AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

OCCUPATIONAL STRESS AMONG NURSES IN GHANA: A COMPARATIVE STUDY BETWEEN GOVERNMENT AND PRIVATE HOSPITALS IN THE ASHANTI REGION

BENJAMIN ANTWI BOASIAKO

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BY

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A thesis submitted to the School of Graduate Studies, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development, in partial fulfilment of the requirements for the award of a Master of Philosophy degree in Public Health at the Department of Public Health Education.

NOVEMBER, 2025

DECLARATION

Candidate's Declaration

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 Name: BENJAMIN ANTWI BOASIAKO

Signature …… Date…….

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the Akenten Appiah- Menka University of Skills Training and Entrepreneurial Development.

Principal Supervisor's Name: DR. JOANA APENKWA

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Signature ……. Date ……

ABSTRACT

Occupational stress is a major challenge in nursing, negatively affecting nurses' health, job satisfaction, and the quality of patient care. In Ghana, systemic healthcare challenges such as understaffing, inadequate resources, and poor institutional support exacerbate stress levels among nurses. Limited research has compared occupational stress between government and private hospitals, where working conditions differ significantly. This study conducted a comparative analysis of occupational stress among nurses in government and private hospitals in the Ashanti Region of Ghana, identifying levels, predictors, effects, and coping strategies. A hospital-based comparative cross-sectional study was conducted among 375 nurses, selected through multi-stage sampling. Data were collected using structured questionnaires covering demographic data, stress levels, influencing factors, effects, and coping mechanisms. Data were analysed with SPSS version 27.0 using descriptive statistics, chi-square tests and logistic regression. High occupational stress was reported by 51.2% of nurses, with stress levels significantly higher in government hospitals compared to private hospitals [AOR=2.43 (0.486–0.99), p=0.039]. Marital status, age, rank, and years of experience were significantly associated with stress levels. Key stressors included heavy workload (69.6%), inadequate resources (61.1%), lack of overtime pay (61.6%), and unsatisfactory salaries (64.3%). Nurses in government hospitals were twice as likely to report reduced patient care attitudes [AOR=1.78 (1.06–3.00), p=0.030]. Emotional stressors such as patient deaths were reported by 81.1% of nurses. Recognition for good work and payment for overtime were protective factors against stress [AOR=0.57, p=0.042; AOR=0.46, p=0.033]. Nurses adopted coping strategies such as time management, hobbies, and peer support. To mitigate stress, hospital management and policymakers should strengthen support systems, ensure fair remuneration, recognize nurses' efforts, and enforce adequate staffing and resource.

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DEDICATION

This work is dedicated to my loving family, particularly my spouse, Patricia Amponsah, whose unwavering support, patience, and encouragement enabled me to pursue this academic endeavour.

To Mr. Alex Osei Bonsu and family, whose guidance, wisdom, and support have been a source of inspiration.

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LIST OF ABBREVIATIONS

AAMUSTED	-	Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development
ANOVA	-	Analysis of Variance
COVID-19	-	Coronavirus Disease 2019
CRA	-	Certified Registered Anaesthetics
DNS	-	Director of Nursing Service
GAS	-	General Adaptation Syndrome
GHS	-	Ghana Health Service
GSS	-	Ghana Statistical Service
HRIMS	-	Human Resource Information Management System
IBM	-	International Business Machine
ILO	-	International Labour Organization
JD-R	-	Job Demands-Resources model
LMICS	-	Low and middle income countries
MOH	-	Ministry of Health
NABCO	-	Nation’s Builders Corps
RN	-	Registered Nurse
SD	-	Standard Deviation
SPSS	-	Statistical Package for Social Sciences
UCC	-	University of Cape Coast
USA	-	United States of America
WLC	-	Work life Conflict
WHO	-	World Health Organization

ETHICAL CLEARANCE

GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE

In case of reply the number and date of this Letter should be quoted.

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5th November 2024

My Ref. GHS/RDD/ERC/Admin/App/24/545
Your Ref. No.

Benjamin Antwi Boasiako
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Ghana

The Ghana Health Service Ethics Review Committee has reviewed and given approval for the implementation of your Study Protocol.

GHS-ERC Number	**GHS-ERC: 087/07/24**
Study Title	Occupational Stress among Nurses in Ghana: A Comparative Study Between Government Hospitals And Private Hospitals
Approval Date	5th November, 2024
Expiry Date	4th November, 2025
GHS-ERC Decision	**Approved**

This approval requires the following from the Principal Investigator

- Submission of a yearly progress reports of the study to the Ethics Review Committee (ERC)
- Renewal of ethical approval if the study lasts for more than 12 months,
- Reporting of all serious adverse events related to this study to the ERC within three days verbally and seven days in writing.
- Submission of a final report after completion of the study
- Informing ERC if study cannot be implemented or is discontinued and reasons why
- Informing the ERC and your sponsor (where applicable) before any publication of the research findings.

You are kindly advised to adhere to the national guidelines or protocols on the prevention of COVID -19

Please note that any modification of the study without ERC approval of the amendment is invalid.

The ERC may observe or cause to be observed procedures and records of the study during and after implementation.

Kindly quote the protocol identification number in all future correspondence in relation to this approved protocol

SIGNED.....
Mr. Kofi Wellington
(GHS ERC Chairperson)

Cc: The Director, Research & Development Division, Ghana Health Service, Accra

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Occupational stress has emerged as a significant global health concern, particularly within professions that demand continuous human interaction and high responsibility, such as nursing (Sarafis *et al.,* 2016). The International Labour Organization (ILO, 2024) defines occupational stress as the harmful physical and psychological responses that occur when work demands exceed an individual's capacity to cope. Worldwide, nursing is consistently ranked among the most stressful occupations due to the emotional labour, unpredictable workloads, and critical decision-making inherent in the profession (Goudarzian *et al.,* 2024). Persistent exposure to such stressors negatively affects nurses' physical and mental health, job satisfaction, and retention rates, while also compromising the quality of patient care.

In many low- and middle-income countries (LMICs), including those in sub-Saharan Africa, the burden of occupational stress is further intensified by systemic healthcare challenges (Khonde Kumbu *et al.,* 2023). These include chronic understaffing, limited resources, poor infrastructure, and inadequate support mechanisms (Armstrong-Mensah *et al.,* 2025). Nurses in these settings often endure long hours and heavy workloads, coupled with low remuneration and limited professional development opportunities. As a result, stress-related outcomes such as burnout, absenteeism, and high turnover are commonly reported (Obeng *et al.,* 2025). Unlike in high-income countries where structured stress management interventions exist, LMICs often lack tailored programs to address this issue, leaving many nurses to rely on individual coping strategies.

In Ghana, nurses constitute the largest proportion of the healthcare workforce and are central to the delivery of both preventive and curative services. However, the Ghana Health Service (GHS, 2022) reports that the majority of nurses work under strenuous conditions characterized by insufficient staffing levels, limited equipment, and overwhelming patient numbers. These factors, combined with socio-economic stressors such as inadequate salaries and job insecurity, contribute to high stress levels among nurses. Despite these challenges, occupational stress in nursing has not received adequate research attention, particularly about differences in stress experiences across healthcare facility types.

The Ashanti Region, one of Ghana's key healthcare hubs, offers a unique setting for examining this issue. The region hosts both government and private hospitals that differ in terms of resources, management practices, and working conditions. Government hospitals frequently face overcrowding, shortages of medical supplies, and high patient-to-nurse ratios, while private hospitals, although relatively better resourced, often impose strict performance standards and may expose nurses to managerial pressures and job insecurity (Parker, 2019). These contrasting environments suggest that stressors, coping mechanisms, and their impacts may vary significantly between the two types of hospitals, yet this has not been systematically investigated.

Understanding the extent and drivers of occupational stress among nurses within these different settings is essential for improving nurse welfare and the overall effectiveness of healthcare delivery. Comparative evidence on stress levels, influencing factors, effects, and coping strategies can inform targeted interventions to mitigate stress and promote a healthier work environment. This study, therefore, seeks to conduct a

comparative analysis of occupational stress among nurses in government and private hospitals in the Ashanti Region, providing context-specific insights that can guide policy, institutional reforms, and support programs for Ghana's nursing workforce.

1.2 Statement of the Problem

Nursing is widely recognized as a high-stress profession due to its demanding nature and the emotional labour involved in patient care. In Ghana, nurses often face extreme workloads, insufficient staffing, inadequate equipment, and limited institutional support, all of which heighten occupational stress (GHS, 2022). These stressors have profound implications, including burnout, reduced job satisfaction, compromised patient care, and high staff turnover (Agyapong *et al.*, 2024). While global evidence emphasizes the impact of stress on nurses' performance and health, there is insufficient empirical data on how stressors differ between government and private hospitals in Ghana. Government hospitals typically experience overcrowding, resource shortages, and higher patient-to-nurse ratios, whereas private hospitals may present stress through strict management oversight, competitive work environments, and job insecurity. Despite these differences, little research has examined how institutional contexts shape stress levels, contributing factors, and coping mechanisms among nurses. Without such insights, policy and organizational responses may remain generic, overlooking the distinct needs of nurses in different hospital settings. Therefore, this study seeks to fill this knowledge gap by conducting a comparative analysis of occupational stress among nurses in government and private hospitals in the Ashanti Region. The findings are expected to guide the development of context-specific interventions aimed at reducing stress, improving job satisfaction, and ensuring high-quality healthcare delivery.

1.3 Objectives of the Study

The main aim of the study was to conduct a comparative analysis of occupational stress among nurses in government and private hospitals in the Ashanti Region.

1.3.1 Specific Objectives

The specific objectives were to:

1. Determine the level of occupational stress among nurses in government and private hospitals.
2. Identify and compare the factors that influence occupational stress among nurses in government and private hospitals.
3. Examine the effects of occupational stress among nurses in government and private hospitals.
4. Analyse the occupational stress coping strategies nurses adopted in government and private hospitals.

1.4 Research Questions

The research study sought to answer the following questions;

1. What is the level of occupational stress among nurses in government and private hospitals?
2. What factors influence occupational stress among nurses in government and private hospitals?
3. What are the effects of occupational stress among nurses in government and private hospitals?
4. What are the occupational stress coping strategies among nurses in government and private hospitals?

1.5 Justification of the Study

Occupational stress among nurses is a critical public health concern that affects both the well-being of healthcare workers and the quality of patient care (Søvold *et al.,* 2021). Globally, nurses face high workloads, inadequate resources, and emotional strain, which contribute to stress-related health issues and reduced job performance (Alrehaili *et al.,* 2024). In Ghana, nurses form the largest proportion of the healthcare workforce, yet they often work under challenging conditions such as staff shortages, low remuneration, and insufficient support systems (Hinneh *et al.,* 2023). These stressors can lead to burnout, absenteeism, and high turnover rates, ultimately impacting healthcare delivery.

The Ashanti Region, being a major healthcare hub in Ghana, hosts a mix of government and private hospitals where nurses operate under varying conditions. Government hospitals often experience overcrowding, limited resources, and high patient-to-nurse ratios, while private hospitals may impose strict performance expectations with fewer support mechanisms (Addai-Duah, 2024; Mensah *et al.,* 2024). Despite these differences, limited comparative research exists on how occupational stress levels and influencing factors differ between these two types of facilities in the region. Such comparative analysis is crucial to understanding context-specific challenges and developing targeted interventions.

Moreover, occupational stress has far-reaching implications, not only for nurses' physical and mental health but also for patient safety and the overall efficiency of healthcare systems (Mensah *et al.,* 2024). Without addressing stressors and improving coping strategies, the healthcare workforce may experience declining productivity and

morale. This study, therefore, fills a critical research gap by providing evidence on the prevalence, causes, effects, and coping mechanisms of occupational stress among nurses in both government and private hospitals. The findings will guide the development of effective policies, stress management programs, and support systems to improve nurse well-being and healthcare outcomes in Ghana.

1.6 Significance of the Study

This study is significant as it offers comparative insights into occupational stress among nurses working in different healthcare settings in the Ashanti Region. By identifying stress levels, contributing factors, and coping strategies, the research offers evidence that can inform hospital administrators, policymakers, and health managers in developing tailored interventions to reduce stress, enhance job satisfaction among nurses and support Ghana's progress toward Standard Development Goal 3 (SDG- 3) on good health and well-being.

1.7 Scope of the Study

The study focused on occupational stress among nurses working in both government and private hospitals in the Ashanti Region of Ghana.

It examined the prevalence and levels of stress, the factors influencing stress, its effects on nurses' health and job performance, and the coping strategies employed in different hospital settings.

Due to logistical constraints, the research was limited to selected hospitals within the region that represent both government and private healthcare systems. The findings reflect the experiences of nurses in these facilities and may not fully capture variations in other regions. Nevertheless, the selected sites provide an appropriate context for analyzing and comparing occupational stress patterns among nurses in diverse healthcare environments.

1.8 Thesis Organization

The study is divided into six main chapters. The first chapter addresses the background of the study, the problem statement, objectives, research questions, justification, significance of the study, scope and organization. The second chapter thoroughly examined relevant literature related to this research topic. Chapter three focuses on presenting the study area and the methodology employed to conduct the research. Moving on to chapter four, the study data is presented. Chapter five discussed the findings of the study. Lastly, in chapter six, the summary of the results is presented, conclusions based on the main findings are drawn, and recommendations are offered based on the study's outcomes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter two takes into consideration the theoretical and empirical review that underpins the research work. The chapter begins with the meaning of stress, types of occupational stress, factors that influence stress, effects of stress, and the measures to curb stress among nurses in Ghana. Moreover, research works closely associated with the topic were also reviewed and included in this chapter. This forms the basis of the conceptual framework used in the study.

2.2 Meaning of Stress

According to Arnold *et al.* (2013) stress is a Latin word that is taken from "Stingere". This means "to draw tight". From the literature, a lot of researchers have attempted to define occupational stress. Some of the scholars who defined stress include Arnold *et al.* (2013). Arnold *et al.*(2013) came out that, stress is the emotional and physiological reaction to environmental factors. Similarly, stress can be expressed through conscious and unconscious behaviours, as well as psychological reactions oriented towards the individual (Balconi *et al.,* 2017). From the above definitions, stress can be regarded as the physiological and psychological factors that stretch beyond the range of stability, causing a strain within an individual.

2.3 Types of Occupational Stress

Literature reveals that we have three categories of work-related stress, namely: severe stress, episodic acute stress, and chronic stress among workers (Burman & Goswani,

2018). Burman & Goswami (2018) suggest that the categorization of stress is based on the causes, symptoms, and impact of this stress on the workers.

2.3.1 Acute Stress

Acute stress is the most common stressor that emanates from the pressure of immediate and past events (Weber *et al.,* 2022). This suggests that acute stress may occur as a result of the instant reaction of a worker, triggering individual responses (Weber *et al.,* 2022). Given this, acute stress may occur due to circumstances within which a person finds himself or herself. From the literature, we have positive and negative acute stress, which is dependent on the personality in question. In one breath, acute stress may offer the opportunity for people to learn and come out with innovative ways of doing things; in another breath, it may become a stress for another person. With this type of stress, the damage caused is short-lived because this type of stress is short-term (Stephenson *et al.,* 2022).

2.3.2 Episodic Acute Stress

Burkhardt et al.(2023) indicated that, unlike acute stress, episodic stress is common and comes frequently and can be observed easily among people at the workplace. People who are unable to meet the demands of their jobs experience this type of stress. Workers who always take a definite position suffer from episodic acute stress (Stephenson *et al.,* 2022).

2.3.3 Chronic Stress

Chronic stress is the result of prolonged acute stress, which has not been treated for some time. This stress continues to develop and affects the everyday life of people. This

type of stress occurs primarily due to changes in employees' conditions of service, frequent employee transfer, and new policy directions. Chronic stress is widely known to damage the body, mind, and lives of people (Koval, 2016).

2.4 Sources of Work-related Stress

Work-related stress can be categorized into two namely intrinsic and extrinsic factors (Hyun-Suk & Business, 2023). The intrinsic factors include;

2.4.1 Working Environment

The work environment plays a critical stress factor among workers, particularly nurses. Examples of stress being recorded at the workplace include job strain, work stress, and load (Hudays *et al.,* 2024). However, some of the factors that influence work environment stress, such as lighting, air quality, and temperature levels, adversely affect employees' productivity. Allison (2023) asserted that stress is perceived as the disparity between work demands and how an employee can cope with the demands at work. Workplace stress focuses primarily on psychosocial aspects of the work environment, which form the basis of psychological health (Burkhardt *et al.,* 2023).

2.4.2 Workload

Workload stress may come from unanticipated duties and pressure at the workplace that misalign the knowledge, expectations, and skills of individuals by constraining the ability of workers to cope (Shinde, 2025)**.** The workload stressors can be categorized into two (2), namely: Quantitative and qualitative workload. The quantitative workload includes nurses working overtime and healthcare professionals attending to a lot of patients at a time, which may be frustrating. This is because of low staff strength among

nurses, nurse-to-patients ratio is relatively high. However, qualitative workload can also influence stress levels among nurses. Allison (2023) reiterated that severe complications among patients or strange diseases that may occur among patients who visit health facilities can extend beyond working hours, resulting in severe stress. In certain circumstances, people may be tasked to perform certain duties that are beyond their mental capabilities. In such situations, people become frustrated and confused in the process.

2.4.3 Work Underload

From literature, work underload can also constitute stress among workers, particularly when the job comes with creativity and is goal-driven (Adamopoulos *et al.*, 2022). With work underload, workers are employed below their skills and capabilities.

2.4.4 Worker's Status

A worker's status can influence his or her stress levels. For example, where a person works without being promoted may worsen the stress levels of the person, resulting in neglect of duty (Adamopoulos *et al.*, 2022). On the contrary, occupational stress has the possible to influence workers of all groups, ranging from those who make small decisions to the big decision makers among health workers.

According to Shinde (2025), lower-grade nurses are more susceptible to high levels of stress compared to senior-rank health professionals. This suggests that healthcare professionals are more vulnerable to work-related stress compared to other institutions.

2.5 Extrinsic Factors

Studies indicated that some individuals interpret their circumstances as being influenced by extrinsic factors (Hudays *et al.,* 2024; Kashefian-Naeeini *et al.,* 2024). These extrinsic factors have been linked to adverse outcomes based on poor work ethics and the level of job satisfaction (Kashefian-Naeeini *et al.,* 2024). Some of the extrinsic factors that influence occupational stress include the following:

2.5.1 Work-life imbalance

A study identifies some of the poor work-life imbalances among individuals to include increased responsibilities at home, engaged in child care before going to work, working longer hours, and increased responsibilities may lead to increased stress levels (Hyun-Suk & Business, 2023). Creating a harmonious work environment is critical for the emotional and mental welfare of the individual (Kashefian-Naeeini *et al.,* 2024). This suggests that the more time an individual spends working, the less time he or she gets to socialize. The work-life balance becomes imbalanced in the process. Workers who experienced self-work-life conflict (WLC) are at a greater risk for low self-rated health (Tamminga *et al.,* 2023).

2.5.2 Lack of control

Failure to influence the decisions that impact the workload and resources required to function properly can lead to occupational stress among nurses (Burkhardt *et al.,* 2023). Previous studies suggests that when an individual is actively involved in taking authority over his or her work, it reduces occupational stress (Adamopoulos *et al.,* 2022; Tamminga *et al.,* 2023). However, in situations where an individual has no say in the work he or she does, it rather increases occupational stress (Adamopoulos *et al.,* 2022).

Gonzalez-Mulé and Cockburn (2017) suggest that for an individual to be free from occupational stress, the person must be actively involved in the work decisions.

2.5.3 Workplace/colleagues

Organizational work culture also contributes to occupational stress among nurses in particular. Unhealthy interpersonal relationships at the workplace adversely contribute to occupational stress. Even interpersonal relationships with colleagues at workplaces are nothing to write home about. All this, the individual needs to endure to ensure that the mission, core values, expectations, and goals of the organization are achieved. This suggests that work culture is critical in minimizing occupational stress. In a situation where there is a healthy interpersonal relationship among workers, stress levels are also minimized (Shetti, 2024).

2.5.4 Workplace moral distress

Workplace moral distress is known to be one of the factors that adversely influence work-related stress (Ackah & Kwashie, 2023). A study conducted by Ackah and Kwashie (2023) revealed that some theatre nurses experience moral distress due to unnecessary starving of patients, delay in post-operative cases, and death of patients. For nurses working in the theatre, at times, they feel it is their responsibility to take care of patients' needs whilst in the hospital.

2.6 Theoretical Review

In this section, the study identified the three (3) most important theories with emphasis on the physiological approach to occupational stress, which was postulated by Selye

(1956). These theories include physiological theory, psychological theory, and interactional theories of occupational stress.

2.6.1 Physiological Approach

Occupational stress gained ground in the psychosocial and occupational health sciences in the latter part of the 20th century. Selye (1956) was the first researcher who propose the concept of "biological stress". Selye (1956) observed that patients complained about issues that were common in nature, even though they were suffering from distinct sicknesses. Given this, (Selye, 1956) conducted a study by examining the correlation between stress and illness. Hans Selye (1956) later published a book titled "The Stress of Life". Hans Selye was widely known as the Father of Stress. He summarized stress reactions into three categories called the general adaptation syndrome (GAS). Selye (1956) in his book explained that stress is the extent to which the body undergoes certain changes based on varied responses. Hans Selye (1956) opined that occupational stress occurs naturally and is experienced by the individual. Selye (1956) in his research work focused primarily on explaining the physiological response pattern, which is referred to as the general adaptation syndrome (GAS). The primary objective of the general adaptation syndrome (GAS) is to attain homeostasis.

According to Selye (1956), while a small amount of stress is beneficial, intense pressure can be harmful and may have negative implications on the well-being of workers .

An investigation conducted by Hegg-Deloye *et al.* (2015) discovered that about 90% of nurses and midwives who reported occupational stress also recorded cardiovascular risk factors.

From several studies, the nursing profession is characterized by stress-related complications (Hyun-Suk & Business, 2023; Karaferis *et al.*, 2022). Van Zyl *et al.* (2024) indicated that some of the stress-related complications include changes in the level of tolerance among nurses, decreased social life, increased irritability, sleep disturbance, and angry outbursts. Occupational stress among health professionals is costly both at the social and individual levels (Updegraff & Taylor, 2021). Although work-related stress in the interim is an asset, in the long run, it can have negative consequences on the well-being of nurses, which may result in low productivity. Physiological model has been heavily criticized by scholars (Richter & Dixon, 2023). Some scholars heavily criticized the physiological theory. They argued that there is a low correlation among different physiological components. Moreover, there is difficulty differentiating physiological changes that influence stress levels among health profession and those that do not. Lazarus (1984) argued that the physiological approach failed to accept psychosocial and organizational situations of occupational stress.

2.6.2 Psychological Approach

A study propounded the psychological stress assessment (Karaferis *et al.*, 2022). From the study, emotional stress valuation is about how the individuals relate to their environment, which is assessed by many as challenging (Luhmann *et al.*, 2021).

This suggests that the most common stressors in our lives are our ability to adapt to daily life situations. In life, the more substantial changes a person undergoes, the higher the probability that the person will experience physical or psychological illness (Acoba, 2024). Although workers generally talk about stress, social and environmental pressure, not all stresses are harmful (Acoba, 2024). Individual perceptions and interpretations

about events greatly influence whether such events are positive or negative (Luhmann *et al.,* 2021; Updegraff & Taylor, 2021).

The sources of stress include biological, psychological, philosophical, and sociological stress. This suggests that different kinds of stressors among nurses and midwives may lead to increased occupational stress. Over the years, the poor handling of stress and negative coping strategies aggravated the work-related stress among nurses.

2.6.3 Interactional Approach

The interactional theory of occupational stress focuses primarily on the physical interactions of individuals with the working environment. Interactional theory of stress can be classified into two namely: The person-environment fit theory and the demand–control theory. From literature, Person-Environment Fit Theory is used to determine the extent to which individuals relate positively or otherwise with his or her (Luhmann *et al.,* 2021). Person-Environment Fit Theory was postulated by French and his colleagues. A study drew a clear distinction between impartial realism and personal insights; ecological variables and individual variables (Shaw *et al.,* 2024). A survey was undertaken by Richter & Dixon (2023) on work-related stress among health workers in the United States . In all, about 23 different occupations were sampled for the study. From the study, there was a positive association between the impartial and personal events and its effects on the health of nurses. However, the theory of demand control stipulated that, the nature of work people do may not necessarily be positively correlated with health of workers (van Zyl *et al.,* 2024).

2.7 Conceptual Framework

The conceptual framework was based on the physiological stress theory propounded by Selye (1956). The study adopted and adapted Selye's (1956) physiological stress theory to explain the intrinsic and extrinsic factors that influence occupational stress among nurses. From the conceptual framework, the intrinsic factors are the hospital's internal factors that adversely affect occupational stress namely: bad leadership, poor remuneration, lack of promotion at the workplace, and conditions of work. Moreover, the extrinsic factors are the external factors that adversely influence the level of stress among nurses. These factors include unhealthy interpersonal relationships at the workplace, family pressure, workplace moral distress and lack of control are some of the extrinsic factors that influence nurses negatively. Both intrinsic and extrinsic variables are classified as independent variables which leads to occupational stress (dependent variable) and overall poor healthcare delivery among nurses in the Ashanti Region. The confounding factors that influence stressors include: age, sex, education, rank, years of experience and marital status. The conceptual framework is indicated below:

CONCEPTUAL FRAMEWORK

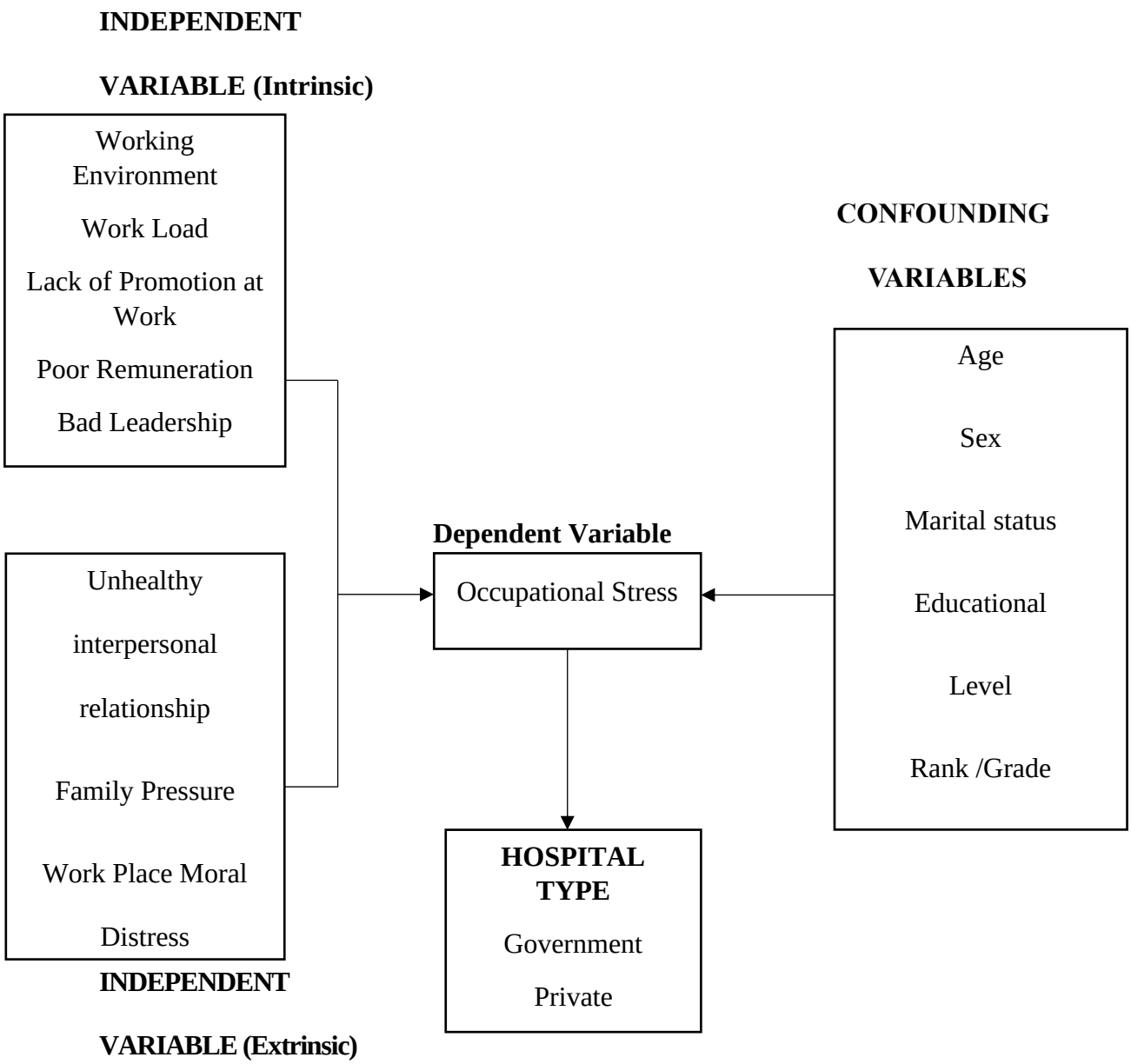

Fig 2.1: Conceptual framework showing work-related stress adapted from Seyle (1956)

2.8 Empirical Review

A lot of literature was reviewed on occupational stress. However, those that relate closely to occupational stress among nurses were reviewed and discussed in this section.

2.8.1 Level of Occupational Stress Among Nurses

Amira et al. (2023) carried out research work on the stress among healthcare providers in the Neonatal Intensive Care Unit in Egypt. To achieve this, the study employed convenient sampling to sample 96 doctors and nurse respondents in the hospital at the University of Cairo, Egypt. The research design was a cross-sectional survey. The self-administered questionnaire was used to solicit primary data. The findings of the research work revealed that 79.2% of the nurses and doctors sampled for the study enjoyed minimal stress. From the study, the average score obtained was 43.89±5.77. However, for widely experienced symptoms of stress, the mean score was 7.53±4.54, median 7, IQR (4, 10). The study indicated that women and physicians were found to have experienced common symptoms of stress than their men.

Gmayinaam et al. (2024) investigated work-related stress among nurses in a hospital setting in Ghana. With this, the study adopted a purposive sampling technique to sample 73 nurses and midwives' respondents for the study. The study discovered that the mean score obtained by nurses concerning their stress level was 37.01 and 2.47 respectively. The findings of the research work identified several stressors such as pressure from the work, lack of logistics, and conflicting demands. Some of the coping strategies adopted by nurses include hobbies, always manage time judiciously, always comply with the

accepted standard and practices at work. In view of this, the study recommends that health workers should be educated on healthcare-specific operational demands.

Gmayinaam et al. (2024) in their study employed a purposive sampling technique to sample respondents for the study. However, Amira et al. (2023) adopted a convenient sampling technique. Both studies could have employed a simple random sampling technique to sample participants for the research. This is because simple random sampling is more representative. Above all, each participant had the likelihood of being selected for the study and overall, for generalization purposes compared to the convenient sampling. The research work undertaken by Yagoubi et al. (2023) suggest a safe stress level of 79.2% while a study conducted by Mutiso (2024) revealed that, on average, the levels of occupational stress among nurses is 37.01 with an individual score of 2.47 respectively.

Sabblah (2022) investigated work-related stress among Certified Registered Anaesthetists (CRAs) in the Greater Accra Region. The researcher adopted a convenience sampling technique to sample 198 participants (Sabblah, 2022). Primary data was obtained using self-administered questionnaire. This was made possible because the Google form questionnaires were sent to the WhatsApp group of the participants. However, data was analysed using descriptive statistics and ordinal logistic regression. The study found out that majority of CRAs were going through some levels of stress. From the study, the stressors include the nature of health facility and inadequate tools to work with.

Zhou et al. (2023) conducted a study on the role of sleep quality and perceived stress on depressive symptoms among tertiary hospital nurses in China. The research design was a cross-sectional survey design. In all, 2,780 nurse respondents were sampled for the research work. Self-administered questionnaire was employed to obtained primary data. However, data was analysed using chi-square. Based on this, the research discovered that, the level of depression among nurses was 60.3%.

Athena and Mirabella (2019) investigated the sources and effects of occupational stress on recent graduate nurses. The motive of the research work was to find out whether there are some levels of association exists between new graduate nurses occupational stress, their responses to stress and their quality of life. Based on this, a sample size of 18 graduate nurse participants were sampled for the research work. The researcher employed descriptive cross-sectional survey design. The findings of the study suggest that, nurses experience moderate to high levels of work-related stress.

2.8.2 Factors that Influence Occupational Stress Among Nurses

Mohammed (2019) investigated work-related stress among health professionals in the Tamale Metropolis. The cross-sectional research design was adopted in the study. In all, 384 nurses were involved: 80 enrolled nurses, 60 community health nurses, 186 registered nurses, and 58 nursing officers were sampled for the research. A semi-structured questionnaire was used to solicit primary data. However, data was analysed using inferential statistics. The research work discovered that 62.2% of the health professionals were moderately stressed. However, 54.2% had severe anxiety. The study concluded that work-related stress is influenced by variables such as sleepless nights, insufficient tools, and workload.

Chen and Zhu (2019) investigated nurses' work-related stressors and their coping strategies. The main aim of the research work was to identify the stressors and coping strategies adopted by nurses. The study employed descriptive statistics. In all, 10 publications between 2008 and 2018 were reviewed and included in the research work. The study found out that occupational stressors among health professionals include conditions of service, the work settings, harmonious living at workplace, individual psychology and a sense of professional conduct.

From the study above, Mohammed (2019) and Chen and Zhu (2019) adopted a descriptive research design in their study. Both studies could have adopted quantitative and qualitative approaches in their study. In the study, Mohammed (2019) suggest that nurses with moderate and severe anxiety were influenced primarily by sociological factors namely: age, marital status, and level of education. Given this, Mohammed (2019) in his study identified the factors that influence occupational stress among nurses include; improper sleep at night, inadequate equipment to work with, unnecessary demands by patients and above all, undue workload. On the contrary, Chen and Zhu (2019) identified that occupational stressors among nurses are influenced by factors such as conditions of work, work settings, work uncertainty and professional conduct.

Sarah et al. (2023) undertook a research work on signs of despair, nervousness post-traumatic stress disorder and suicidal ideas among School Nurses in Pre-kindergarten, USA. The study sampled 7,971 school nurses using a cross-sectional anonymous survey design. The study measured symptoms of depression, anxiety, and suicidal thoughts. The research work found out that, nurses were influenced by stressors such as mental

status of the nurses in the school, employment issues, COVID-19-related job duties and workload.

Al-Yaqoubi & Arulappan (2023) undertook a research work on the factors that influence occupational stress among healthcare providers. In all, 383 nurse participants from 5 selected tertiary care hospitals were sampled for the research work. The study discovered that, the average mean score ranges from 8.5% to 21%.

In addition, the findings of the study reveal that, workload with average score of 8.99 (21%) obtained the highest occupational stress. However, lack of support had the lowest mean score of 3.65 (8.5%).

Iwan and Dessy (2022) investigated occupational stress among nurses during the COVID-19. The research work measured occupational stress using the Hamilton Anxiety Rating Scale. 139 nurse respondents were sampled using cluster random sampling technique. Pearson product-moment and Cramer's V were employed to analysed data. The study found out that, greater percentage of the health professionals experience some level of stress. However, about 0.7% of the health professionals experienced acute stress, 24.5% experience moderate stress and 29.5% experience mild stress. The study suggests that, occupational stress was greatly influenced by workload, work shift, work environment and working period.

From the study above, Safiya and Judie (2023) and Iwan and Dessy (2022) in their research work adopted cross-sectional and cluster sampling design. Both studies could have adopted multi-stage sampling since it is time-effective as compared to the cluster sampling and cross-sectional survey design. On the part of Safiya and Judie (2023), the

study could have been conducted further investigation to identify the correlation between occupational stress and sources of stress among nurses using the Pearson correlation technique.

Wijono et al. (2023) in their research work discovered that, majority of the nurses experience occupational stress from severe (0.7%), to moderate (24.5%) to mild stress (29.5%). However, Al-Yaqoubi & Arulappan (2023) in their study identified percentage mean scores of nurses range from 8.5% to 21%.

According to Wijono *et al.* (2023) the results of the study suggest that, work environment and workload were statistically significant with occupational stress. Similarly, Al-Yaqoubi & Arulappan (2023) in their study, workload and emotional issues were highest.

Seyedfatemi *et al.* (2007) undertook a research work to examine the factors that influence stress and coping strategies adopted by student-nurses. The study found out that; findings new friends, working with people they did not know, new responsibilities were significant at 76.2%, 63.4% and 72.1% respectively. Moreover, the research work discovered that, academic pressure was the most frequent "increased class workload" by 66.9% while ecological source of stress obtained (64.2%). However, waiting in long queues obtained (60.4%).

A research work conducted by Silva *et al.* (2021) reveals that stress is an endemic problem among nurses that contributes to poor healthcare delivery. The study was conducted among nurses in selected health facilities in Benin City. The results of the study suggest that the key factors that influence work-related stress embraces the

following: poor renumerations, workload, job security, and lack of incentive greatly influenced healthcare professionals.

A study conducted by Kyei & Takyi (2024) on occupational stress among nurses in a hospital setting in Ghana identified several stressors and these include pressure from work, inadequate working tools, and conflicting demands. Some of the stress coping strategies nurses employed include: proper management of time, engage in hobbies during leisure, ensure workplace standards are upheld and being able to express freely how they feel about issues. In view of this, the study recommends that, there is the need for nurses to be educated to understand how the healthcare system works.

Dartey *et al.* (2023) undertook a study on occupational stress and its effect on nurses at a health facility in Ho Municipality, Ghana. The research design used in the study was an exploratory research design. In all,18 nurse respondents were sampled using purposive sampling technique (Dartey *et al.*, 2023). Semi-structured interviews with voice recorders were employed to obtained first-hand information from participants. The research work discovered that, health professionals have negative perception about job stress. However, some of the causes of occupational stress identified in the study include the death of patients, undue work pressure, negative attitude from co-workers, inadequate work-resources and low staff strength.

A research work undertaken by Nyarko-Samson (2017) on the effects of work-related stress reveals that, there was no substantial correlation between age of health professionals, their gender and the type of stress experienced.

2.8.3 Effects of Occupational Stress Among Nurses

Moustakas and Constantinidis (2010) indicated that the effect of stress is primarily on the individual, the institution, and the patients as a whole. Moustakas and Constantinidis (2010) revealed that the signs and symptoms of occupational stress that affect nurses include no-cardiac chest pain, palpitations, and shortness of breath, gastrointestinal trouble, dizziness, and headaches.

Dartey *et al.* (2023) on their part discovered that the effects of work-related stress among health professionals include apprehension, hopelessness, mood swing and ineffective family life.

Babapour *et al.* (2022) conducted a study on nurses' job stress and its impact on quality of life and caring behaviours. The research work employed cross-sectional survey design. In all, 115 nurse-respondents were sampled using availability sampling technique. Data was collected using demographic characteristics, nurses' job stress, quality of life, and Caring Dimension Inventory questionnaires. The findings of the study show that, the mean (Standard Deviation) total scores of job stress, quality of life, and caring behaviours were 2.77 (0.54), 56.64 (18.05), and 38.23 (9.39), respectively (Babapour *et al.*, 2022). The study's result reveal that; there was a statistically significant and negative correlation between total job stress scores with quality of life ($r = -0.44$, $P<0.001$, medium effect) and caring behaviours 2.77 (0.26. $p<0$). The univariate linear regression suggests that job stress alone could predict 27.9% in the score ($\beta = -0.534$, SE=0.051, R2adj=0.279, $P<0.001$) and 4.9% change in the total score of caring behaviours ($\beta = -0.098$, SE=0.037, R2adj=0.049 $P<0.001$). Given this, the study concludes that Job stress hurts the quality of life related to nurses' health.

Zhou *et al.* (2023) conducted a study on the role of sleep quality and perceived stress on depressive symptoms among tertiary hospital nurses. A sample size of 2,780 nurse participants were used for the study (Zhou *et al.,* 2023). The research design employed in the research work was a cross-section survey design. Self-administered questionnaires were used to solicit for primary data from the respondents. However, Chi-square test was used for the analysis. The findings of the research work suggest that the level of depression among healthcare professionals was about 60.3%. The result of the research work suggests that health workers with moderate, poor and severe were likely to be more depressed. In view of this, the study recommended the need for appropriate and adequate information to be provided by nurses on sleep health and stress relief.

From the study above, research work conducted by Dartey *et al.* (2023) indicates that nurses have a negative perception of occupational stress. However, Babapour *et al.* (2022) reveal a contrary finding. According to Babapour *et al.* (2022), occupational stress was statistically significant and inversely correlated with the quality of life. Some of the stressors identified by Dartey *et al.* (2023) include the death of patients, stress associated with caring for dying patients, attitude from colleague nurses, lack of logistics, unfavourable shift schedules, and low staff strength. Babapour *et al.* (2022) in their study conclude that job stress hurts the nurse's quality of life. Dartey *et al.* (2023) in their study identified the effects of work-related stress to include low productivity. Given this, Zhou *et al.* (2023) in their research work specified that depressive symptoms among nurses were prevalent (60.3%). Based on this, the study

recommended the need to minimize depressive symptoms among nurses. There is a need for adequate information to be provided by nurses on sleep health and stress relief.

2.8.4 Coping Strategies of Occupational Stress Adopted by Nurses

Diamond (1990) asserted that the rate at which an individual can cope with occupational stress may have a significant impact on stress outcomes. Based on this, Lazarus and Folkman (1984) identified three (3) main types of stress coping strategies namely: problem-focused coping, emotion-focused coping, and perception-focused coping. While problem-focused coping is typically about confronting the situation head-on, either by altering the situation, emotion-focused strategies are aimed at ensuring that the individual avoids negative emotions associated with a problem situation through strategies such as suppression, wishful thinking, or distraction.

Holahan and Moos (1981) revealed that, one major feature of perception-focused coping which makes it unique from other stress coping strategies is that, it focuses primarily on cognitions and perceptions rather than on emotions or behaviours (Holohan & Moos, 1981). Based on this, Glawing *et al.* (2023) undertook a study on work-related stress, stress reactions, and coping strategies in ambulance nurses. The main objective of the study was to describe experiences of work-related stress, stress reactions, and coping strategies among registered nurses (RNs) in the ambulance service. The study adopted a qualitative research design. The respondents for the study were sampled from eight (8) different ambulance stations from different geographical locations in central Sweden. Data for the study was obtained from 14 RNs using a semi-structured interview guide. Data was analysed using an abductive approach. The results of the study on the three (3) categories that describe the RNs' experiences; (1) Situations that cause work-related stress, (2) Reactions and feelings that occur, and (3)

Management of work-related stress; suggest that work-related stress was experienced when participants were a part of traumatic events or experienced insufficient cooperation or a disturbing event in the work environment. From the study, different causes lead to different kinds of reactions with feelings of frustration, fear, and loneliness being prominent. The result of the study also reveals that registered nurses used different kinds of coping strategies such as support from colleagues to curb work-related stress.

The study recommends the need for ambulance services to provide stress-reduction support promote cooperation and maintain and develop RNs' professional competence to ensure quality care and patient safety in the Ambulance Service.

A research work conducted by Sabblah (2022) on work-related stress among certified registered anaesthetists in the Greater Accra Region identified some of the coping strategies adopted by certified registered anaesthetists (CRAs) including denial of guilt, substitute gratification, situation control, escape, positive self-instruction, and peer support. Based on this, the study recommends that CRAs should undergo educational programs and counselling for them to be aware of the high demands of their job. Moreover, CRAs should be well motivated at the facility levels to reduce the stress level.

A study conducted by Chen and Zhu (2019) on nurses' occupational stressors and their coping strategies shows that nurses continue to use a variety of coping strategies such as spiritual entrust, exercising self-control, positive reassessment, emotion adjustment, help-seeking, communication coping, painful problem-solving, self-improvement.

Based on this, the study concludes that nurses are under a lot of stress, but at the same time, they have to find appropriate strategies to cope with their conditions for better individual and social progress.

Salami *et al.* (2023) undertook research work into perceived stress and coping strategies among emergency department nurses and emergency medical services staff during the fifth wave of COVID-19 in Iran. The study adopted a cross-sectional correlation design. Given this, a convenient sampling technique was used to sample 327 nurses and emergency medical service staff. Self-administered questionnaires were used to solicit primary data. Data was analysed using SPSS (version 22). The study adopted descriptive (frequency, percentage, mean, and standard deviation) and inferential (Pearson correlation, t-test, and ANOVA) statistical tests and multiple linear regression analysis. The results of the study indicated that the most common stressors include the transmission of the disease to the family and seeing the death of COVID-19 patients in front of their eyes. However, the coping strategies adopted by nurses and emergency medical service staff amid COVID-19 include strict personal protective measures for all hospitalized patients and the use of clothes that the hospital prepared separately to reduce the transmission of the virus. The results of multiple linear regression showed employees' emotions ($\beta = 0.429$, $p < 0.001$), gender ($\beta = 0.225$, $p < 0.001$), coping strategies ($\beta = 0.209$, $p < 0.001$), stress-reducing factors ($\beta = 0.124$, $p = 0.014$), worry ($\beta = -0.182$, $p < 0.001$), and workplace ($\beta = -0.149$, $p = 0.045$) were effective predictors of perceived stress. From the study, coping strategies such as strict personal protective measures, using special clothes, and seeing the recovery status of patients and colleagues were effective factors in reducing the perceived stress of health workers.

Based on this, the study recommends that health workers should be given psychological support in times of crisis.

Mohammed (2019) undertook a study on stress and anxiety levels among nurses in the Tamale Metropolis, Ghana. The primary objective of the study was to assess the level of stress and anxiety among nurses working in the Tamale metropolis, Ghana. Based on this, the study adopted a descriptive cross-sectional survey design. In all, 384 nurses which involved 80 enrolled nurses, 60 community health nurses, 186 registered nurses, and 58 nursing officers were sampled for the study. Data was obtained using a self-administered semi-structured questionnaire. These questionnaires consist of the Kessler Psychological Distress Scale and stress-reducing management techniques assessments. Data was analysed using Statistical Package for Social Scientists (SPSS) version 22 and inferential statistics. The study identified some of the coping strategies adopted by nurses to include seeking support and advice from colleagues, being recognized at the workplace, and resorting to hobbies. Based on the findings, the study recommends that managers and supervisors should identify and develop reinforcement strategies to reduce stress and anxiety and promote the quality of working conditions for nurses.

Nyarko-Samson (2017) investigated the sources and effects of stress on work performance and coping strategies among nurses at the University of Cape Coast Hospital, Cape Coast, Ghana. The primary objective of the study was to identify the sources and effects of stress on work performance among nurses at the University of Cape Coast Hospital, and the coping strategies they adopt. Multi-stage sampling technique was used to sample 59 nurse respondents for the study. In addition, primary data was obtained using self-administered questionnaires. Data was analysed using

average mean, variance, and independent t-test. The results of the study reveal that no statistically significant differences were found between the ages of nurses and the type of stress experienced, by gender concerning how they coping strategies toward stress, and among the various ranks of nurses and the effect of stress on their performance. Based on this, the study concludes that nurses at the University of Cape Coast Hospital were aware of the sources of stress among nurses, aware of the effects of stress on their performance, and had devised strategies for coping with stress.

According to a study conducted by Seyedfatemi *et al.,* (2007) on the sources of stress and coping strategies adopted by student nurses in Iran's Faculty of Nursing and Midwifery, the study identified several stress-coping strategies adopted by the student nurses in 12 areas namely: family problem solving (46%), reason with parents and compromise" (73.0%) and "going along with family rules" (68.0%). 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 "daydreaming" (52.5%), and the effort to "be close with someone cares about you" (50.5%). These are some of the stress-coping strategies student nurses adopt to curb stress among them.

From the various research works conducted on work-related stress coping strategies, Nyarko-Sampson (2017) indicates that, statistically, there were no significant

differences between the ages of nurses and the type of stress experienced, by gender concerning how their coping strategies toward stress, and among the various ranks of nurses and the effect of stress on their performance. However, the results of multiple linear regression conducted by Salami *et al.* (2023) indicate that employee's emotions, gender, coping strategies, stress-reducing factors, worry, and workplace were effective predictors of perceived stress. From the study, Salami et al (2023) identified work-related stress coping strategies to include strict personal protective measures, using special clothes, and seeing the recovery status of patients and colleagues.

Similarly, Mohammed (2019) on his part identified some of the coping strategies adopted by nurses to include seeking support and advice from colleagues, being recognized in the workplace, and resorting to hobbies.

Goel and Verma (2021) investigated workplace stress and coping mechanisms in a cohort of the India Service Industry. The purpose of the study was to examine workplace stress perceptions and stress coping mechanisms used by employees of different age groups in services. The study adopted random sampling to sample 204 respondents for the study. Data was obtained using a self-administered questionnaire. However, data was analysed using descriptive statistics, analysis of variance, and related post-hoc tests were used to examine different research questions in the study. The findings of the study indicated that perceived workplace stress and stress coping mechanisms differ significantly with age while other factors reported insignificant differences. The results of the study also suggest that older employees can cope with work-related stress compared to younger ones. The study attributes high-stress perceptions in older employees to the new stressors at work, thereby negating the

experience theory widely used in explaining the high coping ability of older employees at work.

A research work conducted by Athena and Mirabella (2019) on the sources and effects of occupational stress on recent graduate nurses shows an inverse correlation between the severity of stress and the effectiveness of coping measures used. Regarding coping strategies, the result of the study suggest that more attention should be paid to dealing with patients' families, nurses should be supported by colleagues, self-care, and exercise periodically.

Moreover, supervisors should reduce the workload for newly trained nurses. Because of this, the study recommended that more training interventions should be given particularly to new graduate nurses as a panacea to boost their confidence level.

Panigrahi (2017) carried out a study on managing stress in the workplace. The result of the study suggests that, stress is an important factor for employees in any organization. Although the study acknowledged the importance of occupational stress in achieving organizational objectives, the consequences of occupational stress cannot be overlooked. The study identified several measures to curb occupational stress and these include adequate sleep, sports, talking to a close one, relaxation habits, and quitting addictive products. Given this, the study recommends that workers should exhibit self-control and good self-esteem; engage in continuous professional development on skills for better organization, integrate work within specified project constraints and delegation assignment, authority, and breaking work into manageable parts to be able to cope with stress.

Giorgi and Dinkelaar (2021) undertook a study on the strategies for preventing occupational stress in healthcare workers; past evidence and current problems. The result of the Cochrane review reveals that cognitive-behaviour therapy and mental and physical relaxation minimize stress among health workers more than no interventions or alternative interventions. From the study, organizational interventions such as a change in work schedule, changes in working conditions, organizational support, and weekend breaks among healthcare professionals also reduce occupational stress although at a moderate rate.

Nyarko-Samson (2017) undertook a study on the sources and effects of stress on work performance and coping strategies among nurses at the University of Cape Coast Hospital (UCC) , Cape Coast, Ghana. The study recommends that the management of the Directorate of University Health Services (UCC) organize seminars, workshops, and forums on strategies to curb occupational stress among nurses. In addition, the study recommends that counsellors should be invited to assist nurses who are going through stressful conditions, which are likely to affect their performance on the work.

A study conducted by Adzakpah *et al.* (2016) on occupational stress among 73 nurses in Akwatia Hospital in the Eastern Region of Ghana reveals that the most common strategies nurses adopt to manage occupational stress include resorting to hobbies, 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.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

Chapter three highlights the methods employed in undertaking the research work. It takes into consideration the research design, the study area, the target population, and the sampling techniques employed in the study. In addition, the chapter provides an outline of data collection methods, data collection procedures, and methods of data analysis were all justified in this chapter.

3.2 Study Area

The study was undertaken in the Ashanti Region of Ghana. The region is situated in the southern half of Ghana and covers a land area of 24,389 square kilometres (Ghana Statistical Service, 2021). To the northern part of the Ashanti Region is the Bono East Region, the Central Region in the south, the Western-North in the southwest, the Ahafo Region in the west, the Bono Region in the northwest, and the Eastern Region in the east (GSS, 2021). The region is the most populous in Ghana, with a total population of about 5,924,298 people (GSS, 2021). The region has 43 administrative districts and 195 sub-districts with a population density of about 242.9 per sq. Km (GSS, 2021). In the Ashanti Region, Kumasi has the highest regional population of 36.1% with 47% of the population located in the rural areas (GSS, 2021). The people of the Ashanti Region are predominantly farmers, with the rest engaged in forestry and mining. The Ashanti Region is endowed with mineral resources such as gold, diamond, bauxite, manganese, silica, sand, limestone, clay, and stone deposits (GSS, 2021). Ashanti Region comprises 1,654 health facilities (GHS, 2022). Among the health facilities in the Ashanti Region are the government hospitals managed by the Ministry of Health (MoH) and Ghana Health Service (GHS), and private health facilities which are under the ambit of the

private individuals and faith-based organizations in the region. There are two thousand, three hundred and ninety-seven (2397) Community Health Nurses, three thousand, three hundred and thirty-three (3133) enrolled nurses, three thousand, one hundred and sixty-four (3164) professional midwifes, three thousand, two hundred and forty-eight professional general nurses (3248) and one hundred and six (116) professional psychiatry nurses in the Ashanti Region (GHS HRIMS, 2024).

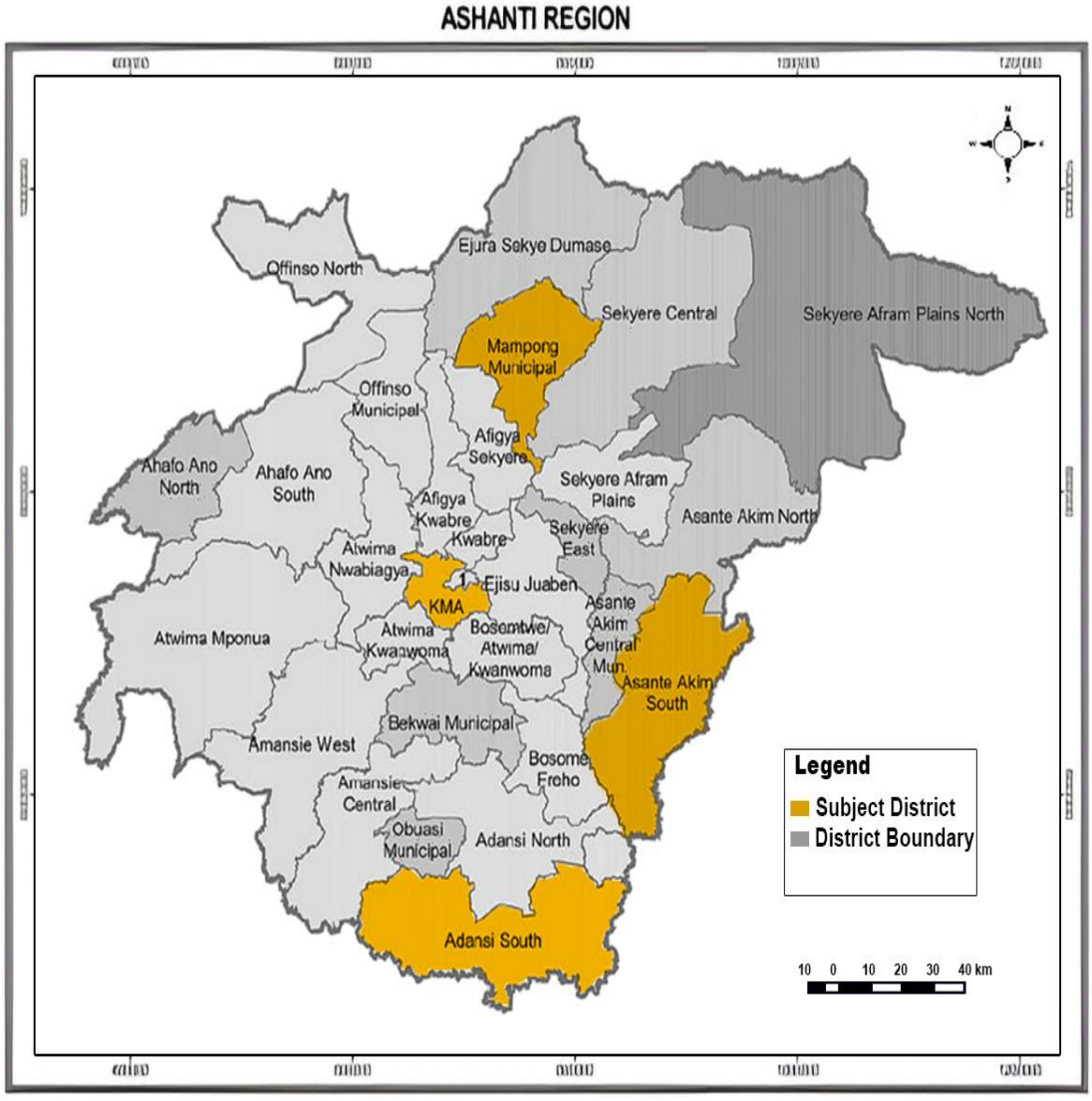

Figure 3.1: Map of the Ashanti Region (GSS, 2021)

3.3 Research Design

Hospital-based comparative cross-sectional design was employed to undertake a comparative analysis of occupational stress among nurses working in government and private health facilities in the Ashanti Region. The study adopted a quantitative research approach guided by the positivist paradigm, which emphasizes objective measurement and statistical analysis. The study was undertaken over a twelve-month period, commencing in June 2024 and concluding in May 2025.

3.4 Study Population

The study population consisted of nurses working in selected government and private hospitals in the Ashanti Region of Ghana. These facilities were chosen because they represent both public and private healthcare delivery systems in the region and provide a suitable setting for comparing occupational stress across different institutional environments. The selected government hospitals included Mampong District Hospital, New Edubiase Government Hospital, Juaso District Hospital, and South Suntreso Hospital. For the private hospitals, the study focused on Calvary Health Service, Quality Health Care Hospital (Mampong Municipal), Hilltop Maternity Home, Fountain Specialist Hospital (Adansi South District), Adiebeba Hospital, Asafo-Agyei Hospital (Kumasi Metropolis), Stewards Hospital, and First-Class Hospital (Asante Akim South Municipal).

The study targeted registered nurses who provide direct patient care and have sufficient work experience to meaningfully report on their experiences of occupational stress. By engaging the participants, the study captured a comprehensive understanding of

stressors, their effects, and coping strategies across government and private hospital settings.

3.5 Inclusion and Exclusion Criteria

3.5.1 Inclusion Criteria

The study included registered nurses aged 18 years and above who had been employed in either government or private hospitals in the Ashanti Region for more than one year. This criterion ensured that participants had adequate exposure to their work environment and were able to provide reliable information about occupational stress, its causes, and coping mechanisms.

3.5.2 Exclusion Criteria

The study excluded student nurses, intern nurses, and Nation Builders Corps (NABCO) personnel, as their experiences may not reflect long-term occupational stress in professional practice. Furthermore, individuals on extended leave during the study period, such as maternity or sick leave, were omitted to ensure that only actively practicing nurses participated.

3.6 Sampling Techniques

A multi-stage sampling technique was employed to select participants for this study. In the first stage, the Ashanti Region was classified into four strata (zones) based on the geographical locations of the 43 districts. The zones included Zone A=10 administrative districts (Northern sector); Zone B=11 administrative districts (Southern sector); Zone C=14 administrative districts (Western sector), and Zone D=8 administrative districts (Eastern sector). A simple random sampling was used to sample one (1) administrative

district from each of the zones. To achieve this purpose, the names of the various administrative districts within each of the zones were written on a piece of paper which was folded, put in a box, and mixed. The research assistant chose at random from the box one after the other. This was repeated for each of the zones. In all, four (4) administrative districts were sampled for the study under government and private hospitals namely: Mampong Municipal (Zone A), Adansi South District (Zone B), Kumasi Metropolis (Zone C), and Asante Akim South Municipal (Zone D).

In the second stage, within each selected district the sample frame of hospitals was stratified by ownership. From each district; one government and two private hospitals were selected using simple random sampling. Two private hospitals were chosen per district to compensate for typically smaller nurse workforce sizes in private facilities.

In the final stage, a list of eligible nurses from the selected hospitals was obtained from hospital administrators. Simple random sampling was then used to select nurses who met the inclusion criteria. Unique serial numbers were assigned to these nurses based on the hospitals and departments they work. These serial numbers were generated electronically at random using the simple random technique. This approach ensured representation from both government and private hospitals while minimizing selection bias.

3.7 Sample Size Estimation

The sample size was estimated using Yamane's formula (Yamane, 1967):

$$n = \frac{N}{1 + N\,(e)2}$$

Where:

Where n is the sample size

N = population size

e = margin of error (set at 0.05 for a 95% confidence level)

For this study, the target population consisted of 683 nurses working in the selected government and private hospitals in the Ashanti Region, as recorded in hospital staff lists provided by administrators.

Sample size estimation $= \frac{683}{1+683(0.05)^2}$

$$n = 252$$

Thus, a minimum sample size of 252 nurses was required. However, to enhance representativeness and account for potential non-response, the sample size was increased to 375 nurses for the study.

$$\text{n final} = \frac{252}{0.672}$$

$$n = 375$$

Hospital Type	**Population**	**Proportion (%)**	**Estimated sample size**	**Allocated per Hospital**
Government (4)	344	50.4 %	189	47 nurses
Private (8)	339	49.6%	186	23 nurses
Total	683	100%	375	375

3.8 Data Collection Tool(s)

Data were collected using a structured, self-administered questionnaire specifically designed to assess occupational stress among nurses. The questionnaire comprised five sections: Socio-demographic information (age, gender, marital status, education, years of experience); Occupational stress levels, assessed using standardized Likert-scale items. Factors influencing occupational stress, including workload, resources, work environment, and management practices; Effects of occupational stress, covering

aspects such as job performance, health outcomes, and job satisfaction; Coping strategies, capturing the mechanisms nurses use to manage stress.

The instrument included both closed-ended and Likert-scale questions adapted from the Occupational Stress Index (Srivastava *et al.,* 1981) to facilitate quantitative analysis, with an open-ended section to allow participants to express additional views on stress management.

3.9 Validity and Reliability

To ensure content and face validity, the questionnaire was reviewed by experts in occupational health, nursing management, and public health research. Their feedback was incorporated to refine unclear items and align the tool with the study objectives.

The pre-test was done with a small group of nurses to identify any of ambiguous questions and assess the tool's practicality. A pilot study was conducted with 30 nurses from a hospital outside the study area but within the Ashanti Region.

Reliability was determined using Cronbach's alpha, which yielded a value of 0.83, indicating strong internal consistency across the scale items.

3.10 Data Collection Procedure

Data collection was carried out over a four-week period. Trained research assistants, conversant with both English and the local dialects (predominantly Twi), visited the selected hospitals to administer questionnaires. Questionnaires were distributed during nurses' less busy hours to minimize disruption to hospital operations.

Participants were briefed on the study's purpose, assured of confidentiality, and asked to provide written informed consent before participation. For respondents requiring

assistance, research assistants provided guidance while ensuring independent responses. Completed questionnaires were checked daily for completeness and accuracy, and any missing data were clarified with participants when possible. All collected data were securely stored and accessible only to the research team.

3.11 Data Management and Statistical Analysis

3.11.1 Data Management

The principal investigator (PI) ensured that all completed questionnaires were reviewed daily to check for completeness, accuracy, and internal consistency. After verification, responses were coded and entered into Microsoft Excel (version 2016) for preliminary organization, error detection, and data cleaning. Inconsistent, incomplete, or duplicate entries were flagged and corrected with reference to the original questionnaires. The cleaned dataset was then exported to International Business Machine (IBM-USA) SPSS Statistics (version 27.0) for detailed analysis. To maintain data security and participant confidentiality, no personal identifiers were included in the final dataset. All electronic files were stored on encrypted, password-protected devices, with access restricted solely to the research team. Hard copies of questionnaires were securely locked in cabinets and will be destroyed after the mandatory retention period.

3.11.2 Statistical Analysis

Data were analysed using both descriptive and inferential statistical methods. Descriptive statistics, including frequencies, percentages, means, and standard deviations (SD), were computed to summarize participants' socio-demographic characteristics, stress levels, factors influencing stress, effects of stress, and coping strategies. Chi-square tests were used to examine associations between categorical variables such as hospital type (government or private) and levels of occupational

stress. Furthermore, binary logistic regression was conducted to identify predictors of high occupational stress while adjusting for potential confounders such as age, gender, and years of experience. A p-value of less than 0.05 was considered statistically significant, and all analyses were carried out at a 95% confidence level.

3.12 Ethical Review and Clearance

Ethical approval for the study was obtained from the Ghana Health Service Ethical Review Committee with the approval number GHS-ERC:087/07/24. Additional authorization was granted by the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED) to ensure compliance with institutional research ethics. Permission to access study sites was also obtained from the Ashanti Regional Health Directorate and the management of all participating hospitals.

Prior to data collection, the objectives, procedures, and potential risks and benefits of the study were clearly explained to all participants. Participation was voluntary, and respondents were informed of their right to withdraw at any point without repercussions. Written informed consent was obtained from every participant. Confidentiality was assured by assigning unique identification codes rather than using names, and all collected data were securely stored with restricted access limited to the research team.

3.13 Study Limitation

This study primarily relied on self-reported data collected through structured questionnaires administered to nurses working in government and private hospitals

within the Ashanti Region. This method may have introduced recall bias or social desirability bias, where participants might have underreported or over reported their experiences of occupational stress, its effects, or coping strategies in a manner they believed to be more socially acceptable. These biases could affect the accuracy and reliability of the responses provided. To address this, participants were assured of confidentiality and anonymity to encourage honest and objective participation.

Another limitation concerns the geographical focus of the study, which was confined to selected hospitals within the Ashanti Region. While the findings provide valuable insights into occupational stress among nurses in this region, they may not be generalizable to other regions or healthcare settings in Ghana. Differences in institutional policies, management practices, staffing levels, and workplace culture may influence occupational stress differently across various regions.

Additionally, the use of a cross-sectional design limits the ability to establish causal relationships between stress predictors and outcomes. Moreover, the sampling approach may not fully capture the diversity of experiences among all nurses in the region, especially those in smaller or rural health facilities. Despite these limitations, the study contributes significantly to the understanding of occupational stress among nurses in Ghana and offers practical evidence to inform interventions aimed at improving nurse well-being and performance in both public and private healthcare systems.

CHAPTER FOUR

RESULTS

4.1 Introduction

This chapter presents the findings of the study, organized in accordance with the specific objectives outlined in Chapter One. The results are structured under thematic headings that reflect the key focus areas of the research.

The presentation of results begins with descriptive statistics to summarize participants' demographic characteristics and responses to key variables. Comparative analyses are then provided to highlight differences and similarities between nurses working in government and private healthcare facilities. Where appropriate, inferential statistics such as chi-square tests, and logistic regression are applied to determine the significance of observed relationships and associations between variables.

4.2 Demographic Characteristics of Respondents

In **Table 4.1**, the majority (56.8%) of respondents were female, 47.7% were single, 38.7% were aged 20–29 years, 38.9% were ranked as Senior/Principal/Director of Nursing Service (DNS), 50.4% worked in government hospitals, 49.3% had less than 5 years of experience, 62.9% worked 7–9 hours per day, and 52.3% of the nurses reported doing extra work beyond their regular duties.

Table 4.1: Demographic Characteristics

Demographic Characteristics	Frequency (N= 375)	Percentage %
Gender		
Male	162	43.2
Female	213	56.8
Marital status		
Single	179	47.7
Widowed/widower	18	4.8
Married	178	47.5
Rank		
Certified Registered Nurse	115	30.7
Nurse Officer	114	30.4
Senior/Principal/DNS	146	38.9
Type of Health facility		
Government hospital	189	50.4
Private hospital	186	49.6
Number of years of experience		
< 5 years	185	49.3
5-10 years	119	31.7
> 10 years	71	18.9
Working hours per a day		
1-6 hours	57	15.2
7-9 hours	236	62.9
> 9 hours	82	21.9
Do you do any extra work		
Yes	196	52.3
No	179	47.7

Age group (years)	Frequency (N= 375)	Percentage %	Mean age	SD	Range
20-29	145	**38.7**			
30-39	89	**23.7**	**36.27**	**10.97**	**39**
40 – 59	141	**37.6**			

(Data source: Field survey, 2025)

4.3 Level of Occupational Stress among Nurses in both Government and Private Hospitals

As shown in **Table 4.2**, the majority (31.7%) of nurses agreed that they often feel overwhelmed by their work ($p < 0.001$). About 26.4% remained neutral on feeling tired in the morning and dreading work. The highest percentage (26.7%) agreed they feel drained at the end of the workday. Regarding feeling positive and in control at work, 32.0% agreed. Additionally, 28.0% were neutral about tolerating interruptions at work, while 24.8% agreed to feeling indifferent or less caring toward patients. Most nurses (26.1%) agreed that there is a high stress level in their institution, and 27.7% remained neutral on worrying about panicking or making mistakes at work.

Table 4.2: Level of Occupational Stress among Nurses in both Government and Private Hospitals

Variables	Responses					(95%CI) P-value
	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)	
I often feel overwhelmed by my work	80 (21.3)	**119 (31.7)**	98 (26.1)	51 (13.6)	27 (7.2)	**< 0.001**
I feel tired in the morning and dread going to work	62 (16.5)	96 (25.6)	**99 (26.4)**	85 (22.7)	33 (8.8)	**< 0.001**
I feel drained at the end of my workday	96 (25.6)	**100 (26.7)**	85 (22.7)	70 (18.7)	24 (6.4)	**< 0.001**
I feel positive, energetic, and in control at work	66 (17.6)	**120 (32.0)**	106 (28.3)	59 (15.7)	24 (6.4)	**< 0.001**
I find it hard to tolerate interruptions at work	56 (14.9)	83 (22.1)	**105 (28.0)**	94 (25.1)	37 (9.9)	**< 0.001**
I have become indifferent or less caring toward patients	59 (15.7)	**93 (24.8)**	84 (22.4)	84 (22.4)	55 (14.7)	**0.004**
There is a high stress level in my institution	96 (25.6)	**98 (26.1)**	96 (25.6)	56 (14.9)	29 (7.7)	**< 0.001**
I worry about panicking and making mistakes at work	83 (22.1)	82 (21.9)	**104 (27.7)**	61 (16.3)	45 (12.0)	**< 0.001**

(Data source: Field survey, 2025)

Table 4.3 presents the comparison of occupational stress indicators among nurses in government and private hospitals. A significant association was found between the type of hospital and difficulty tolerating interruptions at work (χ^2=6.750, p=0.031). Nurses in government hospitals were 8% less likely to report tolerance to interruptions than those in private hospitals [AOR=0.92 (0.44–0.98), p=0.043]. Also, nurses in government hospitals were about 2 times more likely to report becoming less caring toward patients than those in private hospital [AOR=1.78 (1.06–3.00), p=0.030]. Furthermore, high stress levels were over 2 times more common among nurses in government hospitals compared to private facilities [AOR=2.43 (0.486–0.9), p=0.039].

Table 4.3: Level of Occupational Stress between Government and Private Hospitals

Level of Occupational Stress	Type of Hospital		X^2 (P-value)	AOR (95% CI) P-value
	Government (%)	Private (%)		
I often feel overwhelmed by my work				
Yes	87(43.7)	112(56.3)	**7.572(0.006)**	1.38 (0.86, 2.21) 0.185
No	102(58.0)	74(42.0)		**Ref:**
I feel tired in the morning and dread going to work				
Yes	64(40.5)	94(59.5)	**10.691(<0.001)**	1.45 (0.87, 2.42) 0.154
No	125(57.6)	92(42.4)		Ref:
I feel drained at the end of my workday				
Yes	89(45.4)	107(54.6)	**4.093(0.043)**	0.79 (0.46, 1.36) 0.398
No	100(55.9)	79(44.1)		Ref
I feel positive, energetic, and in control at work				
Yes	80(43.3)	106(57.0)	**8.06(0.005)**	1.40(0.86, 2.29) 0.178
No	109(57.7)	80(42.3)		Ref:
I find it hard to tolerate interruptions at work				
Yes	61(43.9)	78(56.1)	**6.750(0.031)**	**0.92 (0.44, 0.98) 0.043**
No	128(54.2)	108(45.8)		Ref
Have become less caring toward patients				
Yes	58(38.2)	94(61.8)	**15.324(<0.001)**	**1.78 (1.06, 3.00) 0.030**
No	131(58.7)	92(41.3)		**Ref:**
Level of stress among nurses				
High	88(45.4)	106(54.6)	**6.083(0.043)**	**2.43 (0.486, 0.99) 0.039**
Low	101(55.8)	80(44.2)		**Ref**
I worry about making mistakes at work				
Yes	68(41.2)	97(58.8)	**9.950(0.002)**	1.31 (0.763, 2.23) 0.330
No	121(57.6)	89(42.4)		**Ref:**

(Data source: Field survey, 2025)

Table 4.4 examines the association between demographic characteristics and occupational stress among nurses. Marital status, age, ranks and years of experience were significantly associated with occupational stress, (χ^2=7.496, p=0.024), (χ^2=9.519, p=0.009), (χ^2=10.642, p=0.005), and (χ^2=13.438, p=0.001), respectively. Married nurses were about 3 times more likely to experience high stress compared to their counterpart [AOR=2.81 (0.15–0.97), p=0.027]. Older nurses (aged 40 and above) were 2 times more likely to report high stress levels compared to younger ones [AOR=2.13 (1.08–4.42), p=0.041]. Senior/principal nurses were 57% less likely to experience high stress compared to certified registered nurses [AOR=0.43 (0.07–0.86), p=0.044]. Nurses having over 10 years of experience were about 2 times more likely to experience high stress than those with less than 10 years [AOR=1.99 (1.01–3.90), p=0045].

Table 4.4: Association between Demographic Characteristics and Level of Occupational Stress among Nurses

Demographics	Level of stress among nurses		X^2 (P-value)	AOR (95% CI) P-value
	High (%)	Low (%)		
Male	94 (58.0)	68 (42.0)	4.521(0.33)	0.69 (0.44, 1.07) 0.098
Female	100(46.9)	113(53.1)		**Ref:**
Marital status				
Single	83(46.4)	96 (53.6)		Ref:
Widowed/widower	14(77.8)	4(22.2)	**7.496(0.024)**	0.95 (0.54, 1.67) 0.858
Married	97(54.5)	81(45.5)		**2.81 (0.15, 0.97) 0.027**
Age				
20-29	62(42)	83(57.2)		Ref:
30-39	46(51.7)	43(48.3)	**9.519(0.009)**	1.43 (0.68, 3.04) 0.347
40 and above	86(61.0)	55(39.0)		**2.13 (1.08, 4.42) 0.041**
Rank				
Certified Registered Nurse	46(40.0)	69(60.0)		**Ref:**
Nurse Officer	60(52.6)	54(47.4)	**10.642(0.005)**	1.40 (0.70, 2.77) 0.341
Senior/Principal/DNS	88(60.3)	58(39.7)		**0.43 (0.07, 0.86) 0.044**
Number of years of experience				
< 5 years	83(44.9)	102(55.1)		**Ref:**
5-10 years	61(51.3)	58(48.7)	**13.438(0.001)**	1.76 (0.78 ,3.94) 0.168
> 10 years	50(70.4)	21(29.6)		**1.99 (1.01, 3.90) 0.045**
Working hours per a day				
1-6 hours	27(47.4)	30(52.6)		1.1 (0.53, 2.23) 0.806
7-9 hours	119(50.4)	117(49.6)	2.117(0.347)	1.2 (0.70, 2.06) 0.507
>9 hours	48(58.5)	34 (41.5)		**Ref:**
Do you do any extra work				
Yes	102 (52.0)	94 (48.0)	0.016 (0.901)	1.2 (0.79, 1.92) 0.361
No	92 (51.4)	87 (48.6)		**Ref:**

(Data source: Field survey, 2025)

4.4 Predictors of Occupational Stress among Nurses in both Government and Private Hospitals

As shown in **Table 4.5**, most nurses (81.1%) indicated that emotional stress such as patient deaths affect them at work, majority (61.1%) reported working with inadequate resources, and 70.9% confirmed that qualified staff are available when needed. About 61.9% stated they are supervised by senior staff, 58.1% face family-related challenges, 56.0% said they are free to choose their work methods, and 69.6% reported having a heavy workload per shift. More than half (58.4%) noted they are recognized for good work, but 61.6% reported not being paid for overtime. Also, 48.3% expressed dissatisfaction with colleagues' attitudes, and 64.3% were not satisfied with their salary.

Table 4.5: Predictors of Occupational Stress among Nurses

Variables	Frequency (N= 375)	Percentage %
Do patient deaths affect you at work		
Yes	304	81.1
No	71	18.9
Do you work with inadequate resources		
Yes	229	61.1
No	146	38.9
Are qualified staff available when needed		
Yes	266	70.9
No	109	29.1
Are you supervised by senior staff		
Yes	232	61.9
No	143	38.1
Do you face family-related challenges		
Yes	218	58.1
No	157	41.9
Are you free to choose your work methods		
Yes	210	56.0
No	165	44.0
Is your workload heavy per shift		
Yes	261	69.6
No	114	30.4
Are you recognized for good work		
Yes	219	58.4
No	156	41.6

Table 4.5: Predictors of Occupational Stress among Nurses (Cont.')

Variables	Frequency (N= 375)	Percentage %
Are you paid for overtime work		
Yes	144	38.4
No	231	61.6
Are you dissatisfied with colleagues' attitudes		
Yes	181	48.3
No	194	51.7
Are you satisfied with your salary		
Yes	134	35.7
No	241	64.3

(Data source: Field survey, 2025)

Table 4.6 examines the predictors of occupational stress among nurses between government and private hospitals. Recognition for good work and payment for overtime were significantly associated with occupational stress, (χ^2=5.73, p=0.030) and (χ^2=5.04, p=0.025), respectively. Nurses who were recognized for good work were 43% less likely to experience occupational stress compared to those who were not recognized [AOR=0.57 (1.13–3.14), p=0.042]. Additionally, nurses who received overtime pay were 54% less likely to report stress than those who were not paid for extra work [AOR=0.46 (1.21–4.24), p=0.033].

Table 4.6: Predictors of Occupational Stress among Nurses between Government and Private Hospitals

Predictors of Occupational Stress	Type of Hospital		X^2 (P-value)	AOR (95% CI) P-value
	Government (%)	Private (%)		
Emotion/Patient deaths affect your work				
Yes	152 (50.0)	152 (50.50)	0.10 (0.749)	0.95 (0.54, 1.68) 0.853
No	37 (52.1)	34 (47.9)		**Ref:**
Work with inadequate resource				
Yes	117 (51.1)	112 (48.9)	0.11 (0.737)	0.86 (0.54, 1.36) 0.520
No	72 (49.3)	74 (50.7)		**Ref:**
Qualify staff available when needed				
Yes	129 (48.5)	137 (51.5)	1.33 (0.249)	1.12 (0.68, 1.80) 0.685
No	60 (55.0)	49 (45.0)		**Ref:**
Workload heavy per shift				
Yes	127 (48.7)	134 (51.3)	1.04 (0.308)	1.31 (0.82, 2.10) 0.257
No	62 (54.4)	52 (45.6)		**Ref:**
You are recognized for good work				
Yes	100 (45.7)	119 (54.3)	**5.73 (0.030)**	**0.57 (1.13, 3.14) 0.042**
No	89 (57.1)	67 (42.9)		Ref:
Are you paid overtime work				
Yes	62 (43.1)	82 (56.9)	**5.04 (0.025)**	**0.46 (1.21, 4.24) 0.033**
No	127 (55.0)	104 (45.0)		**Ref:**
Satisfied with your salary				
Satisfied	59 (44.0)	75 (56.0)	3.39 (0.066)	1.57 (0.98, 2.53) 0.063
Not satisfied	130 (53.9)	111 (46.1)		**Ref:**

(Data source: Field survey, 2025)

Table 4.7 examines the association between demographic characteristics and salary satisfaction among nurses. Marital status, rank, working hours per day, and engagement in extra work were significantly associated with salary satisfaction, (χ^2=28.32, p=0.000), (χ^2=16.93, p=0.000), (χ^2=10.21, p=0.006), and (χ^2=4.69, p=0.030), respectively. Single nurses were 55% more likely to be satisfied with their salary compared to married nurses [AOR=0.45 (0.25–0.84), p=0.011]. Nurse officers were over 2 times more likely to be dissatisfied with their salary compared to senior/principal nurses [AOR=2.62 (1.31–5.23), p=0.006]. Nurses working 7–9 hours per day were 76% more likely to be satisfied with their salary compared to those working more than 9 hours [AOR=1.76 (0.22–0.92), p=0.037]. Nurses who did extra work were nearly 2 times more likely to be dissatisfied with their salary compared to those who did not [AOR=1.84 (1.41–3.25), p=0.032].

Table 4.7: Association between Demographic Characteristics and Salary Satisfaction among Nurses

Demographics	Satisfied with salary		X^2 (P-value)	AOR (95% CI) P-value
	Satisfied (%)	Not Satisfied (%)		
Male	49 (30.2)	113 (69.8)	3.74 (0.053)	1.48 (0.91, 2.40) 0.117
Female	85 (39.9)	128 (60.1)		**Ref:**
Marital status				
Single	87 (48.6)	92 (51.4)		**0.45 (0.25, 0.84) 0.011**
Widowed/widower	8 (44.4)	10 (55.6)	**28.32 (0.000)**	**0.33 (0.12, 0.97) 0.044**
Married	39 (21.9)	139 (78.1)		**Ref:**
Age				
20-29	73 (50.3)	72 (49.7)		0.50 (0.22, 1.15) 0.103
30-39	28 (31.5)	61 (68.5)	**23.52 (0.000)**	0.62 (0.31, 1.26) 0.186
40 and above	33 (23.4)	108 (76.6)		Ref:
Rank				
Certified Registered Nurse	57 (49.6)	58 (50.4)		1.55 (0.74, 3.28) 0.248
Nurse Officer	27 (23.7)	87 (76.3)	**16.93 (0.000)**	**2.62 (1.31, 5.23) 0.006**
Senior/Principal/DNS	50 (34.2)	96 (65.8)		**Ref:**
Number of years of experience				
< 5 years	85 (45.9)	100 (54.1)		0.78 (0.32, 1.91) 0.585
5-10 years	29 (24.4)	90 (75.6)	**16.86 (0.000)**	1.12 (0.53, 2.38) 0.771
> 10 years	20 (28.2)	51 (71.8)		**Ref:**
Working hours per a day				
1-6 hours	31 (54.4)	26 (45.6)		0.53 (0.25, 1.15) 0.108
7-9 hours	77 (32.6)	159 (67.4)	**10.21 (0.006)**	**1.76 (0.22, 0.92) 0.037**
>9 hours	26 (31.7)	56 (68.3)		**Ref:**
Do you do any extra work				
Yes	60 (30.6)	136 (69.4)	**4.69 (0.030)**	**1.84 (1.41, 3.25) 0.032**
No	74 (41.3)	105 (58.7)		**Ref:**

(Data source: Field survey, 2025)

4.5 Effects of Occupational Stress among Nurses in both Government and Private Hospitals

As shown in **Table 4.8**, the majority (81.9%) of nurses reported experiencing physical health problems such as body pain, 36.3% have mental health challenges, most respondents (59.2%) agreed that patient care has reduced in their facility due to stress, 45.3% reported high nurse absenteeism in their facility, and 53.9% stated that staff turnover is high.

Table 4.8: Effects of Occupational Stress among Nurses

Variables	Frequency (N= 375)	Percentage %
Experience physical health problems like body pain		
Yes	307	81.9
No	68	18.1
Do you have mental health challenges		
Yes	136	36.3
No	239	63.7
Has patient care reduced in your facility		
Yes	222	59.2
No	153	40.8
Is nurse absenteeism high in your facility		
Yes	170	45.3
No	205	54.7
Is staff turnover high in your facility		
Yes	202	53.9
No	173	46.1

(Data source: Field survey, 2025)

Table 4.9: Effects of Occupational Stress among Nurses in between Government and Private Hospitals

Effects of Occupational Stress	Type of Hospital		X^2 (P-value)
	Government (%)	Private (%)	
Experience physical problem like body pain			
Yes	154 (50.2)	153 (49.8)	0.04 (0.845)
No	35 (51.5)	33 (48.5)	
Have mental challenge			
Yes	66 (48.5)	70 (51.5)	0.30 (0.585)
No	123 (51.5)	116 (48.5)	
Has patient care reduced in your facility			
Yes	108 (48.6)	114 (51.4)	0.67 (0.414)
No	81 (52.9)	72 (47.1)	
Nurses' absenteeism is high in my facility			
Yes	84 (49.4)	86 (50.6)	0.12 (0.727)
No	105 (51.2)	100 (48.8)	
High staff turnover in my facility			
Yes	96 (47.5)	106 (52.5)	1.45 (0.229)
No	93 (53.8)	80 (46.2)	

(Data source: Field survey, 2025)

Table 4.9 examines the effects of occupational stress among nurses between government and private hospitals. There were no association between any of the effects (such as physical problems like body pain, mental challenges, reduced patient care, high absenteeism, and high staff turnover) and the type of hospital.

4.6 Coping Strategies Adopted by Nurses in both Government and Private Hospitals

In **Table 4.10**, the majority (37.3%) of nurses agreed that they use positive self-talk to cope with stress at work ($p < 0.001$). About 34.1% remained neutral on talking to family, friends, or colleagues for stress relief. The majority (30.9%) agreed they try to control their emotions and reactions when under stress. Additionally, 28.8% were neutral about believing they are not responsible for stressful situations. Most participants (35.7%) agreed that they reward themselves to relieve stress, while 25.1% agreed they avoid or withdraw from stressful work situations.

Table 4.10: Coping Strategies Adopted by Nurses

Variables	Responses					(95%CI) P-value
	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly disagree (%)	
I use positive self-talk to help me cope with stress at work	80 (21.3)	140 (**37.3**)	89 (23.7)	49 (13.1)	17 (4.5)	**< 0.001**
I talk to family, friends, or colleagues to help manage my stress	49 (13.1)	118 (31.5)	128 (**34.1**)	64 (17.1)	16 (4.3)	**< 0.001**
I try to control my emotions and reactions when under stress	82 (21.9)	116 (**30.9**)	96 (25.6)	55 (14.7)	26 (6.9)	**< 0.001**
I believe I am not responsible for stressful situations at work	60 (16.0)	100 (26.7)	108 (**28.8**)	74 (19.7)	33 (8.8)	**< 0.001**
I reward myself with something I enjoy to relieve stress	69 (18.4)	134 (**35.7**)	94 (25.1)	59 (15.7)	19 (5.1)	**< 0.001**
I avoid or withdraw from stressful work situations	57 (15.2)	94 (**25.1**)	78 (20.8)	75 (20.0)	71 (18.9)	**< 0.001**

(Data source: Field survey, 2025)

Table 4.11 examines the coping strategies adopted by nurses between government and private hospitals. Seeking support from family and friends, rewarding oneself, and avoiding stressful situations were significantly associated with stress coping strategies, (χ^2=6.39, p=0.011), (χ^2=7.50, p=0.019), and (χ^2=10.12, p=0.001), respectively. Nurses who sought support from family and friends were 1.4 times more likely to adopt effective coping strategies compared to those who did not [AOR=1.40 (1.06–2.89), p=0.021]. Those who rewarded themselves were about 2 times more likely to cope effectively with stress compared to those who did not [AOR=2.18 (1.01–2.95), p=0.047]. Additionally, nurses who avoided stressful situations were 1.6 times more likely to adopt better coping mechanisms than those who did not [AOR=1.61 (1.02–2.514), p=0.042].

Table 4.11: Coping Strategies Adopted by Nurses between Government and Private Hospitals

Coping Strategies of Stress	Type of Hospital		X^2 (P-value)	AOR (95% CI) P-value
	Government (%)	Private (%)		
Use positive self-talk to cope				
Yes	101 (45.9)	119 (54.1)	**4.29 (0.038)**	1.37 (0.86, 2.18) 0.190
No	88 (56.8)	67 (43.2)		**Ref:**
Seek family and friends support to cope				
Yes	72 (43.1)	95 (56.9)	**6.39 (0.011)**	**1.40 (1.06, 2.89) 0.0.021**
No	117 (56.3)	91 (43.7)		**Ref:**
I try to control my emotions				
Yes	95 (48.0)	103 (52.0)	0.98 (0.321)	0.80 (0.48, 1.34) 0.394
No	94 (53.1)	83 (46.9)		**Ref:**
I reward myself to relieve stress				
Yes	91 (44.8)	112 (55.2)	**750 (0.019)**	**2.18 (1.01, 2.95) 0.047**
No	98 (57.0)	74 (43.0)		**Ref:**
I avoid stressful situation				
Yes	61 (40.4)	90 (59.6)	**10.12 (0.001)**	**1.61 (1.02, 2.514) 0.042**
No	128 (57.1)	96 (42.9)		**Ref:**

(Data source: Field survey, 2025)

CHAPTER FIVE

DISCUSSION

5.1 Introduction

This chapter discusses the key findings of the study, which conducted a comparative analysis of occupational stress among nurses working in government and private hospitals within the Ashanti Region of Ghana. The discussion is structured around the study's specific objectives, which include determining the level of occupational stress; identifying and comparing the factors influencing stress; examining the effects of stress; and analysing coping strategies used by nurses in both sectors. The findings are critically examined in relation to existing literature on occupational health, workplace stress, and healthcare workforce wellbeing. The discussion also considers the broader implications for health system strengthening, policy formulation, and the design of supportive interventions to mitigate stress and enhance productivity among nurses in both sectors.

5.2 Level of Occupational Stress among Nurses in Government and Private Hospitals

The current study revealed a generally moderate to high level of occupational stress among nurses working in both government and private hospitals in the Ashanti Region. Notably, a considerable proportion of respondents (31.7%) agreed that they often feel overwhelmed by their work, which indicates the high demands placed on nursing professionals, regardless of the healthcare setting. This finding aligns with prior studies which reported high levels of work-related stress among nurses in sub-Saharan Africa, largely attributed to workload, staffing shortages, and inadequate support systems (Omotosho *et al.,* 2025; Owuor *et al.,* 2020). The feeling of being drained at the end of

a workday, as reported by 26.7% of respondents, further reinforces the assertion that occupational stress is prevalent in healthcare settings, particularly among frontline workers such as nurses. However, in contrast to this current study, several studies reported that over 50% of nurses in hospitals experienced emotional stress; the stress levels found in this study appear comparatively lower (King *et al.,* 2020; Shaninga, 2022). This discrepancy may reflect contextual differences such as workload intensity, resource availability, or support services between the regions studied(Wu *et al.,* 2025).

Interestingly, 32.0% of respondents agreed that they feel positive and in control at work, suggesting that despite stressors, some nurses retain a sense of professional efficacy and emotional resilience. This may be attributed to individual coping mechanisms, institutional support structures, or prior exposure and adaptation to high-stress environments (Ghasemi, 2025). This finding is consistent with other studies, which found that nurses with better control over their schedules and access to supportive supervisors reported lower stress levels and higher job satisfaction (Alkubati *et al.,* 2025; Cheyroux *et al.,* 2025). Yet, the neutrality of 28.0% of nurses regarding their ability to tolerate interruptions reflects uncertainty or ambivalence in stress response and adaptability, which may hint at underlying factors such as poor workflow planning or inconsistent administrative support. This calls for further investigation into the specific work environment characteristics of both hospital types.

Another noteworthy finding is that 24.8% of nurses reported feeling indifferent or less caring toward patients, which can be indicative of emotional exhaustion or burnout, a well-documented consequence of prolonged occupational stress (Spaeth, 2024). This supports previous research by Karakachian & Colbert (2019), who associated

emotional detachment with burnout in high-stress professions like nursing. Similarly, 26.1% of respondents affirmed that their workplace is generally a high-stress environment, a sentiment echoed in literature from Ghana and other LMICs where understaffing, poor remuneration, and long shifts are common (Alenezi *et al.,* 2024; Hutsell, 2024). However, 27.7% remained neutral on the issue of panicking or making mistakes at work, suggesting that while stress is acknowledged, its direct impact on performance errors remains less openly discussed, perhaps due to fear of blame or a lack of a safe culture for reporting psychological distress in the workplace. This highlights the need for organizational reforms to foster open communication, peer support, and access to mental health services.

These findings have several implications for healthcare administrators, policymakers, and stakeholders. First, the moderate levels of stress suggest the need for immediate intervention to prevent escalation to severe burnout and compromised patient care. Strategies such as periodic stress assessments, staff rotation, adequate staffing, and provision of rest periods are necessary. Furthermore, training in stress management, emotional intelligence, and resilience-building should be integrated into institutional capacity-building programs. Policymakers must prioritize nurse welfare and mental health in workforce planning. Importantly, differences between government and private hospitals in stress response should be explored further in subsequent analyses to tailor interventions appropriately.

The present study explored the level and determinants of occupational stress among nurses in government and private hospitals in the Ashanti Region. The findings revealed a significantly higher level of occupational stress among nurses in government hospitals

compared to their counterparts in private facilities. Specifically, nurses in government hospitals were more than twice as likely to experience high stress. This could be attributed to systemic differences in working conditions, such as higher patient loads, administrative bureaucracy, and resource constraints often characteristic of government health facilities (Manyisa & van Aswegen, 2017). In contrast, private hospitals are often better resourced, more flexible in management practices, and maintain better nurse-to-patient ratios, which can contribute to reduced work-related stress. The implication of this finding is critical, as chronic occupational stress not only impacts the mental and physical health of nurses but also affects the quality of care provided to patients(Al-Hrinat *et al.,* 2024). Therefore, interventions aimed at improving working conditions in government hospitals such as staff redistribution, workload reduction, and better resource allocation are urgently needed to mitigate occupational stress among nurses.

Additionally, the study found that nurses in government hospitals were 8% less tolerant of workplace interruptions than their counterparts in private hospitals, and were about 78% more likely to become less caring toward patients. This reduced tolerance and emotional exhaustion among government nurses may reflect cumulative burnout, consistent with the Job Demand-Resource (JD-R) model, which posits that high job demands coupled with inadequate support lead to emotional fatigue and depersonalization (Baker, 2023). The fact that nurses in government hospitals are more likely to become emotionally detached may signal compromised professional quality of life and potentially reduced patient satisfaction. A similar study by Todaro-Franceschi (2024) found that burnout was significantly associated with emotional detachment among healthcare providers in public institutions. To counter this, policies that promote emotional support systems, including regular counselling sessions, peer

support groups, and stress-relief programs, should be integrated into public hospital management strategies.

Demographic characteristics were also significantly associated with stress levels. Marital status, age, rank, and years of experience were all significant predictors of occupational stress. Married nurses were nearly three times more likely to experience high stress levels compared to their unmarried counterparts, possibly due to the additional responsibilities of managing both professional and family roles. This supports earlier findings by Bennin (2024), who observed that work-family conflict was a major source of stress among married nurses. Older nurses (aged 40 and above) were also found to be twice as likely to report high stress levels, which may be due to accumulated job fatigue and age-related health challenges. Contrary to expectations, however, senior/principal nurses were 57% less likely to experience high stress than certified registered nurses. This may reflect their greater autonomy, experience, and coping strategies developed over time, aligning with the transactional theory of stress which highlights the importance of individual appraisal and coping mechanisms(de Cordova *et al.,* 2024).

Moreover, nurses with over 10 years of experience were about twice as likely to report high stress levels [AOR = 1.99 (1.01–3.90), p = 0.045]. This finding contrasts with the assumption that more experience equates to better stress management (de Lucena Coelho & Kunze, 2025; Oliveira, 2025). It is possible that long-term exposure to demanding work environments without adequate institutional support leads to emotional exhaustion and burnout over time. This highlights the need for continuous professional development, job rotation, and recognition of long-serving staff to boost

morale and prevent career fatigue. Also, management should consider tailoring stress reduction programs to different age groups, marital statuses, and experience levels. The evidence supports advocating for improved working conditions, especially in government hospitals, and implementing support systems to ensure the mental and physical well-being of nurses, ultimately translating into improved patient care.

5.3 Predictors of Occupational Stress among Nurses in Government and Private Hospitals

The current study identified several significant predictors of occupational stress among nurses in both government and private hospitals in the Ashanti Region, Ghana. Notably, a high percentage (81.1%) of respondents reported that emotional stress, particularly about patient deaths, adversely affected them at work. This finding is consistent with previous studies that have emphasized the emotional toll of nursing, especially in high-mortality wards or under-resourced health systems(Kalyan *et al.*, 2025; Nagel, 2025). Emotional burden is recognized as a core element of compassion fatigue and burnout, which can ultimately affect performance, well-being, and staff retention(Todaro-Franceschi, 2024). This underscores the need for institutions to provide regular psychological support, peer debriefing, and grief counselling services to help nurses cope with such traumatic experiences, as recommended by WHO (2023).

Additionally, a majority of nurses (61.1%) reported working with inadequate resources, highlighting a persistent challenge in many health facilities in low- and middle-income countries (LMICs). This finding supports the results of Terefe et al. (2025), who found that insufficient medical equipment, lack of personal protective equipment, and poor infrastructure significantly contribute to occupational stress among Ghanaian nurses

(Poku *et al.*, 2025). This could reflect localized recruitment improvements or better staff retention strategies in specific institutions. Nonetheless, while staff numbers may be adequate, the lack of essential tools and logistical support appears to compromise job performance and increase frustration, calling for targeted policy interventions to improve supply chain and equipment availability.

Workload and compensation also emerged as key stressors. A large proportion of respondents (69.6%) indicated they had a heavy workload per shift, while 61.6% stated that they were not paid for overtime. This is in line with earlier studies, which associated long shifts and unpaid labour with nurse burnout and dissatisfaction (Emmanuel, 2025; Moreno-Martínez & Sánchez-Martínez, 2025). Furthermore, 64.3% of respondents expressed dissatisfaction with their salaries, reinforcing the notion that poor remuneration is a significant demotivating factor for health workers in Ghana. Interestingly, over half of the participants (58.4%) felt recognized for good work, suggesting that non-financial incentives such as praise and appreciation may still play a meaningful role in job satisfaction. However, this is insufficient to fully buffer against financial stressors. Addressing workload demands through task-shifting, staff rotation, and equitable compensation policies is crucial in reducing stress and improving retention.

Social and supervisory dynamics also influenced stress levels. About 61.9% of nurses reported being supervised by senior staff, which may offer guidance and accountability, contributing to professional development and structured workflow. However, 48.3% of participants expressed dissatisfaction with the attitudes of colleagues, indicating that interpersonal conflicts and poor teamwork may exacerbate stress levels. Positive staff

relationships are known to buffer occupational stress and promote workplace harmony(Prasanth *et al.,* 2024). Moreover, while 56.0% stated they were free to choose their work methods, family-related challenges (reported by 58.1%) added another layer of stress, pointing to the blurred boundary between personal and professional life. These findings suggest the need for healthcare managers to implement team-building programs, foster collegial respect, and offer work-life balance initiatives such as flexible scheduling.

The current study examined organizational and demographic factors that significantly predict occupational stress among nurses in both government and private hospitals. The study revealed, that workplace recognition and payment for overtime are protective factors against stress. Specifically, nurses who were recognized for good work were 43% less likely to experience occupational stress, and those who received overtime pay were 54% less likely to report stress. These findings are in line with Herzberg's Two-Factor Theory, which identifies recognition and fair compensation as key motivators that enhance job satisfaction and reduce stress (Susetyo *et al.,* 2025). Previous studies have similarly shown that lack of recognition and inadequate compensation contribute to burnout, dissatisfaction, and emotional fatigue among nurses (Andina-Díaz *et al.*, 2025; Jaber *et al.,* 2025). The implication of this finding is profound; healthcare managers must institutionalize reward systems and enforce equitable remuneration for overtime to promote a supportive work culture and minimize stress among nurses.

Further analysis revealed that salary satisfaction among nurses was significantly associated with several demographic variables. Marital status emerged as a notable factor, with single nurses being 55% more likely to express satisfaction with their salaries compared to married counterparts. This may be due to fewer financial

responsibilities and dependents among single individuals, which allows them to perceive their earnings more favourably (Treas & Wang, 2024)). This finding is consistent with the work of Yusof *et al.* (2024), who noted that married nurses often experience greater financial strain due to family obligations, influencing their perception of income adequacy. Hence, this suggests that salary and incentive policies should consider family-oriented benefits or allowances for married nurses to enhance satisfaction and retention.

Rank within the nursing profession also significantly influenced salary satisfaction. Nurse officers were over two times more likely to be dissatisfied with their salaries than senior or principal nurses. This disparity may stem from differences in job security, decision-making power, and income levels associated with higher ranks. It aligns with prior findings indicating that lower-ranked staff often feel undervalued and inadequately compensated compared to their senior colleagues (Dinh, 2024). To address this, career development opportunities, transparent promotion criteria, and periodic salary reviews for lower-ranked nurses should be prioritized to foster equity and motivation in the workplace.

Working conditions, particularly work hours and extra duties, were also important predictors of salary satisfaction. Nurses working between 7–9 hours daily were 76% more likely to be satisfied with their salary compared to those working more than 9 hours, suggesting that longer working hours may lead to perceptions of being overworked and underpaid. Additionally, nurses who engaged in extra work beyond their core duties were nearly twice as likely to be dissatisfied with their salaries.

These results echo the findings of Khateeb (2025), who reported that excessive workload without proportional compensation contributes significantly to job dissatisfaction and stress. The implication is that reducing unnecessary workload and ensuring that all extra tasks are appropriately compensated can significantly improve salary satisfaction and overall staff morale. Taken together, these findings highlight the need for equitable compensation structures, recognition systems, and workload management strategies tailored to the unique needs of nurses across different hospitals and demographic categories.

5.4 Effects of Occupational Stress among Nurses in Government and Private Hospitals

The present study revealed significant physical and mental health effects of occupational stress among nurses working in both government and private hospitals in the Ashanti Region. A majority of respondents (81.9%) reported experiencing physical health issues such as body pain, suggesting that prolonged standing, heavy workloads, and poor ergonomic conditions are contributing factors. This aligns with findings from studies by Erasmus (2024) and Adams *et al.* (2024), which indicated that musculoskeletal disorders and fatigue are common outcomes of stress among healthcare workers in low-resource settings. Additionally, 36.3% of nurses admitted to having mental health challenges, a result consistent with global research emphasizing the psychological toll of nursing work, particularly in environments with high patient loads, insufficient breaks, and limited psychosocial support (Ali & Shaban, 2025; Al-Jaziri, 2019). These findings highlight the dual burden of physical and emotional strain among nurses and the urgent need for workplace interventions such as regular health screenings, mental health counselling, and stress management training.

The effect of occupational stress on patient care and service delivery was also evident. A significant portion (59.2%) of the nurses agreed that stress has negatively impacted the quality of care in their facilities. This supports earlier studies by Taqtoq (2024) and Alexander (2024), which documented how overworked and emotionally drained nurses tend to provide suboptimal care, delay treatment processes, and are more prone to errors. Moreover, 45.3% of respondents reported high nurse absenteeism in their institutions, which further exacerbates the stress cycle by increasing workload for the remaining staff and disrupting continuity of care. While some studies by Klootwijk *et al.* (2025) in high-income countries have shown lower absenteeism due to stronger institutional support systems, the findings from the current study reflect the structural and resource-related constraints prevalent in many Ghanaian health facilities. Addressing these issues requires not only staff wellness programs but also administrative reforms to ensure balanced staffing and reasonable workload distribution.

Another notable finding is the high staff turnover reported by 53.9% of respondents. This suggests that many nurses may be leaving their jobs due to unmanageable stress levels, inadequate compensation, and limited career progression opportunities. Similar patterns have been observed in other African contexts, where health worker migration and attrition pose serious challenges to health system sustainability (Amouzou *et al.*, 2025; Oke & Health, 2025). The implications are profound, as frequent turnover leads to a loss of institutional knowledge, reduced team cohesion, and increased training costs. To mitigate this, health facility managers and policymakers must prioritize nurse retention strategies such as timely promotions, fair remuneration, access to continuous professional development, and a supportive work environment. Overall, the findings

reinforce the critical need for holistic occupational health policies that protect the physical and mental well-being of nurses while enhancing the efficiency and resilience of the healthcare system.

The current study further assessed the effects of occupational stress among nurses in both government and private hospitals and found no significant associations between hospital type and reported stress-related outcomes. As identified, physical problems such as body pain, mental health challenges, reduced quality of patient care, high absenteeism, and staff turnover occurred similarly across both hospital types. This suggests that, regardless of institutional setting, the impact of occupational stress manifests uniformly among nurses, reflecting the demanding nature of the nursing profession itself. These findings align with previous studies, which emphasize that the nursing role is inherently stressful due to long hours, emotional labour, and high patient acuity (Hassan & Elsayed, 2025; Trombley, 2024). The lack of difference also implies that interventions targeting stress effects should not be limited to one type of facility but implemented across both sectors. Hospital administrators should therefore adopt universal stress-reduction strategies such as mental health support, regular breaks, and employee wellness programs to address the adverse outcomes of occupational stress.

5.5 Coping Strategies Adopted by Nurses in Government and Private Hospitals

The current study explored the coping strategies adopted by nurses in both government and private hospitals in the Ashanti Region to manage occupational stress. A significant proportion of participants (37.3%) reported using positive self-talk as a key coping mechanism, suggesting that cognitive behavioural strategies are commonly employed

to regulate emotional responses in stressful work environments. This aligns with findings by Rose (2024), who identified positive self-talk as a key element in emotion-focused coping. Studies in Ghana also emphasized the usefulness of such internal coping techniques among healthcare workers in emotionally demanding roles (Komesuor *et al.,* 2024; Nkyi & Baaba, 2024). This finding is particularly relevant in resource-limited settings where formal institutional support is often inadequate, prompting nurses to rely on personal resilience strategies to navigate workplace challenges.

Another prominent coping method observed was emotional regulation, with 30.9% of participants agreeing that they try to control their emotions and reactions during stressful periods. This aligns with the findings of Mitchell *et al.* (2025), who reported that nurses who exhibit high emotional regulation are more likely to maintain professional conduct, reduce interpersonal conflicts, and provide consistent care even under pressure. Conversely, only a modest percentage (34.1%) felt comfortable discussing their stress with family, friends, or colleagues, with many remaining neutral. This suggests that while interpersonal communication can be a valuable coping tool, cultural norms around emotional disclosure, fear of stigma, or lack of time may prevent nurses from seeking social support. In comparison, healthcare workers in Western contexts often report higher engagement in peer debriefing and external counselling as coping strategies, highlighting differences in coping cultures and access to mental health services (Cogan *et al.,* 2024).

Additional coping mechanisms observed include self-rewarding behaviour (35.7%) and avoidance or withdrawal from stressful situations (25.1%). Rewarding oneself for hard

work may serve as a motivation booster and a form of positive reinforcement. This finding supports earlier work, which found that nurses in Ghana often engage in self-care rituals, such as leisure activities and small treats, as part of their stress management (Shen *et al.,* 2024; Xu *et al.,* 2024). However, the use of avoidance strategies, though common, can be maladaptive if it leads to disengagement from critical tasks or patient care. Nurses who avoid stressful work scenarios may initially experience relief but may also suffer from long-term professional dissatisfaction or decreased performance. Therefore, while personal strategies are helpful, they must be complemented by institutional coping supports such as stress management workshops, confidential counselling services, and healthy work environments. The study highlights the need for tailored interventions that integrate both individual and organizational coping approaches to improve resilience and well-being among nurses in both public and private healthcare facilities.

The current study explored coping strategies adopted by nurses in both government and private hospitals and found significant associations between certain personal coping mechanisms and effective stress management. Seeking support from family and friends emerged as a crucial strategy, with nurses who relied on such social support being 1.4 times more likely to cope effectively with occupational stress. This finding aligns with the stress-buffering hypothesis, which suggests that emotional support can moderate the negative effects of stress (Cohen & Wills, 1985). Social interaction helps nurses process workplace stressors, providing both emotional relief and practical advice, regardless of whether they work in public or private settings.

In addition, self-rewarding behaviours such as engaging in enjoyable activities or giving oneself treats were positively associated with effective stress coping. Nurses who practiced self-reward were nearly twice as likely to cope effectively with stress compared to those who did not. This is consistent with the theory of self-care and positive reinforcement, where individuals who recognize and reward their efforts are more likely to maintain psychological well-being (Wise *et al.,* 2012). It highlights the importance of promoting self-care strategies among nurses to enhance their resilience and motivation in the face of work-related challenges.

Furthermore, nurses who deliberately avoided stressful situations were 1.6 times more likely to demonstrate effective coping mechanisms. Avoidance, although sometimes viewed as a passive strategy, may serve a protective function in high-stress environments like hospitals by minimizing exposure to emotionally draining situations (Secor, 2003). However, prolonged use of avoidance can also lead to unresolved stress and burnout if not balanced with active problem-solving. Therefore, while avoidance can be temporarily beneficial, healthcare institutions should provide structured support systems, such as stress management training and counselling services, to promote long-term psychological resilience.

CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a summary of the key findings from the study, which investigated occupational stress among nurses in government and private hospitals in the Ashanti Region of Ghana. This chapter also discusses the limitations encountered during the study and proposes evidence-based recommendations aimed at mitigating stress among nurses and improving their overall well-being. The chapter concludes with strategic suggestions for policy formulation, clinical practice, and areas for future research to enhance occupational health and workforce sustainability within Ghana's healthcare system.

6.2 Summary of the Key Findings

The majority of participants (56.8%) were female, 38.7% were aged 20–29 years, 47.7% were single, and 49.3% had less than 5 years of working experience. Most respondents (62.9%) worked between 7–9 hours daily, with over half (52.3%) reporting engagement in extra work beyond their routine duties. Government hospital nurses constituted 50.4% of the sample, while 38.9% were ranked as Senior/Principal/DNS. Occupational stress was prevalent, with 31.7% of nurses often feeling overwhelmed and 26.7% reporting they felt drained after work. Nurses in government hospitals were 8% less tolerant to interruptions [AOR=0.92, p=0.043], 78% more likely to feel indifferent toward patients [AOR=1.78, p=0.030], and over twice as likely to report high stress [AOR=2.43, p=0.039] than those in private hospitals.

Married nurses were nearly three times more likely to experience high stress than their single counterparts [AOR=2.81, p=0.027], and older nurses (40+) were twice as likely to report stress [AOR=2.13, p=0.041]. Senior/principal nurses were 57% less likely to experience high stress [AOR=0.43, p=0.044], while those with over 10 years of experience were twice as likely to experience stress [AOR=1.99, p=0.045]. Predictors such as recognition for good work [AOR=0.57, p=0.042] and payment for overtime [AOR=0.46, p=0.033] significantly reduced stress. Salary satisfaction was significantly associated with marital status, rank, working hours, and doing extra work. Single nurses were more satisfied with their pay [AOR=0.45, p=0.011], while nurse officers were over two times more dissatisfied than senior/principal nurses [AOR=2.62, p=0.006].

Most nurses (81.9%) reported physical health problems due to stress, 36.3% indicated mental health issues, and 59.2% observed reduced patient care. High absenteeism (45.3%) and staff turnover (53.9%) were also reported, though these effects were not significantly different across hospital types. Coping strategies such as positive self-talk (37.3%), emotional control (30.9%), and self-reward (35.7%) were commonly used. Nurses who sought support from family/friends [AOR=1.40, p=0.021], rewarded themselves [AOR=2.18, p=0.047], or avoided stressful situations [AOR=1.61, p=0.042] were more likely to manage stress effectively. These findings highlight key demographic and organizational influences on stress and underscore the need for targeted interventions in both government and private health facilities.

6.3 Conclusion

The study revealed that a significant proportion of nurses in both government and private hospitals in the Ashanti Region experience high levels of occupational stress. Nurses in government hospitals were more likely to report challenges such as difficulty tolerating interruptions and emotional detachment from patients, indicating that work-related stress is more intense in the public sector. This imply that nurses' stress can harm their well-being and patient care. These findings emphasize the need for institutional reforms to address workload management and provide a more supportive work environment.

The study found out that; marital status, age, professional rank, and years of experience were significant predictors of occupational stress. Married and older nurses, as well as those with longer work experience, were more susceptible to stress, while higher-ranking nurses were less likely to report stress. The findings imply that stress among nurses is influenced by personal and professional factors, with older, married, and more experienced nurses being more vulnerable, while higher-ranking nurses experience less stress, highlighting the need for targeted support and workplace interventions.

Additionally, recognition for good work and overtime pay significantly reduced the likelihood of stress. These findings highlight the importance of fair compensation, acknowledgement, and professional development in reducing stress among healthcare workers.

The study further established that occupational stress had adverse effects on nurses' physical and mental well-being, including body pains, emotional exhaustion, reduced patient care, high absenteeism, and staff turnover. Although these effects were not

significantly different between public and private hospitals, their overall prevalence underscores the urgent need for mental health support systems within healthcare facilities to safeguard staff welfare and ensure quality patient care.

Finally, the study demonstrated that nurses adopted various coping strategies to manage occupational stress. Positive self-talk, seeking support from family and friends, rewarding oneself, and avoiding stressful situations were common coping mechanisms. These strategies were significantly associated with reduced stress levels. Therefore, promoting healthy coping strategies and integrating stress management training into nursing practice is essential for improving the mental resilience of nurses in both public and private healthcare settings.

6.4 Recommendations

6.4.1 Policy makers

Ghana Health Service (GHS)

- GHS should implement structured stress management programs in all public healthcare facilities, focusing on training nurses in positive coping strategies.
- GHS should improve resource allocation, ensure adequate staffing, and institutionalize systems for recognizing and rewarding outstanding performance to enhance job satisfaction and reduce stress.

Ministry of Health (MoH), Ghana

- The Ministry should revise national occupational health policies to integrate mental health support services for nurses, including counselling and periodic wellness checks.

- MoH should promote policies that enforce fair compensation, including timely payment for overtime, to reduce financial-related stress among nurses.

6.4.2 Practice

Hospital Management Boards

- Hospital administrators should routinely assess staff workload, create flexible work schedules, and foster a supportive environment that encourages teamwork and emotional well-being.
- Facilities should introduce recognition systems and staff appreciation initiatives to motivate healthcare professionals and reduce burnout.

6.4.3 Participants

Nurses are encouraged to practice self-care through positivity, social support, self-rewards and managing exposure to stressful situations.

6.4.4 Future Research

- Future studies should adopt longitudinal or mixed-method approaches to examine the long-term impacts of occupational stress and coping strategies among nurses across different regions of Ghana.
- Further research should explore institutional and policy-level barriers to implementing effective occupational stress management practices in the healthcare sector.

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APPENDICES

APPENDIX I
QUESTIONNAIRE FOR THE STUDY

I humbly request your attention on this instrument to solicit information on the topic "Occupational Stress Among Nurses in Ghana: A Comparative Study Between Government Hospitals and Private Hospitals in Ashanti Region". I am an MPhil Public Health student from the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development. I would be grateful if you could answer the questions bearing in mind that your honest responses will go a long way to determine the overall success of this exercise. This work is strictly for academic purposes so information given will be treated with absolute confidentiality. Thank you for your cooperation.

Please express your consent by ticking Yes /No

ADMINISTRATIVE SECTION

INTERVIEWER	DATE OF INTERVIEW	QUESTIONNAIRE CODE

Please tick the appropriate option of the answers provided for closed and open-ended questionnaires below:

SECTION A: DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

1. Gender: Male [1], Female [0]
2. Marital status: Single [0], Married [1], Separated [2], Widowed [3], Widower [4]
3. What was your age at last your birthday?

   20 - 24 [1]

   30 – 39 [2]

   40 – 49 [3]

   50 – 59 [4]

4. Rank/Grade:
   i. Certified Registered Nurse [1]
   ii. Senior Staff Nurse [2]
   iii. Nurse Officer [3]
   iv. Senior Nurse Officer [4]
   v. Principal Nurse Officer [5]
   vi. Deputy Director of Nursing [6]
   vii. Director of Nursing [7]

5. Type of Health facility: Government hospital [1] Private hospital [2]
6. Number of years of experience …….

SECTION B: LEVEL OF OCCUPATIONAL STRESS AMONG NURSES
Please tick (√) against the word or sentence that is most applicable to you.
Key: 5-Strongly agree; 4-Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree

LEVEL OF OCCUPATIONAL STRESS AMONG NURSES	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Have you ever felt incapacitated or overwhelmed by work-related stress?					
Do you feel tired in the morning and hate to face another day at work?					
At the end of a working day do you feel used up/drained from work?					
At work do you feel positive/energetic and in control of your surroundings?					
I find it difficult to tolerate interruptions while I am working.					
At work, do you feel that you have started caring less, or become indifferent or even callous towards your patients?					
In your opinion, would you say there is a high level of					

stress among nurses in your institution?					
I worry that I might find myself in situations in which I might panic and make a mistake at work.					

SECTION C: FACTORS THAT INFLUENCE OCCUPATIONAL STRESS AMONG NURSES

Please tick (√) against the word or sentence that is most applicable to you.

KEY: (1) YES, (2) NO

FACTORS THAT INFLUENCE OCCUPATIONAL STRESS AMONG NURSES	**(1) YES**	**(2) NO**
Do you encounter negative patient outcomes at work (e.g., death or permanent disability)?		
Do you have to work with inadequate or sub-standard resources, equipment, and supplies?		
Are the appropriate and qualified nurses' staff available when you need to work? (Scrub nurses, surgeons, etc.)?		
Are you supervised by senior colleagues and management at work?		
Are facing challenges from your family?		
Are you given the freedom to choose your methods and techniques at work?		
Is your workload heavy per shift?		
Are you recognized for doing a good job at work? (e.g., managing very difficult cases with good outcomes)?		
Are you paid an overtime allowance for working more hours than your shift requires in a day?		
Are you dissatisfied with other nurses' attitudes toward you?		
Do you enjoy good remuneration at your workplace?		

SECTION D: EFFECTS OF OCCUPATIONAL STRESS AMONG NURSES

Please tick (√) against the word or sentence that is most applicable to you.

KEY: (1) YES, (2) NO

EFFECT OF OCCUPATIONAL STRESS ON NURSES	**(1) YES**	**(2) NO**
Are you suffering from any physical health problems such as waist pains, back pains, body pains, and headaches?		
Do you have any of these mental health issues such as anxiety, depression, frustrations, poor concentration, and ineffective family life?		
Is there a reduction in patient care in your health facility?		
Is there a high rate of nurse absenteeism at your health facility?		
Is there a high staff turnover at your health facility?		

SECTION E: COPING STRATEGIES OF OCCUPATIONAL STRESS AMONG NURSES

Please tick (√) against the word or sentence that is most applicable to you.

Key: 5-Strongly agree; 4-Agree; 3=Neutral; 2=Disagree; 1=Strongly disagree

COPING STRATEGIES OF OCCUPATIONAL STRESS AMONG NURSES	**Strongly Disagree (1)**	**Disagree (2)**	**Neutral (3)**	**Agree (4)**	**Strongly Agree (5)**
Positive self-instructions (e.g. I tell myself that I can cope with this)					
Peer support/ Spending time with family and friends (e.g. (I try to talk to somebody about the problem Self-blame Attributes stress to one's mistakes (I blame myself).					
Reaction control (e.g. I tell myself that I must not lose my temper)					
Denial of guilt. (e.g. I think that I am not responsible for the situation)					

Substitute gratification (e.g. l give me something that l desired for a long time)					
Situation control. (e.g. I plan how to solve the difficulties involved)					
Escape (e.g. tend to run away from the situation)					

SECTION F: PREVENTION OF WORK-RELATED STRESS AMONG NURSES

1. **Briefly explain how occupational stress can be prevented in our health facilities in Ghana.**

   ……

   ……

   ……

   ……

   ……

   ……..

APPENDIX II

APPROVAL LETTER FROM THE STUDY SITE

In case of reply the number and the date of this letter should be quoted

My Ref: GHS/ASH/SUP
Your Ref. No:

Email: rdhs.ar@ghsmail.org
Tel: 233 -0320-22089/23651
Fax: 233-0320-26219

GHANA HEALTH SERVICE
REGIONAL HEALTH DIRECTORATE
P. O. BOX 1908
KUMASI
14TH MARCH, 2024.

THE CHAIRPERSON
GHANA HEALTH SERVICE ETHICS REVIEW COMMITTEE
RESEARCH AND DEVELOPMENT DIVISION
P O BOX MB 190
ACCRA.

LETTER OF SUPPORT

Mr. Benjamin Antwi Boasiako, an MPhil Student at the Akenten Appiah-Menka University (AAMUSTED), intends to conduct a study titled ***"Work related Stress among Nurses in Selected Facilities in Ashanti Region".***

The Regional Health Directorate has given approval for the study on condition that ethical approval is obtained from your outfit.

Kindly provide him with the necessary support needed for the study.

Thank You

DR. EMMANUEL K. TINKORANG
REGIONAL DIRECTOR OF HEALTH SERVICES
ASHANTI REGION

Cc: Mr. Benjamin Antwi Boasiako (Principal Investigator)