stuff to avoid thinking about unnecessary stuff; I suppress stress most of the time but I sometimes talk to friends about my problems to see how it can be solved; I tackle my issues systematically, rule and regulations guides us to do our work without burdening ourselves,; yes, most of the time I dedicate work to my subordinates to ensure everything is running smoothly; it depended on the situations. If it can be avoided without any problem I do so but some cannot be avoided"* ***WHW2***.

Listening to music or occupying oneself with reading a novel makes her manage her stress or anxiety. To avoid stress she thinks most of her time is adequately planned for to avoid unnecessary time to think over events that could cause her pain. She believes that not making time for unnecessary stuff could be a step to easing yourself from stress and anxiety. She mostly would keep to problems that worries her until such time that it become very serious then she talks to trusted friends to see how jointly they can solve

the problems. Avoiding situations mainly is dependence on their magnitude; problems with very little importance can be ignore without worrying your head some cannot be ignored they need to tackled.

> *"yes, I recognize my activities; yes I play games mostly to wild away time when am stressed; I try as much as possible not to add emotions with my activities; I plan my time effectively; I don't suppress stress but I deal with it, Yes, I do for a problem share is a problem solved; I plan ahead and uses rules and regulations to avoid stressful events; I delicate work most of the time and does not avoid simple situation when am stressed"* ***CHW3***

Just like WHW2, he believed tackling issues as and when they come up is a way to avoid stress and anxiety. Planning ahead of time and respecting timelines coupled with rules and regulations could in a long run translate to managing stress effectively. He agrees with the other participants that a problem shares is a problem solved. Talking to friends for advice could help you cope with stress and anxiety. Avoiding simply situation is not part of the ways I manage stress. Dedicating work has become a part of my work.

> *"Most of the time, I usually resort to diversional therapy to solve my stress; Most often, I feel good that I have achieve an aim within the time frame; yes, I suppress stress sometimes to enable me work on my present task; Not too often, because you end of telling them more than they should know when it comes to talking to friends on my problems; Rarely.*

Because occupying yourself anger you and your efficiency is going to be low as well; Most of the time, it guides me in doing what at what time; Yeah sometimes it good to focus on specific problems to solve them; Most of the time, when am tired or feels time is not by my side, I usually delegate work to colleagues for help to achieved good results; Yeah, nobody wants to be stressed so yes I mostly would avoid stress when I think it is unnecessary to stress myself" ***WHW4***

Unlike the other informants, WHW4 believes that sharing sensitize information with friends could be deadly as some friends could sell your problems to the world. When situations hit him on a specific task, he focuses on the task and tackles the situations afterwards. Planning one activity guides you on what to do at a particular time and as well increases productivity. When am being catch up by time I usually dedicate some duties to the other nurses to free myself of pressure? Usually, he strives to prevent anything that could causes stress or anxiety.

" When I go back home and I remember a patient whose condition was very bad and you realize that with the help of your colleagues life has been restored back you feel like your work has been appreciated, it how he cope with stress; Once in a while, usually during the dry season when the weather is very warm, since I can't be indoors; I do it in such a way that, if I know that I am tired, I make sure that I rest to release the tiredness is how I suppress stress; When I am at work, I am at work and when, I am at home, I am at home; I am always occupied mostly, yes I

plan my day always, If I wake up in a day and I know that I have so much to do, I make sure that when I close from work I do my work fast; If there is a problem at hand I make sure that it is settled before I move out"

CHW5.

CHW5 does not over stretch herself she rests when she has to. She does her duties very independently from each other. She does add house work to her duties at work wherever she finds herself she focuses on the task at hand. Planning of daily activities has become a part of my life. Just like the other in charges she tackles her issues head on when they come up.

CHAPTER FIVE

DISCUSSION

5.0 INTRODUCTION

This chapter discusses part of this study according to the results obtained from statistical analysis base on the literature review, objectives and findings of the study. The setting of this study is Tamale Metropolis and it was conducted among nurses in the Tamale Central and West hospitals.

Stress is a natural phenomenon that everyone experiences in his or her life time and is often caused by stress factors or stressors (Selye, 1956). Stress according to Seyle is defined as the non-specific response of the body to any demand for change. Several studies have shown that stress is harmful for mental and physical health. Constant stress brings about changes in the balance of hormones in the body which may lead to the situation or thoughts that makes us feel angry, nervous or anxious (Stetson, 1997).

There are many different sources of stress. Some of them include biological (e.g. toxins, heat, cold), psychological (e.g. threats to self-esteem, depression), sociological (e.g. unemployment, death of a loved one, birth of a child), and others philosophical (e.g. use of time, purpose in life). Researchers have identified various sources of stress to include daily hassles, life changes, physical pain and discomfort, frustration and conflict and natural and technological disasters. Regardless of the stressor, the human body always react (Greenberg, 1990).

Stress is known to exist in all professions (Dragano et al., 2005; Pelletier et al., 1996; Pflanz & Sonnek, 2002; Todd & Deery-Schmitt, 1996). The difficulty in measuring work stress lies in the fact that work life is not independent from family life, the two domains often conflict (Near et al., 1980; Pearlin, 1983). In some cases, non-work stress may even be more at play at the workplace than work stress itself.

5.1 Socio-Demographic Characteristics of Respondents

Analysis of the demographic data of the nurses were presented as follows: The importance of age in every aspect of life including the use of it to make decisions concerning the health of individual cannot be under estimated. The study reveals that majority of the participants 150 (39.1%) falls within the age brackets of 21-25 years. This turns to oppose the findings made by Abdulai (2011) where the age brackets of 25-30 years were the majority in that study. An assigned reason could be that, the school going age (6 years) in addition to the number of years required for an individual to acquire a basic nursing certificate in Ghana adds up to 21 years or more. This was followed by 98 (25.5%) in the age bracket of 26-30 years. 43 (11.2%) and 42 (10.9%) fall in the age bracket of 15-20 and 31-35 years respectively. 11 (2.9%) and 6 (1.6%) of participants fall in the age brackets of 46-50 and 51-55 years respectively.

Regarding gender, the study revealed that majority of the participants 203 (52.9%) were females whereas 181 (47.1%) were males. This is obvious because females have much preference for the nursing profession as compared to their male counter parts in Ghana. This was similar to a study conducted by Amidu et al. (2018) on the prevalence of stress and anxiety among nurses in which the researchers had 127 (52.26%) of females and

116 (47.74%) of males. In a similar study conducted by Kyreaa (2014) on the causes of stress among nurses in the greater Accra Region, majority of the participants 261 (70.7%) were females and 108 (29.3%) were males. Similar findings were also made by Abdulai in his study.

Comparing the findings of this study to other works, it was noted the dominated religion when it comes to nurses and their stress and anxiety levels, it was realized that Muslims representing (62.2%) ware recoded as the majority. This differs from a study conducted by DAISY (2012) where Hindus were the dominated religion with a percentage (86%). However, this study revealed Christian as the second majority (35.2%) which was in accordance with Daisy's study. The differences recorded in terms of the religion which dominated as discussed above, could be attributed to the fact that Muslims are known to be the dominated religion in norther Ghana as indicated by GSS (2014) whereas Hindus are known to be the dominate religion in India as a country.

On the issue of participant's qualification, this study recorded (48.8%) as the highest value for diploma nurses' whiles (2.3%) was obtained for master's holders in the profession. An ascribed reason could be as a result of monthly allowances earned by students in diploma nursing schools which is not so in the case of degree and masters awarding institution. Another reason could be as a result of the early introduction of diploma in nursing before the birth of all other qualifications in nursing. These findings correspond to the results obtained by a study conducted in northern Ghana by Amidu et al. (2018) where diploma holder was found to be the majority with (55.2%) and (0.0%) for the master's holders. A similar finding was recorded by Hussain et al. (2017) where (76.7%) of their resondents (nurses) were diploma holders.

In reference to marital status of the participants, a little over half the participants (57.3%) were single. This conforms to (53.3%) finding made by Hussain et. al (2017) in their study. Notwithstanding the similarities, majority of similar works had findings which opposes that of this work as they recorded most of their respondents to be married. They include (Abdulai, 2011; Adzakpah, Laar, & Fiadjoe 2016; Amidu et al., 2018) Vernekar and Shah (2018) with 50.68%, 53.91%, 71% respectively.

Upon analyzing respondents' years of work experience, those with less than five years (<5years) were noted to be the majority with (69.1%). This finding is supported by that of (Adzakpah, Laar, & Fiadjoe, 2016) where (68.49%) of respondents with less than ten years (<10years) working experiences dominated. In contrast, Abdulai (2011) recorded 28% as his highest value for respondents with 5-10 years working experiences.

5.2 Level of Stress and Anxiety Among Nurses

The discussion below dwells on stress and anxiety experienced by participants of the study. The level of stress and anxiety among participants in relation to marital status, educational levels and age is also discussed here.

The finding from the study indicated that majority of the participants (62.2%) experienced moderate level of stress. This finding conforms with studies conducted by Vernekar and Shah (2018) in which 59.3% of the subjects in their study. A similar finding was also made by Sharma and Kaur (2011) where they had a higher percentage of 97.0% moderate stress level. Mohite et al. (2014), also had a finding in line with what is discussed above. Notwithstanding, the high level of moderate stress in this study, other works had finding which was different. A study by Nair (2016) indicated that

majority of the health workers (78%) in his study was found to have severe level of stress.

Furthermore, close to one fourth of participants were identify to have severe level of stress (24.2%). This was closely related to other findings where 26.2% of participants in that study were found to experienced high level of job stress (Koval, 2016). A similar severe level of stress was also noticed from Bhatia et al. (2010) study where 32.2% of their participants were involved.

Despite a low number of 5.2% of our participants recording normal anxiety level, other related search had a degree far advance than our findings. An example was the study conducted by Alharthy et al. (2017) where 48% of their participants had no anxiety.

More so, the study found that a very good number (40.6%) of the participants experienced moderate anxiety level. This finding was higher than other findings where (20.7%) of the subjects were equally found to have moderate anxiety level (Alharthy et al., 2017).

As our study recoded severe anxiety level among some of the participants, so it is in other study by Li et al. (2016) where the participants show higher level of anxiety.

Looking at the relationship that exist between some demographic characteristics and stress, some relevant findings were established. The relationship between married and stress of this study found as high as (79.9%) of the participants had low stress. Compared to a similar study conducted by Amidu et al. (2018), recorded more than half of the married participants to be stressed.

Despite that there was not significant relationship between age and stress, the study noted that participants with the range of 15-30 years were severely stressed. This could

be attributed to the fact that majority of workers within this age range are young and could still be occupying low ranks in the service which is highly linked to responsibilities assigned to them. This was not the case in other studies where participants age 40 years and above were those noted to be highly stresses according to (Vernekar & Shah, 2018).

The finding from the study shown that moderate stress level was experienced by a little more than half of the participants (62.2%). In comparing the revelation of the study to the findings of a similar work conducted by Sharma and Kaur (2011) noted that (97%) of participants of their study experienced moderate stress level. However, the study of Sharma and Kaur, revealed that, a small number of the subjects (3%) of their study are noted with severe stress whereas almost quarter of the participants (24.2%) of this study reported severe stress level.

5.3 Most Common Stressors Among Nurses

Stress at workplace is common among nurses since nursing is considered as one of the professions that comes with a lot of it. Many factors are considered to bring about this phenomenon which some have been identified in this study. The discussion below takes into consideration these factors and those noted in other studies.

The study revealed the following in a descending order as the top most causes of stress among the participants. These factors include; lack of good night sleep, inadequate resource to work with, conflicting demands of people around you, work schedule affecting outside relationship, worried overwork not done by peers or colleagues among others. Comparing the study findings with other related works, it was noted that

inadequate resources and conflicting demands of people were also found in a study by (Godwin et al., 2016). Despite this similarity, others factors such as workload was noted to be a major factor in Godwin, Suuk and Selorm study but rather a minor in this study. A similar finding was made with regards to the top most causes of stress found in this study as stated above by (Eleni et al., 2010).These researchers found out that conflict between professions and family roles were the famous causes of stress among nurses. Contrary to these similarities as noted by Eleni et al. workload was equally found as one of the front lines causes of stress in their study whereas it was seen as the minor cause of stress in this study.

Other study conducted by AbuRuz (2014) have some similar findings like that of this study concerning the factors contributing to stress among nurses. These findings include patients and their families and workload. Despite these resemblances, some other factors such as death and dying was noted as a key issue regarding the discussion underway but was not so in this study.

To add to this, studies conducted by Kurki (2018) and Vernekar and Shah (2018) have some factors such as workload which is similar to the to those noted in this study as contributing to the cause of stress experienced by participants. Despite these commonalities, death of patients and leadership are also factors that contribute to the issue under discussion but same cannot be said in relation to this study.

Furthermore, studies conducted by Kyreaa (2014) and Mohite et al. (2014) conflict with this study in a sense that, inadequate emotional preparation, conflict with doctors and supervisors, number of hours of work and financial difficulties were noted as the leading findings of their study.

5.4 THE MOST COMMON STRESS MANAGEMENT TECHNIQUES / STRATEGIES

Stress left unattended could grow to levels that are unbearable with consequent harmful effects on both individual and organization. The nature of the nursing profession makes it possible for nurses to be expose to so many factors that lead to stress. Individuals adopt varied techniques or strategies to reduce their stress. Some may keep themselves occupied, others may try to avoid stressful situations and others may try to deal with the situation objectively without emotions. Participants in this study commonly adapted three strategies. The three most common strategies used by participants to reduced stress are as follows:

1. I recognize my work
2. I seek support and advice from colleagues and supervisors
3. I resort to my hobbies

The findings of the study indicated that apart from the above most common strategies used by participants to reduce stress, other strategies adapted include better time management, complying with use of rules and regulations, avoiding unnecessary stressful situations among others. These results are similar to the findings such as resorting to hobbies, managing time better and avoiding unnecessary stress observed in a study conducted by (Godwin et al., 2016). Despite these resemblances, Godwin et al., (2016) revealed additional strategies such as identifying the resources of stress, adjusting to standards and attitudes and expressing their feeling instead of bottling them as means of reducing stress which are not found in this research. Another work done by Misra and McKean (2000) revealed that time management skills is one such factor that seems to lower academic stress and anxiety among the participants of their study. This

finding resembles the stress management strategies identified among the participants of this study.

Contrary to the findings of this study, a similar work conducted by Li et al. (2016) found and suggested the developing of a range of coping strategies for reducing harmful effects of stress and minimize the occurrence of anxiety. Other works by (Onasoga Olayinka et al. (2013)) found factors such as avoidance of unnecessary stress, adjusting to standards and attitudes, express feelings, go on break, exercise and relax as strategies necessary to adapt in the management of stress among their study participants. Some of the findings are similar to those identified in this study.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

6.0 INTRODUCTION

The summary and conclusion of the study are presented in this chapter. It also makes recommendations for future practice and research.

6.1 CONCLUSION

The highpoints of this study are the moderate and severe levels of stress and anxiety among nurses respectively. The moderate and severe levels of stress and anxiety among the nurses was 62.2% and 54.2% respectively. The stress and anxiety among nurses do not only affect the psychological and physical health of the nurses but also have an impact on job concentration, absenteeism and low productivity.

The socio-demographic factors associated with stress anxiety included marital status, age and educational level. Also, the causes of stress among other factors include; lack of good night sleep, inadequate resources to work with and conflicting demand of people around you. In addition to this, the most common management strategies used by nurses in both hospitals among others are I recognize my work, I seek support and advice from colleagues and supervisors and I resort to my hobbies among nurses.

6.2 RECOMMENDATION

1. The management of Tamale Central Hospital and Tamale West Hospital should develop appropriate intervention programs to provide positive reinforcements for nurses to reduce stress and anxiety.
2. Again, hospital authorities in collaboration with Ghana Health Service should provide refresher courses for nursing staff on coping strategies to enable them manage their stress and anxiety levels.
3. The health care managers should increase the opportunity for social support for the nurses in the workplace.
4. Ghana Health Service should put special emphasis on identifying those who are at special high vulnerability for work-related stress and anxiety and help them to manage the stress and anxiety.
5. Further investigation on the long-term effects of stress and anxiety should be conducted.

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APPEDIX A

QUESTIONNAIRES

ASSESSING STRESS AND ANXIETY AMONG NURSES IN THE TWO MAIN GOVERNMENT HOSPITALS IN TAMALE, GHANA

INFORM CONSENT

I am a student from the Department of Public Health, University for Development Studies, conducting a research project on the above-mentioned topic. This research is part of the requirements of the University for the fulfillment of the award of a Master's Degree (MPhil Community Health and Development).

These questionnaires may take about 20 – 30 minutes or less to complete. Whatever information you provide will be strictly confidential and will contribute to my knowledge of stress and anxiety among nurses. You can decline to answer any question you do not feel comfortable answering. I hope that you will participate in this study since your views are helpful and important.

SOCIODEMOGRAPHIC

Please circle or thick the appropriate response

Age 15-20 years [ ] 21-25 years [ ] 26-30years [ ] 31-35years [ ] 36-40years [ ] 41-45years [ ] 46-50years [ ] 51-55years [ ]	Gender Male [ ] Female [ ]
Marital status Married [ ] Cohabitating [ ] Single [ ] Divorced [ ] Widowed [ ]	Religion: Muslim [ ] Christian [ ] Traditionalist [ ] Non-religion [ ]
Educational level Certificate [ ] Diploma [ ] Degree [ ] Masters [ ]	Do you have a part-time job? Yes [ ] No [ ]
How many years have you been working as a nurse? Less than 5 years [ ] 5 – 10 years [ ] – 15 years [ ] 16 – 20 years [ ] 21 years and above [ ]	On the average, how many hours do you work in a week? Less than 40 hours [ ] 40 – 50 hours [ ] hours and above [ ]
What do you often do in your free time? (can choose more than one) Listening to music [ ] Reading [ ] watching TV [ ] Playing sport [ ]	Do you smoke cigarette? Yes [ ] No [ ]

Go out with friends [ ] Nothing [ ] Others: …….	
Do you take alcoholic beverages? Yes [ ] No [ ]	Do you take energy drink? Yes [ ] No [ ]
How often do you do exercise? Never [ ] Seldom [ ] Sometime [ ] Often [ ] Always [ ]	

B. STRESS ASSESSMENT

Stress rating scale (1 = Never 2 = Almost Never 3 = Sometimes 4 = Fairly Often 5 = Very Often)

Please circle or thick the appropriate number or response beside each item.

In the past 4 weeks

14. Do you often get upset about something that happened unexpectedly?	1	2	3	4	5
15. Do you often feel bad about your inability to control an important thing in your life?	1	2	3	4	5
16. How often do you get nervous and "stressed"?	1	2	3	4	5
17. How often do you feel confident about your ability to handle your personal problems?	1	2	3	4	5

18. How often do you feel that things are going your ways?	1	2	3	4	5
19. How often do you find that you could not cope with all the things that you had to do?	1	2	3	4	5
20. How often are you able to control irritations in your life?	1	2	3	4	5
21. How often do you get the feeling of being on top of things?	1	2	3	4	5
22. How often do you get angry because of things that are outside of your control?	1	2	3	4	5
23. How often do you get the feeling that your difficulties are piling up so high that you cannot overcome them?	1	2	3	4	5
24. How often do you spend time at work such that your outside relationships are suffering?	1	2	3	4	5
25. How often do you get busy that you find it increasingly difficult to concentrate on the job in front of you?	1	2	3	4	5
26. How often do you enjoy a good night sleep without worrying about work?	1	2	3	4	5
27. How often do you find it more difficult to control your emotions?	1	2	3	4	5
28. How often do you feel tired during the day?	1	2	3	4	5
29. How often do you get the feeling that you have too little authority to carry out your responsibilities at work?	1	2	3	4	5
30. How often would you agree that the following statement best describes your nature: 'I am very sensitive to criticism.'?	1	2	3	4	5
31. How often do you think that you will not be able to satisfy the conflicting demands of various people around you?	1	2	3	4	5
32. How often do you find yourself unable to get information needed to carry out your job?	1	2	3	4	5
33. How often do you find yourself unable to get resources needed to carry out your job?	1	2	3	4	5

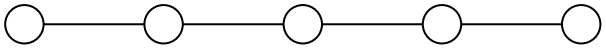
34. How often do you get worried about co-workers not doing their job?	1	2	3	4	5
35. How often do you feel that you have to do things that are against your better judgment?	1	2	3	4	5

Anxiety Assessment

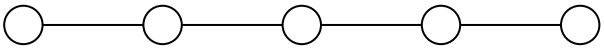
These questions concern how you have been feeling over the past 4 weeks. Tick a circle by each question that best represents how you have been.

In the past 4 weeks:	None of the time	A little of the time	Some of the time	Most of the time	All of the time
36.About how often did you feel tired out for no good reason?					
37.About how often did you feel nervous?					
38.About how often did you feel so nervous that nothing could calm you down?					
39.About how often did you feel hopeless?					
40.About how often did you feel restless or fidgety?					

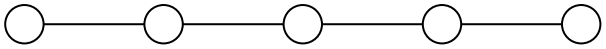
41.About how often did you feel so restless you could not sit still?



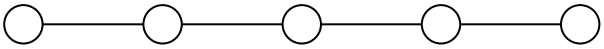
42.About how often did you feel depressed?



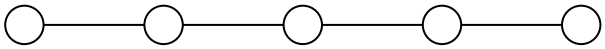
43.About how often did you feel that everything is an effort?



44.About how often did you feel so sad that nothing could cheer you up?



45.About how often did you feel worthless?



MANAGEMENT STRATEGIES OR TECHNIQUES ASSESSMENT

Stress rating scale (1 = Most frequently 2 = More frequently 3 = Frequently 4 = Sometimes

5 = Seldom)

Please circle or thick the appropriate number or response beside each item.

46. I recognize my work	1	2	3	4	5
47. I seek support and advice	1	2	3	4	5
48. I resort to my hobbies	1	2	3	4	5
49. I try to deal with the situation objectively without emotions	1	2	3	4	5
50. I effectively manage my time	1	2	3	4	5
51. I just try not to let the stress show	1	2	3	4	5

52. I talk about it with my colleagues and to understanding friends	1	2	3	4	5
53. I keep myself occupied	1	2	3	4	5
54. I plan ahead	1	2	3	4	5
55. I concentrate on the specific problem	1	2	3	4	5
56. I set priorities and deal with problems accordingly	1	2	3	4	5
57. I use rules and regulations	1	2	3	4	5
58. I delegate work and responsibility	1	2	3	4	5
59. I simply try to avoid the situation	1	2	3	4	5
60. I look for the funny side of the problem	1	2	3	4	5

Thank you for your cooperation!

APPENDIX B

INTERVIEW GUIDE

TOPIC: ASSESSING STRESS AND ANXIETY AMONG NURSES IN THE CENTRAL AND WEST HOSPITALS IN TAMALE METROPOLIS, GHANA

INFORM CONSENT

My name is Abdul-Samed Mohammed, a student from the Department of Public Health, University for Development Studies, conducting a research project on the above-mentioned topic. This research is part of the requirements of the University for the fulfillment of the award of a Master's Degree (MPhil Community Health and Development). I hope that you will participate in this study since your views are helpful and important.

IDENTIFICATION

1. Name of Hospital (Please tick): Tamale Central Hospital [ ]

Tamale West Hospital [ ]

SOCIODEMOGRAPHIC

Age

How long you have been working

Marital status

Educational level

Hours of work in a week

Extra engagements.

STRESS ASSESSMENT

How often he/she feel about the following

Somethings happening unexpectedly

Inability to control important things

Nervous and stress

Cope with all things you have to do

Control irritations

Angry because of things that are outside your control

Difficulties are piling up beyond your control

Outside relationships are suffering because of work

Busy that it is difficult to concentrate on job at hand

Good night sleep without worrying of work

Tire during the day

Little authority to carry out your responsibilities at work

Unable to satisfy the conflicting demands of various people around you

Unable to get information needed to carry out your job

Unable to get resources needed to carry out your job

Worried about co-workers no doing their work

ANXIETY ASSESSMENT

How often he/she feel about the following

Tired for no reason

Nervous that nothing could calm you down

Hopeless

Restless

Depress

Sad that nothing could cheer you up

Worthless

MANAGEMENT STRATEGIES

How often he/she feel about the following

Recognize my work

Resort to my hobbies

Deal with situations with emotions

Effectively manage my time

Suppress stress

Talk about it with colleagues and friends

Occupied my self

Plan ahead

Concentrate on specific problem

Use rules and regulations

Delegate work

Simply avoid the situation

Thank you for your cooperation!

APPENDIX C

GHANA HEALTH SERVICE

OUR CORE VALUES:
1. People-Centered
2. Professionalism
3. Team work
4. Innovation
5. Discipline
6. Integrity

My Ref No: GHS/NR/21-1/742

Your Ref No: .....

Regional Health Directorate
Ghana Health Service
P.O. BOX 99
Tamale

Tuesday, 19 June 2018

Tel: (233) (03720) 22912, 22710, 22146
Fax: (233) (03720) 22941
Email: rdhs.nr@ghsmail.org

PERMISSION TO COLLECT DATA FOR RESEARCH PURPOSE

I would be very grateful if Mr.Mohammed Abdul-Samed, a final year MPhil Community Health and Development (MCHAD) student of the University for Development Studies in the Department of Public Health, School of Allied Health Sciences is granted permission to collect data from your facility to address his research topic

"Assessing the level of stress and anxiety among nurses in the Tamale Central and Tamale West hospitals in the Tamale Metropolis, Ghana".

The data so collected will be treated as confidential and it is only for research purpose.

Thank you.

Dr.Braimah Baba Abubakari
Dep.Director – Clinical Care
For: Reg.Director of Health Services
Northern Region

Distribution

The Medical Superintendent:

- ✓ *Tamale Central Hospital*
- ✓ *Tamale West Hospital*