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FACULTY OF PUBLIC HEALTH

DEPARTMENT OF COMMUNITY HEALTH

ASSESSING THE IMPACT OF WORKPLACE STRESS ON MENTAL HEALTH AMONG HEALTH WORKERS: A CASE STUDY OF THE 37 MILITARY HOSPITAL IN ACCRA, GHANA

BY

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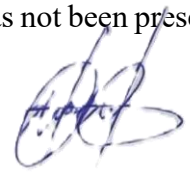
DECLARATION

I hereby certify that, except for references to other people's work, which I have duly cited, this project submitted to the Department of Community Health, Ensign Global University, Kpong, is the result of my own investigation and has not been presented for any other degree elsewhere.



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DEDICATION

I dedicate this work to the Almighty God for his immense grace and protection on my life and my journey through the program successfully. This work is especially dedicated to my family and Sgt Daniel Quarshie for their support and encouragement throughout this academic journey.

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I wish to express my profonde gratitude to the Almighty God for his grace, strength and wisdom to go through this journey. Also, special gratitude to my family for their support and encouragement.

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ABSTRACT

Background: The 37 Military Hospital in Accra is in a stressful working environment founded on the fact that it is a dual service provider as both a military and civilian provider of healthcare services. However, the degrees to which these pressure points are transcending to the psyche of the health workers and, to a large extent, in the military health establishments like the 37 Military Hospital, there is a lack of literature concerning empirical studies into their impact. To address this gap, a study will be conducted to determine the impacts of workplace stress on the mental health of health workers at the 37 Military Hospital.

Methodology: This study adopted a cross-sectional quantitative design, which allowed for the collection of quantitative data at a single point in time. This approach enabled the researcher to measure the prevalence and patterns of workplace stress and mental health outcomes (depression, anxiety, and stress levels) among health workers. This design was appropriate for this research because it facilitated the simultaneous examination of prevalence of depression, anxiety and stress within the institutional context of a military hospital.

Conclusion: The study revealed a high prevalence of depression, anxiety and stress among the clinical health workers. Therefore, policy makers and mental health professionals should advocate for platforms for regular dialogue with frontline staff to identify workplace challenges and implement timely solutions. Further studies should be conducted to examine the economic implications of workplace stress on healthcare delivery, including costs associated with absenteeism, turnover, and reduced productivity.

Keywords:

Mental Health, Depression, Anxiety, Stress, 37 Military Hospital, Ghana

List of Abbreviations

AOR	Adjusted Odds Ratio
CI	Confidence Interval
DASS-21	Depression Anxiety Stress Scale – 21 Items
GHS	Ghana Health Service
HCWs	Health Care Workers
IRB	Institution Review Board
JDC	Job Demand-Control
LMICs	Low-Middle Income Countries
OR	Odds Ratio
PTSD	Post-Traumatic Stress Disorder
SD	Standard Deviation
STATA	Statistics and Data Analysis (Software)
WHO	World Health Organization

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CHAPTER 1

1.0 Introduction

1.1 Background Information

Laser work stress is being recognised across the world as a leading factor of mental illness among medical workers. According to the World Health Organisation (2021), occupational stress is one of the most important risk factors when it comes to developing depression, anxiety, burnout, and even physical diseases, including cardiovascular diseases. The situation is especially dangerous in the healthcare sector, as it is an emotionally heavy job that often implies physical efforts. The professionals in the health field constantly face life-threatening situations, patient pain and distress, and the stress of having to make quick, high-risk decisions that have life-and-death consequences. They are further coupled with long work hours, poor sleep, and numerous patients in relation to the staff members, thus resulting in emotional fatigue and depersonalisation, two of the main burnout dimensions (Maslach & Leiter, 2016).

Mheidly, Fares, and Fares (2020) also state that the culture of being resilient and self-sacrificing exposes health workers to the risk of internalising stress because the professional culture promotes the discussion of mental health issues and disregards the needs of the health workers themselves. Moreover, excessive paperwork and electronic health record systems, as well as bureaucratic workloads, aggravate the effect of occupational stress, exposing professionals to fewer opportunities to attend to the patients and making them more frustrated.

The issue is complemented in the scenario of Ghana by structural and infrastructural issues. Chronic understaffing, poor medical supplies, and outdated equipment add to the burden already overworked healthcare workers are facing, note Kusi-Mensah et al. (2021). Most of the hospitals work on a low budget, so it is compulsory to improvise and multitask, which often

leads to mental and physical problems for employees. Observations made by Ofori-Atta, Read, and Lund (2010) also point out how the problem is further exacerbated by the fact that helping healthcare workers who are already under a lot of stress to access the needed mental healthcare services is not an easy task.

The crisis is especially sharp in tertiary and referral hospitals such as the 37 Military Hospital in Accra, where there is a combination of a civilian patient load, an environment of military discipline, an emergency situation and, hence, a high-stakes working environment. The fact that an organisational setting like this lacks a proper mental health system and coping resources to support the staff employed to work in it means that there is a critical necessity to conduct empirical research on the subject of workplace stress and psychological effects, which is why it must be considered urgent and essential.

1.2 Problem Statement

Irrespective of the high-pressure business and busy working environment at 37 Military Hospital that is characterised by long working shifts, military discipline and emergency responses, it can be noted that very few empirical studies have been conducted to understand the direct correlation between stress at the workplace and mental health among the care providers in this facility. Although past research has found that occupational stress in healthcare organisations contributes to poor mental health in the form of anxiety, depression, and burnout (WHO, 2021; Pappa *et al.,* 2020; Mheidly, Fares & Fares, 2020), little research has been done in Ghanaian hospitals in the military context. The limited body of research on stress among healthcare workers in Ghana (e.g., Kusi-Mensah *et al.,* 2021; Ofori-Atta, Read & Lund, 2010) is comparatively generalised across the realm of public health facilities, whereas the notion of stress in the context of military healthcare institutions, characterised by a

hierarchical organisation command structure, set of dual civil-military roles, and other specific stressors, remains understudied.

The absence of any specific empirical evidence is a major issue since it prevents the creation of interventions and policies specific to the needs of staff in this context of the 37 Military Hospital. Unless there is a clear picture of what stressors are and to what extent they affect the mind in this distinctive environment, institutional leaders and policymakers can only do so much in their responses. Thus, such a study attempts to address this dangerous knowledge deficit by examining the impact of workplace stress on the mental health of health workers of the 37 Military Hospital in Accra in a systematic manner.

1.3 Rationale of Study

Being aware of what stress is like in the workplace and how it affects mental health is the key to preserving the wellbeing, productivity, and sustainability of medical professionals in the long run. The staff members in any health system are also known as the healthcare professionals that are the most crucial part of the system, and their chronic burnout syndrome has a cascade effect on all parts of the health system because it impacts the patient safety, job retention rate, and the provision of healthcare services (Maslach & Leiter, 2016; WHO, 2021). Clinical decision-making may be reduced, and the level of medical errors may be raised with the influence of psychological disorders like burnout, anxiety, and depression, which result in absenteeism and inflated turnover (Pappa *et al.,* 2020; Shanafelt *et al.,* 2015). These effects weaken not only the quality of care given to the patients but also subject both the fiscal and operational pressure on the already strained healthcare institutions due to a shortage of resources.

The stakes are even higher in high-stress situations such as in the military hospitals, where rigidity in hierarchy in combination with an emergency requirement and lack of adequate

psychological support mechanisms compounds the intensity of the job. This situation is typical of the 37 Military Hospital in Accra, where the employees are forced to comply with the military standards while at the same time respecting the civic health care demands, frequently regarding acute shortages of time and resources. However, without context-specific information, any intervention is likely to become reactive, generic, or even assumption-based, which does not live up to the actual experiences of the personnel in such a unique environment.

The proposed study would fill this vital gap by providing strong, evidence-based information on the nature of the stressors that the health workers of the 37 Military Hospital experience, the magnitude and severity of associated mental health issues, and the current methods of coping. In such a manner, it will help to present the actionable data that can assist in formulating the development of the special-tailored stress management and mental health support policies not only to the military medical establishments but also to the other problematic areas where the conventional models of the support of the occupation might not be enough.

1.4 Conceptual Framework

As a theoretical framework, the study will rely on Karasek's (1979) Job Demand-Control (JDC) model, which is considered to be one of the major theoretical frameworks used in occupational health psychology research. The jobs which are largely linked to high job demands (e.g., heavy workload, time pressure, emotional labour) and low decision-making control (e.g., limited autonomy, no ability to control work processes) are most likely to cause psychological strain according to this model. According to Karasek, employees who are exposed to high-strain jobs have higher chances of succumbing to health issues that are stress-related, such as anxiety, burnout and depression. The model is of particular importance to the healthcare sector, as workers there are usually subjected to the atmosphere of a high workload and minimal

individual control over the work in which they are engaged, a state of affairs that is typical of facilities such as 37 Military Hospital.

Military hospital health workers can also experience the added issues of hierarchical order, combining military and civilian roles, and lack of accessibility to mental health services, all of which could increase the likelihood of psychological distress (Mheidly, Fares & Fares, 2020; Kusi-Mensah *et al.,* 2021). Implementing the JDC model in this setting will enable the study to determine not only the strength of job demands but also the perceived level of control and support that can be brought about to healthcare providers. Through this, the study will be able to predict better how changes in these factors are associated with mental health conditions of stress, anxiety and depression.

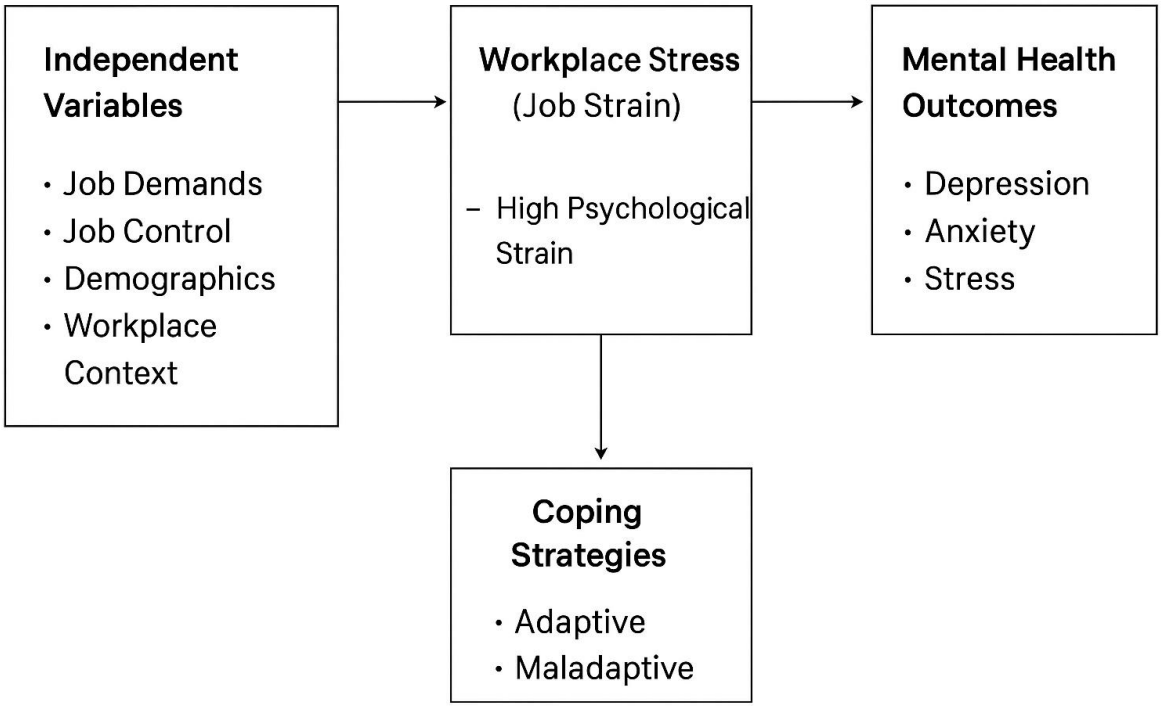

Figure 1

Figure 1 Job Demand-Control Model (Karasek, 1979)

1.5 Research Questions

1. What is the prevalence of depression, among the staff?
2. What is the prevalence of anxiety among the staff of the 37 Military Hospital?
3. What is the prevalence of stress among the health workers at the 37 Military Hospital?

1.6 General Objective

To assess the impact of workplace stress on the mental health of health workers at the 37 Military Hospital.

1.7 Specific Objectives

1. To determine the prevalence of stress issues among staff.
2. To evaluate the prevalence of depression among health workers.
3. To examine the prevalence of anxiety among the health workers.
4. To investigate the coping mechanisms adopted by the health workers.

1.8 Profile of Study Area

The 37 Military Hospital is a specialist hospital in Accra. It is located along the Liberation Road connecting the Kotoka International Airport to the Accra City Centre. It is the largest military hospital in Ghana. Because it was the 37th military hospital to be constructed in the British territory of West Africa, it was given the name 37 (Mensah, et al., 2014).

General George Giffard, a British army commander, founded the hospital in 1941. Its primary objective is to provide health care to military personnel and families, civilian employees of the Ministry of Defence and their families and ex-service men. In addition to these roles, it serves as the Government's Emergency and Disaster Hospital and the United Nations Level IV Hospital in the West Africa Sub-Region. Giffard also initiated the establishment of the 52

Military Hospital at Takoradi, which was eventually relocated to India. The 37 Military Hospital has currently been expanded and opened to the public; however, it is still predominantly manned by military personnel.

The hospital has roughly 600 beds in total. It has an Accident and Emergency Centre that is open 24 hours a day, as well as a Pharmacy. It also has an X-ray machine that operates 24 hours a day. Dental care, Gynaecology, Paediatrics and Laboratory are among the other services provided in the hospital.

In addition, the hospital serves as a teaching hospital for post-graduate medical students (Briggs, 2019). The departments at the hospital include a shopping mall, Accident & Emergency, Dental Division, Public Health Division, Medical Division, Psychiatry Department, Medical Reception Stations, Obstetrics & Gynaecology, Paediatric Division, Pathology Division, Radiology Division, Surgical Division, Veterinary Division, and Ear, Nose and Throat (ENT) Division.

Figure 2 Aerial View of the 37 Military Hospital

The choice of the facility is in the reflection of the fact that the study was devoted to peculiarities of the healthcare environment in Ghana and specific stressors of a military healthcare environment. The site-specific nature of the basic investigation contrasts with the generalisability of the multicentre studies, although it can be the deep, in-depth, context-sensitive investigation into a high-stress institutional facility, blending the military culture and medical urgency under resource constraints.

1.9 Scope of Study

The research was conducted in the Greater Accra Region with concentration on the 37 Military Hospital on the impact of workplace stress on the mental health of health workers. The study focused on active health workers in the facility. It explored the impact of workplace stress on the mental health of the health workers using key mental health indicators including depression, anxiety and stress. The findings are context-specific and may not be generalized to other military hospitals.

1.10 Organization of Report

This thesis consists of six independent but interconnected chapters. Chapter One, the introduction, sets the stage for the research with background, problem statement, research goals and questions, and the study's relevance, scope, and organizational framework.

Chapter Two presents a comprehensive review of current literature, incorporating relevant theoretical frameworks and empirical research on workplace stress and its implications for the mental well-being of healthcare workers. This chapter identifies the key concepts and topics in the current knowledge base, thereby laying the academic background and justification for this research. Chapter Three subsequently describes the methodology employed, specifying the

research design, population of study, sampling technique, data collection instruments, and methods. It also explains the data analysis methods employed and the ethical guidelines observed in the research process.

The substance of analysis in the thesis lies in Chapters Four and Five. Chapter Four presents a brief but organized summary of the research findings, utilizing statistical analysis and descriptive summaries in addressing each research goal. Chapter Five then offers a critical discussion and explanation of these findings in relation to the literature examined in Chapter Two. This discussion considers the impact of the findings and their nuanced meanings regarding the relationship between work stress and the consequences of mental health.

Lastly, Chapter Six is the thesis climax because it summarizes the overall findings from the study. Based on these findings, it provides actionable suggestions to pertinent stakeholders—such as hospital executives, health policymakers, and mental health practitioners—and outlines constructive paths for subsequent scholarly inquiry.

CHAPTER 2

2.0 Literature Review

2.1 Introduction

Healthcare workers (HCWs) are the pillars of delivering health systems, yet their profession exposes them to extreme occupational hazards that adversely affect mental well-being. While the COVID-19 pandemic highlighted these problems, the issues are system-based and intricately complex. This literature review synthesizes international and domestic data on sources and impact of stress on HCWs, namely work and non-work-related stressors, role problems, and working relationships. It provides background for an investigation of these in the unique circumstance of the 37 Military Hospital in Accra, Ghana, a facility with both national healthcare demands and a particular military organizational culture.

2.2 The Global Burden of Workplace Stress in Healthcare Settings

It is well documented and supported by substantial international literature that healthcare is one of the most stressful occupations worldwide. The JD-C model offers a valuable theoretical framework, suggesting that high levels of job demand (e.g., workload, emotional strain) drain energy and result in burnout whereas low job resources (e.g., support, autonomy) impede achievement and result in disengagement (Bakker & Demerouti, 2017). For HCWs this includes high administrative burdens, shift work, and moral distress in the face of not being able to provide optimal care in the setting of system-level constraints (Shanafelt et al., 2015). The psychological impact is profound. Burnout — defined in terms of emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment — is widespread among clinical personnel and is associated with depression, anxiety, and suicidal thinking (Maslach & Leiter, 2016).

The psychophysical condition of HCWs is not only individual level matter, but it is intertwined with organizational outcomes. Elevated levels of stress and burnout are also linked to lower job performance, higher rates of medical errors, decreased patient satisfaction, and population with higher staff turnover levels (Hall et al., 2016). Researchers have found that supportive leadership, peer support networks, and mental health access represent key resource in mitigating the effects of stress and fostering resilience (Ruotsalainen et al.,2015). But their affordance is extremely variable across health systems and organizations.

2.3 The Ghanaian and Low-Middle Income Countries Context

The general stressors of the health sector are exacerbated in LMICs like Ghana. Health systems in these regions typically grapple with fundamental problems like erratic power supply, unavailable essential drugs and equipment, and dilapidated infrastructure (Dzansi et al., 2020). HCWs in Ghana's government hospitals consistently suffer from such systemic failures, referring to themselves as underpaid and overworked because they have too heavy a patient load combined with what they perceive as inadequate pay and minimal career advancement opportunities (Amponsah-Tawiah, Dartey-Baah, & Osei-Bonsu, 2016). This provides an environment in which the most fundamental tools to care effectively are frequently absent, adding a pinch of frustration and powerlessness to the already challenging nature of the work.

Cultural factors also play a role. The strong family and community obligations that exist in Ghanaian society can create work-life conflict because HCWs are struggling to meet intense occupational needs and high social obligations (Amponsah-Tawiah et al., 2016). Furthermore, despite growing awareness, stigma around mental health exists and this could deter HCWs from accessing help because they fear being perceived as weak or incompetent. This cultural block could lead to the internalization of tension and a reluctance to make use of formal helping agencies even when they exist.

2.4 Causes of Workplace Stress

2.4.1 Work-Related Stress: The Core Occupational Hazards

Workplace stress within the health profession arises immediately from the demands of the work and can be usefully defined by frameworks such as the Job Demand-Control-Support theory (Karasek & Theorell, 1990). High workload and excessive working hours are among the most prevalent causes of stress and usually occur as a result of chronic understaffing, which is a very significant issue in the majority of Low- and Middle-Income Countries (LMICs). This reality gives rise to too many patients, long hours, and daunting administrative duties, which are the primary source of burnout—a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment (Maslach et al., 2001).

The emotional and psychological demands of health care create another key occupational hazard. Health care workers are regularly exposed to death, traumatic injury, extreme human suffering, and very distressed patients and relatives. This repeated and direct exposure to trauma can lead to the onset of compassion fatigue and secondary traumatic stress, a condition similar to post-traumatic stress disorder symptoms but acquired through the process of helping others (Figley, 1995).

Furthermore, systemic resource constraints heavily exacerbate work-related stress, especially in some environments like Ghanaian hospitals. The chronic shortage of basic health supplies, broken equipment, and inadequate infrastructure impose formidable logistical burdens and intense moral distress. Clinicians commonly experience a formidable ethical challenge when systemic shortcomings take away the possibility of offering the quality of care they were educated to provide, contributing to their daily stress (Afulani et al., 2021).

2.4.2 Non-Work-Related Stress: The External Pressures

Mental well-being of health workers is considerably influenced by extra-hospital stressors. Extra-work pressures can considerably deplete a person's coping skills and thus reduce resistance to work pressure and increase general vulnerability. Ranking high among such external stressors are long-term socio-economic problems, in particular financial insecurity through the low rate of remuneration or absence of timeliness in salary payment, which is by no means uncommon in many public sectors. Other anxieties related to housing, transport, and the welfare of the family constitute a constant undercurrent of worry that the healthcare workers carry with them into work, affecting their focus and emotional presence.

Family responsibilities generate another important source of external stress, particularly in balancing demanding and often unpredictable shift work with domestic duties. The challenge of coordinating childcare, eldercare, and domestic tasks with work obligations creates intense work-life conflict. This burden frequently falls disproportionately on female health workers, who may feel social pressure to prioritize domestic roles, creating a double burden that compounds daily stress and limits opportunities for recuperation and relaxation.

In a collectivist social setup like Ghana's, healthcare workers also face unique community and societal pressures that extend beyond their immediate professional and family circles. They often carry high expectations from their extended families and broader community groups to provide financial support, medical advice, and care, which further imposes a great deal of pressure on their already hectic schedules. These sorts of cultural obligations, while based in familial values, can contribute immensely to the worldwide stress burden, creating a

complicated interaction between professional obligations, home expectations, and societal roles that defines the general stress experience of health professionals in this kind of setting.

2.4.3 Role Ambiguity and Role Conflict

Role-related stressors emerge when job expectations are unclear or contradictory, generating significant psychological strain.

Role ambiguity is a situation where healthcare practitioners are unclear about their responsibilities, sphere of authority, or expectations of performance, a state particularly prevalent in hierarchical environments like military hospitals or new jobs. For instance, a nurse may be uncertain whether a particular clinical task falls within their responsibilities or a physician's, leading to anxiety and operational uncertainty that undermines both confidence and unit cohesion.

Role conflict is another major stressor when health professionals perceive incompatible job demands or find themselves in conflict between organizational demands and professional values. A typical manifestation is conflict between professional ethics, such as the responsibility to provide necessary care, and organizational constraints, such as restrictive bureaucratic policies that conflict with patient service. Within military medical settings, this conflict can be particularly acute when medical professionals balance competing duties between their military duty to follow orders and their medical duty to preserve patient autonomy, creating ethical dilemmas that exacerbate daily stress.

2.4.4 Relationships at Work: The Social Environment

Supportive relationships are also a key line of defence against burnout and stress in the workplace among health care workers. Consistent, compassionate support from colleagues at

all ranks—supervisors, physicians, nurses, and support staff—is a crucial protective factor that functions to enhance resilience. Supportive leadership, for example, has been found to correlate very highly with enhanced job satisfaction and improved mental health outcomes, and this builds a culture in which staff are valued and empowered (West et al., 2018).

Negative interpersonal relations are also a major direct cause of occupational stress and psychological strain on the other side. Interprofessional conflict is when there are discord and communications failure between professional groups such as doctors and nurses or administrative and clinical staff. More extreme negative relations include bullying and harassment, which can be vertically by superiors or horizontally by peers, and typically entail intimidation, abuse, and occasionally gender discrimination. Moreover, repeated exposure to frustrated, upset, and demanding patients and their relatives continuously exposes front-line staff to chronic verbal harassment and psychological stress, adding to their stress burden.

2.5 Unique Stressors in Military Healthcare Settings

Military hospitals, such as the 37 Military Hospital, incorporate all of the above challenges and introduce a special set of other stressors by virtue of their military status. The first special factor is the dual-service mandate. Staff must negotiate the competing cultures and requirements of military discipline and civilian patient care. This can create role conflict and confusion, where a health worker is both a soldier in a strict chain of command and a caregiver (Gibbons, Barnett, & Hickling, 2013).

Second, the military's hierarchical structure itself may be a significant stressor. In contrast to the comparatively collegial culture in civilian medicine, military organizations emphasize rank, discipline, and obedience. This can limit professional autonomy, inhibit open communication, and create a high-power-distance environment in which junior staff may feel powerless to voice

concern or report stressors (Koritsas, Coles, & Boyle, 2010). The continued tension between the egalitarianism of medical ethics and the authoritarianism of military life is a chronic, background stressor.

Third, military healthcare providers face the ongoing possibility of deployment to combat operations or humanitarian crises. For the not deployed, waiting and preparing to do so can be a chronic source of stress. For those who do deploy, there are exposures to severe stressors like danger to personal safety, exposure to high numbers of casualties, and practicing in resource-scarce settings (Harvey et al., 2016). Upon return, readjustment to a peacetime hospital setting can be challenging, with a corresponding risk of PTSD and other deployment-related psychological sequelae.

Finally, there is the special nature of military trauma. Dealing with combat injuries, which are often severe and psychologically disturbing, can add to the levels of secondary traumatic stress (STS) or compassion fatigue in military HCWs compared to civilian HCWs (Jones et al., 2019). The added component of treating one's own peers can enhance the emotional cost and sense of responsibility.

2.6 Positive and Negative Effects of Stress

Stress is not inherently negative. Hans Selye's concept of Eustress (positive stress) and Distress (negative stress) is a foundational model for understanding stress responses (Selye, 1976).

Stress is not necessarily detrimental and can instead be in the form of eustress, or positive stress, which enhances performance and resilience in clinical settings. In emergency situations, such as mass casualty events, an acute stress response can heighten focus and awareness, enhancing senses and response times to enable life-saving interventions (Yaribeygi et al.,

2017). Short-term, manageable stress is a very powerful motivator too, driving performance through complex operations and facilitating bonding in shared adversity, whereas managing such pressures wisely strengthens psychological resilience and prepares staff to cope more effectively with future crises (Le Fevre et al., 2003; Southwick & Charney, 2012).

Chronic distress, on the other hand, fosters exceedingly negative impact on individual and organizational performance. At the personal level, chronic distress is a primary source of burnout, anxiety, depression, and physical illness—a state more than likely exacerbated in the military environment where mental illness stigma may deter people from seeking assistance (Maslach et al., 2001; Williamson et al., 2021). Organizationally, distress is expressed as reduced attention that increases medical errors, presenteeism where workers are physically present but not mentally active, and increased absenteeism and turnover that is a staggering loss of experience and institutional knowledge (West et al., 2018; Johansen et al., 2014; Agyepong et al., 2018).

2.7 Stress Management

2.7.1 Employee Strategies for Stress Management

Clinicians must possess robust individual coping strategies to counter occupational stress, beginning with fundamental self-care practices. Physical health maintenance in the form of consistent exercise, quality sleep, and proper nutrition is the foundation of stress resistance, directly impacting an individual's capacity to manage high-stress situations (Weinstein & Brooks, 2023). This is evidenced by the fact that relaxation and mindfulness-based interventions such as controlled breathing and meditation can effectively combat acute stress, with programs such as the formal Mindfulness-Based Stress Reduction being particularly effective among medical professionals (Ireland et al., 2017).

Along with physical self-care, psychological interventions provide indispensable tools for emotional and mental management. Cognitive restructuring allows people to knowingly notice and redefine unproductive patterns of thinking into more controllable, goal-oriented states, reducing feelings of being overwhelmed (Beck, 2011). Moreover, skill in controlling emotions—such as temporarily compartmentalizing overwhelming feelings to remain productive during high-stakes activities, followed by set time to get through these feelings in healthy ways—are required to maintain long-term flourishing in high-demand settings (Gross, 2015).

The importance of drawing on social support cannot be overstated in stress resilience development. The generation of robust esprit de corps and positive peer relationships draws on the military strategy of "esprit de corps," as an effective buffer for resistance to the alienating forces of stress (Hobfoll et al., 2018). Moreover, maintaining close relationships with family and friends outside of the military medical hospital complex provides an invaluable balanced perspective and emotional sanctuary, vital for psychological rehabilitation and sustained performance (Figley, 1995).

2.7.2 Organizational Strategies for Stress Management

Military hospitals have a specific organizational responsibility to address system stressors by strategically adapting their special hierarchical organization to facilitate well-being. This is achieved through leadership and cultural change, with officers and senior medical staff required to be trained in psychologically safe behaviours to recognize signs of distress and foster open-ended conversation, thereby demystifying mental health issues (Kelloway & Barling, 2010). Strong communication from the leadership emphasizing that seeking assistance is an indicator of professionalism (Tanielian & Jaycox, 2008), as well as structural interventions such as equitable scheduling (West et al., 2018), adequate resource allocation (Afulani et al., 2021),

and well-established roles through detailed job descriptions (Rizzo et al., 1970), can reduce burnout, moral distress, and conflict of role.

Operational efficiency is also dependent on the creation of concrete support programs tailored to the high-stress military medicine environment. The foundation of this is providing anonymous access to psychologists experienced with the overlap of medical and military expectations so that employees can seek assistance without fear of ensuing career repercussions (Adler et al., 2017). In addition to that, official peer support initiatives (Tuckey & Scott, 2014) and structured procedures such as Critical Incident Stress Management (CISM) offer avenues for mutual processing after traumatic events, which can neutralize the long-term threat of PTSD (Everly & Mitchell, 1999).

Finally, such organizational strategies establish a critical framework for sustaining individual resilience and institutional resilience. By integrating mental health as a core component of readiness operations, military hospitals can cultivate a culture that supports openness, care, and psychological safety. Such an active approach not only addresses overt stressors but also enhances the overall resilience capacity of healthcare teams to operate proficiently in high-stress environments.

2.8 The Gap in Literature on the 37 Military Hospital and Justification

Despite the well-documented challenges to civilian Ghanaian medicine and global military medicine alike, there remains a critical gap where these two meet. Occupational stress studies in Ghana, like those of Amponsah-Tawiah et al. (2016), have been mostly limited to civilian

public hospitals. Military health worker studies, conversely, like those of Harvey et al. (2016) or Jones et al. (2019), are conducted primarily in Western, high-income military settings. The unique context of a military hospital in an LMIC like Ghana has been sufficiently underexplored.

A study by Osei-Bonsu, Appiah, and Osafo (2021) on stress in the Ghana Armed Forces did consider army personnel but did not exclude and focus on medical personnel in the army setting. The in-the-trenches reality of doctors, nurses, and clinical support personnel in an institution like the 37 Military Hospital—who are faced with systemic Ghanaian healthcare problems, civilian patient expectations, and special pressures of a military setting—are consequently lacking in the literature. This lack of specific research means that the specific stressors they are being subjected to are unknown, and consequently, any policy or institutional response is evidence-free and potentially not effective. Therefore, there is a compelling need for empirical, context-specific research to assess the impact of workplace stress on the mental health of health workers at the 37 Military Hospital.

The findings of such research will be a critical evidence base for the hospital administration and policy makers within the Ghana Health Service. It will inform the development of state, culture-specific, institution-specific interventions. These could include specialized mental health care support programs, stress management courses, leadership training for military personnel deployed in hospitals, and policy modifications to minimize the found stressors. Lastly, investment in the psychological health of such frontline providers is not just an ethical imperative but a strategic imperative to ensure the quality and sustainability of the provision of healthcare to both military and civilian populations in Accra and beyond.

2.9 Summary

The literature confirms that the mental welfare of health care workers is assaulted on all fronts: the intrapsychic demands of their work, expectations from their personal lives, confusing or

inconsistent role expectations, and the dynamics of their working life relationships. The 37 Military Hospital is a prime place to observe this complex interaction. Understanding these dynamics is not an intellectual exercise but a critical move towards sustaining Ghana's health care providers' health, and the health system's effectiveness and resilience, therefore.

CHAPTER 3

3.0 Methodology

This chapter outlines the methodological approach adopted to investigate the impact of workplace stress on the mental health of health workers at the 37 Military Hospital. It describes the study design, data collection techniques and tools, study population, variables, sampling procedure, pre-testing, data handling and analysis procedures, ethical considerations, limitations, and underlying assumptions. The methodology was carefully designed to ensure validity, reliability, and adherence to ethical principles in order to address the research objectives effectively.

3.1 Research Methods and Design

This study adopted a cross-sectional quantitative design, which allowed for the collection of quantitative data at a single point in time. This approach enabled the researcher to measure the prevalence and patterns of workplace stress and mental health outcomes (depression, anxiety, and stress levels) among health workers. According to Creswell & Plano Clark (2018), cross-sectional studies are effective for establishing associations between variables and provide a snapshot of a phenomenon within a defined population. This design was appropriate for this research because it facilitated the simultaneous examination of depression, anxiety and stress within the institutional context of a military hospital.

3.2 Data Collection Techniques and Tools

Stratified random sampling was applied to make the study fair in representing and validating the results. In this approach, the total population of clinical staff was divided into subgroups depending on the departmental affiliation, for example, emergency, surgery, internal medicine, paediatrics and obstetrics & gynaecology. The participants were selected randomly, with the proportion due to the size of the clinical staff in each department to minimise the sampling bias and reflect the work environment, job description, and stress exposure level variety in the whole hospital.

The study collected data through trained research assistants who were briefed on the ethical and procedural issues of the study. In the quantitative part, the paper-based questionnaires were used by giving out paper-based questionnaires, including the Perceived Stress Scale (PSS) and Depression, Anxiety and Stress Scale (DASS-21) questionnaires, in separate consultation rooms or quiet sections.

3.3 Study Population

Research participants were the clinical health personnel working at the hospital. These were physicians, nurses, midwives, physician assistants, and laboratory technicians – workers who are at the finest end of patient care and are, therefore, more vulnerable to stress factors at work. This group was not chosen arbitrarily since such jobs are characterized by high cognitive and emotional workloads, long work hours, and firsthand experiences in medical emergencies and trauma, which are classified as occupational stress and mental health risk factors (Maslach & Leiter, 2016; Mheidly, Fares & Fares, 2020). This population gave the study the ability to evaluate the horizontal and vertical range of the psychological outcomes of stress among the healthcare delivery epicentres.

3.4 Inclusion/Exclusion Criteria

The research involved the use of clinical personnel from the 37 Military Hospital, ensuring reliability and relevance. Participants were of eighteen years and above, had done six months of continuous service, and gave their informed consent. The non-clinical stuff, clinical staff on leave or on psychiatric treatment, and interns and students were not covered. The idea of these criteria was to encompass the experience of full-time clinical professionals experienced in clinical practice facing stressors operating in extremely high-stress environments, and not compromising the data.

3.5 Study Variables

The study examined both independent and dependent variables:

- Independent Variables: Demographic characteristics (age, gender, marital status, years of service), work-related stressors (workload, shift patterns, exposure to emergencies).
- Dependent Variables: Mental health outcomes measured by DASS-21 (depression, anxiety, stress levels).

3.6 Sampling

A stratified random sampling technique was used to ensure that all clinical departments (e.g., emergency, surgery, internal medicine, paediatrics, obstetrics & gynaecology) were proportionally represented. This method minimised sampling bias and ensured a representative mix of staff with varying job descriptions and exposure levels to workplace stressors.

Sample Size

The sample size was determined using Cochran's formula for large populations:

The formula is given as:

$$n = \frac{\left(Z^2 \times p\,(1 - p)\right)}{e^2}$$

Where;

n = sample size (Cochran, 1977)

Z = the z-score that corresponds with 95% confidence interval which is 1.96

p = proportion of the clinical staff that experienced burnout (15.64%) [Konlan et. al., 2022]

q = proportion of clinical staff that have not experienced burnout = 1-p = 1-0.15664 = 0.8463

e = Margin of errors set at 5% (0.05)

Therefore;

$$n = \frac{(1.96)^2 \times (0.1564 \times 0.8436)}{(0.05)^2} \cong 203$$

A 10% non-response rate estimated on the calculated sample (≈ 20). This was then be added to the calculated sample size, bringing the total working sample to 223.

3.7 Pre-testing

To measure the validity and reliability of the data collection instruments, a pilot study was conducted -involving 10 clinical health workers at Police Hospital in Accra, a tertiary healthcare facility that operates under a structured and highly pressurized environment. The purpose was to determine the clarity of questions, internal reliability of standardized measures, and feasibility of practical procedures of data collection. Subjects filled out the scales Perceived Stress Scale (PSS) and Depression, Anxiety, and Stress Scales (DASS-21), and their comments were a source of correction of words and layout of the instrument. The preliminary analysis tested out the reliability coefficients of the scales to be perfectly sure that they were consistent in measuring the intended constructs. The pilot also enabled the research team to identify logistical issues associated with administering the tools, such as timing, privacy settings, and the efficacy of instructions. It ensured that possible modifications in the instruments or procedures were done on the basis of feedback already given by the pilot participants and observations made by research assistants to improve the quality and trustworthiness of the study outcome at the end of the entire study.

3.8 Data Handling

To ensure the confidentiality and the security of the participant, the strict data protection measures were implemented in the study. Physical information, such as questionnaires and consent forms was stored in a locked cabinet that only the principal investigator and the

selected team members had access. Statistical datasets, transcripts and other electronic data were stored in computers, which were password-secured and had encryption software. Encryption also took place on backup copies. Every participant was assigned a unique identification code that was used in place of their name or identifiers when entering the data into the system and analysing it as well as in the reporting of data. Results will only be announced in the aggregate or de-identified findings in all published reports and presentations. These were intended to ensure the confidentiality of the participants, limit harm risks and establish trust between researchers and the researched.

3.9 Data Analysis

The researcher applied descriptive and inferential statistics to establish the association between workplace stress and mental health outcomes. Descriptive statistics were applied to describe the demographic and occupational characteristics of the respondents using STATA (Version 17). Pearson's Chi-Square Test was used to test the level of association between selected variables on the dependent variable. A multivariate logistic regression model was used to assess the effect of the predictors on the response variable. Results were presented using tables and charts to facilitate interpretation and comparison with existing literature.

3.10 Ethical Consideration

Ethical approval was obtained from the Institutional Review Board (IRB) of Ensign Global University, and administrative approval was obtained from the Institutional Review Board (IRB) of the 37 Military Hospital. The study upheld the highest ethical standards in its recruitment and sampling procedures to ensure the voluntary and informed participation of all respondents. Participation was entirely voluntary, with no coercion or pressure applied. Eligible clinical staff were approached through their respective departmental heads, who were first briefed about the study and its objectives. Once departmental approval was secured, potential participants were individually contacted and provided with detailed information sheets

outlining the purpose, procedures, potential risks, and benefits of the research. Only those who expressed clear willingness to participate were enrolled in the study, following the formal process of obtaining informed consent.

The study posed minimal risk to participants. However, given the sensitive nature of the subject—specifically discussions around workplace stress and mental health—there was the possibility that some individuals may experience mild emotional discomfort during the interviews or while completing questionnaires. To mitigate this risk, any participant who exhibited signs of emotional distress or reports feeling overwhelmed was referred to in-house mental health professionals at the 37 Military Hospital for immediate support and counselling. This provision ensured that participants were safeguarded throughout the research process.

Confidentiality and anonymity were rigorously maintained. All responses were anonymized using unique codes, and no names or personal identifiers were recorded or reported. Data collected during the study was not shared with hospital authorities in any identifiable form. The data will be kept for 3 to 10 years after study completion for future research.

3.11 Limitations of the Study

This study was subject to a number of limitations. Firstly, the use of a cross-sectional design limited the ability to establish causal relationships between workplace stress and mental health outcomes. Secondly, data were collected through self-reported questionnaires, which may be affected by individual bias or inaccurate recall. Thirdly, the study was specifically limited to the 37 Military Hospital, hence, affecting the generalizability of the findings to military hospitals in other regions or settings.

3.12 Assumptions

The study was based on several key assumptions. Firstly, the study presumed that respondents provided honest and accurate answers to the questionnaire items. The DASS-21 is a valid and reliable tool for assessing health workers' mental health in the Ghanaian context. Also, the

study also presumed that participants understand the questions and respond based on their genuine experiences over the specified time period. These assumptions were necessary to support the validity and interpretation of the data collected.

CHAPTER 4

4.0 Results

This chapter presents the findings from the study on the impact of workplace stress on the mental health of health workers at the 37 Military Hospital. Data was analysed using STATA (Version 17). Results are presented in tables and figures, organized according to the study's specific objectives:

4.1 Socio-Demographic Characteristics of Respondents

A total of 188 clinical health workers out of the projected sample size of 223 consented and fully participated in the study, indicating a response rate of 84.3%. In terms of age distribution, the largest group of respondents (37.8%) were between 26 and 35 years, followed by those aged 18–25 years (23.9%) and 36–45 years (23.4%). Only a small proportion were aged 56 years and above (4.8%). Regarding gender, females constituted a slight majority (55.9%) compared to males (44.1%), reflecting the gender distribution often seen in healthcare professions, particularly nursing and midwifery.

When considering marital status, over half of the respondents (55.3%) were married, while 36.2% were single and 8.5% were divorced or widowed. This distribution indicates that a significant proportion of respondents' balance workplace demands with family responsibilities.

With respect to professional roles, nearly half (48.9%) of respondents were nurses, making them the largest professional group represented in the study. This was followed by lab technicians (12.2%), physician assistants (10.1%), doctors (15.4%), midwives (9.6%), and a small group categorized as "others" (3.7%). This reflects the multidisciplinary nature of the hospital workforce, with nurses forming the backbone of clinical care delivery.

In terms of years of clinical experience, most respondents had between 1and 5 years of experience (47.9%), while 23.9% had 6–10 years, and 10.1% had more than 10 years of experience. A notable 18.1% were relatively new with less than one year of experience, suggesting a mix of experienced and early-career staff. With respect to military status, 44.7% of respondents were military personnel, while 55.3% were civilians, reflecting the hospital's dual civilian-military workforce structure. Concerning departmental distribution, respondents came from a variety of departments, with Internal Medicine (20.2%), Obstetrics and Gynaecology (14.9%), Surgery (13.8%), Paediatrics (12.8%), and Emergency (12.2%) being the most represented. Psychiatry accounted for 8%, while 18.1% of respondents were from other smaller departments combined.

Finally, with respect to workload indicators, 41.0% of respondents reported working 45–54 hours per week, while 36.2% worked 55 hours or more per week, indicating a significant number of staff exceeding standard working hours. For night shifts, 43.1% worked 2–3-night shifts per week, while 18.6% worked 4–6-night shifts weekly, which could contribute to stress and fatigue. Table 4.1 summarizes their socio-demographic characteristics.

Table 1 Socio-Demographic Characteristics of Respondents (n = 188)

Variable	Options	Frequency	Percentage (%)
Age	18 – 25 years	45	23.9%
	26 – 35 years	71	37.8%
	36 – 45 years	44	23.4%
	46 – 55 years	19	10.1%
	56+ years	9	4.8%
	TOTAL	**188**	**100.0%**
Gender	Male	83	44.1%
	Female	105	55.9%

	TOTAL	**188**	**100.0%**
Marital Status	Single	68	36.2%
	Married	104	55.3%
	Divorced/ Widowed	16	8.5%
	TOTAL	**188**	**100.0%**
Professional Role	Doctor	29	15.4%
	Nurse	92	48.9%
	Midwife	18	9.6%
	Physician Assistant	19	10.1%
	Lab Technician	23	12.2%
	Other	7	3.7%
	TOTAL	**188**	**100.0%**
Experience	< 1 year	34	18.1%
	1 – 5 years	90	47.9%
	6 – 10 years	45	23.9%
	> 10 years	19	10.1%
	TOTAL	**188**	**100.0%**
Military Personnel	Yes	84	44.7%
	No	104	55.3%
	TOTAL	**188**	**100.0%**
Department	Emergency	23	12.2%
	Surgery	26	13.8%
	Internal Medicine	38	20.2%
	Obstetrics & Gynaecology	28	14.9%
	Paediatrics	24	12.8%
	Psychiatry	15	8.0%
	Other	34	18.1%

	TOTAL	**188**	**100.0%**
Hours/Week	<45 hours	43	22.9%
	45–54 hours	77	41.0%
	≥55 hours	68	36.2%
	TOTAL	**188**	**100.0%**
Night Shifts/Week	0-1	72	38.3%
	2-3	81	43.1%
	4-6	35	18.6%
	TOTAL	**188**	**100.0%**

Source: Field Data, 2025

4.2 Prevalence of mental health issues among staff

The first objective of the study was to establish the prevalence of mental health issues among clinical staff. Mental health status was measured using the Depression Anxiety, and the Stress Scale (DASS-21), a widely used , standardized, self-report instrument for the measurement of emotional states of depression, anxiety, and stress in both clinical and research settings. Each respondent's scores were aggregated and categorized into five severity levels for each of the three domains: Normal, Mild, Moderate, Severe, and Extremely Severe.

The findings indicate a high level of psychological distress among the health workers as evidence by the proportion of staff that reported symptoms above the normal range in all domains. For Depression, 59.0% of the respondents manifested symptoms ranging from Mild to Extremely Severe, with almost a quarter, 24.4% falling in the Severe and Extremely Severe categories. Anxiety was even higher, with 64.9% of staff reporting clinically significant

symptoms, and noticeably, 32.4% experiencing Severe or Extremely Severe anxiety levels. For Stress, 54.8% of the health workers reported symptoms above the normal level, with 17.5% experiencing Severe or Extremely Severe stress.

This categorization evidently indicates that the majority of health workers were showing noticeable symptoms of psychological distress, with anxiety being most prevalent and sever among the clinical staff. The findings indicate an urgent need for mental health support interventions within this healthcare setting in order to address the substantial burden of symptoms of depression, anxiety, and stress affecting the clinical workforce.

Table 2 DASS-21 severity distributions (n = 188)

Severity	Depression (%)	Anxiety (%)	Stress (%)
Normal	77 (41.0)	66 (35.1%)	85 (45.2%)
Mild	28 (14.9%)	26 (13.8%)	34 (18.1%)
Moderate	37 (19.7%)	35 (18.6%)	36 (19.1%)
Severe	20 (10.6%)	25 (13.3%)	19 (10.1%)
Extreme Severe	26 (13.8%)	36 (19.1%)	14 (7.4%)
TOTAL	**188 (100.0)**	**188 (100.0)**	**188 (100.0)**

Source: Author's Compilation, 2025

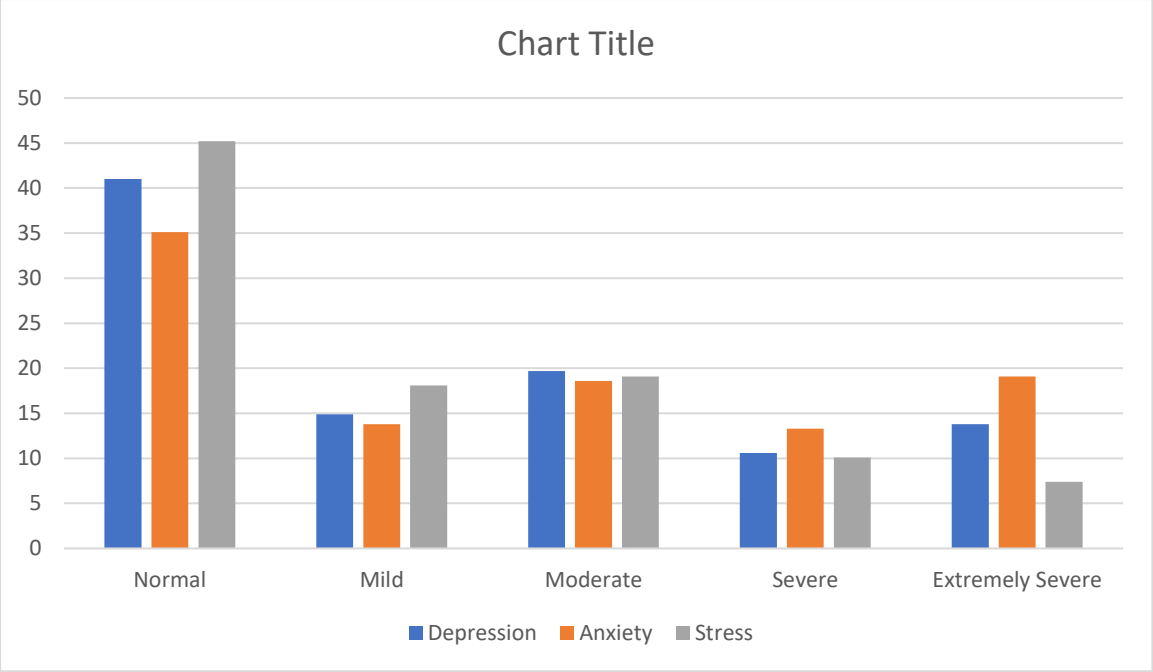

Figure 3 DASS-21 Severity Distribution (n = 188)

Source: Author's Compilation, 2025

4.3 Bivariate Analysis of the mental health impact and the independent variables

A Pearson's Chi-Square test was run individually on the three outcome variables (depression, anxiety, and stress) to assess the level of association in each with the selected and independent variables (age group, gender, marital status, military status, professional role, department and years of experience).

4.3 Bivariate Analysis of Depression and the Independent Variables

The analysis displays a complex interplay of depression levels across different demographic and professional factors. Age and marital status present the most striking distributions, where 56 years and above display the highest rate of normal depression levels, at 62.50%, while 46-55-year-olds have the lowest at 36.84%. Divorced individuals reported the highest rate of

normal depression levels do not exhibit a significant statistical relationship with any of variables studied in this paper : gender, military status, professional role, department, and years of experience, because all p-values are above 0.05. Though trends could be appreciated in some of the data-the higher prevalence of mild depression among those with over 10 years of experience (66.67%) compared with those with 6-10 years (33.33%)-are apparently present, these differences are not statistically significant. The table below presents the results.

Table 3 Bivariate Analysis of Depression and the Independent Variables

Variable	**Depression**					
	Normal (%)	**Mild (%)**	**Moderate (%)**	**Severe (%)**	**Extremely Severe (%)**	***p-value***
Age groups						
18–25	18 (40.00)	18 (40.00)	9 (20.00)	0	0	
26–35	30 (41.67)	30(41.67)	12 (16.67)	0	0	
36–45	18 (40.91)	18 (40.91)	8 (18.18)	0	0	**0.709**
46–55	7 (36.84)	11 (57.89)	1 (5.26)	0	0	
56 and above	5 (62.50)	3 (37.50)	0 (0.00)	0	0	
Gender						
Female	45 (42.86)	45 (42.86)	15 (14.29)	0	0	**0.768**
Male	33 (39.76)	35 (42.17)	15)18.07)	0	0	
Marital Status						
Single	25 (36.76)	29 (42.65)	14 (20.59)	0	0	
Married	46 (43.81)	43 (40.95)	16 (15.24)	0	0	**0.531**
Divorced	4 (57.14)	3 (42.86)	3 (42.86)	0	0	
Widowed	3 (37.50)	5 (62.50)	5 (62.50)	0	0	
Military Status						
No	21 (33.33)	31 (49.21)	11 (17.46)	0	0	**0.267**
Yes	57 (45.60)	49 (39.20)	19 (15.20)	0	0	
Professional Role						
Doctor	12 (41.38)	14 (48.28)	2 (10.34)	0	0	
Lab technician	10 (41.67)	9 (37.50)	5 (20.83)	0	0	
Midwife	10 (52.63)	4 (21.05)	5 (26.32)	0	0	**0.297**
Nurse	39 (42.39)	39(42.39)	14 (15.22)	0	0	
Other	2 (42.86)	2 (28.57)	2 (28.57)	0	0	
Physician Assistant	4 (23.53)	1 (70.59)	1 (5.88)	0	0	
Department						
Emergency	7 (31.82)	10 (45.45)	5 (22.73)	0	0	
Internal Medicine	15 (45.45)	14 (42.42)	4 (12.12)	0	0	
Obstetrics & Gynaecol	12 (44.44)	10 (37.04)	5 (18.52)	0	0	
Other	12 (54.55)	8 (36.36)	2 (9.09)	0	0	**0.944**

Paediatrics	11 (33.33)	17 (51.52)	5 (15.15)	0	0	
Psychiatry	8 (36.36)	10 (45.45)	4 (18.18)	0	0	
Surgery	13 (44.83)	11 (37.93)	5 (17.24)	0	0	
Years of Experience						
Less than 1	11 (31.43)	15 (42.86)	9 (25.71)	0	0	
1 – 5 years	39 (43.33)	38 (42.22)	13 (14.44)	0	0	**0.121**
6 – 10 years	24 (53.33)	15 (33.33)	6 (13.33)	0	0	
More than 10 years	4 (22.22)	12 (66.67)	2 (11.11)	0	0	

Source: Author's Compilation, 2025

4.4 Bivariate Analysis of Anxiety and the Independent Variables

The analysis explores how anxiety levels associate with the various demographic and professional variables. Most demographic and professional variables do not show a statistically significant association with anxiety levels, as their p-values are higher than the 0.05 threshold from the datasheet. However, one important exception is the department variable, which associates statistically significantly with anxiety levels of p-value of 0.038). Looking at the distribution, it can be seen that the surgery department has the highest proportion of staff in the category of mild anxiety, amounting to 34.48%, but the lowest, also 34.48%, in the category of moderate anxiety, which indicates a different pattern in the severity of anxiety from other departments where the majority, often more than 60%, fall into the moderate category. Another trend that can be noticed, though statistically insignificant, is in marital status, with single people having higher prevalence of severe anxiety at 11.76% compared to married people at 3.81%. The table below represents the results.

Table 4 Bivariate Analysis of Anxiety and the Independent Variables

Variable	**Anxiety**					
	Normal (%)	**Mild (%)**	**Moderate (%)**	**Severe (%)**	**Extremely Severe (%)**	***p-value***

Age groups						
18–25	1 (2.22)	9 (20.00)	31 (68.89)	1 (2.22)	0	
26–35	5 (6.94)	19 (26.39)	36 (50.00)	5 (6.94)	0	
36–45	5 (11.36)	7 (15.91)	26 (59.09)	5 (11.36)	0	**0.527**
46–55	0 (0.00)	4 (21.05)	12 (63.16)	0 (0.00)	0	
56 and above	1 (12.50)	1 (12.50)	6 (75.00)	1 (12.50)	0	
Gender						
Female	11 (10.48)	25 (23.81)	64 (60.95)	5 (4.76)	0	**0.352**
Male	14 (16.87)	15 (18.07)	47 (56.63)	7 (8.43)	0	
Marital Status						
Single	12 (17.65)	19 (27.94)	29 (42.65)	8 (11.76)	0	
Married	11 (10.48)	20 (19.05)	70 (66.67)	4 (3.81)	0	**0.074**
Divorced	1 (14.29)	1 (14.29)	5 (71.43)	0 (0.00)	0	
Widowed	1 (12.50)	0 (0.00)	7 (87.50)	0 (0.00)	0	
Military Status						
No	8 (12.70)	15 (23.81)	39 (61.90)	1 (1.59)	0	**0.277**
Yes	17 (13.60)	25 (20.00)	72 (57.60)	11 (8.80)	0	
Professional Role						
Doctor	2(10.34)	5 (17.24)	19 (65.52)	2(6.90)	0	
Lab technician	4 (16.67)	7 (29.17)	11 (45.83)	2 (8.33)	0	
Midwife	2 (15.79)	5 (26.32)	11 (57.89)	0 (0.00)	0	
Nurse	13 (14.13)	20 (21.74)	53 (57.61)	6 (6.52)	0	**0.940**
Other	1 (14.29)	0 (0.00)	5 (71.43)	1 (14.29)	0	
Physician Assistant	1 (5.88)	3 (17.65)	12(70.59)	1 (5.88)	0	
Department						
Emergency	5(22.73)	4 (18.18)	12 (54.55)	1 (4.55)	0	
Internal Medicine	3(9.09)	12 (36.36)	17 (51.52)	1 (3.03)	0	
Obstetrics & Gynae	2(7.41)	4 (14.81)	20 (74.07)	1 (3.70)	0	**0.038**
Other	2 (9.09)	1 (4.55)	15 (60.18)	4 (18.18)	0	
Paediatrics	5 (15.15)	3 (9.09)	23 (69.70)	2 (6.06)	0	
Psychiatry	2 (9.09)	6 (27.27)	14 (63.64)	0 (0.00)	0	
Surgery	6 (20.69)	10 (34.48)	10 (34.48)	3 (10.34)	0	
Years of Experience	7 (20.00)	7 (20.00)	20 (57.14)	1 (2.86)	0	
Less than 1 year	11 (12.22)	17 (18.89)	54 (60.00)	8 (8.89)	0	**0.823**
1 – 5 years	4 (8.89)	11 (24.44)	28 (62.22)	2 (4.44)	0	
6 – 10 years	3 (16.67)	5 (27.78)	9 (50.00)	1 (5.56)	0	
More than 10 years						

Source: Author's Compilation, 2025

4.5 Bivariate Analysis of Stress and the Independent Variables

The analysis indicates that none of the demographic and professional variables analysed has statistically significant association with levels of stress, as all p-values are above 0.05. however, what comes from the data is very low prevalence of reported stress irrespective o a group; the

majority of participants were in the “Normal” category of the stress inventory, always over 84% for every category with the rest having only “Mild” stress. There were no cases of moderate, severe, or extremely severe stresses. Even though not statistically significant, some minor variation is observed. For instance, the “Other” department and Physician assistants reported the lowest prevalence of mild stress (0.00%), placing 100% of its members in the normal stress category. On the other hand, the highest incidence was seen in the Paediatrics department, with 18.18% reporting mild stress. The table below represents the results.

Table 5 Bivariate Analysis of Stress and the Independent Variables

Variable	**Stress**					
	Normal (%)	**Mild (%)**	**Moderate (%)**	**Severe (%)**	**Extremely Severe (%)**	***p-value***
Age groups						
18–25	41 (91.11)	4 (8.89)	0	0	0	
26–35	66 (91.11)	6 (8.33)	0	0	0	
36–45	38 (86.36)	6 (13.64)	0	0	0	0.823
46–55	16 (84.21)	3 (15.79)	0	0	0	
56 and above	7 (87.50)	1 (12.50)	0	0	0	
Gender						
Female	95 (90.48)	10 (9.52)	0	0	0	0.577
Male	73 (87.95)	10 (10.64)	0	0	0	
Marital Status						
Single	62 (91.18)	6(8.82)	0	0	0	
Married	92 (87.62)	13 (12.38)	0	0	0	0.698
Divorced	7 (100.00)	0 (0.00)	0	0	0	
Widowed	7 (87.50)	1 (12.50)	0	0	0	
Military Status						
No	57 (90.48)	6 (9.52)	0	0	0	0.725
Yes	111 (88.80)	14 (11.20)	0	0	0	
Professional Role						
Doctor	27 (93.10)	2 (6.90)	0	0	0	
Lab technician	22 (91.67)	2 (8.33)	0	0	0	
Midwife	16 (84.21)	3 (15.79)	0	0	0	
Nurse	80 (86.96)	12 (13.04)	0	0	0	0.583
Other	6 (85.71)	1 (14.29)	0	0	0	
Physician Assistant	17 (100)	0 (0.00)	0	0	0	
Department						
Emergency	18 (81.82)	4 (18.18)	0	0	0	
Internal Medicine	30 (90.91)	3 (9.09)	0	0	0	
Obstetrics & Gynae	24 (88.89)	3 (11.11)	0	0	0	0.254
Other	22 (100)	0 (0.00)	0	0	0	
Paediatrics	27 (81.82)	6 (18.18)	0	0	0	
Psychiatry	19 (86.36)	3 (13.64)	0	0	0	

Surgery	28 (96.55)	1 (3.45)	0	0	0	
Years of Experience						
Less than 1	33 (94.29)	2 (5.71)	0	0	0	
1 – 5 years	81 (90.00)	9 (10.00)	0	0	0	0.580
6 – 10 years	39 (86.67)	6 (13.33)	0	0	0	
More than 10 years	15 (83.33)	3 (16.67)	0	0	0	

Source: Author's Compilation, 2025

4.6 Multivariate Logistic Regression

4.6 Multivariate analysis of depression

The results of the multivariate analysis identify key demographic predictors for the outcome, while controlling for other variables. Age was a statistically significant predictor, in that the subjects aged between 46 and 55 years were 90% less likely (AOR=0.1, 95% CI=0.03-0.56, p=0.006) to experience the outcome as compared with the reference category 18-25-year-old. Another notable predictor was the marital status of the subjects. Though not at the conventional alpha level statistically significant, being married emerged as having an increased odds of 11.5 times the occurrence of the out come as opposed to he divorced individuals. This thus means AOR =11.5, 95% CI=1.09-121.08, p=0,042, showing a strong but imprecisely estimated association. For other variables, the analysis suggested that males were 1.3 times more likely to have the depression outcome than females, though this was not statistically significant (AOR=1.3, 95% CI=0.70-2.60, p=0.374). similarly, with other variables adjusted for, having a military status had 1.9 times the odds (AOR=1.9,95% CI=0.94-3.75, p=0.074) for the depression outcome in comparison to their civilian counterparts, though this finding was marginally insignificant. The professional role, department, and years of experience did not show a statistically significant association with the outcome. The table below represents the results.

Table 6 Multivariate Analysis of Depression and Independent Variables

Variable	Categories	OR (95% CI)	*p-value*	AOR (95% CI)	*p-value*
Age groups	18–25	1		1	
	26–35	0.8(0.358-1.599)	0.465	0.6(0.282-1.487)	0.305
	36–45	1.2(0.498-2.678)	0.736	1.5(0.609-3.921)	0.360
	46–55	0.2(0.611-0.745)	0.015	0.1(0.33-0.559)	0.006
	56 and above	1.3(0.284-6.266)	0.716	1.3(0.233-8.357)	0.715
Gender	Female	1		1	
	Male	1.4(0.797-2.533)	0.234	1.3(0.699-2.595)	0.374
Marital Status	Single	6(0.685-52.535)	0.106	8.7(0.795-95.130)	0.076
	Married	7.4(0.861-63.670)	0.068	11.5(1.089-121.080)	0.42
	Divorced	1		1	
	Widowed	2(0.141-28.416)	0.609	2.1(0.112-38.719)	0.622
Military Status	Yes	1.3(0.715-2.407)	0.381)	1.9(0.941-3.750)	0.074
	No	1		1	
Professional Role	Doctor	1		1	
	Lab technician	1.1(0.363-3.161)	0.901	0.7(0.208-2.290)	0.545
	Midwife	1(0.303-3.070)	0.951	0.4(0.113-1.663)	0.223
	Nurse	1.3(0.577-3.076)	0.501	0.7(0.283-1.959)	0.551
	Other	0.8(0.152-4.246)	0.797	0.6(0.81-3.865)	0.557
	Physician Assistant	0.6(0.170-2.005)	0.393	0.3(0.072-1.154)	0.076
Department	Emergency	1		1	
	Internal Medicine	0.6(0.193-1.719)	0.323	0.3(0.097-1.216)	0.097
	Obstetrics & Gynae	1(0.320-3.165)	0.990	0.9(0.236-3.371)	0.866
	Other	0.7(0.210-2.280)	0.545	0.3(0.072-1.179)	0.84
	Paediatrics	0.7(0.219-1.938)	0.442	0.3(0.092-1.196)	0.092
	Psychiatry	0.6(0.175-1.905)	0.367	0.4(0.109-1.705)	0.231
	Surgery	0.6(0.211-1.979)	0.444	0.3(0.078-1.161)	0.081
Years of Experience	Less than 1	0.9(0.414-1.973)	0.799	1.2(0.505-3.068)	0.634
	1 – 5 years	1		1	
	6 – 10 years	1(0.489-2.046)	1.000	0.9(0.407-2.095)	0.849
	More than 10 years	1(0.692-1.581)	0.931	1.7(0.499-5.636)	0.403

Source: Author's Compilation, 2025

4.7 Multivariate analysis of anxiety

The multivariate analysis presented one significant predictor of anxiety. Military status was significantly associated with anxiety, as those with military background had 2,2 times the odds of experiencing anxiety compared to their civilian counterparts (AOR=2.2, 95% CI=1,108-4,463,p=0.025), adjusted for all other variables. For other variables, analysis again reported that, among genders, males were 1.2 times more likely to have anxiety than females, while the

p-value was not statistically significant. The adjusted odds ratio of the age category 46.55 was 1.2 (95% CI=0.365-4.197), adjusted for all other variables, though this was also insignificant. Though there was no significant association between department and anxiety, people in paediatrics were 2.6 times more likely to have anxiety than those in emergency, given all other variables were kept constant. Also, for the professional roles, though not statistically significant, nurses and midwives had 0.4 and 0.3 times the odds of anxiety than doctors, respectively, when adjusted for all other variables. The table below represents the results.

Table 7 Multivariate Analysis of Anxiety and Independent Variables

Variable	Categories	OR (95% CI)	p-value	AOR (95% CI)	p-value
Age groups	18–25	1		1	
	26–35	1.3(0.611-2.742)	0.500	1.1(0.469-2.468)	0.863
	36–45	0.9(0.408-2.207)	0.900	0.8(0.308-2.002)	0.613
	46–55	1.5(0.518-4.466)	0.446	1.2(0.365-4.197)	0.733
	56 and above	1.4(0.303-6.175)	0.683	1.1(0.216-5.690)	0.901
Gender	Female	1		1	
	Male	1.1(0.614-1.949)	0.761	1.2(0.623-2.242)	0.610
Marital Status	Single	1(0.206-4.776)	0.770	1.3(0.206-7.644)	0.806
	Married	1.3(0.269-5.904)	0.991	1.8(0.305-10.624)	0.517
	Divorced	1		1	
	Widowed	0.8(0.1001-6.347)	0.833	0.8(0.0742-7.594)	0.808
Military Status	Yes	1.8(0.949-3.289)	0.072	2.2(1.108-4.463)	0.025
	No	1		1	
Professional Role	Doctor	1		1	
	Lab technician	0.6(0.195-1.731)	0.329	0.5(0.145-1.518)	0.206
	Midwife	0.5(0.145-1.550)	0.217	0.3(0.089-1.275)	0.109
	Nurse	0.6(0.258-1.386)	0.230	0.4(0.153-1.044)	0.061
	Other	2(0.337-12.236)	0.439	1.6(0.225-12.092)	0.623
	Physician Assistant	0.9(0.275-3.038)	0.883	0.7(0.175-2.441)	0.526
Department	Emergency	1		1	
	Internal Medicine	1.5(0.482-4.409)	0.504	1.6(0.482-5.196)	0.448
	Obstetrics & Gynaecol	1.9(0.596-5.957)	0.280	2(0.571-6.735)	0.285
	Other	1.2(0.359-4.084)	0.757	1.1(0.281-4.120)	0.915
	Paediatrics	2.8(0.783-7.203)	0.127	2.6(0.786-8.877)	0.116
	Psychiatry	1.8(0.524-5.842)	0.363	1.9(0.528-6.981)	0.322
	Surgery	0.9(0.289-2.932)	0.889	0.7(0.178-2.471)	0.541
Years of Experience	Less than 1	0.9(0.390-1.883)	0.701	0.9(0.372-2.107)	0.783
	1 – 5 years	1		1	
	6 – 10 years	1.1(0.534-2.238)	0.807	1.2(0.515-2.607)	0.721
	More than 10 years	0.7(0.578-1.324)	0.546	0.5(0.168-1.764)	0.311

Source: Author's Compilation, 2025

4.8 Multivariate Analysis of Stress and Independent Variables

With respect to stress, the multivariate regression analysis showed that none of the demographic or professional variables examined demonstrated statistically significant associations, as all adjusted p-values were above the threshold of 0.05. the analysis indicated varied risks for stress with respect to professional role. Compared to doctors, physician assistants are 3.5 times more likely to develop stress (AOR=3.5, 95% CI=0.881-14.151, p-0.075), though this was marginally insignificant. Similarly, laboratory technicians and nurses were 2.0 and 1.6 times more likely, respectively, though these findings were not significant. For the departmental category, employees under the "Other" department category were 1.5 times and those under the paediatrics similarly 1.3 times more prone to stress, while controlling for all other variables; however, their p-values were not significant. The model further suggested a few factors associated with lower odds of stress, though once again not significantly so. Older adults aged 56 and above were 0.6 times less prone to stress compared to the youngest age group. Similarly, having a military status (AOR=0.7), being male (AOR=0.9), and having more than 10 years of experience (AOR=0.7) were also found to be associated with lower risk of developing stress. The table below represents the results.

Table 8 Multivariate analysis of stress

Variable	Categories	OR (95% CI)	p-value	AOR (95% CI)	p-value
Age groups	18–25	1		1	
	26–35	0.6(0.302-1.354)	0.243	0.7(0.292-1.518)	0.333
	36–45	1(0.416-2.213)	0.924	0.9(0.353-2.223)	0.796
	46–55	0.6(0.197-1.720)	0.327	0.7(0.204-2.142)	0.573
	56 and above	0.5(0.102-2.256)	0.353	0.6(0.103(2.952)	0.486
Gender	Female	1		1	
	Male	1.1(0.633-2.005)	0.685	0.9(0.487-1.733)	0.794

Marital Status	Single	1.7(0.351-8.131)	0.513	1.3(0.241-7.284)	0.746
	Married	1.1(0.239-5.266)	0.883	0.8(1.55-4.352)	0.817
	Divorced	1		1	
	Widowed	0.8(0.168-3.351)	0.833	0.9(0.090-8.152)	0.894
Military Status	Yes	0.8(0.443-1.490)	0.503	0.7(0.367-1.407)	0.335
	No	1		1	
Professional Role	Doctor	1		1	
	Lab technician	2.3(0.759-6.917)	0.141	2(0.623-6.675)	0.239
	Midwife	1.2(0.366-3.872)	0.773	1.2(0.311-4.379)	0.818
	Nurse	1.5(0.638-3.525)	0.352	1.6(0.595-4.038)	0.3369
	Other	1.2(0.230-6.548)	0.811	1(0.166-6.066)	0.997
	Physician Assistant	3.9(1.087-14.195)	0.037	3.5(0.881-14.151)	0.075
Department	Emergency	1		1	
	Internal Medicine	0.4(0.142-1.330)	0.144	0.5(0.138-1.501)	0.196
	Obstetrics & Gynae	1.1(0.349-3.321)	0.897	1(0.319-3.540)	0.921
	Other	1.4(0.439-4.757)	0.545	1.5(0.393-5.507)	0.566
	Paediatrics	1.4(0.459-4.012)	0.581	1.3(0.403-4.237)	0.654
	Psychiatry	0.7(0.210-2.280)	0.545	1.3(0.404-4.237)	0.535
	Surgery	1.2(0.405-3.738)	0.714	1.3(0.365-4.491)	0.699
Years of Experience	Less than 1	0.6(0.264-1.289)	0.183	0.6(0.256-1.447)	0.261
	1 – 5 years	1		1	
	6 – 10 years	0.8(0.409-1.713)	0.626	0.9(0.425-2.091)	0.885
	More than 10 years	0.7(0.253-1.937)	0.492	0.7(0.233-2.377)	0.619

Source: Author's Compilation, 2025

4.9 Coping strategies used by health workers

This section explores the coping mechanisms adopted by health workers to manage workplace stress and maintain psychological well-being. Understanding coping strategies is essential, as they play a significant role in mitigating the negative effects of stress on mental health and sustaining job performance. Respondents were asked to indicate the frequency with which they employed specific coping techniques. The responses provide insights into the preferred coping patterns among health workers at the 37 Military Hospital and form the basis for recommendations on enhancing stress management interventions within the institution.

Table 4.9 presents the distribution of coping strategies reported by health workers, classified into "Never/Rarely" (N/R), "Sometimes" (S), and "Often/Always" (O/A). The mean scores indicate the relative frequency of use for each strategy, with higher mean values reflecting more frequent use.

The most commonly employed coping strategies were using humour to relieve stress (O/A = 81.4%, Mean = 4.18, SD = 0.83) and taking short breaks during shifts (O/A = 76.6%, Mean = 4.07, SD = 0.91), suggesting that staff favour quick, accessible stress-relief techniques during work hours. Talking to family or friends for support also showed a relatively high usage rate (O/A = 54.3%, Mean = 3.52), highlighting the importance of external social support. Moderately used strategies included exercising after work (O/A = 43.1%, Mean = 3.29) and seeking counselling or therapy (O/A = 31.4%, Mean = 3.07). The latter suggests that formal psychological support services are underutilized relative to informal methods.

Interestingly, use of alcohol or medication to unwind was reported by roughly one-third of respondents as an occasional or frequent coping mechanism (O/A = 31.9%, Mean = 2.99). This finding indicates a potential risk factor for maladaptive coping, which could exacerbate long-term mental health problems. The data suggest that health workers primarily rely on informal, emotion-focused, and immediate coping strategies, with limited engagement in professional mental health services. This pattern points to the need for structured workplace interventions, such as stress management training and improved access to counselling, to promote healthier coping mechanisms.

Table 9 Coping strategies among health workers (n = 188)

Coping Strategies	N/R (%)	S (%)	O/A (%)	Mean	SD
Talk to colleagues about stress	58 (30.9)	66 (35.1)	64 (34.0)	3.02	1.12
Take short breaks during shifts	12 (6.4)	32 (17.0)	144 (76.6)	4.07	0.91
Use humour to relieve stress	6(3.2)	29 (15.4)	153 (81.4)	4.18	0.83
Exercise after work	36 (19.1)	71 (37.8)	81 (43.1)	3.29	1.02
Seek counselling or therapy	57 (30.3)	72 (38.2)	59 (31.4)	3.07	1.12
Pray or meditate	58 (30.9)	64 (34.1)	66 (35.1)	3.03	1.11
Use alcohol or medication to unwind	62 (32.9)	66 (35.1)	60 (31.9)	2.99	1.16

Talk to family/friends for support	30 (15.9)	56 (29.8)	102 (54.3)	3.52	0.98

Source: Author's Compilation, 2025

CHAPTER 5

5.0 DISCUSSIONS

This chapter discusses the key findings of the study on the impact of workplace stress on mental health among health workers at the 37 Military Hospital in Accra, Ghana. The discussion is organized around the study objectives and integrates the results with existing literature.

5.1 Prevalence of Mental Health Issues among Staff

The study assessed the prevalence of mental health issues among healthcare staff using the DASS-21 scale. The study revealed a significant burden of mental health issues among clinical staff, with anxiety being the most prevalent condition (64.9% reported symptoms above the normal range), followed by depression (59.0%) and stress (54.8%). Notably, a substantial proportion of staff presented severe to extremely severe symptoms, with anxiety again being the most acute at 32.4%. These numbers are disconcertingly high and in consonance with the global literature on healthcare as a high-stress profession (WHO, 2021).

Indeed, the prevalence is higher than some figures for general Ghanaian public hospitals and may reflect increased stressors within this dual-role, high-demand environment that is typical of military hospitals. Such findings therefore validate the problem statement by confirming the unique context within which the 37 Military Hospital operates places its staff at a critically high risk for psychological distress, which has direct implications for clinical decision-making and resultant patient safety and ultimately also impacts staff retention (Shanafelt et al., 2015).

5.2 Association Between Demographics, Professional Factors and Mental Health

The bivariate and multivariate analyses provided nuanced insights into factors associated with mental health outcomes.

For depression, the multivariate model identified age as a predictor. Participants aged 46-55 years had 90% reduced odds of depression compared to the reference group of 18-25-year-old health workers (AOR=0.1, p=0.06). this seems to imply that mid-career professionals could

have built strong coping mechanisms or possibly attained a certain degree of career stability that buffers them from depression. Additionally, marital status indicated strong, although imprecisely estimated, positives association; married status had 11.5 times the odds for depression compared with divorced status (AOR=11.5, p=0.042). this unexpected finding requires further investigation but may be linked to the additional demands and stresses of combining family responsibilities with the demands of an intense career, which has also been identified in the Ghanaian context.

For anxiety, military status was the only significant predictor in the multivariate model. Individuals who had military background had 2.2 times the odds of anxiety compared to their civilian counterparts (AOR=2.2, 0.025). this strongly supports the literature on unique military healthcare stressors, including the rigid hierarchical structure , the constant tension between military discipline and medical ethics, and the potential for deployment-related stress (Gibbons, Barnett, & Hickling, 2013). The finding that no other variables were significant suggests that the experience of anxiety is pervasive but particularly concentrated within the military sub-population of the hospital.

No demographic or professional variable was significantly associated with stress. An overwhelming majority of staff in all categories reported only “Normal” or “Mild” stress, with no cases of moderate or higher. This could indicate a potential under-reporting bias due to stigma, or it may reflect a cultural or professional norm, where admitting to significant stress is discouraged, especially in a military environment that values resilience.

5.3 Coping Strategies Adopted by Health Workers

The coping strategy data indicate a high reliance on informal, immediate, and emotion-focused coping techniques. The strategies used most often/always were: “using humour to relieve stress” (81.4%) and “Taing short breaks during shifts” (76.6%). This reflects the cultural

context in Ghana, where practical support and humour are strong coping tools (Kugbey et al., 2020). This is further reflected in the high reliance on "Talking to family/friends" (54.3% often/always).

However, the underutilization of formal support is a critical finding. Only 31.4% reported often or always engaging in "Seeking counselling or therapy". This echoes both global and Ghanaian literature that documents stigma and barriers in accessing mental health care among healthcare workers themselves (Doku et al., 2021).

5.4 Theoretical Implications

This study was guided by the Job Demand–Control (JDC) model, which posits that high job demands combined with low job control result in increased psychological strain (Karasek, 1979). The findings provide strong support for the Job Demand-Control (JDC) model (Karasek, 1979). The high prevalence of mental health issues can be interpreted as a direct outcome of the high job demands inherent in the hospital environment—evidence by long working hours (over 77% worked ≥45 hours/week) and high patient loads—coupled with potentially low control, as suggested by the hierarchical military structure. The significant effect of military status on anxiety reflects the low-decision latitude and high-strain environment predicted by the model for those within the rigid command structure. The study successfully applies this model to a unique LMIC military healthcare setting, demonstrating its cross-cultural and contextual validity.

CHAPTER 6

6.0 Conclusions & Recommendations

This chapter presents the key conclusions and practical recommendations derived from the study on workplace stress and mental health among health workers at the 37 Military Hospital in Accra, Ghana.

6.1 Conclusions

This study concludes that among health workers at the 37 Military Hospital, there is a high, clinically significant prevalence of depression, anxiety, and stress, with anxiety being the most severe and widespread problem. The mental health burden is not evenly distributed; it is strongly predicted by particular demographic and professional factors. The military status emerges as a key risk factor for anxiety, while the age group 46-55 years appears protective against depression. Marital status may also influence the risk of depression, although the relationship requires further study. The staff rely mainly on informal and social coping strategies, with a concerning underutilization of professional mental health services. These findings together paint a picture of a workforce under significant psychological strain, navigating its challenges with limited formal institutional support.

6.2 Recommendations

Based on the findings of this study, several recommendations are put forward to the management of the 37 Military Hospital, policymakers, and relevant stakeholders to address workplace stress, mitigate its negative mental health outcomes, and promote staff well-being.

1. Targeted Mental Health Screening and Support: Mandatory annual, and, of course, confidential screenings for metal health must be initiated by the administration. These should make use of the DASS-21 and similar diagnostic tools. Specific attention must be paid to employees with military backgrounds and younger employees. This must be coupled with the establishment of a dedicated, confidential, and stigma-free counselling

service within the hospital, staffed by professionals familiar with military and medial cultures.

2. Military-Specific Mental Health Interventions: Given the heightened anxiety among military staff, the Ghana Armed Forces Health Service should develop tailored resilience and stress management training. This should address unique stressors such as role conflict (soldier vs caregiver), hierarchical pressures, and deployment preparedness.
3. Review Workload and Shift Structures: Management should conduct an audit of workload distribution and shift schedules with the goal of minimizing consistently excessive hours ≥55 hours/week, and ensure equitable night shift rotations. Policies should formally mandate and protect break times during shifts.
4. Supportive Organization Culture: This would require an active effort at the leadership and mental health first aid training should be provided to leaders and officers. Open forums for staff to raise concerns without fear of reprisal is essential for instilling confidence and finding flaws in the system.

6.3 Recommendation for further studies

While this study provides valuable insights into workplace stress and its effects on healthcare personnel at the 37 Military Hospital, further research is needed to build on these findings and address existing gaps. Future studies should consider the following:

- A follow-up qualitative study is urgently needed to explore the lived experiences behind these statistics. In-depth interviews could unravel why military status predicts anxiety, why married staff might be at higher risk for depression, and the specific barriers to seeking formal mental health care.

- A longitudinal cohort study would help establish causality and track how mental health outcomes fluctuate with changes in policy, workload, or exposure to specific events (e.g., mass casualties, deployments).
- Future research should design and test the efficacy of specific interventions recommended in this study, such as the impact of dedicated counselling services or military-specific resilience training on reducing DASS-21 scores.
- Expanding this research to other military and civilian hospitals in Ghana would allow for comparative analysis, helping to isolate the specific effects of the military hospital environment from broader systemic issues within the Ghanaian health sector.

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APPENDICES

Appendix A – (Informed Consent Form)

CONSENT FORM

INFORMED CONSENT FORM

Section A- BACKGROUND INFORMATION

Title of Study:	**Assessing the Impact of Workplace Stress on Mental Health Among Health Workers: A Case Study of the 37 Military Hospital in Accra, Ghana**
Principal Investigator:	**Belinda Forson**
Name of institution/company and complete address	**Ensign Global University** **Tema-Akosombo Highway, Kpong**

Section B– CONSENT TO PARTICIPATE IN RESEARCH

General Information about Research

The research is aimed at assessing the impact of workplace stress on the mental health of clinical health workers at the 37 Military Hospital in Accra, Ghana. The results of the study are expected to provide evidence that will inform better health support policies and interventions within high-stress healthcare settings, particularly military hospitals.

Procedures:

If you agree to participate, you will be asked to:

- Complete a structured questionnaire that includes items from the Perceived Stress Scale (PSS) and Depression, Anxiety and Stress Scale (DASS-21), which will take approximately 20–30 minutes.
- Participate in a semi-structured interview (if selected) that may last 30–45 minutes, to discuss your experiences and perceptions of workplace stress and coping mechanisms.

Possible Risks and Discomforts

Although there are minimal risks, you may experience mild emotional discomfort while discussing stressful experiences. If this occurs, you will be referred to in-hose mental health professionals for support.

Possible Benefits

There may be no direct benefit to you. However, your participation will help identify and address mental health challenges in military healthcare settings and contribute to the development of stress management policies that could improve the working conditions of health workers like yourself.

Confidentiality

Your identity will be kept strictly confidential. No names or identifying information will be used in any report or publication of this study. Your responses will be coded and securely stored. All data will be anonymised and only accessed by the research team.

Compensation

There will be no financial compensation for participation in this study.

Additional Cost

None

Voluntary Participation and Right to Leave Research

Participation in this study is entirely voluntary. You are free to decline to participate or to withdraw at any time without penalty or loss of benefits to which you are otherwise entitled.

Contacts for Additional Information

If you have questions about this study or experience any adverse effects, please contact:

Name: Belinda Forson

Email: belinda.forson@st.ensign.edu.gh

Phone Number: 0572899308

Your Right as a Participant

This research has been reviewed and approved by the 3 Military Hospital Institutional Review (37MH-IRB). If you have any questions or further information about research participant you can contact the IRB office between :30am – 2:00pm through the Office mobile phone: 0591759506 or email address: irbmilhosp@gmail.com

Section C- **VOLUNTEER AGREEMENT**

The above document describing the benefits, risks and procedures for the research title ***Assessing the Impact of Workplace Stress on Mental Health Among Health Workers: A Case Study at the 3 Military Hospital in Accra, Ghana,*** has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature or mar of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____ _____

Date Name and signature of Person Who Obtained Consent

Appendix B - (Proposed Questionnaire)

Title of Study: *Assessing the Impact of Workplace Stress on Mental Health Among Health Workers: A Case Study of the 37 Military Hospital in Accra, Ghana*

Section A: Demographic Information

Please tick (✓) the appropriate box or fill in the blank.

1. Age:

☐ 18–25 ☐ 26–35 ☐ 36–45 ☐ 46–55 ☐ 56 and above

2. Gender:

☐ Male ☐ Female ☐ Prefer not to say

3. Marital Status:

☐ Single ☐ Married ☐ Divorced ☐ Widowed

4. Military Personnel:

☐ Yes ☐ No

5. Professional Role:

☐ Doctor ☐ Nurse ☐ Midwife ☐ Physician Assistant ☐ Lab Technician ☐ Other: _____

6. Department:

☐ Emergency ☐ Surgery ☐ Internal Medicine ☐ Obstetrics & Gynaecology ☐ Paediatrics

☐ Psychiatry ☐ Other: _____

7. Years of Experience in Clinical Practice:

☐ Less than 1 year ☐ 1–5 years ☐ 6–10 years ☐ More than 10 years

8. Number of Night Shifts per Week (on average): _____

9. Average Hours Worked per Week: _____

Section B: Depression, Anxiety, and Stress Scale (DASS-21)

Please read each statement and circle the number which indicates how much the statement applied to you over the past week.

Item	Did not apply (0)	Applied somewhat (1)	Applied a lot (2)	Applied very much (3)
1. I found it hard to wind down	☐	☐	☐	☐
2. I was aware of dryness of my mouth	☐	☐	☐	☐
3. I couldn't seem to experience any positive feeling at all	☐	☐	☐	☐
4. I experienced breathing difficulty (e.g., rapid or short breath)	☐	☐	☐	☐
5. I found it difficult to work up the initiative to do things	☐	☐	☐	☐
6. I tended to over-react to situations	☐	☐	☐	☐
7. I experienced trembling (e.g., in the hands)	☐	☐	☐	☐

8. I felt that I was using a lot of nervous energy	☐	☐	☐	☐
9. I was worried about situations in which I might panic and make a fool of myself	☐	☐	☐	☐
10. I felt that I had nothing to look forward to	☐	☐	☐	☐
11. I found myself getting agitated	☐	☐	☐	☐
12. I found it difficult to relax	☐	☐	☐	☐
13. I felt down-hearted and blue	☐	☐	☐	☐
14. I was intolerant of anything that kept me from getting on with what I was doing	☐	☐	☐	☐
15. I felt I was close to panic	☐	☐	☐	☐
16. I was unable to become enthusiastic about anything	☐	☐	☐	☐
17. I felt I wasn't worth much as a person	☐	☐	☐	☐
18. I felt that I was rather touchy	☐	☐	☐	☐
19. I was aware of the action of my heart (e.g., increased heart rate)	☐	☐	☐	☐
20. I felt scared without any good reason	☐	☐	☐	☐
21. I felt that life was meaningless	☐	☐	☐	☐

Section C: Coping Strategies

Please indicate how often you use the following coping strategies at work.

Strategy	Never	Rarely	Sometimes	Often	Always
1. Talk to colleagues about stress	☐	☐	☐	☐	☐
2. Take short breaks during shifts	☐	☐	☐	☐	☐
3. Use humour to relieve stress	☐	☐	☐	☐	☐
4. Exercise after work	☐	☐	☐	☐	☐
5. Seek counselling or therapy	☐	☐	☐	☐	☐
6. Pray or meditate	☐	☐	☐	☐	☐
7. Use alcohol or medication to unwind	☐	☐	☐	☐	☐
8. Talk to family/friends for support	☐	☐	☐	☐	☐

ENSIGN GLOBAL
UNIVERSITY

OUR REF: ENSIGN/IRB/EL/SN-297/03
YOUR REF:

August 4, 2025

INSTITUTIONAL REVIEW BOARD SECRETARIAT

Belinda Forson
Ensign Global University
Kpong.

Dear Belinda,

ETHICAL CLEARANCE TO UNDERTAKE POSTGRADUATE RESEARCH

At the General Research Proposals Review Meeting of the *INSTITUTIONAL REVIEW BOARD (IRB)* of Ensign Global University held on Friday, August 1, 2025, your research proposal entitled **"Assessing the Impact of Workplace Stress on Mental Health Among Health Workers: A Case Study of the 37 Military Hospital in Accra, Ghana"** was considered.

You have been granted Ethical Clearance to collect data for the said research under academic supervision within the IRB's specified frameworks and guidelines.

We wish you all the best.

Sincerely,

Dr. (Mrs.) Rebecca Acquaah-Arhin
IRB Chairperson