AKENTEN APPIAH-MENKA UNIVERSITY OF SKILLS TRAINING AND ENTREPRENEURIAL DEVELOPMENT

MPHIL THESIS

INVESTIGATING OCCUPATIONAL HEALTH RISKS AND HEALTH-SEEKING BEHAVIOURS AMONG HEALTHCARE WORKERS IN THREE SELECTED HEALTH FACILITIES ACROSS THREE DISTRICTS OF ASHANTI REGION.

DANIEL QUARSHIE

SEPTEMBER, 2025

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BY

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A thesis submitted to the Department of Public Health Education of the Faculty of Environment and Health Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development in partial fulfillment of the requirements for the award of a Master of Philosophy Degree in Environmental and Occupational Health Education

SEPTEMBER, 2025

DECLARATION

I hereby declare that this thesis, with the exception of quotations and references contained in published works which have been duly acknowledged; is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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Supervisors' Declaration

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

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ABSTRACT

Healthcare workers (HCWs) are at heightened risk of occupational hazards due to the nature of their work, which compromises their safety, productivity, and overall well-being. This study investigated occupational health risks and health-seeking behaviours among HCWs in three selected health facilities across three districts of Ashanti Region, Ghana; Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre. A descriptive cross-sectional design was employed, and data were collected from 253 respondents using structured questionnaire. The analysis was conducted using SPSS, applying descriptive statistics, chi-square tests, and logistic regression. Findings revealed widespread exposure to occupational risks, with biological (65.6%), ergonomic (54.1%), and physical (51.8%) risks most prevalent. Logistic regression showed that HCWs aged 31-40 years and ≥ 41 years were significantly less likely to seek professional care after exposure than those aged 20-30 years (AOR = 0.050 and 0.007), respectively. Married and cohabiting workers were more likely to seek professional treatment than singles. Staff at Afrancho Polyclinic had higher odds of professional care-seeking than those at Adansi North DH (AOR = 14.98) and Kenyasi HC, whereas non-clinical workers were less likely to seek care than clinical staff. The study concludes that occupational health risks among HCWs remain widespread and are compounded by age, marital status, facility, staff category, work experience and the availability of stress-management and emotional-support systems. Policies should therefore strengthen occupational health and safety protocols, provide continuous training and adequate PPE, and institutionalise stress-management and psychosocial support programmes to encourage timely professional care. Targeted interventions for non-clinical staff and older workers may further improve health-seeking behaviour and ensure the well-being of the workforce a prerequisite for resilient health systems and progress toward universal health coverage.

DEDICATION

I dedicate this research work to God Almighty, whose unfailing love, grace, and guidance made this journey possible. To Comfort Abankoro (Mum), Joel Quarshie, Professor John Owusu Gyapong (Former Vice-Chancellor of UHAS), Owuraku Abu Amponsah, Joyce Ofori-Amoah, Isaac Mensah and his family, Samuella Druwaah, Osei Osman, Angela Bonsu, Emmanuel Adu, and Collins Kwame Adjei and his family, thank you for being a part of my life and for walking this path with me in your own unique ways. Your presence, support, and kindness have left a lasting mark on my heart. This achievement is not mine alone, but a shared testimony of love, faith, and divine favor. May God bless you all abundantly.

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ACRONYMS

BBPs	Bloodborne Pathogens
CHRPE	Committee on Human Research, Publications, and Ethics
CI	Confidence Interval
COPD	Chronic Obstructive Pulmonary Disease
COVID-19	Coronavirus Disease 2019
DH	District Hospital
GHS	Ghana Health Service
HBM	Health Belief Model
HBV	Hepatitis B Virus
HC	Health Centre
HCV	Hepatitis C Virus
HCWs	Healthcare Workers
HIV	Human Immunodeficiency Virus
HSBs	Health-Seeking Behaviours
ILO	International Labour Organization
IPC	Infection Prevention and Control
IRB	Institutional Review Board
LMICs	Low and Middle-Income Countries
MoH	Ministry of Health
NHIS	National Health Insurance Scheme
NICU(s)	Neonatal Intensive Care Unit(s)
OHRs	Occupational Health Risks

OHS	Occupational Health and Safety
OR / aOR	Odds Ratio / Adjusted Odds Ratio
PC	Polyclinic
PEP	Post-Exposure Prophylaxis
PPE	Personal Protective Equipment
PPE	Personal Protective Equipment
SD	Standard Deviation
SDGs	Sustainable Development Goals
SPSS	Statistical Package for the Social Sciences
TB	Tuberculosis
TPB	Theory of Planned Behaviour
UHC	Universal Health Coverage
WHO	World Health Organization

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The health and well-being of healthcare workers (HCWs) are indispensable to the functioning of healthcare systems and the delivery of quality care. As frontline providers, HCWs are routinely exposed to a range of occupational health hazards that compromise their safety, productivity, and overall quality of life *(Nathan-Ezie et al., 2023).* Globally, the World Health Organization (WHO) estimates that nearly 19% of HCWs experience work-related injuries or illnesses annually, with many cases underreported due to systemic and cultural barriers (*Debelu et al., 2023;* WHO, 2022). The healthcare industry ranks among the most hazardous occupational sectors worldwide. According to the International Labour Organization (ILO), HCWs are at heightened risk of exposure to physical hazards (e.g., slips, falls, musculoskeletal injuries), biological hazards (e.g., needlestick injuries, exposure to infectious diseases including hepatitis B and C, and COVID-19), chemical hazards (e.g., exposure to disinfectants, sterilant, and cytotoxic drugs), and psychosocial hazards (e.g., workplace violence, burnout, long working hours, and emotional fatigue) (International Labour Organization, 2024; *Ji et al., 2025*). In recent years, mental health issues have gained prominence among HCWs, particularly in the aftermath of the COVID-19 pandemic, where increased workload and emotional stress contributed to high levels of anxiety, depression, and burnout (*Gyamerah et al., 2025*).

In Sub-Saharan Africa, including Ghana, occupational health risks are magnified by systemic challenges such as poorly equipped facilities, lack of personal protective equipment (PPE), limited staffing, and inadequate surveillance systems for occupational illnesses *(Rai et al., 2021; Mossburg et al., 2019)*. Many healthcare facilities operate with minimal adherence to occupational health

and safety (OHS) standards, increasing the risk of adverse health outcomes among staff. In addition, weak enforcement of national and institutional OHS policies further compounds the vulnerability of HCWs (*Tawiah et al., 2022*).

In Ghana, although the Labour Act 2003 (Act 651) and the Occupational Health and Safety Policy (drafted in 2010) provide a framework for worker protection, their implementation in the healthcare sector remains inadequate. Studies have shown that Ghanaian HCWs often lack access to safety training, face a shortage of protective gear, and work in environments that do not prioritize health and safety (Ghana Health Service, 2020; *Opoku et al., 2023*). For instance, Tawiah, et al. (2024) revealed that only 58% of nurses in a public hospital in Ghana had received formal training on occupational health risks in the past two years, while over 70% had experienced some form of occupational hazard.

The Ashanti Region, being one of Ghana's most densely populated regions and a central hub for healthcare delivery, bears a high patient load and healthcare worker demand. Despite being home to major health facilities such as the Komfo Anokye Teaching Hospital, many district and community health facilities in the region face similar occupational health risks as those in rural Ghana, exacerbated by resource limitations, understaffing, and high patient-to-provider ratios (*Aiken et al., 2023*). The region's health system also struggles with inadequate reporting and management mechanisms for occupational injuries, affecting both prevention and treatment measures.

Furthermore, the health-seeking behaviour of HCWs in response to occupational risks is influenced by multiple factors, including accessibility of care, stigma, perceived severity of symptoms, and workplace support. Some studies suggest that HCWs, ironically, are less likely to seek timely medical care due to professional culture, fear of judgment, or overconfidence in self-

treatment *(Teksin et al., 2020; Negarandeh et al., 2024)*. In Ghana, limited studies have comprehensively examined the occupational health risks faced by HCWs alongside their health-seeking behaviours, especially within the context of district and peri-urban health facilities. Most existing studies have focused on major urban hospitals, overlooking the unique challenges in underserved areas such as those in the Ashanti Region. The selected facilities Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre represent a mix of healthcare settings that face significant infrastructure and staffing constraints, making them ideal for exploring occupational vulnerabilities and behavioural responses.

This study, therefore, investigates the occupational health risks and health-seeking behaviours among HCWs in three selected health facilities across three districts of Ashanti Region, Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre of Ghana. These facilities were chosen to reflect both rural and peri-urban healthcare environments within the region.

1.2 Statement of the Problem

Healthcare workers (HCWs) in Ghana, particularly in the Ashanti Region, faced numerous occupational health risks that threatened their health, safety, and productivity *(Tawiah et al., 2022)*. Despite the critical role they played in delivering healthcare services, HCWs were often exposed to hazardous working conditions, inadequate personal protective equipment (PPE), and insufficient training on occupational health and safety. A study conducted in Ghana by Appiagyei et al. (2021) found that 58.3% of HCWs had experienced at least one needlestick injury. Additionally, 45% of HCWs in Ghana reported work-related musculoskeletal pain (Kayi et al. 2023), while 47% experienced high levels of job-related stress *(Agbanu, 2022).*

Despite these risks, many HCWs did not seek timely medical care. Studies indicated that 52% of African HCWs engaged in self-medication rather than seeking professional healthcare *(Opoku et*

al., 2023). In Ghana, 40% of HCWs delayed treatment due to financial constraints (Adusei et al., 2021), and stigma surrounding mental health discouraged HCWs from seeking psychological support *(Agyemang et al., 2022).* According to the WHO (2020), Ghana had one of the highest rates of occupational injuries and illnesses in the African Region. Despite the availability of international guidelines on occupational health and safety, there is limited context-specific research on occupational health risks and health-seeking behaviours among HCWs in Ghana (Opoku et al., 2023), hence given the limited studies that have been conducted in the Ashanti Region no comparative assessments across other facilities so this study investigates the occupational health risks and health-seeking behaviours among HCWs in three selected health facilities across three districts of Ashanti Region.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of the study was to investigate the occupational health risks and health-seeking behaviours among healthcare workers in three selected health facilities across three districts of Ashanti Region (Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre), Ghana.

1.3.2 Specific Objectives

The specific objectives of the studies were to;

1. Identify occupational health risks faced by healthcare workers in the selected health facilities.
2. Investigate the factors influencing health-seeking behaviours among healthcare workers after exposure to occupational health risks in the selected health facilities.

3. Compare the occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities.

1.4 Research Questions

1. What are the occupational health risks faced by healthcare workers in the selected health facilities in the Ashanti Region, Ghana?
2. What factors influence health-seeking behaviours among healthcare workers after exposure to occupational health risks in the selected health facilities?
3. Are there significant differences in occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities?

1.5 Significance of the Study

This study was significant for several reasons. Theoretically, it contributed to the existing body of knowledge on occupational health risks and health-seeking behaviours among healthcare workers (HCWs). The findings brought to light the occupational health risks faced by healthcare workers in the Ashanti Region, which informed policy formulation and implementation by the Ghana Health Service regarding occupational health risks. Moreover, the outcomes of the study enlightened both the public and the Ghana Health Service on issues related to occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities. In addition, the study provided adequate information to the Ghana Health Service on the factors that influenced health-seeking behaviours among healthcare workers after exposure to occupational health risks. The study's outcomes informed the development of targeted interventions, educational programmes, and policy reforms by the Ghana Health Service aimed at mitigating occupational health risks and promoting healthy behaviours among HCWs.

Finally, the study served as a reference for other researchers who may intend to investigate this problem further.

1.6 Justification of the Study

The justification for this study stems from the critical role HCWs plays in the delivery of essential health services and the increasing risks they face in the course of their duties. Despite being at the forefront of healthcare delivery, HCWs are routinely exposed to occupational hazards such as infectious diseases, physical injuries, chemical exposures, and psychological stress. These risks not only compromise their health and safety but also impact the quality of patient care and the overall efficiency of the healthcare system. In Ghana, limited studies have examined the occupational health risks faced by HCWs alongside their health-seeking behaviours, especially within the context of district and peri-urban health facilities. Most existing research has focused on major urban hospitals, overlooking the unique challenges in underserved areas such as those in the Ashanti Region. The selected facilities Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre represent a mix of healthcare settings that face significant infrastructure and staffing constraints, making them ideal for exploring occupational vulnerabilities and behavioural responses. Furthermore, Ghana's occupational health and safety (OHS) policies are often poorly implemented at the facility level. A better understanding of the types and frequency of occupational risks, as well as the coping strategies and healthcare-seeking patterns among HCWs, helped inform evidence-based interventions. This study was therefore crucial in investigating the occupational health risks and health-seeking behaviours of healthcare workers in three selected health facilities across three districts of Ashanti Region, Ghana.

1.7 Scope of the Study

This study primarily focused on investigating the occupational health risks and health-seeking behaviours among healthcare workers (HCWs) in three selected health facilities across three districts of Ashanti Region. Geographically, the study was conducted in one district hospital, one polyclinic, and one health centre in the Ashanti Region of Ghana being one of the most densely populated regions in the country. In terms of scope, the study examines occupational health risks faced by healthcare workers in the selected health facilities, investigates the factors influencing health-seeking behaviours among healthcare workers after exposure to occupational health risks and assesses the occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities across three districts of Ashanti Region. The study population was informed by healthcare workers including nurses, doctors, and other non-clinical healthcare professionals in the selected health facilities in the Ashanti Region. The study spanned over a period of nine months, from January 2025 to September 2025.

1.8 Limitations of the Study

This study had several limitations. Firstly, it was conducted in only three health facilities in the Ashanti Region of Ghana, which limits the generalizability of the findings to other healthcare settings. Secondly, the cross-sectional design captures information at a single point in time and therefore cannot establish causal relationships. Thirdly, the study relied on self-reported data from HCWs, which may be subject to recall and social desirability biases. To reduce the impact of these limitations, a quantitative approach to data collection and analysis was adopted to provide a more comprehensive understanding of the research phenomenon. Validated data collection instruments were used to enhance accuracy and minimize bias, and participants' confidentiality and anonymity

were assured to encourage honest reporting of their experiences. Finally, the study acknowledges these limitations and offers recommendations for future research to address them.

1.9 Organization of the study

This thesis was organized into six chapters. Chapter one gives a general overview of the thesis showing the background of the study, problem statement, general and specific objectives, research questions, the significance of the study, justification of the study, the scope of the study, and organization of the study. Chapter two reviewed literature on recent studies related to occupational health risks and health-seeking behaviours among HCWs and the theoretical underpinning of the study. Chapter three was concerned with the methodology employed for the study. It involves the philosophical underpinning of the study, study area, research design, research approach, target population, sample size and technique, data collection instruments, data collection procedure, method of data analysis, ethical consideration and limitations of the study. Chapter four presented the results of the study. Chapter five presents the discussion of the findings while the sixth chapter presents the summary of findings, conclusion, recommendations and areas for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The chapter deals with the literature review and the conceptual framework used for the study. The section reviews existing literature on occupational risks and heath seeking among health care workers. It also discusses the theoretical underpinning of the study and the conceptual framework.

2.1 Conceptual Review

2.1.1 Definition of Occupational Health

According to the World Health Organization (2022), occupational health focuses on promoting and maintaining workers' physical, mental, and social well-being by preventing work-related illnesses and injuries and aligning job demands with workers' capabilities. The International Labour Organization (ILO, 2024) underscores occupational health as both a human rights concern and an economic necessity, linking healthy workers to increased productivity and national development. In healthcare, occupational health is especially critical due to the high-risk nature of clinical work. HCWs face constant exposure to biological, chemical, and psychological hazards. As Benson et al. (2024) highlight, the complexity and inherent dangers of healthcare environments make effective occupational health measures both essential and challenging.

2.1.2 Historical Evolution of Occupational Health in Healthcare

Historically, the recognition of occupational health hazards in healthcare dates back to the 19th century, when high rates of infections like tuberculosis were observed among hospital workers *(Sepkowitz, 1994)*. Early responses included Joseph Lister's development of antiseptic techniques and the introduction of hospital hygiene standards. However, systematic efforts to protect HCWs

only gained momentum in the late 20th century, especially during the HIV/AIDS epidemic, which highlighted the risks of needlestick injuries and bloodborne infections (*Michaleas et al., 2022*).

In recent years, the scope of occupational health in healthcare has broadened to include issues including ergonomic injuries, workplace violence, and mental health. Although international bodies like the WHO and ILO have provided extensive guidelines, implementation remains inconsistent across regions *(Kirsten, 2022)*.

2.1.3 Dimensions of Occupational Health in Healthcare Settings

Occupational health in healthcare settings is a multifaceted concept that plays a crucial role in ensuring the safety, well-being, and productivity of HCWs. Given the inherently high-risk and demanding nature of healthcare environments, occupational health initiatives go beyond the prevention of injuries and illnesses. They also focus on promoting long-term physical, mental, and emotional wellness, while effectively managing a wide range of workplace hazards. These efforts collectively support HCWs throughout their professional journey, from initial exposure prevention to post-injury rehabilitation and reintegration *(Flaubert et al., 2021)*. A major component of occupational health is preventive services, which aim to minimize the risk of exposure to biological, chemical, and physical hazards. These include essential measures such as vaccinations (e.g., Hepatitis B), regular training in infection prevention and control (IPC), and the consistent use of personal protective equipment (PPE) (*Rai et al., 2021*). Periodic health assessments also play a key role in early detection of occupational illnesses, ensuring that workers remain fit for duty.

Equally important is the dimension of risk assessment and management. This involves systematically identifying and addressing potential hazards in the workplace through safety protocols, engineering interventions such as ergonomic designs, and administrative strategies like

workload management and shift scheduling (*Pascarella et al., 2021*). These practices help institutions maintain a proactive and adaptable occupational health system. Health promotion adds another critical layer by focusing on enhancing the overall well-being of HCWs. Initiatives such as stress management programs, ergonomics training, and lifestyle interventions (promoting exercise, good nutrition, and substance moderation) help prevent burnout, reduce work-related injuries, and support long-term health and resilience among HCWs (*Palmer et al., 2018*). Finally, rehabilitation and reintegration are essential for workers who experience occupational injuries or illnesses. These services offer medical and psychosocial support and help workers return to their roles safely, often with necessary accommodations *(Keegan et al., 2024*). Sveen et al., (2022) noted that effective reintegration programs also foster a culture of care and commitment within healthcare institutions

2.2. Empirical review

2.2.1 Global Trends and Challenges in Occupational Health for Healthcare Workers

Healthcare is one of the most hazardous professions globally, with HCWs comprising less than 3% of the world's population but accounting for 14.4% of COVID-19 infections (*Nguyen et al., 2020).* Mental health is increasingly recognized as a key occupational health concern, with the WHO (2019) classifying burnout as an occupational phenomenon. Aiken et al. (2023), report high burnout rates among physicians (32%) and nurses (47%), which threaten healthcare quality and workforce stability. In low- and middle-income countries (LMICs), challenges persist due to underfunded health systems, poor compliance with safety measures, inadequate PPE, limited training, and insufficient institutional support (*Feyisa et al., 2022*).

Although the Ghana Health Service (GHS) has established occupational health and safety policies in Ghana, their implementation remains uneven across regions and facility types (GHS, 2020).

Many HCWs lack access to essential services such as post-exposure prophylaxis (PEP) and psychological support *(Tawiah et al., 2022)*. Rural and peri-urban facilities, particularly in the Ashanti Region, face heightened risks due to equipment shortages, inadequate staffing, and poor reporting systems. In these settings, HCWs often address occupational exposures informally, turning to peer support or self-medication instead of formal healthcare services (*Poku et al., 2023*).

2.2.2 Common Occupational Health Risks Among Healthcare Workers

HCWs face diverse occupational health risks stemming from their work environment, patient care duties, and systemic workplace conditions. These risks include biological, chemical, physical, psychosocial, and ergonomic hazards. The level of exposure varies based on job roles, departmental assignments, and the availability of institutional resources and policies *(Che Huei et al., 2020; Rai et al., 2021).*

2.2.2.1 Biological Risks

Among the most well-documented biological hazards faced by HCWs is exposure to bloodborne pathogens such as HIV, Hepatitis B (HBV), and Hepatitis C (HCV). These infections are typically transmitted through needlestick injuries, contact with mucous membranes, or broken skin *(Beltrami et al., 2000; Coppola et al., 2016).* The World Health Organization (WHO) estimates that approximately 2 million HCWs suffer percutaneous exposure to infectious diseases annually, with occupational exposure accounting for 40% of HBV and HCV infections among HCWs (*Prüss-Üstün et al., 2003).* In Ghana, Tawiah et al. (2024) reported that 45.6% of HCWs in ten hospitals in Greater Accra had experienced a needlestick injury, while only 30% had received the full course of Hepatitis B vaccination. These findings point to systemic deficiencies in vaccination coverage, safety training, and post-exposure protocols.

Another significant biological risk is tuberculosis (TB), especially in high-burden regions. HCWs working in TB clinics and emergency departments face elevated risks due to frequent contact with infected individuals. Uden et al. (2017) found that latent TB infection rates among HCWs are significantly higher than in the general population. In Ghana, a study by Graves et al. (2019) revealed that 60.7% of HCWs tested positive for latent TB, underscoring the inadequacy of airborne infection control measures and the limited use of N_{95} respirators in health facilities.

The COVID-19 pandemic further intensified biological risks for HCWs. According to WHO (2021), HCWs represented a disproportionate share of global COVID-19 cases, highlighting lapses in infection prevention and control (IPC), insufficient PPE supply, and inconsistent safety practices. In Ghana, hundreds of HCWs were infected during the early waves of the pandemic, with multiple fatalities reported *(Ghana Health Service, 2020).* Although emergency interventions such as PPE distribution and mental health services were implemented, persistent issues such as inadequate training and PPE shortages particularly in district-level hospitals undermined protection efforts. Oppong et al. (2024) noted that 22% of HCWs in the Ashanti Region reported COVID-19 infections or quarantine due to workplace exposure, often linked to gaps in standard precautions.

2.2.2.2 Chemical Risks

Chemical exposure constitutes another major occupational hazard in healthcare environments. HCWs routinely handle a range of chemicals including disinfectants, sterilizing agents, pharmaceuticals (notably cytotoxic drugs), anesthetic gases, and cleaning products. Prolonged exposure to these agents can result in respiratory conditions, dermatological reactions, reproductive health issues, and increased cancer risks (*Che Huei et al., 2020; Shetty et al., 2023)*.

Disinfectants such as glutaraldehyde, formaldehyde, and ethylene oxide are widely used but pose health risks when mishandled or used in poorly ventilated spaces. Dumas et al. (2019) reported a 25% increase in the risk of chronic obstructive pulmonary disease (COPD) among nurses heavily exposed to disinfectants. In Ghana, Siabi et al. (2022) documented frequent complaints of skin irritation, headaches, and eye discomfort among laboratory personnel due to improper chemical handling and limited use of PPE. These risks are compounded in poorly equipped facilities where ventilation is inadequate and compliance with chemical safety protocols remains low *Siabi et al. (2022)*.

Cytotoxic drugs used in chemotherapy also pose significant risks to HCWs, particularly oncology nurses, pharmacists, and laboratory staff. Exposure to these agents can cause both acute effects such as nausea and rashes and chronic consequences, including miscarriages, congenital anomalies, and cancers (*Ortiz-Garcia et al., 2023*). Although data from Ghana are sparse, reports from tertiary hospitals like Korle-Bu Teaching Hospital indicate that many staff members handle cytotoxic drugs without full protective gear such as closed-system transfer devices or ventilated safety hoods *(Boateng et al., 2020).* This is further exacerbated by the lack of specialized training in drug handling.

Additionally, anesthetic gases like nitrous oxide, halothane, and isoflurane used in surgical procedures represent a serious risk. Inadequate scavenging systems and equipment leaks can expose staff to these gases, leading to headaches, fatigue, neurobehavioural effects, and reproductive issues (*Kiani et al., 2023)*. A study by Thiyagarajan et al. (2024) reported higher rates of spontaneous abortion and infertility among female anesthetists and operating room staff. In Ghana, many district hospitals lack advanced ventilation systems, significantly increasing these risks for surgical teams.

2.2.2.3 Physical Risks

Physical risks in healthcare settings are widespread and stem from patient care, environmental conditions, and medical technology use. These hazards affect both clinical and non-clinical staff and, if not well managed, can cause acute or chronic health issues. Consequences may include absenteeism, lower productivity, and early departure from the profession *(Che Huei et al., 2020; De Hert, 2020).*

One of the most frequent physical hazards in healthcare settings is slips, trips, and falls. These incidents are typically caused by wet floors, cluttered corridors, uneven surfaces, and inadequate lighting. Globally, the healthcare and social assistance sectors record the highest number of nonfatal occupational injuries due to falls *(Muramatsu et al., 2018)*. In Ghana, especially in rural and peri-urban areas like the Ashanti Region, poor infrastructure maintenance, water spills, and insufficient housekeeping significantly elevate these risks (*Okesanya et al., 2024*). Budget constraints often limit the ability of health facilities to address these basic infrastructural challenges. A study by Appiagyei et al. (2021) conducted in a tertiary hospital in Ghana reported that falls accounted for 7.5% of occupational injuries among HCWs. Such injuries can result in fractures, sprains, and musculoskeletal disorders, leading to absenteeism and decreased workforce productivity.

Radiation exposure represents another significant physical hazard for HCWs, particularly among radiologists, radiologic technologists, surgical staff, and those involved in fluoroscopy-guided procedures. Ionizing radiation, including X-rays and CT scans, poses cumulative health risks such as increased cancer susceptibility and reproductive health issues if proper shielding and safety monitoring are not consistently practiced *(Frane & Bitterman, 2023)*. In Ghana, compliance with radiation safety protocols remains inconsistent. Kyei et al. (2025) found that in several district

hospitals, radiation dose monitoring was irregular or entirely absent. Essential protective equipment such as lead aprons, thyroid shields, and radiation badges were either unavailable or underutilized. Moreover, radiation risks are not limited to radiology departments, as surgical and emergency units may also experience incidental exposure, highlighting the need for broad-based radiation safety education and policy enforcement.

While often overlooked, noise constitutes a significant physical hazard in healthcare settings, especially in intensive care units (ICUs), emergency departments, and neonatal intensive care units (NICUs). Noise levels in these environments can exceed recommended thresholds set by the World Health Organization, leading to hearing impairment, increased stress levels, communication difficulties, and reduced work performance *(Aminudin et al., 2023*). Noise sources include alarm systems, medical equipment, intercom announcements, and even conversations. A study by Tahvili et al. (2025) demonstrated that high noise levels in ICUs were associated with increased worker fatigue and stress-related absenteeism. In Ghana, empirical studies on occupational noise in healthcare are limited; however, anecdotal evidence suggests that emergency and maternity units, often overcrowded and under-resourced, experience high ambient noise levels, thereby contributing to the cumulative occupational burden on HCWs (*Tawiah et al., 2022*).

HCWs also face risks from the improper use or malfunction of medical equipment and instruments. Cuts, punctures, abrasions, and crush injuries can occur during the handling of surgical instruments, diagnostic devices, or even patient lifting aids. According to Khairallah et al., (2024), manual handling of patients without proper equipment is a major cause of injury among HCWs in resource-limited settings. Mechanical lifting devices, adjustable beds, and transfer boards are often unavailable in district and rural health centers in Ghana, exposing staff to repetitive strain injuries

and acute accidents. Furthermore, poorly maintained equipment such as malfunctioning autoclaves or damaged diagnostic machines can pose electrical hazards, adding another layer of physical risk.

2.2.2.4 Psychosocial Risks

Psychosocial risks in healthcare settings involve organizational, social, and emotional factors that negatively impact the mental health and well-being of HCWs. Although less visible than physical hazards, these risks can lead to serious consequences such as depression, anxiety, burnout, and suicidal thoughts. High workloads, emotional strain from patient care, exposure to trauma, and workplace conflicts make healthcare environments particularly stressful *(Franklin & Gkiouleka, 2021)*.

One of the most critical psychosocial risks faced by HCWs is workplace violence, which includes physical assaults, verbal abuse, psychological intimidation, and sexual harassment. This violence can come from patients, their relatives, or even coworkers (*Lim et al., 2022*). Globally, a significant proportion of HCWs ranging between 8% and 38% report experiencing physical violence during their careers, with many more subjected to verbal abuse (*Kafle et al., 2022*). In Ghana, this issue is notably prevalent, with studies indicating that 67% of nurses have faced some form of workplace violence within a year, especially in high-risk areas such as emergency and psychiatric units *(Bekelepi & Martin, 2023)*. Factors such as inadequate security, lack of clear policies, and the normalization of aggression contribute to the persistence of this issue, while fear of retaliation and lack of institutional support often discourage incident reporting *(Lim et al., 2022*).

Another prevalent psychosocial risk is emotional stress and compassion fatigue, which arise from constant exposure to patient suffering, trauma, and death. HCWs working in emotionally intense environments like ICUs, oncology, and palliative care units are particularly vulnerable *(Flaubert et al., 2021)*. Compassion fatigue, a concept introduced by Figley (1995), describes the emotional

exhaustion that occurs when caregivers are unable to replenish their mental and emotional resources. This condition can lead to reduced empathy, irritability, and emotional numbness, thereby affecting the quality of care provided *(Cocker & Joss, 2016)*. In Ghana, studies have shown that a significant number of ICU nurses suffer from moderate to high levels of compassion fatigue, driven by factors such as understaffing and the absence of psychosocial support (*Garnett et al., 2023).*

Burnout syndrome is another major concern. Recognized by the World Health Organization as an occupational phenomenon, burnout manifests in three key dimensions: emotional exhaustion, depersonalization, and a reduced sense of personal accomplishment *(Nadon et al., 2022; Maslach & Leiter, (2016)*. This condition is widely prevalent across healthcare systems worldwide, including Ghana. High levels of burnout among medical professionals, especially junior doctors and those in high-pressure departments like emergency care, have been linked to long working hours, inadequate resources, and a lack of institutional recognition and support *(Reith, 2018)*. The implications of burnout extend beyond individual suffering, contributing to increased staff turnover, reduced patient satisfaction, higher healthcare costs, and a rise in medical errors issues that are particularly detrimental in low-resource settings *(Rotenstein et al., 2018; De Hert, 2020)*. Despite the significant burden of psychosocial risks, HCWs often hesitate to seek help due to pervasive mental health stigma. In Ghana, cultural beliefs that associate mental illness with weakness or spiritual failings further compound this issue *(Odonkor & Frimpong, 2020)*. Many HCWs resort to self-medication or informal support networks instead of pursuing professional mental health services. This reluctance to seek help results in untreated mental health conditions, further impairing job performance and overall well-being *(Yonemoto & Kawashima, 2023)*.

2.2.2.5 Ergonomic Risks

Ergonomic risks in healthcare settings arise from physically demanding tasks that exceed the body's natural limits, particularly those involving posture, repetitive movement, and prolonged exertion. These risks, though less visible than biological or chemical hazards, significantly impact the musculoskeletal health of HCWs, often resulting in chronic pain, limited mobility, and even permanent disability. Common contributors include lifting patients, prolonged standing, awkward body positions, and repetitive tasks (*Caroline et al., 2024; Krishnan et al., 2021)*.

Musculoskeletal disorders (MSDs) are the most common ergonomic-related health issue in the healthcare profession. These include conditions like back pain, neck strain, tendonitis, and carpal tunnel syndrome. Studies show that nurses are particularly vulnerable, with Sun et al., (2023) reporting that 52% of nurses experience work-related MSDs annually. In Ghana, a study by Mohammed et al. (2024) found that 61% of nurses suffered from job-related musculoskeletal pain, primarily due to manual patient handling and a lack of ergonomic tools.

Manual patient handling tasks such as lifting, transferring, and repositioning patients are a major source of ergonomic strain. Hegewald et al. (2018), identified these tasks as the single greatest risk factor for musculoskeletal injuries, especially when assistive devices are unavailable. In Ghana, a study by Khairallah et al., (2024) revealed that only 25% of health facilities had mechanical lifting aids, many of which were non-functional due to poor maintenance.

Additionally, repetitive movements and prolonged static postures also contribute to ergonomic risks. Tasks like administering injections, working in laboratories, and standing for extended periods during surgeries can lead to chronic strain injuries. A study by Hoe et al. (2018) found that such injuries are especially common among lab technicians, dentists, and surgical teams. In Ghana,

the lack of ergonomic assessments and poorly designed workstations further increase these risks (*Tawiah, et al., 2024*).

A significant factor exacerbating ergonomic injuries is the lack of proper training and equipment. Many HCWs receive little to no instruction on safe lifting techniques or body mechanics. Training on ergonomic safety is often absent from orientation programs *(Kugler et al., 2024)*. Although Ghana's health policy acknowledges ergonomic risks (Abdalla et al., 2017), implementation remains weak due to limited resources, poor prioritization, and a lack of institutional commitment.

2.3 Comparative Analysis of Occupational Health Risks and Health-Seeking Behaviours Across Departments

Occupational health risks and health-seeking behaviours among HCWs differ significantly across departments within health facilities, influenced by factors such as job function, exposure type, patient interaction, and institutional support. Clinical departments like surgery, emergency, and obstetrics/gynecology present the highest biological risks due to frequent exposure to bloodborne pathogens through invasive procedures, with elevated rates of needlestick injuries and fluid contact *(Ridge et al., 2024; Asiedu et al. (2024)*. While awareness is generally high in these areas, systemic issues like workload and stigma still hinder timely care-seeking (*Auerbach et al., 2024*).

Laboratory staff face chemical and biological risks but often underreport exposures due to fear of reprimand and workflow disruptions, despite their technical knowledge (Garchie et al., 2023). Radiology departments confront cumulative physical risks from ionizing radiation, but delayed health-seeking is common due to the often invisible and slow-onset nature of radiation-related illnesses *(Frane & Bitterman 2025; Castañeda-Millán et al., 2025)*.

In administrative and support roles, ergonomic strain, stress, and workplace violence are key concerns. However, these workers frequently deprioritize their health, viewing ailments as routine

rather than occupational, leading to low uptake of interventions (Daliri et al., 2024). Mental health risks, especially in ICUs and emergency units, are prevalent due to high-stress environments, though stigma across departments limits help-seeking (*Azoulay et al., 2021*). Institutional leadership and policy significantly shape departmental health behaviours. As noted by Wu et al. (2021), departmental leadership plays a crucial role in shaping the occupational safety climate, with supportive leaders fostering environments where health concerns are addressed promptly and constructively.

2.4 Importance of Occupational Health in Achieving Health System Goals

Protecting HCWs is essential for advancing universal health coverage (UHC) and achieving the Sustainable Development Goals (SDGs). A resilient health system depends on safe, supportive working environments for healthcare staff *(Debie et al., 2024).* The COVID-19 pandemic highlighted the consequences of neglecting healthcare worker safety, including workforce shortages, service disruptions, and reduced public trust (*Bhaskar et al., 2020*). As such, occupational health should be regarded as a core element of health system strengthening.

2.5 Factors Influencing Health-Seeking Behaviour Among Healthcare Workers

2.5.1 Personal Factors

Personal attributes such as age, gender, education, and experience significantly shape HCWs' health-seeking behaviours in response to occupational risks. Older workers (above 40) are more likely to seek medical care after injuries due to heightened risk perception, as noted by Appiagyei et al. (2021). Gender differences are also evident, with female HCWs showing higher rates of post-exposure prophylaxis (PEP) uptake and mental health service use than males, who may avoid care due to societal expectations of masculinity *(Sithole, 2023; Aggrey-Bluwey & Botchwey, 2025)*.

Education plays a critical role; those with higher academic qualifications demonstrate greater compliance with reporting and treatment protocols (*Bana et al., 2016*). While experience can improve awareness of risks, it may also lead to complacency if past reporting did not result in adequate institutional support. These findings underscore the need for targeted interventions that consider individual characteristics to improve timely and appropriate health-seeking behaviours among HCWs.

2.5.2 Institutional Factors

Institutional factors play a pivotal role in shaping HCWs' health-seeking behaviours after occupational exposures. The presence or absence of supportive structures, policies, and organizational culture determines whether HCWs feel safe and empowered to seek timely medical care. Facilities that offer comprehensive occupational health services such as PEP, vaccinations, mental health support, and regular screenings promote positive health-seeking behaviours *(Tran et al., 2023)*. However, in many resource-limited settings like Ghanaian district hospitals, such services are either inadequate or absent, leading staff to self-manage or avoid care altogether (*Baidoo et al., 2025)*. Clear, confidential, and non-punitive reporting systems also encourage prompt action after incidents. Unfortunately, many healthcare institutions in Ghana have bureaucratic or stigmatizing reporting procedures, discouraging formal reports of injuries (*Appiagyei et al., 2021)*. Leadership style further impacts staff behaviour with transformational leadership fostering openness and safety, while authoritarian styles suppress reporting and care-seeking (*Ystaas et al., 2023*).

Additionally, chronic understaffing and high workloads reduce the time and opportunity for workers to access care, especially in overstretched facilities (Thapa et al., 2022). Financial and

insurance-related barriers also hinder treatment-seeking, as not all occupational exposures are covered by Ghana's NHIS and reimbursement procedures are often slow *(Kumah et al., 2024)*.

Wu et al. (2021), posit that institutional neglect of mental health services contributes to the stigma and silence surrounding psychological distress. Many facilities lack structured support for emotional well-being, leading HCWs to conceal rather than confront issues like burnout or trauma.

2.5.3 Socio-cultural Factors

Socio-cultural factors deeply influence the health-seeking behaviours of HCWs, especially in contexts including Ghana where cultural beliefs, traditional practices, and social norms are strong. Cultural values such as stoicism and endurance often discourage HCWs from seeking help, especially for minor injuries or mental health issues, for fear of appearing weak (Mossburg et al., 2019). This pressure is particularly acute among male workers due to gendered expectations.

Traditional medicine also plays a prominent role. Despite formal medical training, many HCWs use herbal remedies and spiritual healing either due to cultural familiarity or limited access to formal healthcare services. This was evident in a study conducted by Ampomah et al. (2022), who found that Ghanaian nurses often used herbal treatments for occupational injuries, potentially delaying more effective biomedical interventions.

Stigma presents another major barrier. Fear of being associated with diseases like HIV or mental illness discourages HCWs from reporting exposures or seeking necessary care. Auerbach et al. (2024) reported that stigma significantly lowered PEP uptake following needlestick injuries.

Religious beliefs further complicate health-seeking behaviour. In Ghana, some HCWs interpret illness through a spiritual lens, turning to prayer or faith healers instead of medical treatment. While spirituality can offer emotional support, exclusive reliance on spiritual care may delay critical interventions *(Kpobi & Swartz, 2019)*.

Community and family expectations also contribute. HCWs may hide illnesses to maintain their family's social standing or to meet expectations of strength and reliability *(Maglalang et al., 2021)*. Women, in particular, often prioritize caregiving roles over their own health needs, as shown by Karaçam Yilmaz et al. (2023). Societal expectations that HCWs remain resilient and immune to illness can suppress help-seeking altogether. Flaubert et al. (2021), noted that these norms reinforce a harmful culture of silence and self-neglect.

2.6 Barriers to Health-Seeking Behaviour of Healthcare Workers

Despite heightened awareness among HCWs about occupational health risks and the importance of early medical intervention, numerous barriers continue to impede timely and appropriate health-seeking behaviour. These barriers are complex and multifaceted, rooted in psychological, institutional, financial, logistical, and socio-cultural factors.

Psychological barriers remain among the most prominent challenges. HCWs, often perceived as resilient caregivers, may internalize this societal expectation and feel compelled to suppress signs of vulnerability. As a result, fear of judgment, embarrassment, or being blamed for workplace incidents can prevent them from reporting exposures or seeking medical care. This fear fosters a culture of silence that increases not only individual risk but also the potential for wider transmission of infectious diseases within health facilities. A study by King & Strony (2025) found that Ghanaian nurses often avoided treatment after needlestick injuries due to fear of managerial or peer judgment.

In many healthcare facilities particularly in low- and middle-income countries like Ghana the occupational health infrastructure is either weak or entirely lacking. Where systems exist, they are frequently under-resourced, poorly publicized, or overly bureaucratic. Inadequate or non-confidential reporting mechanisms further discourage reporting of workplace exposures.

According to Tawiah et al., (2024), HCWs in Ghanaian district hospitals expressed frustration over the convoluted processes and delays involved in accessing basic care, such as HIV testing after exposure

Financial constraints further exacerbate the issue. Although Ghana's National Health Insurance Scheme (NHIS) covers some basic healthcare services, many occupational health interventions such as post-exposure prophylaxis for HIV or Hepatitis B vaccinations are not fully subsidized. This is particularly challenging for contract staff or those earning lower wages. As observed by Derkyi-Kwarteng et al. (2021), financial concerns where a major reason HCWs forewent formal care, especially in rural areas where income levels tend to be lower.

Logistical barriers also hinder timely health-seeking behaviour. Long travel distances to healthcare facilities, inflexible clinic hours, and long wait times discourage workers from seeking care, particularly in rural parts of the Ashanti Region. Chronic understaffing further complicates the situation, as taking time off for medical appointments may place additional strain on already limited personnel. Dumedah et al. (2023) noted that these combined logistical and staffing challenges frequently led HCWs to postpone or avoid seeking medical care altogether.

Stigma plays a critical role, particularly around conditions such as HIV and mental health issues. Many HCWs fear being labeled as HIV-positive or mentally unstable if they seek post-exposure prophylaxis or counseling services. Such stigmas are deeply entrenched in both the healthcare system and broader society. Mohammed et al. (2024), emphasized that cultural misconceptions around HIV and mental illness significantly deter healthcare providers from accessing the support they need.

A further issue is the lack of awareness or misinformation about occupational health policies and services. Some HCWs, especially those in peripheral or under-resourced facilities, are not

adequately informed about reporting protocols or the healthcare services available to them. This is often due to inadequate training or institutional communication. As Puplampu & Quartey (2012), pointed out, many Ghanaian HCWs were unaware of occupational health rights and procedures due to insufficient orientation and poor internal communication.

In the nutshell, the workplace culture itself can act as a barrier. In high-pressure environments, there is often an implicit expectation for HCWs to prioritize patient care over their own well-being. This culture of self-sacrifice may discourage workers from taking necessary time off or seeking care, thereby normalizing self-neglect. Kiptulon et al. (2024), observed that such cultural norms reinforce harmful practices, where injured or psychologically compromised staff continue working without seeking appropriate support.

2.7 Occupational Health Policies and Interventions

Occupational health policies and interventions are essential for safeguarding HCWs, offering legal, ethical, and programmatic support to reduce workplace risks. Global frameworks such as the WHO's Global Plan of Action on Workers' Health (2008-2017) and the Health Worker Safety Charter (WHO, 2017; WHO, 2020), along with ILO conventions (C155 & C161), emphasize the need for preventive strategies, safe work environments, and mental health support.

In Ghana, occupational health is governed by laws such as the Labour Act, 2003 (Act 651) and the Public Health Act, 2012 (Act 851), which require risk assessments, provision of PPE, and the establishment of health and safety committees. The Ghana Health Service's Occupational Health and Safety Policy reinforce these mandates with targeted guidelines for health facility management, staff training, immunization, and post-exposure care.

However, implementation gaps persist, particularly in lower-tier facilities like district hospitals and polyclinics, due to underfunding, inadequate staffing, and weak institutional capacity *(Tawiah*

et al., 2024). While interventions such as Hepatitis B vaccination, IPC training, PPE distribution, and peer support initiatives have seen progress, especially during the COVID-19 pandemic, they remain uneven and poorly institutionalized. Key challenges include limited monitoring and evaluation, low awareness of occupational health rights among workers, and the marginalization of occupational health in health system budgeting *(Vinberg, 2020)*.

2.8 Theoretical Underpinning of the Study

Health-seeking behaviour among HCWs can be effectively understood through theoretical models that examine the motivations and obstacles influencing their actions. Two widely used frameworks in this context are the Health Belief Model (HBM) and the Theory of Planned Behaviour (TPB)**.**

2.8.1. The Health Belief Model (HBM)

The Health Belief Model (HBM)**,** developed by Rosenstock in the 1950s, suggests that a person's health-related behaviour depends on their perceived risk (susceptibility), perceived seriousness of a health threat, perceived benefits of taking preventive action, and perceived barriers to action. Additional factors like cues to action and self-efficacy (belief in one's ability to act) also play a role. In healthcare settings, for example, a healthcare worker who sustains a needlestick injury may evaluate their personal risk of contracting HIV or Hepatitis B. If they believe the threat is serious and that post-exposure prophylaxis (PEP) is effective, they are more likely to seek care unless barriers such as fear of stigma or logistical issues prevent them. Makhado and Seekane, (2020) also found that high perceived risk and severity are linked to greater uptake of PEP.

2.8.2. The theory of Planned Behaviour (TPB)

The Theory of Planned Behaviour (TPB)**,** developed by Ajzen, emphasizes that behavioural intention shaped by one's attitudes, perceived social norms, and sense of control is the strongest predictor of action. In the healthcare context, if there is a workplace culture that encourages

reporting and timely medical treatment after occupational injuries, HCWs are more likely to follow through. Studies like Darboe et al. (2025) in The Gambia show that when HCWs perceive strong support from peers and feel confident in their ability to act, they are more proactive in seeking care.

2.9 Conceptual Framework

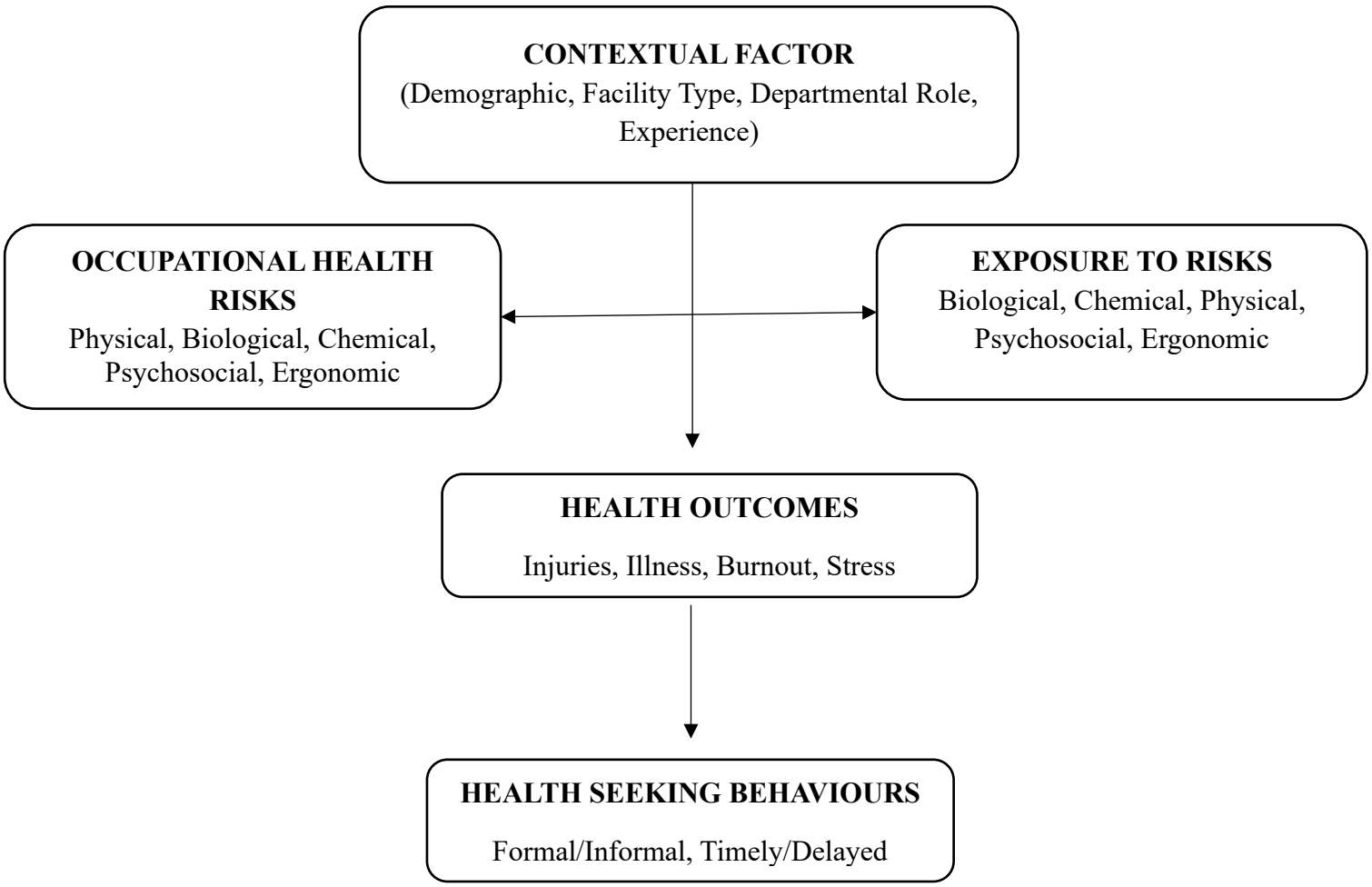


Figure 2. 1: Conceptual framework of Occupational Health Risks and Health Seeking Behaviour among hospital employees.

Author Construct, 2025.

2.10 Summary and Research Gaps

Although existing studies highlight the occupational health risks faced by healthcare workers (HCWs) in Ghana, such as biological, chemical, physical, psychosocial, and ergonomic hazards, several gaps remain. Most research has focused on single institutions or urban tertiary hospitals, with limited comparative analyses across multiple facilities, departments, and districts. Consequently, little is known about how occupational risks vary in rural or district-level health facilities, particularly in the Ashanti Region. Similarly, while delayed care, self-medication, and avoidance of psychological support have been reported, health-seeking behaviours among HCWs remain underexplored, especially in relation to specific occupational exposures and departmental roles.

Moreover, the influence of personal, institutional, and socio-cultural factors including stigma, workplace culture, financial constraints, and access to occupational health services on timely health-seeking is inadequately documented. Lower-tier facilities are underrepresented, and theoretical frameworks like the Health Belief Model and Theory of Planned Behaviour have rarely been applied to explain HCWs' responses to workplace hazards. This study addresses these gaps by providing a comparative assessment of occupational health risks and health-seeking behaviours among HCWs across three selected health facilities in three districts of the Ashanti Region, offering context-specific evidence to inform policy, training, and occupational health interventions.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter focused on the methodology employed for the study. It involves the philosophical underpinning of the study, study area, research design, research approach, target population, sample size and technique, data collection instruments, method of data analysis, ethical consideration and limitations of the study.

3.1 Study Area

The study was conducted in the Ashanti Region of Ghana, specifically in three selected health facilities across three districts: Adansi North District Hospital, classified under the Ghana Health Service (GHS) as a secondary-level facility (district hospital); Afrancho Polyclinic, classified as a primary-level facility (polyclinic/CHPS or basic primary care); and Kenyasi Health Centre, also a primary-level facility (health centre/CHPS) (Figure 3.1). The Ashanti Region was selected because it is one of the most populous regions in Ghana, with a high density of healthcare facilities. These three facilities were purposely chosen to represent different levels of healthcare delivery in the region, varying daily patient volumes, distinct geographical locations, and differing resource allocations.

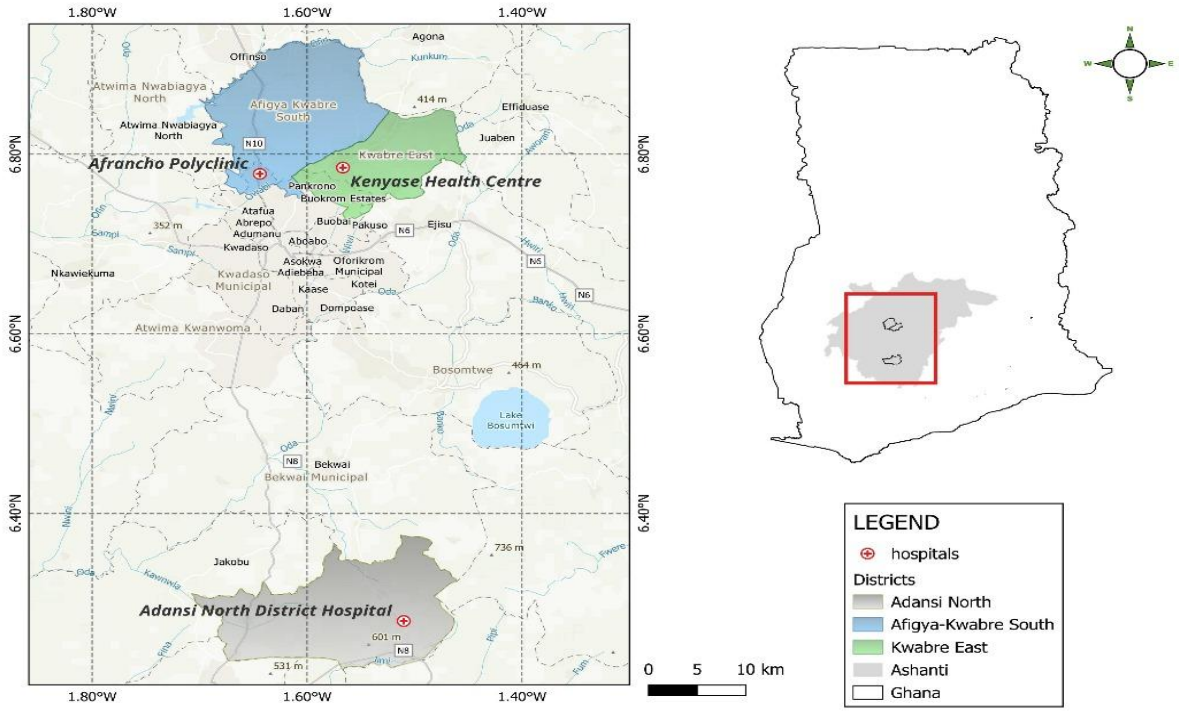


Figure 3. 1: A map showing the location of the three selected facilities

3.1.1 Adansi North District Hospital

Adansi North District Hospital, located in Adansi Fomena in Ghana's Ashanti Region, is the main healthcare provider for the Adansi North District. Established in the early 1980s and upgraded to district hospital status in 2023, it serves a population of over 60,000 people. Positioned approximately 40 kilometers south of Kumasi, the hospital delivers both general and specialized healthcare services under the Ghana Health Service (GHS).

The facility offers a wide range of services, including outpatient and inpatient care, maternal and child health, surgical procedures, emergency services, and the treatment of both communicable and non-communicable diseases. Public health initiatives such as immunization campaigns, health education, and community outreach also form a core part of the hospital's operations.

With a staff of about 164 personnel including doctors, nurses, midwives, and allied health professionals the hospital manages an average of 150 outpatient cases daily and has a bed capacity

of 80 for inpatient care. It functions as a referral center for smaller health facilities within the district and coordinates advanced referrals to tertiary hospitals like the Komfo Anokye Teaching Hospital in Kumasi. This structured referral system enhances continuity of care and efficient resource utilization within the district's healthcare network.

3.1.2 Afrancho Polyclinic

Afrancho Polyclinic, located in the Afigya Kwabre South District of the Ashanti Region, is a key healthcare facility serving the semi-urban population of Afrancho and nearby communities. Originally established in the late 1990s as a health center, it was later upgraded to a polyclinic to meet the area's growing healthcare needs. The facility, situated about 18 kilometers north of Kumasi, serves an estimated population of 30,000 people.

As a first-level healthcare provider, Afrancho Polyclinic offers essential services such as outpatient care, maternal and child health, family planning, immunization, and treatment for common illnesses like malaria and respiratory infections. It also provides limited emergency care and short-term admissions. The clinic is staffed by a dedicated team of clinical and non-clinical personnel, averaging 100 outpatient visits daily. It is equipped with basic diagnostic tools, a dispensary, and a few observation beds.

Public health plays a major role in the clinic's operations, including health education campaigns, disease prevention efforts, and routine screenings for chronic conditions like hypertension, diabetes, and hepatitis. The polyclinic also conducts immunization drives and maternal health programs to improve child and maternal outcomes. Functioning as a referral hub, the facility directs complex cases to higher-level hospitals such as Komfo Anokye Teaching Hospital and St. Patrick's Hospital in Offinso. This structured referral system ensures patients receive appropriate and timely care while maximizing healthcare resources in the district.

3.1.3 Kenyasi Health Centre

Kenyasi Health Centre, located in the Kwabre East Municipality of Ghana's Ashanti Region, is a vital primary healthcare facility serving over 20,000 people in Kenyasi and nearby communities. Positioned about 15 kilometers northeast of Kumasi, the centre addresses the healthcare needs of a growing peri-urban population. It offers a wide range of services, including outpatient care, maternal and child health, family planning, immunization, and treatment for common illnesses like malaria and respiratory infections. Limited emergency care and short-term admissions are also provided.

The facility is staffed by dedicated healthcare professionals and sees an average of 70 outpatient visits daily. It is equipped with basic diagnostic tools and a dispensary for essential medicines. In addition to clinical services, the centre runs public health programs such as health education, disease prevention, and screenings for chronic conditions. Kenyasi Health Centre also acts as a referral hub for smaller facilities in the area, directing patients needing advanced care to larger hospitals like Kumasi South Hospital and Komfo Anokye Teaching Hospital.

3.2 Research Design

This study employed a descriptive cross-sectional design using a quantitative technique as data was collected once and no follow up was carried out. A descriptive cross-sectional design in particular, involves a one-time interaction with a given group of people, and it is effective at gathering information that describes a phenomenon as it currently exists *(Tenny et al., 2024)*. The study design and type best address the objectives as it provides a snapshot of occupation health and safety situation. This study design used, enabled the researcher to identify the occupational health risk and health-seeking behaviour among HCWs outcome at a specific time. It gives an in-

depth understanding to establish association between the cause and the health-seeking behaviour among HCWs in the study health centres.

3.3 Study Population

The study population was HCWs in the three selected health facilities across three districts of Ashanti Region (i.e., Adansi North District Hospital, Afrancho Polyclinic and Kenyasi Health Center). For this study, the HCWs were categorized into two units namely clinical and non-clinical. They were grouped into clinical and non-clinical based on the duties they carry out in the healthcare facilities and particular hazards associated with their responsibilities in the hospital. The population for the study is 539 HCWs. Clinical HCWs accounted for 420 of the total population while the non-clinical HCWs were 119.

3.3.1 Inclusion criteria

Patino & Ferreira (2018), defined inclusion criteria as the key features of the target population that the researcher included in the study. The study included:

1. A healthcare worker who has been employed at the facilities.
2. A HCW involved in direct patient care or administrative roles that exposed them to occupational health risks.
3. HCW who provided informed consent and participated in the surveys.

3.3.2 Exclusion criteria

Patino & Ferreira (2018), defined exclusion criteria as features of the potential study participants who meet the inclusion criteria but presented with additional characteristics that could interfere with the success of the study. This study excluded:

1 HCW who were not present in the facility at the time of study and those present at the facility at the time of study but did not consent to participate.

2 Staff who joined the selected health facilities within the last six months, as they may lack sufficient experience with local risks.

3 Staff who works at the facilities as their mandatory national service.

3.4 Study Variables

The goal of the study was to investigate the occupational health risks and health-seeking behaviours among HCWs in the study population at a particular point in time.

3.4.1 Dependent Variable

Health seeking behaviour among HCWs in the three (3) selected health facilities was the dependent variables (Table 3.1).

3.4.2 Independent Variable

The independent variables were the occupational health risks, factors influencing health-seeking and department of work (Table 3.1). These factors influence the health seeking among HCWs at the three selected primary health facilities.

Table 3. 1: Description of the Study Variables

Objective	Dependent variable	Independent variable	Conceptual definition of dependent variables	Scale of Measurement	Indicators	Data collection tools	Type of statistical analysis
To identify occupational health risks faced by HCWs in the selected health facilities.	Occupational health risk	Risks, namely, Physical, chemical, biological, ergonomic and psycho-social, educational level, work experience, gender, age	The occurrence of occupational health risk	Nominal	Frequency, Proportion	Questionnaires	Logistics regression, Chi-square
To investigate the factors influencing health-seeking behaviours among HCWs after exposure to occupational health risks.	Health seeking behaviours	Educational level, work experience, gender, age,	The factors influencing health seeking behaviours	Nominal and Ordinal	Odds ratio, CI, Chi-square	Questionnaire	Logistics regression, Chi-square

		department, facility					
To compare occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities.	Occupational health risk and health-seeking behaviours	Lack of comprehensive national OHS policy, Inadequate OHS training for HCW, Inadequate Personal Protective equipment (PPEs)	The occurrence of occupational health risk and health-seeking behaviour.	Nominal	Frequency, CI, odds ratio	Questionnaire	Descriptive, Chi-square and Logistics regression

3.5 Sample Size and Sampling Techniques

3.5.1 Sample Size Calculation

The sample size for the study computed using Yamane 1957 formula (Polonia 2013)

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

Where:

n = Sample size,

N= the population size,

e = The allowable margin of error which was 5% at 95% confidence level.

Based on an estimated population of 539 HCWs in the three selected facilities (420 clinical and 119 non-clinical HCW),

$n = \frac{539}{1+539(0.05)\wedge 2} = 230$

Adjusting for the non-respondent rate of 10% = 0.1(230) = 23

The total estimated sample size for the study was 253.

The sampling distribution for Clinical and Non-clinical was estimated at,

Clinical staff: $\frac{420}{539}$x 253 =197

Non-Clinical staff: $\frac{119}{539}$ x 253 = 56

Adansi North District Hospital (Number of Clinical Staff): $\frac{99}{420}$ x 197 = 47

Adansi North District Hospital (Number of Non-Clinical Staff): $\frac{65}{119}$ x 56 = 30

Afrancho Polyclinic (Number of Clinical Staff): $\frac{216}{420}$ x 197 =101

Afrancho Polyclinic (Number of Non-Clinical Staff): $\frac{44}{119}$ x 56 =21

Kenyasi Health Centre (Number of Clinical Staff): $\frac{105}{420}$ x 197 = 49

Kenyasi Health Centre (Number of Non-Clinical Staff): $\frac{10}{119}$ x 56 =5

Table 3. 2: Sample size of each facility

Health Facilities	Clinical Staff Sample	Non-clinical Staff Sample
Adansi North DH (Adansi North District)	47	30
Afrancho PC (Afigya Kwabre South District)	101	21
Kenyasi HC (Kwabre East Municipality)	49	5
Total	**197**	**56**

3.6 Sampling Procedure

This study employed a three-stage sampling procedure. First, three different levels of healthcare facilities, the Adansi North District Hospital, Afrancho Polyclinic (Afigya Kwabre South District) and Kenyasi Health Center (Kwabre East Municipality), was purposively selected from the list of facilities in the Ashanti Region. These facilities were selected due to their different level of services provided in their various healthcare facility and number patients they see each day which provided different risk to HCWs.

Secondly, HCWs in these selected facilities were stratified into clinical and non-clinical staff. This is because, in the healthcare facilities, there is difference in occupational health risk exposure among clinical and non-clinical staff and this is due to their responsibilities carry out in the hospital. Simple random sampling technique was used to select HCWs in the selected facilities.

All HCWs in the various facility was allowed to participate in the study provided they met the inclusion criteria. This was done separately for clinical and non-clinical staff.

3.7 Data Collection Instruments

To collect data for the study, a well-structured questionnaire (see Appendix IV) was developed and distributed to respondents through self-administration. The instrument was developed and designed based on the purpose of the study. It was divided into four sections, A to D. Section A of the instruments focused on questions relating to the socio-demographic characteristics of the respondents. Section B asked question related to examined the occupational health risks faced by healthcare workers in the selected health facilities, Section C solicited information on the factors influencing health-seeking behaviours among healthcare workers after exposure to occupational health risks while section D looked at question on the occupational health risks and health-seeking behaviours among healthcare workers across different departments within the selected health facilities in the Ashanti Region, Ghana.

3.8 Pretesting

The data collection instrument was piloted at the Suntreso Government Hospital, Abuakwa Polyclinic and Mampongteng Health Center with respondents of 8, 7 and 5 respectively. These facilities were chosen because they are at a comparable level to the facilities that were to be used for the main study. The sample size for the pretesting was 20 which is 10% of the estimated total sample size for the study. The essence of the pre-test is to ensure that the questions were clear, understandable and also determine the validity and reliability of the questions. The tool was modified and finalized after the pre-testing was completed.

3.9 Method of Data Analysis

The data for this study were analyzed using both descriptive and inferential statistics. Descriptive statistics summarised respondents' demographic characteristics, the prevalence of occupational health risks, and their health-seeking behaviours. Inferential statistics were applied to explore relationships between occupational risks, health-seeking behaviours after exposure, and demographic factors. Specifically, frequency distributions and summary statistics described key variables; chi-square tests and logistic regression examined associations among variables; and multiple linear regression identified factors influencing health-seeking behaviours among HCWs.

3.10 Ethical Considerations

A letter of introduction to the Regional Health Directorate Director and to the Chairman, Committee on Human Research, Publications, and Ethics (CHRPE-KNUST) was obtained from the Faculty of Environment and Health Education, Department of Public Health Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development. The letter was submitted to the Medical Superintendents/Faculty Heads of the study areas for approval. Similarly, ethical clearance was granted by the CHRPE with reference number CHRPE/AP/362/25.

The researcher obtained the consent of the research participants in advance of participation through a signed informed consent form after verbal agreement. The purpose of the study, what they needed to know and their roles was defined and explained in details to them. Room was made for clarifications and any concerns were addressed before and during the study. Research respondents were made aware of the rights to consent or otherwise and the fact that they can stop participating in the study if they so desire. Beyond the right to consent or not to consent and voluntary participation, the study participants were assured of their right to privacy and all information

obtained from participants during the course of the study will be treated as confidential. Again, identifiers such as names of respondents' house numbers, and mobile phone numbers were not obtained. This is to ensure anonymity of participants by the researcher. After all these procedures were met, respondents were asked verbally if they are interested to be a part of the study and only after they had given their consent that they were recruited into the study.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presented and discussed the study findings. It covered the socio-demographic characteristics of respondents, examined the occupational health risks they faced, and explored the factors influencing their health-seeking behaviours after exposure. It also highlighted differences in occupational health risks and health-seeking behaviours across departments within the selected health facilities in the Ashanti Region of Ghana.

4.1 Socio-Demographic Characteristics of Respondents

Information on the socio-demographic characteristics of respondents enabled the researcher to discover the disparities among respondents. The socio-demographic characteristics presented in Table 4.1 include age, sex, marital status, highest educational level, type of staff, and years of working experience.

Table 4. 1: Socio-Demographic Characteristics of Health Workers by Type of Health Facility

Variable	Name of Facility			Total n (%)	χ^2	P - value
	Adansi North DH n (%)	Afrancho PC n (%)	Kenyasi HC n (%)			
Age group					12.52	**0.014**
20-30	28 (36.4)	52 (42.6)	9 (16.7)	89 (35.2)		
31-40	41 (53.3)	62 (50.8)	41 (75.9)	144 (56.9)		
≥41	8 (10.4)	8 (6.6)	4 (7.4)	20 (7.9)		
Age (mean+sd)	33.5 (±6.4)	32.5 (±5.1)	35.3(±4.4)	33.4 (±5.5)		
Sex					8.83	**0.014**
Female	44 (57.1)	82 (67.2)	44 (81.5)	170 (67.2)		
Male	33 (42.9)	40 (32.8)	10 (18.5)	83 (32.8)		
Marital status					21.40	**<0.001**
Single	37 (48.1)	76 (62.3)	16 (29.6)	129 (51.0)		
Married	34 (44.2)	43 (35.3)	37 (68.5)	144 (45.1)		
Cohabitation	6 (7.8)	3 (2.5)	1 (1.9)	10 (3.9)		
Highest Educational Level					11.32	0.079
Certificate	11 (14.3)	16 (13.1)	11 (20.4)	38 (15.0)		
Diploma	28 (36.4)	58 (47.5)	30 (55.7)	116 (45.9)		
Bachelor's Degree	32 (41.6)	43 (35.3)	13 (24.1)	88 (34.8)		
Master's Degree	6 (7.8)	5 (4.1)	0 (0.0)	11 (4.4)		
Type of staff					19.56	**<0.001**
Clinical	47 (61.0)	101 (82.8)	49 (90.7)	197 (77.9)		
Non-clinical	30 (39.0)	21 (17.2)	5 (9.3)	56 (22.1)		
Working Experience (Years)					16.80	**0.002**
1-5	42 (54.6)	79 (64.8)	17 (31.5)	138 (54.6)		
6-10	22 (28.6)	28 (23.0)	23 (42.6)	73 (28.9)		
≥ 11	13 (16.9)	15 (12.3)	14 (25.9)	42 (16.6)		
Total	**77 (30.4)**	**122 (48.2)**	**54 (21.3)**	**253 (100.0)**		

***DH=District Hospital; PC=Polyclinic; HC=Health Centre; *(1 divorcee and 2 widows were added to the single group); SD=standard deviation*, Source: Field Data, 2025**

Results presented in Table 4. 1 on the socio-demographic profile of respondents showed significant variations across the three healthcare facilities: Adansi North District Hospital (DH), Afrancho Polyclinic (PC), and Kenyasi Health Centre (HC). Out of the 253 healthcare workers who participated in the study, 48.2% were from Afrancho Polyclinic, 30.4% from Adansi North DH, and 21.3% from Kenyasi HC.

The distribution of age groups showed a statistically significant difference ($\chi^2 = 12.52, p = 0.014$), with the majority of staff at Kenyasi HC aged between 31-40 years (75.9%) compared to 53.3% at Adansi North DH and 50.8% at Afrancho PC. The 20-30year age group was most common at Afrancho PC (42.6%) but least represented at Kenyasi HC (16.7%). The mean age of respondents was highest at Kenyasi HC (35.3 ± 4.4 years) and lowest at Afrancho PC (32.5 ± 5.1 years).

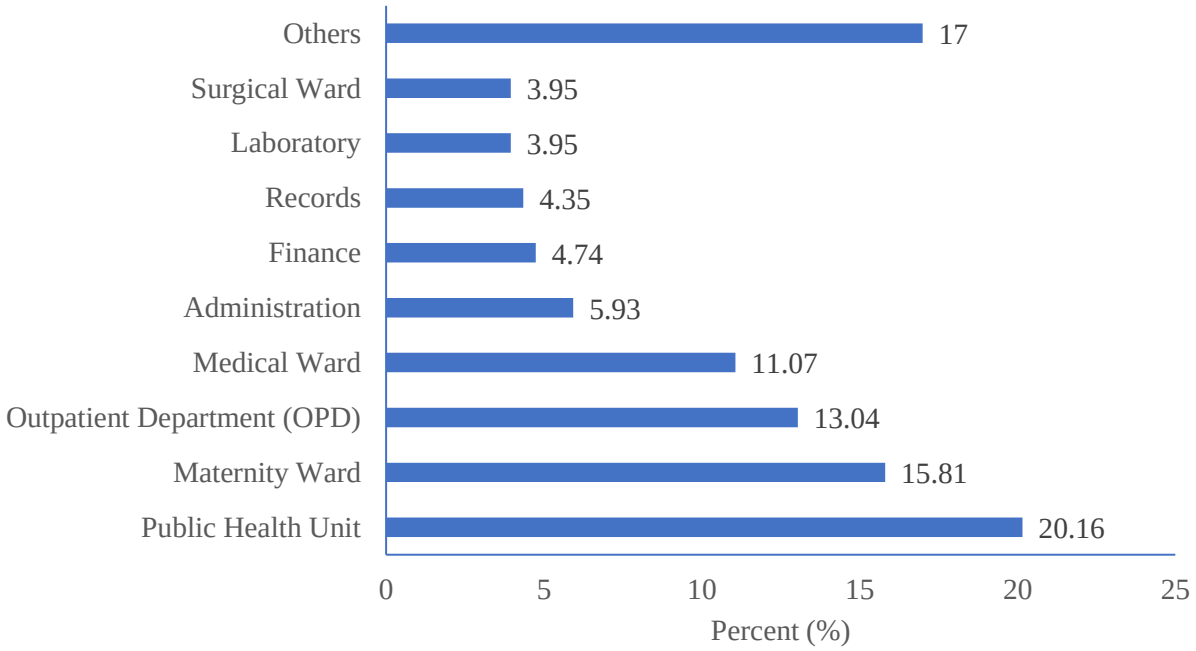
There were also significant differences in gender across the facilities ($\chi^2 = 8.83, p = 0.014$), with females representing the majority of staff overall (67.2%) and particularly dominant at Kenyasi HC (81.5%), compared to 67.2% at Afrancho PC and 57.1% at Adansi North DH. On marital status of respondents, the distribution differed significantly across the facilities ($\chi^2 = 21.40, p < 0.001$). Kenyasi HC had the highest proportion of married staff (68.5%), while Afrancho PC had the highest proportion of single staff (62.3%). Only a small fraction of respondents was cohabiting across all facilities (see Table 4.1).

Although the differences in educational attainment were not statistically significant (p = 0.079), notable variations were observed. Thus, the majority of respondents held a diploma (45.9%), with higher proportions at Kenyasi HC (55.7%) and Afrancho PC (47.5%). Bachelor's degree holders were most prevalent at Adansi North DH (41.6%), while master's degree holders were the least represented, with none reported at Kenyasi HC.

Also, the distribution of staff types varied significantly across the facilities ($\chi^2 = 19.56$, $p < 0.001$), with clinical staff comprising the majority in all facilities. Kenyasi HC had the highest proportion of clinical staff (90.7%), followed by Afrancho PC (82.8%) and Adansi North DH (61.0%).

The results showed in Table 4. 1 revealed a significant difference in years of working experience ($\chi^2 = 16.80$, $p = 0.002$). Staff with 1-5 years of experience formed the majority at Afrancho PC (64.8%) and Adansi North DH (54.6%). In contrast, Kenyasi HC had a higher proportion of staff with over 10 years of experience (25.9%) compared to the other facilities.

The study collected information from respondents on the working departments of staff in the three health facilities and the data is presented in Figure 4. 1.



Source: Field Data, 2025, **Others (Emergency, Pharmacy, Radiology, Security, Maintenance/Cleaning, Stores/Procurement, Theatre/Operating Room)*

Figure 4. 1: Working Departments of Staff

Figure 4. 1 showed the distribution of healthcare workers across various departments. The study discovered that, the highest proportion of staff comprising 20.16% were in the Public Health Unit, followed by the Maternity Ward (15.81%) and the Outpatient Department (OPD) (13.04%). The Medical Ward and Administration also had notable representation, accounting for 11.07% and 5.93%, respectively. Smaller percentages of staff were found in the Finance (4.74%), Records (4.35%), Laboratory (3.95%), and Surgical Ward (3.95%) departments. Additionally, 17% of the respondents worked in other departments including Emergency, Pharmacy, Radiology, Security, Maintenance/Cleaning, Stores/Procurement and Theatre/Operating Room.

4.2: Occupational health risks faced by healthcare workers in the selected health facilities

The researcher solicited information from the respondents on the occupational health risks faced by healthcare workers across three healthcare facilities; Adansi North District Hospital, Afrancho Polyclinic, and Kenyasi Health Centre in the Ashanti Region, Ghana. Data on the responses are presented in Table 4.2.

Table 4. 2: Occupational health risks faced by healthcare workers in the selected health facilities

Variables	Name of Facility			Total	χ^2	P - value
	Adansi North DH n (%)	Afrancho PC n (%)	Kenyasi HC n (%)			
Biological Risk					19.69	**<0.001**
No	34 (44.2)	48 (39.3)	5 (9.3)	87 (34.4)		
Yes	43 (55.8)	74 (60.7)	49 (90.7)	166 (65.6)		
Chemical Risk					2.73	0.254
No	55 (71.4)	85 (69.7)	44 (81.5)	184 (72.7)		
Yes	22 (28.6)	37 (30.3)	10 (18.5)	69 (27.3)		
Physical Risk					37.87	**<0.001**
No	45 (58.4)	71 (58.2)	6 (11.1)	122 (48.2)		
Yes	32 (41.6)	51 (41.8)	48 (58.9)	131 (51.8)		
Ergonomic Risk					18.54	**<0.001**
No	38 (49.4)	67 (54.9)	11 (20.4)	116 (45.9)		
Yes	39 (50.7)	55 (45.1)	43 (79.6)	137 (54.1)		
Psychosocial Risk					2.17	0.337
No	36 (46.8)	70 (57.4)	28 (51.9)	134 (53.0)		
Yes	41 (53.3)	52 (42.6)	26 (48.1)	119 (47.0)		
Mechanical Risk					1.73	0.422
No	61 (79.2)	105 (86.1)	46 (85.2)	212 (83.8)		
Yes	16 (20.8)	17 (13.9)	8 (14.8)	41 (16.2)		

Source: Field Data, 2025

The results presented in Table 4. 2 showed that a significantly higher proportion of staff at Kenyasi HC reported exposure to biological risks such as blood, body fluids, and airborne infections (90.7%) compared to Afrancho PC (60.7%) and Adansi North DH (55.8%), with the difference being statistically significant ($\chi^2 = 19.69$, $p < 0.001$). This finding elucidates that staff at Kenyasi HC reported higher exposure to biological risks compared to those in Afrancho PC and Adansi North DH.

Similarly, the study found a statistically significant differences in exposure of healthcare workers to physical risks (e.g., noise, radiation, heat, and falls), with 58.9% of staff at Kenyasi HC reporting such exposures compared to 41.8% at Afrancho PC and 41.6% at Adansi North DH ($p < 0.001$). This finding implies that staff at Kenyasi HC reported higher exposure to physical hazards compared to those in Afrancho PC and Adansi North DH.

The study revealed that exposure to ergonomic risks by healthcare workers also differed significantly by facility, with 79.6% of staff at Kenyasi HC reporting such risks, compared to 45.1% at Afrancho PC and 50.7% at Adansi North DH ($p < 0.001$) (see Table 4. 2).

On the other hand, it was found that exposure to chemical hazards by healthcare workers (such as disinfectants, cleaning agents, and drugs), psychosocial risks (stress, burnout, harassment), and mechanical risks (faulty equipment and injuries from tools or machines) did not differ significantly across the facilities, with *p*-values of 0.254, 0.337, and 0.422, respectively.

4.3: Factors influence health-seeking behaviours among HCWs after exposure to occupational health risks

To understand what influences health-seeking behaviours among healthcare workers after exposure to occupational health risks, the researcher gathered data from staff at three healthcare facilities in the Ashanti Region of Ghana: Adansi North District Hospital, Afrancho Polyclinic, and

Kenyasi Health Centre. Respondents provided insights into their actions following exposure to hazards, as well as the personal, institutional, and accessibility factors that shape their decisions to seek or delay care. The findings, including the demographic factors on treatment after exposure, reporting practices after exposure, and access to occupational health services, are presented in below. In order to achieve this, regression analysis was done on the relationship between demographic characteristics, experienced injury, OHS policy awareness, training, and PPE availability and mental health, psychosocial access and health seeking behaviour. The results are summarised in Tables below.

Table 4.3.1: Association Between Demographic Characteristics and Behaviour After Exposure

Variable	Behaviour After Exposure		χ^2	p-value
	Self-Treatment n (%)	Professional Treatment n (%)		
Age group			1.71	0.423
20-30	41 (46.1)	48 (53.9)		
31-40	79 (54.9)	65 (45.1)		
≥41	10 (50)	10 (50.0)		
Sex			12.7	**<0.001**
Female	74 (43.5)	96 (56.5)		
Male	56 (67.5)	27 (32.5)		
Marital status			1.46	0.481
Single	70 (54.3)	59 (45.7)		
Married	54 (47.4)	60 (52.6)		
Cohabitation	6 (60.0)	4 (40.0)		
Educational level			6.49	0.090
Certificate	16 (42.1)	22 (57.9)		
Diploma	54 (46.6)	62 (53.4)		
Bachelor's Degree	52 (59.1)	36 (40.9)		
Master's Degree	8 (72.7)	3 (27.3)		
Health facilities			38.49	**<0.001**
Adansi North DH	62 (80.5)	15 (19.5)		
Afrancho PC	50 (41.0)	72 (59.0)		
Kenyasi HC	18 (33.3)	36 (66.7)		
Type of staff			11.56	**0.001**
Clinical	90 (45.7)	107 (54.3)		
Non-clinical	40 (71.4)	16 (28.6)		
Working experience (Years)			8.43	**0.015**
1-5	77 (55.8)	61 (44.2)		
6-10	40 (54.8)	33 (45.2)		
≥ 11	13 (31.0)	29 (69.0)		

Source: Field Data, 2025.

Table 4.3.1 presents the relationship between selected demographic characteristics and the treatment behaviour of healthcare workers following occupational exposure in the selected hospitals Ashanti Region. The analysis shows that sex, health facility of work, type of staff, and years of working experience were significantly associated with the choice of treatment after exposure. Specifically, a significant association was found for sex ($\chi^2 = 12.7$, $p < 0.001$), where a higher proportion of males (67.5%) engaged in self-treatment compared with females (43.5%). Likewise, health facility of work was strongly associated with treatment behaviour ($\chi^2 = 38.49$, $p < 0.001$); self-treatment was most common at Adansi North District Hospital (80.5%) compared to Afrancho Polyclinic (41.0%) and Kenyasi Health Centre (33.3%). The type of staff also showed a significant relationship ($\chi^2 = 11.56$, $p = 0.001$), with non-clinical staff reporting higher rates of self-treatment (71.4%) than clinical staff (45.7%). In addition, years of working experience influenced behaviour ($\chi^2 = 8.43$, $p = 0.015$); workers with ≥11 years' experience were more likely to seek professional treatment (69.0%) than those with 1-5 years (44.2%) or 6-10 years (45.2%). Conversely, age group, marital status, and educational level were not significantly associated with treatment behaviour after exposure (all $p > 0.05$). For example, self-treatment rates among respondents aged 20-30 years (46.1%), 31-40 years (54.9%), and ≥41 years (50.0%) did not differ significantly ($\chi^2 = 1.71$, $p = 0.423$). Similar non-significant patterns were observed across marital status and educational categories. These findings indicate that workplace characteristics particularly the facility of employment, staff category, and professional experience as well as sex differences, play a crucial role in influencing whether healthcare workers self-treat or seek professional care after occupational exposure. Age, marital status, and education appear to exert minimal influence on such post-exposure health-seeking behaviour.

Table 4.3.2: Association Between Experienced Injury and Behaviour After Exposure

Variable	Behaviour After Exposure		χ^2	p-value
	Self-Treatment [n (%)]	Professional Treatment [n (%)]		
Experienced injury			0.30	0.580
Yes	61 (49.6)	62 (50.4)		
No	69 (53.1)	61 (46.9)		
Experienced injury type			4.73	0.578
Needle-stick injury	24 (42.9)	32 (57.1)		
Back injury / Musculoskeletal strain	29 (51.8)	27 (48.2)		
Burn or cut	7 (43.8)	9 (56.2)		
Slip or fall	9 (50.0)	9 (50.0)		
Repetitive strain injury	11 (68.8)	5 (31.2)		
Allergic reaction	11 (61.1)	7 (38.9)		
Crush injury	3 (60.0)	2 (40.0)		
Experienced times			3.27	0.352
1	15 (45.5)	18 (54.5)		
2	16 (59.3)	11 (40.7)		
3	12 (38.7)	19 (61.3)		
4>	18 (56.2)	14 (43.8)		
Contributor most to occupational hazards			17.92	**0.021**
Lack of training	49 (45.4)	59 (54.6)		
Inadequate PPE	54 (43.2)	71 (56.8)		
Staff shortage	46 (67.6)	22 (32.4)		
Unsafe procedures	27 (54.0)	23 (46.0)		
Poor supervision	20 (54.1)	17 (45.9)		
Long working hours and fatigue	69 (57.5)	51 (42.5)		
Faulty or poorly maintained equipment	17 (42.5)	23 (57.5)		
Overcrowded workspaces	15 (38.5)	24 (61.5)		
Poor infrastructure	18 (48.6)	19 (51.4)		

Source: Field Data, 2025

Table 4.3.2 presents the relationship between experienced occupational injuries and post-exposure health-seeking behaviour of healthcare workers in the Ashanti Region. A statistically significant association was found between the main contributor to occupational hazards and health-seeking behaviour ($\chi^2 = 17.92$, $p = 0.021$). In particular, respondents who identified staff shortage as the primary contributor were more likely to practise self-treatment (67.6%) compared with those who cited lack of training (45.4%), inadequate personal protective equipment (43.2%), unsafe procedures (54.0%), poor supervision (54.1%), long working hours and fatigue (57.5%), faulty or poorly maintained equipment (42.5%), overcrowded workspaces (38.5%), or poor infrastructure (48.6%). This suggests that when staff shortages are perceived as the key occupational hazard, healthcare workers may be more inclined to manage exposures on their own rather than seek professional treatment.

Conversely, no significant association was observed between the experience of injury and health-seeking behaviour ($\chi^2 = 0.30$, $p = 0.580$). Healthcare workers who had experienced an injury (49.6% self-treatment vs. 50.4% professional treatment) did not differ significantly from those who had not experienced an injury (53.1% vs. 46.9%). Similarly, the type of injury experienced including needle-stick injuries, musculoskeletal strains, burns or cuts, slips or falls, repetitive strain injuries, allergic reactions, or crush injuries was not significantly related to health-seeking behaviour ($\chi^2 = 4.73$, $p = 0.578$). The number of times an injury was experienced also did not influence treatment choices ($\chi^2 = 3.27$, $p = 0.352$), with fairly similar proportions of self-treatment across all frequency categories. In summary, the findings indicate that perceived causes of occupational hazards, especially staff shortages, significantly influenced whether healthcare workers sought professional care after exposure, whereas the occurrence, type, or frequency of injury itself showed no significant relationship with their post-exposure health-seeking behaviour.

Table 4.3.3: Association Between OHS Policy Awareness, Training, and PPE Availability and Behaviour After Exposure

Variable	Behaviour After Exposure		χ^2	p-value
	Self-Treatment n (%)	Professional Treatment n (%)		
OHS policy at the facility			4.21	**0.040**
Yes	108 (54.8)	89 (45.2)		
No	22 (39.3)	34 (60.7)		
Ensures OHS policy implement			4.12	0.389
Facility/Medical Superintendent	39 (43.8)	50 (56.2)		
OHS Committee	17 (51.5)	16 (48.5)		
Hospital Administrator	52 (58.4)	37 (41.6)		
Departmental Heads / Unit Managers	7 (46.7)	8 (53.3)		
I don't know	15 (55.6)	12 (44.4)		
Received OHS training			0.68	0.408
Yes	78 (49.4)	80 (50.6)		
No	52 (54.7)	43 (45.3)		
Updated on OHS guidelines changes			0.96	0.325
Yes	102 (53.1)	90 (46.9)		
No	28 (45.9)	33 (54.1)		
Have the necessary PPEs			0.25	0.616
Yes	98 (50.5)	96 (49.5)		
No	32 (54.2)	27 (45.8)		
Often availability of PPEs			2.82	0.244
Always	68 (54.8)	56 (45.2)		
Often	20 (40.8)	29 (59.2)		
Sometimes	42 (52.5)	38 (47.5)		
Consistent use PPEs			11.81	**0.019**
Always	63 (46.7)	72 (53.3)		
Often	15 (60.0)	10 (40.0)		
Sometimes	33 (47.1)	37 (52.9)		
Rarely	9 (90.0)	1 (10.0)		
Never	10 (76.9)	3 (23.1)		
Refused a task due to lack of PPE			0.03	0.843
Yes	47 (52.2)	43 (47.8)		

No	83 (50.9)	80 (49.1)		
Run out of essential PPE			1.16	0.762
Never	19 (51.4)	18 (48.6)		
Rarely	26 (55.3)	21 (44.7)		
Sometimes	80 (51.3)	76 (48.7)		
Frequently	5 (38.5)	8 (61.5)		
Replacement of PPEs			0.015	0.903
Yes	96 (51.6)	90 (48.4)		
No	34 (50.7)	33 (49.3)		
Equal access to PPEs			1.55	0.213
Yes	92 (54.1)	78 (45.9)		
No	38 (45.8)	45 (54.2)		
OHS trainings done department-wide or in selected units			1.55	0.670
All Department	95 (52.7)	87 (47.3)		
Only some units	16 (44.4)	20 (55.6)		
Training is based on specific roles, not departments	6 (42.9)	8 (57.1)		
No formal OHS training has been conducted	11 (57.9)	8 (42.1)		
Risk reporting systems			2.28	0.131
Yes	91 (54.8)	75 (45.2)		
No	39 (44.8)	48 (55.2)		

Source: Field Data, 2025

Table 4.3.3 presents the relationship between awareness of occupational health and safety (OHS) policy, related training, and the availability and use of personal protective equipment (PPE) with the health-seeking behaviour of healthcare workers after occupational exposure in the selected health facilities in Ashanti Region. Two key variables showed statistically significant associations with treatment behaviour: the presence of an OHS policy at the facility and the consistency of PPE use. A significant association was observed between awareness of an OHS policy and health-seeking behaviour ($\chi^2 = 4.21$, $p = 0.040$). Healthcare workers who confirmed the existence of an OHS policy were more likely to practise self-treatment (54.8%) compared with those who reported

no policy (39.3%). This suggests that awareness of policy provisions alone does not necessarily translate into professional care-seeking after exposure.

Similarly, consistency of PPE use was significantly related to health-seeking behaviour ($\chi^2 = 11.81$, $p = 0.019$). Respondents who reported rarely using PPE had the highest rate of self-treatment (90.0%), followed by those who never used PPE (76.9%). In contrast, those who always used PPE demonstrated lower levels of self-treatment (46.7%), indicating that irregular or inconsistent PPE use is associated with a greater likelihood of self-treating after exposure. Other OHS-related indicators including the person responsible for policy implementation ($\chi^2 = 4.12$, $p = 0.389$), receipt of OHS training ($\chi^2 = 0.68$, $p = 0.408$), updates on OHS guideline changes ($\chi^2 = 0.96$, $p = 0.325$), availability and replacement of PPE, access to PPE, frequency of PPE shortages, risk reporting systems, and the scope of OHS training did not show significant associations with post-exposure treatment behaviour (all $p > 0.05$). In summary, the findings indicate that awareness of an institutional OHS policy and the consistency of PPE use significantly influence whether healthcare workers seek professional care or self-treat after occupational exposure, while other aspects of OHS training, policy implementation, and PPE access or replacement appear not to affect their health-seeking behaviour.

Table 4.3.4: Association between Mental Health, Psychosocial Access and Behaviour After Exposure

Variable	Behaviour After Exposure		χ^2	p-value
	Self-Treatment n(%)	Professional Treatment n(%)		
System for managing stress or burnout			7.98	0.005
Yes	77 (60.2)	51 (39.8)		
No	53 (42.4)	72 (57.6)		
Management of stress or burnout			3.37	0.908
Go on leave	80 (45.5)	96 (54.5)		
Travel or take time off	33 (42.3)	45 (57.7)		
Talk to a mental health professional	11 (47.8)	12 (52.2)		
Engage in religious or spiritual practices	3 (42.9)	4 (57.1)		
Talk to friends, colleagues, or family	22 (51.2)	21 (48.8)		
Participate in recreational activities	19 (57.6)	14 (42.4)		
Sleep or rest more	70 (49.0)	73 (51.0)		
Use self-medication or over-the-counter drugs	12 (54.5)	10 (45.5)		
Attend stress management programs	10 (50.0)	10 (50.0)		
Safe from aggression/violence			1.85	0.395
Always	6 7(55.8)	53 (44.23)		
Sometimes	43 (46.7)	49 (53.3)		
Never	20 (48.8)	21 (51.2)		
Assaulted at work			0.10	0.747
Yes	65 (52.4)	59 (47.6)		
No	65 (50.4)	64 (49.6)		
Access of mental health support			0.14	0.906
Yes	106 (51.4)	101 (48.8)		
No	24 (52.2)	22 (47.8)		
Use psychological counselling services if offered			0.26	0.867
Yes	110 (51.2)	105 (48.8)		
No	20 (52.6)	18 (47.4)		
Taken leave due to burnout or emotional fatigue			0.03	0.846
Yes	65 (50.8)	63 (49.2)		

No	65 (52.0)	60 (48.0)		
Cried or broken down due to work-related pressure			0.06	0.798
Yes	55 (50.5)	54 (49.5)		
No	75 (52.1)	69 (47.9)		
How common is burnout in your department?			1.59	0.450
Very Common	25 (55.6)	20 (44.4)		
Common	39 (45.9)	46 (54.1)		
Not Common	66 (53.7)	57 (46.3)		
Rate of emotional support			5.10	0.164
Excellent	10 (71.4)	4 (28.6)		
Good	28 (60.9)	18 (39.1)		
Poor	73 (48.3)	78 (51.7)		
None received	19 (45.2)	23 (54.8)		

Source: Field Data, 2025.

Table 4.3.4 presents the relationship between mental health and psychosocial support factors and the health-seeking behaviour of healthcare workers after occupational exposure in the selected health facilities in Ashanti Region. A statistically significant association was observed only for the presence of a system for managing stress or burnout ($\chi^2 = 7.98$, $p = 0.005$). Healthcare workers who reported that their facility had a system for managing stress or burnout were more likely to practise self-treatment (60.2%) compared with those in facilities without such a system (42.4%). This finding suggests that the availability of a structured stress-management system may influence workers' confidence in handling exposures independently, possibly reducing their inclination to seek professional treatment. By contrast, all other mental health and psychosocial variables were not significantly associated with post-exposure treatment behaviour (all $p > 0.05$). The preferred methods of managing stress or burnout such as going on leave, taking time off, consulting a mental health professional, engaging in religious or spiritual practices, talking to friends or family, participating in recreational activities, resting, self-medicating, or attending stress-management

programmes showed no significant differences in self-treatment or professional care-seeking (χ^2 = 3.37, p = 0.908). Similarly, perceptions of being safe from aggression or violence (χ^2 = 1.85, p = 0.395), experiences of being assaulted at work (χ^2 = 0.10, p = 0.747), access to mental health support (χ^2 = 0.14, p = 0.906), and the willingness to use counselling services if offered (χ^2 = 0.26, p = 0.867) were not significantly related to health-seeking behaviour. Other psychosocial indicators including taking leave due to burnout or emotional fatigue (χ^2 = 0.03, p = 0.846), crying or breaking down due to work-related pressure (χ^2 = 0.06, p = 0.798), perceived frequency of burnout in the department (χ^2 = 1.59, p = 0.450), and the rate of emotional support received (χ^2 = 5.10, p = 0.164) also showed no significant association with whether healthcare workers self-treated or sought professional care.

Overall, these findings highlight that the presence of a formal system for managing stress or burnout is the only mental health or psychosocial factor significantly influencing health-seeking behaviour after occupational exposure, whereas individual coping strategies, experiences of workplace aggression, and access to emotional or mental health support services do not appear to affect the choice between self-treatment and professional treatment.

Table 4.3.5: Multivariable Analysis of Behaviour After Exposure of Occupational Health Risk

Variable	Behaviour After Exposure		Crude Odds Ratio	95% CI		p-value	Adjusted odds ratio	95% CI		p-value
	Self-Treatment (%)	Professional Treatment (%)		Lower	Upper			Lower	Upper	
Age group										
20-30	41 (46.1)	48 (53.9)	Ref				Ref			
31-40	79 (54.9)	65 (45.1)	0.70	0.41	1.19	0.19	0.04	0	0.39	<0.01
≥41	10 (50)	10 (50.0)	0.85	0.32	2.25	0.75	0.00	0	0.28	<0.01
Sex										
Female	74 (43.5)	96 (56.5)	Ref				Ref			
Male	56 (67.5)	27 (32.5)	0.37	0.21	0.64	<0.01	0.54	0.09	3.33	0.51
Marital status										
Single	70 (54.3)	59 (45.7)	Ref				Ref			
Married	54 (47.4)	60 (52.6)	1.31	0.79	2.18	0.28	12.55	1.21	19.34	0.03
Cohabitation	6 (60.0)	4 (40.0)	0.79	0.21	2.93	0.72	6.47	1.05	37.69	0.04
Educational level										
Certificate	16 (42.1)	22 (57.9)	Ref				Ref			
Diploma	54 (46.6)	62 (53.4)	0.83	0.39	1.75	0.83	0.11	0	2.34	0.15
Bachelor's Degree	52 (59.1)	36 (40.9)	0.50	0.23	1.08	0.50	0.08	0	1.33	0.07
Master's Degree	8 (72.7)	3 (27.3)	0.27	0.06	1.19	0.27	0.01	0	0.70	0.03
Health facilities										
Adansi North DH	62 (80.5)	15 (19.5)	Ref				Ref			
Afrancho PC	50 (41.0)	72 (59.0)	5.95	3.04	11.62	<0.01	14.98	1.43	157.01	0.02

Kenyasi HC	18 (33.3)	36 (66.7)	8.26	3.71	18.37	<0.01	3.00	0.33	26.87	0.32
Type of staff										
Clinical	90 (45.7)	107 (54.3)	Ref				Ref			
Non-clinical	40 (71.4)	16 (28.6)	0.33	0.17	0.64	<0.01	0.06	0	1.13	0.05
Working Experience (Years)										
1-5	77 (55.8)	61 (44.2)	Ref				Ref			
6-10	40 (54.8)	33 (45.2)	0.65	0.37	1.17	0.15	0.18	0.01	2.02	0.16
≥ 11	13 (31.0)	29 (69.0)	2.11	1.02	4.36	0.04	9.95	0.95	103.67	0.05
Support for employee welfare										
Needs Improvement	48 (45.3)	58 (54.7)	Ref				Ref			
Satisfactory	65 (53.7)	56 (46.3)	0.71	0.42	1.20	0.20	0.75	0.13	4.09	0.74
Excellent	17 (65.4)	9 (34.6)	0.43	0.17	1.07	0.07	2.23	0.03	142.86	0.70
Fair assignment of workload										
Needs Improvement	37 (44.0)	47 (56.0)	Ref				Ref			
Satisfactory	70 (53.0)	62 (47.0)	0.69	0.40	1.20	0.19	0.16	0.02	1.29	0.08
Excellent	23 (62.2)	14 (37.8)	0.47	0.21	1.05	0.06	0.02	0	0.24	<0.01
Experienced injury										
Yes	61 (49.6)	62 (50.4)	Ref				Ref			
No	69 (53.1)	61 (46.9)	1.15	0.70	1.88	0.58	0.02	0	0.24	<0.01
Experienced injury type										
Needle-stick injury	24 (42.9)	32 (57.1)	Ref				Ref			

Back injury / Musculoskeletal strain	29 (51.8)	27 (48.2)	1.45	0.58	3.60	0.42	1.38	0.25	7.40	0.70
Burn or cut	7 (43.8)	9 (56.2)	1.04	0.44	2.47	0.92	0.68	0.09	5.09	0.71
Slip or fall	9 (50.0)	9 (50.0)	1.26	0.39	4.07	0.69	0.14	0.01	1.60	0.11
Repetitive strain injury	11 (68.8)	5 (31.2)	0.98	0.29	3.27	0.97	0.57	0.05	6.50	0.65
Allergic reaction	11 (61.1)	7 (38.9)	0.39	0.12	1.26	0.11	8.84	0.56	137.54	0.11
Crush injury	3 (60.0)	2 (40.0)	0.61	0.20	1.88	0.39	1.94	0.17	21.28	0.58
Experienced times										
1	15 (45.5)	18 (54.5)	Ref				Ref			
2	16 (59.3)	11 (40.7)	0.57	0.20	1.60	0.28	4.90	0.33	72.53	0.24
3	12 (38.7)	19 (61.3)	1.31	0.48	3.57	0.58	2.84	0.32	24.61	0.34
4>	18 (56.2)	14 (43.8)	0.64	0.24	1.72	0.38	1.28	0.11	14.21	0.83
OHS policy at the facility										
Yes	108 (54.8)	89 (45.2)	Ref				Ref			
No	22 (39.3)	34 (60.7)	0.53	0.29	0.97	0.04	1.95	0.20	18.77	0.56
Received OHS training										
Yes	78 (49.4)	80 (50.6)	Ref				Ref			
No	52 (54.7)	43 (45.3)	1.24	0.74	2.06	0.40	1.26	0.17	9.27	0.81
System for managing stress or burnout										
Yes	77 (60.2)	51 (39.8)	Ref				Ref			
No	53 (42.4)	72 (57.6)	0.48	0.29	0.80	<0.01	0.05	0	0.53	0.01
Assaulted at work										
Yes	65 (52.4)	59 (47.6)	Ref				Ref			

No	65 (50.4)	64 (49.6)	0.92	0.56	1.51	0 .74	0.20	0.03	1.22	0.08
Access of mental health support										
Yes	106 (51.4)	101 (48.8)	Ref				Ref			
No	24 (52.2)	22 (47.8)	1.03	0.54	1.97	0.90	0.57	0.06	5.46	0.62
How common is burnout in your department?										
Very Common	25 (55.6)	20 (44.4)	Ref				Ref			
Common	39 (45.9)	46 (54.1)	1.36	0.78	2.37	0.27	1.09	0.21	5.60	0.91
Not Common	66 (53.7)	57 (46.3)	0.92	0.46	1.84	0.82	0.15	0.01	1.37	0.09
Rate of emotional support										
Excellent	10 (71.4)	4 (28.6)	Ref				Ref			
Good	28 (60.9)	18 (39.1)	0.88	0.44	1.75	0.72	1.73	0.16	18.52	0.64
Poor	73 (48.3)	78 (51.7)	0.53	0.22	1.24	0.14	0.03	0	0.76	0.03
None received	19 (45.2)	23 (54.8)	0.33	0.08	1.22	0.09	0.02	0	36.41	0.32

Source: Field Data, 2025.

The results presented in table 4.3.5 of the multivariable logistic regression provide important insights into the factors that influence whether health workers seek professional treatment after occupational exposure. Overall, the analysis reveals that a combination of personal characteristics and institutional or psychosocial factors significantly shapes treatment-seeking behaviour.

Age emerged as a strong determinant of professional treatment-seeking. Compared with the youngest group (20-30 years), health workers aged 31-40 years were significantly less likely to seek professional care after exposure (adjusted odds ratio [AOR] = 0.05, 95% confidence interval [CI] [0.005, 0.39], $p < 0.01$). A similar pattern was observed among those aged 41 years and above (AOR = 0.007, 95% CI [0, 0.28], $p < 0.01$). These findings suggest that older workers, possibly due to greater experience or self-confidence in managing exposures, may rely more on self-treatment and less on formal professional services. Marital status also showed a significant association with professional treatment-seeking. Married health workers were much more likely to seek professional care compared with single counterparts (AOR = 12.55, 95% CI [1.21, 129.34], $p = 0.03$). Those living in cohabitation similarly demonstrated higher odds of professional treatment (AOR = 62.47, 95% CI [1.05, 37.69], $p = 0.04$). This pattern may reflect the role of spousal or partner support in encouraging prompt and appropriate health-seeking behaviour after occupational exposure.

Institutional factors were equally important. Staff working at Afrancho Polyclinic had significantly higher odds of seeking professional treatment than their counterparts at Adansi North District Hospital (AOR = 14.98, 95% CI [1.43, 157.01], $p = 0.02$). This difference could be related to the presence of facility-specific protocols, resource availability, or stronger workplace culture around occupational health and safety. In terms of staff category, non-clinical workers were less likely than clinical workers to seek professional treatment (AOR = 0.061, 95% CI [0.003, 1.13], p =

0.05), highlighting a potential gap in occupational health awareness among administrative and support personnel. Furthermore, those with 11 or more years of work experience were more likely to seek professional treatment compared to those with only 1-5 years of experience (AOR = 9.95, 95% CI [0.95, 103.67], p = 0.05), possibly indicating that longer service promotes better knowledge of institutional health protocols.

Psychosocial and organisational support systems demonstrated a notable effect. The presence of a formal system for managing stress or burnout was strongly associated with professional treatment-seeking behaviour. Workers in facilities without such systems were far less likely to seek professional care (AOR = 0.05, 95% CI [0, 0.53], p = 0.01), emphasising the protective role of structured stress-management programs. Similarly, the perceived rate of emotional support influenced behaviour: respondents who rated emotional support as poor were less likely to seek professional treatment compared with those reporting excellent support (AOR = 0.034, 95% CI [0.002, 0.761], p = 0.03). These findings underscore the importance of fostering supportive work environments that prioritise mental health and emotional well-being.

Other factors such as sex, educational level, exposure to workplace violence, access to mental-health support, and receipt of occupational health and safety training did not show significant relationships with professional treatment-seeking in the adjusted model (all $p > 0.05$). Their lack of statistical significance suggests that while these variables may play some role in occupational health behaviours, they do not independently predict professional care utilisation after exposure in this setting. In summary, the analysis highlights that treatment-seeking behaviour after occupational exposure is not solely an individual choice but is influenced by age, marital support, facility characteristics, staff category, work experience, and the availability of stress-management and emotional support systems. Interventions to improve professional treatment-seeking should

therefore target both individual health workers and the institutional environment. Strengthening stress-management structures, enhancing emotional support services, and ensuring that non-clinical staff are adequately sensitised to occupational health protocols may significantly improve the timely use of professional care and ultimately reduce the risks associated with occupational exposures.

Table 4.3.6: Association Between Demographic Characteristics and Reporting After Exposure

Variable	Reporting After Exposure		χ^2	p-value
	Not Reporting n (%)	Reporting n (%)		
Age group			2.56	0.27
20-30	53 (59.6)	36 (40.4)		
31-40	72 (50.0)	72 (50.0)		
≥41	9 (45.0)	11 (55.0)		
Sex			0.06	0.79
Female	91 (53.5)	79 (46.5)		
Male	43 (51.8)	40 (48.2)		
Marital status			10.91	**<0.01**
Single	81 (62.8)	48 (37.2)		
Married	50 (43.9)	64 (56.1)		
Cohabitation	3 (30.0)	7 (70.0)		
Educational level			6.58	0.08
Certificate	23 (60.5)	15 (39.5)		
Diploma	68 (58.6)	48 (41.4)		
Bachelor's Degree	37 (42.0)	51 (58.0)		
Master's Degree	6 (54.5)	5 (45.5)		
Health facilities			5.49	0.06
Adansi North DH	33 (42.9)	44 (57.1)		
Afrancho PC	73 (59.8)	49 (40.2)		
Kenyasi HC	28 (51.9)	26 (48.1)		
Type of staff			0.04	0.84
Clinical	105 (53.3)	92 (46.7)		
Non-clinical	29 (51.8)	27 (48.2)		
Working experience (Years)			5.07	0.07
1-5	82 (59.4)	56 (40.6)		
6-10	33 (45.2)	40 (54.8)		
≥ 11	19 (45.2)	23 (54.8)		

Source: Field Data, 2025

Table 4.3.6 presents the relationship between selected socio-demographic and the reporting behaviour of healthcare workers following occupational exposure in the three selected health facilities in the Ashanti Region. Among the variables assessed, marital status emerged as the only factor showing a statistically significant association with reporting behaviour. A significant association was observed between marital status and the likelihood of reporting occupational exposure ($\chi^2 = 10.91$, $p < 0.01$). Married respondents (56.1%) and those in cohabitation (70.0%) were more likely to report incidents compared with their single counterparts (37.2%). This suggests that family or social support networks linked to marital relationships may motivate individuals to adhere to formal reporting procedures.

In contrast, other demographic and workplace variables did not show significant associations with reporting after exposure. These include age group ($\chi^2 = 2.56$, $p = 0.27$), sex ($\chi^2 = 0.06$, $p = 0.79$), educational level ($\chi^2 = 6.58$, $p = 0.08$), health facility ($\chi^2 = 5.49$, $p = 0.06$), type of staff ($\chi^2 = 0.04$, $p = 0.84$), and working experience ($\chi^2 = 5.07$, $p = 0.07$). Although some of these variables approached significance for example, health facility and working experience the differences were not statistically meaningful at the 5% level.

Overall, the findings indicate that marital status is the key socio-demographic determinant of reporting behaviour among healthcare workers following occupational exposure, while factors such as age, sex, educational level, facility type, staff category, and years of experience appear not to influence whether exposures are formally reported.

Table 4.3.7: Association Between Experienced Injury and Reporting After Exposure

Variable	Reporting After Exposure		χ^2	p-value
	Not Reporting n (%)	Reporting n (%)		
Experienced injury			53.95	**<0.01**
Yes	36 (29.3)	87 (70.7)		
No	98 (75.4)	32 (24.6)		
Experienced injury type			8.78	0.18
Needle-stick injury	15 (26.8)	41 (73.2)		
Back injury / Musculoskeletal strain	20 (35.7)	36 (64.3)		
Burn or cut	4 (25.0)	12 (75.0)		
Slip or fall	2 (11.1)	16 (88.9)		
Repetitive strain injury	1 (6.2)	15 (93.8)		
Allergic reaction	6 (33.3)	12 (66.7)		
Crush injury	2 (40.0)	3 (60.0)		
Experienced times			2.66	0.44
1	13 (39.4)	20 (60.6)		
2	8 (29.6)	19 (70.4)		
3	8 (25.8)	23 (74.2)		
4>	7 (21.9)	25 (78.1)		
Contributor most to occupational hazards			7.67	0.46
Lack of training	55 (50.9)	53 (49.1)		
Inadequate PPE	66 (52.8)	59 (47.2)		
Staff shortage	34 (50.0)	34 (50.0)		
Unsafe procedures	20 (40.0)	30 (60.0)		
Poor supervision	24 (64.9)	13 35.1)		
Long working hours and fatigue	54 (45.0)	66 (55.0)		
Faulty or poorly maintained equipment	19 (47.5)	21 (52.5)		
Overcrowded workspaces	18 (46.2)	21 (53.8)		
Poor infrastructure	16 (43.2)	21 (56.8)		

Source: Field Data, 2025

Table 4.3.7 presents the association between experienced injury and reporting behaviour after occupational exposure among healthcare workers in the three selected health facilities in the Ashanti Region. Experienced injury showed a strong and statistically significant relationship with reporting behaviour ($\chi^2 = 53.95$, $p < 0.01$). Healthcare workers who had experienced an injury were substantially more likely to report incidents (70.7%) compared with those who had not experienced any injury (24.6%). This finding underscores that direct experience of injury strongly motivates healthcare workers to formally report occupational exposures, possibly due to the perceived severity or the need for medical attention and documentation.

However, no statistically significant associations were observed for the type or frequency of injury or for perceived contributors to occupational hazards. Specifically, type of injury ($\chi^2 = 8.78$, $p = 0.18$) and number of times an injury was experienced ($\chi^2 = 2.66$, $p = 0.44$) were not significantly associated with reporting. Likewise, factors perceived as major contributors to occupational hazards such as lack of training, inadequate personal protective equipment (PPE), staff shortages, unsafe procedures, poor supervision, long working hours and fatigue, faulty equipment, overcrowded workspaces, and poor infrastructure did not significantly influence reporting behaviour ($\chi^2 = 7.67$, $p = 0.46$; all $p > 0.05$).

Overall, the findings highlight that the mere occurrence of an occupational injury is the key driver for reporting among healthcare workers, whereas the specific nature of the injury, the number of times injuries occurred, or perceived workplace risk factors do not significantly determine whether an exposure is formally reported.

Table 4.3.8Association Between OHS Policy Awareness, Training, and PPE Availability and Reporting After Exposure

Variable	Reporting After Exposure		χ^2	p-value
	Not Reporting n (%)	Reporting n (%)		
OHS policy at the facility			0.04	0.84
Yes	105 (53.3)	92 (46.7)		
No	29 (51.8)	27 (48.2)		
Ensures OHS policy implement			7.90	0.09
Facility/Medical Superintendent	50 (56.2)	39 (43.8)		
OHS Committee	20 (60.6)	13 (39.4)		
Hospital Administrator	37 (41.6)	52 (58.4)		
Departmental Heads / Unit Managers	10 (66.7)	5 (33.3)		
I don't know	17 (63.0)	10 (37.0)		
Received OHS training			10.88	**<0.01**
Yes	71 (44.9)	87 (55.1)		
No	63 (66.3)	32 (33.7)		
Updated on OHS guidelines changes			0.04	0.83
Yes	101 (52.6)	91 (47.4)		
No	33 (54.1)	28 (45.9)		
Refused a task due to lack of PPE			5.20	**0.02**
Yes	39 (43.3)	51 (56.7)		
No	95 (58.3)	68 (41.7)		
OHS trainings done department-wide or in selected units			1.55	0.670
All Department	94 (51.1)	90 (48.9)		
Only some units	22 (61.1)	14 (38.9)		
Training is based on specific roles, not departments	7 (50.0)	7 (50.0)		
No formal OHS training has been conducted	11 (57.9)	8 (42.1)		
Reporting systems across departments			1.08	0.29
Yes	84 (50.6)	82 (49.4)		
No	50 (57.5)	37 (42.5)		

Source: Field Data, 2025

Table 4.3.8 presents the relationship between awareness of occupational health and safety (OHS) policy, related training, and the availability and use of personal protective equipment (PPE) with the reporting behaviour of healthcare workers after occupational exposure in the selected health facilities in the Ashanti Region. A significant association was observed between receipt of OHS training and reporting after exposure ($\chi^2 = 10.88$, $p < 0.01$). Healthcare workers who had received OHS training were more likely to report occupational exposures (55.1%) compared with those who had not received any training (33.7%). This suggests that training equips staff with the knowledge and confidence to follow formal reporting procedures when incidents occur. Similarly, refusal of a task due to lack of PPE was significantly associated with reporting behaviour ($\chi^2 = 5.20$, $p = 0.02$). Respondents who had at some point refused to perform a task because of inadequate PPE reported exposures more frequently (56.7%) than those who had never refused tasks (41.7%). This finding indicates that a proactive stance on workplace safety such as refusing unsafe tasks is linked to a greater likelihood of formally reporting occupational incidents.

In contrast, other OHS-related indicators showed no significant association with reporting behaviour. These include the presence of an OHS policy at the facility ($\chi^2 = 0.04$, $p = 0.84$), the person responsible for policy implementation ($\chi^2 = 7.90$, $p = 0.09$), being updated on OHS guideline changes ($\chi^2 = 0.04$, $p = 0.83$), the scope of OHS trainings ($\chi^2 = 1.55$, $p = 0.67$), and the existence of reporting systems across departments ($\chi^2 = 1.08$, $p = 0.29$). Overall, these findings indicate that participation in OHS training and actively refusing tasks in the absence of adequate PPE significantly increase the likelihood of reporting occupational exposures, while other elements of OHS policy awareness and training structure do not appear to influence reporting behaviour among healthcare workers.

Table 4.3.9: Association between Mental Health, Psychosocial Access and Reporting After Exposure

Variable	Reporting After Exposure		χ^2	p-value
	Not Reporting n (%)	Reporting n (%)		
System for managing stress or burnout			3.85	**0.04**
Yes	60 (46.9)	68 (53.1)		
No	74 (59.2)	51 (40.8)		
Safe from aggression/violence			2.15	0.34
Always	61 (50.8)	59 (49.2)		
Sometimes	54 (58.7)	38 (41.3)		
Never	19 (46.3)	22 (53.7)		
Assaulted at work			7.23	**<0.01**
Yes	55 (44.4)	69 (55.6)		
No	79 (61.2)	50 (38.8)		
Access of mental health support			2.29	0.13
Yes	105 (50.7)	102 (49.3)		
No	29 (63.0)	17 (37.0)		
Use psychological counselling services if offered			7.70	**<0.01**
Yes	106 (49.3)	109 (50.7)		
No	28 (73.7)	10 (26.3)		

Source: Field Data, 2025

Table 4.3.9 presents the relationship between mental health and psychosocial support factors and the reporting behaviour of healthcare workers after occupational exposure in the selected health facilities in the Ashanti Region. A marginally significant association was observed between the existence of a system for managing stress or burnout and reporting ($\chi^2 = 3.85$, $p = 0.04$). Healthcare workers who reported that their facility had a system for managing stress were more likely to report exposures (53.1%) than those without such a system (40.8%), suggesting that institutional stress-management mechanisms may encourage formal incident reporting. Similarly, experience of assault at work was significantly associated with reporting after exposure ($\chi^2 = 7.23$, $p < 0.01$).

Those who had been assaulted were more likely to report occupational exposures (55.6%) compared with those who had not experienced assault (38.8%). This indicates that personal exposure to workplace violence strongly motivates healthcare workers to follow reporting procedures. Finally, willingness to use psychological counselling services if offered was also significantly related to reporting behaviour ($\chi^2 = 7.70$, $p < 0.01$). Respondents willing to use counselling services were more likely to report exposures (50.7%) than those who would not (26.3%), highlighting that a positive attitude toward mental-health support correlates with greater likelihood of formal exposure reporting. In contrast, other mental health–related indicators showed no significant association with reporting behaviour. These include perceptions of being safe from aggression or violence ($\chi^2 = 2.15$, $p = 0.34$) and access to mental health support services ($\chi^2 = 2.29$, $p = 0.13$). Overall, these findings suggest that institutional stress-management systems, direct experience of workplace assault, and openness to psychological counselling are key psychosocial factors that enhance the reporting of occupational exposures, whereas general perceptions of safety and access to mental health support do not significantly influence reporting behaviour.

Table 4.3.10: Multivariable Analysis of Reporting After Exposure of Occupational Health Risk

Variable	Reporting After Exposure		Crude Odds Ratio	95% CI		p-value	Adjusted odds ratio	95% CI		p-value
	Not Reporting n (%)	Reporting n (%)		Lower	Upper			Lower	Upper	
Age group										
20-30	53 (59.6)	36 (40.4)	Ref				Ref			
31-40	72 (50.0)	72 (50.0)	1.47	0.86	2.51	0.15	0.22	0.02	1.96	0.17
≥41	9 (45.0)	11 (55.0)	1.79	0.67	4.78	0.23	0.36	0.01	8.98	0.54
Sex										
Female	91 (53.5)	79 (46.5)	Ref				Ref			
Male	43 (51.8)	40 (48.2)	1.07	0.63	1.81	0.79	0.87	0.11	6.40	0.89
Marital status										
Single	81 (62.8)	48 (37.2)	Ref				Ref			
Married	50 (43.9)	64 (56.1)	0.25	0.06	1.02	0.05	6.61	0.74	58.48	0.09
Cohabitation	3 (30.0)	7 (70.0)	0.54	0.13	2.22	0.40	1.88	0.03	95.91	0.75
Educational level										
Certificate	23 (60.5)	15 (39.5)	Ref				Ref			
Diploma	68 (58.6)	48 (41.4)	1.08	0.51	2.28	0.83	0.86	0.07	9.69	0.90
Bachelor's Degree	37 (42.0)	51 (58.0)	2.11	0.97	4.59	0.05	6.54	0.54	78.72	0.13
Master's Degree	6 (54.5)	5 (45.5)	1.27	0.33	4.94	0.72	0.13	0	3.54	0.22
Health facilities										
Adansi North DH	33 (42.9)	44 (57.1)	Ref				Ref			
Afrancho PC	73 (59.8)	49 (40.2)	0.50	0.28	0.89	0.02	0.13	0.01	1.06	0.05

Kenyasi HC	28 (51.9)	26 (48.1)	0.69	0.34	1.40	0.31	0.10	0	3.93	0.22
Type of staff										
Clinical	105 (53.3)	92 (46.7)	Ref				Ref			
Non-clinical	29 (51.8)	27 (48.2)	1.06	0.58	1.92	0.84	1.83	0.11	30.86	0.67
Working Experience (Years)										
1-5	82 (59.4)	56 (40.6)	Ref				Ref			
6-10	33 (45.2)	40 (54.8)	1.77	1.0	3.14	0.05	9.01	0.79	101.73	0.07
≥ 11	19 (45.2)	23 (54.8)	1.77	0.88	3.55	0.10	0.96	0.08	11.06	0.97
Experienced injury										
Yes	36 (29.3)	87 (70.7)	Ref				Ref			
No	98 (75.4)	32 (24.6)	7.40	4.24	12.91	<0.01	0.02	0	0.24	**<0.01**
Experienced injury type										
Needle-stick injury	15 (26.8)	41 (73.2)	Ref				Ref			
Back injury / Musculoskeletal strain	20 (35.7)	36 (64.3)	0.83	0.31	2.22	0.71	0.77	0.07	8.10	0.70
Burn or cut	4 (25.0)	12 (75.0)	1.63	0.39	6.81	0.50	121.13	1.29	11329.50	0.71
Slip or fall	2 (11.1)	16 (88.9)	6.81	1.20	38.56	0.03	15.82	0.59	419.63	0.11
Repetitive strain injury	1 (6.2)	15 (93.8)	11.32	1.33	95.87	0.02	12.8	0.25	645.43	0.65
Allergic reaction	6 (33.3)	12 (66.7)	1.60	0.47	5.46	0.44	4.24	0.19	92.42	0.11
Crush injury	2 (40.0)	3 (60.0)	1.11	0.1	7.51	0.91	47.34	0.81	2766.04	0.58
Experienced times										
1	13 (39.4)	20 (60.6)	Ref				Ref			
2	8 (29.6)	19 (70.4)	1.54	0.52	4.55	0.43	0.15	0	2.86	0.20

3	8 (25.8)	23 (74.2)	1.86	0.64	5.42	0.25	7.03	0.82	60.00	0.07
4>	7 (21.9)	25 (78.1)	2.32	0.78	6.91	0.13	0.61	0.02	13.33	0.75
OHS policy at the facility										
Yes	105 (53.3)	92 (46.7)	Ref				Ref			
No	29 (51.8)	27 (48.2)	0.94	0.51	1.70	0.84	0.50	0.02	9.73	0.65
Ensures OHS policy implement										
Facility/Medical Superintendent	50 (56.2)	39 (43.8)	Ref				Ref			
OHS Committee	20 (60.6)	13 (39.4)	1.56	0.49	4.93	0.44	6.31	0.18	213.43	0.30
Hospital Administrator	37 (41.6)	52 (58.4)	2.81	0.88	8.90	0.07	15.39	0.40	592.94	0.14
Departmental Heads / Unit Managers	10 (66.7)	5 (33.3)	1.30	0.36	4.67	0.68	8.28	0.20	333.94	0.26
I don't know	17 (63.0)	10 (37.0)	1.17	0.31	4.43	0.81	453.54	2.28	90007.59	**0.02**
Received OHS training										
Yes	71 (44.9)	87 (55.1)	Ref				Ref			
No	63 (66.3)	32 (33.7)	2.41	1.42	4.09	<0.01	2.64	0.23	30.09	0.43
Updated on OHS guidelines changes										
Yes	101 (52.6)	91 (47.4)	Ref				Ref			
No	33 (54.1)	28 (45.9)	1.06	0.59	1.89	0.83	0.51	0.06	4.33	0.53
Refused a task due to lack of PPE										
Yes	39 (43.3)	51 (56.7)	Ref				Ref			
No	95 (58.3)	68 (41.7)	1.82	1.08	3.07	0.02	3.40	0.50	22.85	0.20

System for managing stress or burnout										
Yes	60 (46.9)	68 (53.1)	Ref				Ref			
No	74 (59.2)	51 (40.8)	1.644	1.00	2.70	0.05	3.80	0.42	33.93	0.23
Safe from aggression/violence										
Always	61 (50.8)	59 (49.2)	Ref				Ref			
Sometimes	54 (58.7)	38 (41.3)	0.60	0.29	1.27	0.18	0.02	0	0.48	**0.01**
Never	19 (46.3)	22 (53.7)	0.83	0.41	1.70	0.62	0.06	0	1.09	**0.05**
Assaulted at work										
Yes	55 (44.4)	69 (55.6)	Ref				Ref			
No	79 (61.2)	50 (38.8)	1.98	1.20	3.27	0	20.71	2.79	153.52	**<0.01**
Access of mental health support										
Yes	105 (50.7)	102 (49.3)	Ref				Ref			
No	29 (63.0)	17 (37.0)	1.65	0.85	3.19	0.13	41.24	1.77	960.91	**<0.02**

Source: Field Data, 2025

The multivariable logistic regression analysis examined individual, workplace, and psychosocial factors associated with whether healthcare workers formally reported occupational health exposures. Table 4.3.10 presents both the crude (unadjusted) and adjusted odds ratios (AORs) with 95% confidence intervals (CIs). Experienced injury was the most powerful predictor of reporting. Healthcare workers who had not experienced an occupational injury were markedly less likely to report exposures compared with those who had sustained an injury (AOR = 0.02, 95% CI [0.00, 0.24], $p < 0.01$). This finding highlights that direct experience of injury strongly motivates workers to follow formal reporting procedures.

Two psychosocial factors were also significant in the adjusted model. Staff who had not been assaulted at work showed substantially higher odds of reporting exposures (AOR = 20.71, 95% CI [2.79, 153.52], $p < 0.01$), suggesting that personal experience of workplace violence increases risk awareness and reinforces the need for formal documentation. In addition, respondents who reported no access to mental-health support were more likely to report exposures (AOR = 41.24, 95% CI [1.77, 960.91], $p < 0.02$), indicating that in the absence of psychosocial services, staff may use formal reporting to seek institutional recognition or support. Several variables were significant at the bivariate level but lost their effect after adjustment. These included refusing a task because of inadequate personal protective equipment (PPE) (crude OR = 1.83, $p = 0.02$), receipt of occupational health and safety (OHS) training (crude OR = 2.41, $p < 0.01$), and the presence of a formal system for managing stress or burnout (crude OR = 1.64, $p = 0.05$). Their attenuation in the multivariable model suggests that the influence of these factors is largely explained by the strong effects of experienced injury and psychosocial exposures.

Conversely, demographic and workplace characteristics such as age group, sex, marital status, educational level, health facility, staff category, and years of working experience were not

independently associated with reporting behaviour (all $p > 0.05$). Although these factors may shape attitudes toward reporting, they did not predict reporting once key injury and psychosocial variables were considered. In summary, the multivariable analysis shows that direct injury experience and key psychosocial conditions particularly workplace assault and access to mental-health support are the principal determinants of reporting occupational exposures. Efforts to improve reporting rates should therefore prioritise strengthening mental-health services, addressing workplace violence, and reinforcing the importance of incident reporting even among staff who have not personally sustained injuries.

4.4 Occupational Health Risks and Health-Seeking Behaviour across by Department

The study focuses on assessing the occupational health risks and health-seeking behaviours among healthcare workers across various departments within the selected health facilities in the Ashanti Region, Ghana. To address this objective, respondents were asked questions regarding how they respond to occupational health risks encountered in their respective departments. Table 5 presents the prevalence of different categories of occupational hazards - biological, chemical, physical, ergonomic, psychosocial, and mechanical as reported by staff in each department. It also captures the proportion of workers in each department who demonstrate good health-seeking behaviour in response to occupational exposures. Data on the responses are presented in Table 5.

Table 4. 3: Distribution of Occupational Health Risks and Health-Seeking Behaviour by Department

Department	Occupational health risks (n, %)						Behaviour After Exposure	Reporting After Exposure
	Biological*	Chemical*	Physical	Ergonomic	Psychosocial	Mechanical*	Professional Treatment	Reporting
Administration	0 (0)	1 (6.7)	6 (40.0)	7 (46.7)	9 (60.0)	3 (20.0)	2 (13.3)	7 (46.7)
Emergency Unit	7 (87.5)	3 (37.5)	4 (50.0)	5 (62.5)	3 (37.5)	1 (12.5)	6 (75.0)	4 (50.0)
Finance	1 (8.3)	1 (8.3)	6 (50.0)	9 (75.0)	6 (50.0)	3 (25.0)	4 (33.3)	5 (41.7)
Laboratory	9 (90.0)	4 (40.0)	7 (70.0)	4 (40.0)	3 (30.0)	5 (50.0)	5 (50.0)	7 (70.0)
Maintenance/Cleaning	6 (85.7)	5 (71.4)	6 (85.7)	7 (100.0)	5 (71.4)	5 (71.4)	3 (42.9)	2 (28.6)
Maternity Ward	33 (82.5)	9 (22.5)	18 (45.0)	27 (67.5)	16 (40.0)	4 (10.0)	23 (57.5)	19 (47.5)
Medical Ward	26 (92.9)	12 (42.9)	18 (64.3)	14 (50.0)	7 (25.0)	6 (21.4)	21 (75)	20 (71.4)
OPD	24 (72.7)	4 (12.1)	16 (48.5)	15 (45.5)	19 (57.6)	3 (9.1)	12 (36.4)	14 (42.4)
Pharmacy	4 (50.0)	8 (100.0)	5 (62.5)	3 (37.5)	6 (75.0)	0 (0.0)	0 (0.0)	5 (62.5)
Public Health Unit	38 (74.5)	7 (13.7)	26 (51.0)	21 (41.2)	21 (41.2)	3 (5.9)	31 (60.8)	16 (31.4)
Radiology	0 (0.0)	0 (0.0)	3 (100.0)	1 (33.0)	1 (33.3)	1 (33.3)	2 (66.7)	1 (33.3)
Records	2 (18.2)	0 (0.0)	5 (45.5)	7 (63.6)	7 (63.6)	2 (18.2)	2 (18.2)	7 (63.6)
Security	0 (0.0)	0 (0.0)	3 (75.0)	3 (75.0)	4 (100.0)	1 (25.0)	2 (50.0)	4 (100)
Stores / Procurement	0 (0.0)	4 (100.0)	0 (0.0)	2 (50.0)	3 (75.0)	0 (25.0)	1 (25)	1 (25.0)
Surgical Ward	9 (90.0)	6 (60.0)	4 (40.0)	7 (70.0)	5 (50.0)	1 (10.0)	5 (50)	5 (50.0)
Theatre	7 (77.8)	5 (55.6)	4 (44.4)	5 (55.6)	4 (44.4)	3 (33.3)	4 (44.4)	2 (22.2)

*p<0.001: Each of the occupational risk has no and yes. It was used with cross-tabulation as department name. Only the YES category against the department was presented.

Mechanical: Faulty Equipment Injuries from Tools Machines/ Psychosocial: Stress Aggression Burnout Harassment/ Ergonomic: Lifting Patients Awkward Postures Repetitive Movements/ Physical: Noise Radiation Heat Slips and Falls/ Chemical: Disinfectants Cleaning Agents Drugs/ Biological: Blood Body Fluids Airborne Infections

The distribution of occupational health risks and health-seeking behaviour (HSB) of healthcare workers varied across departments within the selected health facilities. Results in Table 4.4 show that exposure to biological hazards was notably high in departments with direct patient interaction. For instance, the Medical Ward recorded the highest prevalence of biological risks at 92.9%, followed closely by the Laboratory (90.0%), Surgical Ward (90.0%), and Maintenance/Cleaning (85.7%). Similarly, the Maternity Ward (82.5%) and Public Health Unit (74.5%) also reported high biological exposure. In contrast, no biological risks were reported in the Radiology, Security, or Stores/Procurement departments.

Again, the study found that chemical hazards were most prevalent in the Pharmacy and Stores/Procurement departments, each with a 100.0% exposure rate. The Surgical Ward (60.0%), Theatre (55.6%), and Medical Ward (42.9%) also showed considerable chemical risks, while other departments including Records, Security, and Radiology reported no chemical exposure at all.

With regard to physical risks, departments including Radiology (100.0%), Maintenance/Cleaning (85.7%), and the Laboratory (70.0%) were most affected. The Medical Ward (64.3%) and Pharmacy (62.5%) also reported significant physical exposure. The Stores/Procurement department, however, recorded no physical risks.

Ergonomic risks, which typically involve strain from repetitive movements or poor posture, were widespread across many departments. The highest levels were reported in Maintenance/Cleaning (100.0%), followed by Finance (75.0%), the Maternity Ward (67.5%), and the Emergency Unit (62.5%). Moderate levels were found in the Medical Ward (50.0%) and Surgical Ward (70.0%).

Moreover, it was revealed that psychosocial risks, including stress or workplace tension, were reported in all departments but were most common in Security (100.0%), Pharmacy (75.0%), and Stores/Procurement (75.0%). The Administration department also recorded a high psychosocial

risk level at 60.0%, while the Medical Ward reported a relatively lower rate of 25.0%. In a similar vein, mechanical hazards, though less commonly reported, were highest in the Maintenance/Cleaning (71.4%) and Laboratory (50.0%) departments. The Theatre (33.3%) and Medical Ward (21.4%) also showed moderate exposure, whereas several departments including the Pharmacy, Stores/Procurement, and Public Health Unit reported minimal to no mechanical risks.

In terms of health-seeking behaviour (HSB) after exposure, the Medical Ward demonstrated the highest level of professional treatment at 75.0%, matched by the Emergency Unit (75.0%). High rates were also observed in the Public Health Unit (60.8%), Maternity Ward (57.5%), and Laboratory (50.0%). The Security (50.0%), Surgical Ward (50.0%), and Theatre (44.4%) recorded moderate levels, while the Pharmacy (0.0%), Finance (33.3%), and Records (18.2%) departments had the lowest proportions of professional treatment after exposure.

Reporting after exposure showed a similarly varied pattern across departments. The highest formal reporting rates were observed among Security staff (100.0%), followed by the Medical Ward (71.4%) and Laboratory (70.0%). The Emergency Unit (50.0%), Surgical Ward (50.0%), and Pharmacy (62.5%) demonstrated moderate reporting levels. In contrast, Theatre (22.2%), Maintenance/Cleaning (28.6%), and the Public Health Unit (31.4%) had notably lower reporting rates. These differences underscore how department-specific work cultures and supervisory practices may influence the likelihood that exposures are formally documented.

Overall, the findings indicate that departments with intensive patient-care roles such as the Medical Ward, Maternity Ward, and Laboratory not only face greater occupational risks but also demonstrate comparatively stronger engagement in both professional treatment and formal reporting after exposure. By contrast, non-clinical units like Stores/Procurement and Pharmacy,

while still exposed to specific hazards (notably chemical and psychosocial), showed relatively poorer health-seeking and reporting behaviours. This pattern highlights the need for targeted occupational health interventions that extend beyond clinical units, including tailored training, strengthened reporting systems, and improved access to occupational health services for non-clinical staff. Strengthening these structures will help ensure that all categories of hospital workers regardless of their department or level of patient contact can promptly seek care and formally report occupational exposures, ultimately improving both worker safety and institutional risk management.

CHAPTER FIVE
DISCUSSION OF FINDINGS

5.1 Introduction

This section discusses the study results based on the research objectives and compares the findings with other literature to draw useful conclusions. The general objective of the study was to investigate the occupational health risks and health-seeking behaviours among healthcare workers in three selected health facilities in Ashanti Region of Ghana.

5.2 Occupational Health Risks among Healthcare Workers

The study's examined the spectrum of occupational health risks faced by healthcare workers in three facilities. Results indicate that biological, ergonomic, and physical hazards were high at the Kenyasi Health Centre, suggesting a harsher risk profile in that facility. This finding aligns with broader literature on healthcare settings in Ghana, where biological hazards (such as needlestick injuries and exposure to infectious diseases) are prevalent across hospitals (*Ridge et al., 2024*; *Senoo-Dogbey & Klutsey, 2024; Tawiah et al., 2025*). According to Tawiah et al. (2022), over half of recent Ghanaian studies on healthcare occupational hazards focused on biological exposures, underscoring the prominence of risks like blood-borne infections. High biological risk at Kenyasi is therefore not surprising, it reflects the general vulnerability of HCWs to pathogens through sharps injuries, patient fluids, and airborne infections *(Tawiah et al., 2022)*.

The elevated ergonomic hazards at Kenyasi (e.g., musculoskeletal strain from patient lifting and repetitive tasks) also mirror national trends. Boakye et al. (2018) reported a musculoskeletal disorder prevalence of nearly 79% among Ghanaian nurses and midwives, with lower back pain being most common. Such staggering rates of work-related musculoskeletal disorders highlight how routine tasks like lifting patients, prolonged standing, and poor workstation design put staff

at risk. The finding of significant ergonomic issues in one facility may indicate insufficient staffing or assistive equipment there, leading to heavier physical workloads on staff.

Similarly, physical hazards (including slips, falls, noise, radiation, and inadequate ventilation) were high at Kenyasi. Although often less studied than infectious risks, physical environmental dangers can considerably affect HCW safety. Alhassan & Poku (2018), found that in psychiatric hospitals, physical hazards were the most reported type of occupational hazard by staff, more so than even psychosocial threats, indicating that issues like unsafe infrastructure or insufficient safety measures are common concerns. Kenyasi's higher physical hazard levels might stem from older infrastructure or limited safety resources in that facility.

Notably, the study found no statistically significant differences in psychosocial, chemical, and mechanical hazards across the three facilities. This suggests that stress, violence, chemical exposure, and equipment-related risks are pervasive and relatively uniform in all settings. Indeed, psychosocial hazards (such as workplace stress, burnout, and aggression) are endemic in healthcare environments generally. According to Opoku Agyemang et al. (2022), a large proportion of nurses in Ghana report high levels of stress, anxiety, and burnout, underscoring that mental strain is a widespread problem rather than isolated to a particular hospital.

In a study of Ghanaian psychiatric nurses, 26.4% had significant occupational stress and over 40% experienced severe burnout symptoms Opoku Agyemang et al. (2022). Likewise, workplace violence is a systemic issue: Alhassan & Poku, (2018) reported that 72% of nursing staff in their sample had encountered some form of workplace violence, mostly verbal abuse, in the course of their duties. Such high rates of aggression and abuse were recorded in multiple facilities (in their case, two major hospitals), supporting the finding that psychosocial hazards are similarly high everywhere (Alhassan & Poku, 2018). The uniformity of stress and violence levels across the

facilities in this study likely reflects common underlying causes of chronic understaffing, high patient volumes, emotional demands of care, and a lack of strong workplace safety policies which are present throughout the health system.

For chemical hazards, the lack of difference between sites implies all three facilities have comparable exposures to harmful chemicals (e.g., disinfectants, laboratory reagents, medications, or waste anesthetic gases). Even if not highlighted by participants as much as other risks, chemical exposures do exist in all hospitals: for example, use of strong cleaning agents and sterilant can lead to respiratory or dermal issues among staff (especially cleaners and theatre personnel).

Chemical hazards (such as disinfectants, laboratory reagents, medications, and waste anesthetic gases) were comparable across all three facilities. Although not highlighted as frequently as infectious risks, chemical exposures can cause respiratory or skin problems, especially among cleaners, laboratory staff, and theatre personnel. A study in Ghanaian mortuaries reported that formalin use led to eye irritation and breathing difficulties among workers *(Akortiakumah et al., 2022)*. Likewise, research in other African hospitals has shown that disinfectants like glutaraldehyde and formaldehyde are common sources of staff complaints about respiratory and skin symptoms *(Fontana et al., 2025)*. These findings suggest that each facility manages (or fails to manage) chemical safety in a similar manner, perhaps due to standard Ghana Health Service protocols on hazardous materials. Mechanical hazards (such as injuries from medical devices or machinery, and accidents like cuts from equipment) also did not significantly differ, indicating a baseline level of such risks across the board. This could be interpreted as a shared need for better safety training on equipment use and maintenance in all facilities.

In summary, while Kenyasi HC had particularly high biological, ergonomic, and physical hazard exposures, all facilities faced a broad array of risks, with psychosocial, chemical, and mechanical

dangers pervading uniformly. These results underscore the multifaceted nature of occupational hazards in healthcare confirming prior reports that Ghanaian HCWs are simultaneously vulnerable to infectious diseases, physical strains, hazardous substances, and psychological stressors *(Tawiah et al., 2022; Boakye et al., 2018; Opoku Agyemang et al., 2022)*. Addressing such risks requires comprehensive occupational health and safety strategies, tailored to mitigate each hazard type across all hospital settings.

5.3 Factors Influencing Health-Seeking Behaviours after Occupational Risk Exposure

The study found that sex, facility of employment, staff category and years of working experience were significantly associated with treatment behaviour. A higher proportion of males (67.5%) engaged in self-treatment than females (43.5%), a pattern that mirrors global evidence that men generally delay professional care or rely on self-medication *(Akande-Sholabi et al., 2021; Al-Omrani et al., 2023; Mohammed et al., 2021; Opoku et al., 2023)*. Facility of work strongly influenced behaviour, self-treatment was most common at Adansi North District Hospital (80.5%) compared with Afrancho Polyclinic (41.0%) and Kenyasi Health Centre (33.3%). Similar inter-facility differences have been documented in Nigeria, where hospitals with stronger infection-control protocols recorded higher uptake of post-exposure prophylaxis (Auerbach et al., 2024). Non-clinical staff were more likely to self-treat (71.4%) than clinical staff (45.7%), consistent with a study in Ghana that support staff receive less infection-prevention training and have lower uptake of post-exposure care *(Tawiah,, et al., 2024)*. Workers with ≥11 years of experience were more likely to seek professional care (69.0%) than those with fewer years of service; however, multivariable analysis showed that older age groups (31-40 years and ≥41 years) were less likely than 20–30-year-olds to seek professional care (AOR = 0.050 and 0.007, respectively). This paradox reflects both greater knowledge of procedures and greater self-confidence among older

HCWs, a dynamic described in studies where senior staff sometimes bypass formal reporting *(Abdisa et al., 2022; Halboup et al., 2025; Kumah & Forkuo-Minka, 2023)*. Marital status also influenced behaviour: married and cohabiting HCWs were markedly more likely to seek professional treatment (AOR = 12.55 and 62.47). Andersen's model of health service utilisation highlights social support as an enabling factor; partners may encourage timely care-seeking *(Lederle et al., 2021)*.

Perceiving staff shortage as the main contributor to occupational hazards was associated with higher self-treatment (67.6%), supporting evidence from studies where chronic understaffing normalised occupational risk and discouraged formal reporting *(Tawiah et al., 2022; Usset et al., 2024)*. By contrast, neither experiencing an injury nor the type or frequency of injury significantly predicted treatment behaviour, suggesting a "normalisation of risk" whereby repeated minor exposures are accepted as routine and not seen as requiring professional attention *(Richardson et al., 2021; Tawiah et al., 2025)*.

Awareness of an OHS policy was unexpectedly associated with higher self-treatment (54.8% vs. 39.3% with no policy), indicating that policy existence or awareness alone does not guarantee professional care-seeking. More intuitively, inconsistent PPE use was strongly related to self-treatment those who rarely used PPE had the highest rate of self-treatment (90.0%). This supports Ghanaian data showing that inconsistent PPE use is associated with lower uptake of post-exposure prophylaxis *(Denge & Rakhudu, 2022; Segbenya & Yeboah, 2022)*. Other indicators scope of OHS training, updates of guidelines, and PPE supply were not significant, echoing reviews that training alone seldom changes behaviour without reinforcement and supportive culture *(Cordeiro et al., 2022)*.

Among the stress systems, only the presence of a formal stress-management system significantly influenced treatment behaviour in the bivariate analysis; HCWs in facilities with such a system were more likely to self-treat (60.2%). Yet multivariable analysis revealed that facilities without stress-management systems were far less likely to have staff seek professional care (AOR = 0.05), showing that structured psychosocial support protects against under-utilisation of professional care. Moreover, respondents who rated emotional support as poor were less likely to seek professional care (AOR = 0.034), underscoring evidence that psychological safety and supportive work climates encourage both reporting and treatment-seeking *(de Lisser et al., 2024; Marković et al., 2024; Mehta et al., 2024)*.

Marital status predicted reporting, married or cohabiting HCWs were more likely to report incidents with 56.1% and 70.0%, respectively. The experience of injury was the most powerful driver of reporting 70.7% vs. 24.6% among those without injury, consistent with study findings that needlestick injury experience motivates post-exposure prophylaxis uptake (Appiagyei, et al., 2021; Ekpor et al., 2024). Receipt of OHS training and refusal of tasks because of inadequate PPE also promoted reporting, reinforcing the importance of knowledge and empowerment. Psychosocial variables existence of a stress-management system, experience of workplace assault, and willingness to use counselling were significantly associated with reporting. Notably, in multivariable analysis, direct injury experience (AOR = 0.02), workplace assault (AOR = 20.71) and lack of access to mental-health support (AOR = 41.24) remained independent predictors. These findings resonate with studies showing that traumatic workplace events heighten risk awareness and trigger formal reporting *(Auerbach et al., 2024; Eshetie et al., 2025)*.

The results confirm that health-seeking behaviour after occupational exposure is not determined by demographics alone but by a nexus of personal experience and institutional context. The

normalisation of minor injuries underscores the need for regular risk-communication and refresher training to maintain salience of post-exposure protocols. Strengthening stress-management structures and providing visible emotional support can foster psychological safety and improve both care-seeking and incident reporting. Facility-level differences call for leadership engagement and enforcement of OHS policies to create a strong safety culture across all cadres, including non-clinical staff who are currently less likely to seek professional care.

4.6.3 Occupational Health Risks and Health-Seeking Behaviour by Department

The study examined how occupational risks and health-seeking behaviours differ across departments within healthcare facilities. The findings indicate clear department-specific patterns, both in the types of hazards faced and, in the strategies, staff adopt to manage them. This is expected, since each hospital department has a distinct role, workflow, and physical environment, which in turn shape the exposure profile of workers.

The findings presented in Table 4.10 demonstrate that occupational health risks are unevenly distributed across departments, reflecting the different tasks and exposures faced by healthcare workers (HCWs). Biological hazards were highly concentrated in departments with direct patient interaction. The Medical Ward (92.9%), Laboratory (90.0%), Surgical Ward (90.0%), and Maternity Ward (82.5%) all reported very high exposure. This was expected, as HCWs in these units frequently handle blood, body fluids, and infectious materials. Previous studies in Ghana and other LMICs have consistently shown that staff in clinical units bear the highest burden of biological hazards, especially through needlestick injuries and blood/body fluid exposure (Kumah et al., 2020; Senoo-Dogbey & Klutsey, 2024; Tawiah et al., 2025). The lower biological exposure reported in non-clinical departments such as Radiology, Security, and Stores/Procurement supports the view that clinical contact remains the primary driver of infectious risk.

Chemical hazards were most pronounced in the Pharmacy (100%) and Stores/Procurement (100%) departments. These results reflect the reality that pharmaceutical staff are directly involved in the preparation and dispensing of medicines, while procurement units frequently handle disinfectants, sterilant, and other chemical agents. Substantial chemical exposure was also noted in the Surgical Ward (60.0%), Theatre (55.6%), and Medical Ward (42.9%). These patterns align with findings by Akinyemi et al. (2021), who observed significant risks of chemical exposure among surgical and pharmacy staff in Nigeria, largely due to inadequate ventilation, lack of protective equipment, and poor handling practices. In contrast, administrative and record-keeping units reported little or no chemical exposure, highlighting the task-specific nature of such risks.

Physical risks, including noise, radiation, and slips/falls, also varied by department. Radiology reported universal exposure (100%), confirming the expected risks associated with ionizing radiation. Maintenance/Cleaning staff also reported high levels (85.7%), reflecting their routine use of cleaning equipment, exposure to wet floors, and handling of heavy loads. Laboratory (70.0%) and Medical Ward (64.3%) staff likewise reported notable physical risks. These results correspond with studies by Appiagyei et al. (2021) and Weldetekle et al. (2025) which emphasize that radiographers, maintenance staff, and laboratory workers are disproportionately exposed to radiation, noise, and environmental hazards in hospital settings.

Ergonomic risks were widespread, especially among Maintenance/Cleaning staff (100%), Finance (75.0%), and Maternity (67.5%). Such risks are likely linked to lifting patients, prolonged standing or sitting, and repetitive tasks. This finding is consistent with research by Sisala et al. (2024), who identified musculoskeletal strain and back pain as leading occupational health issues among nurses and midwives in Ghana. Ergonomic challenges were also moderate in the Medical Ward (50.0%) and Surgical Ward (70.0%), where high patient volumes and manual handling are routine.

Psychological risks, including stress, burnout, and aggression, cut across nearly all departments. Security staff reported the highest prevalence (100%), followed by Pharmacy (75.0%), Stores/Procurement (75.0%), and Administration (60.0%). This reflects the high exposure of security staff to patient aggression and confrontations, and the workload pressure in logistics and administrative roles. Comparable findings have been reported by Alhassan & Poku, (2018) and Tawiah et al. (2022), who found that healthcare workers in Ghana faced high rates of verbal abuse and work-related stress, with security and frontline staff most affected. Interestingly, psychosocial risks were relatively lower in the Medical Ward (25.0%), possibly due to better supervisory structures or established coping mechanisms.

Mechanical hazards, though less widespread, were concentrated in Maintenance/Cleaning (71.4%) and Laboratory (50.0%) staff, consistent with their use of machines, tools, and cleaning equipment. Moderate risks were observed in the Theatre (33.3%) and Medical Ward (21.4%). This mirrors findings by Bourassa et al., (2016), who noted that poorly maintained equipment and lack of training were key contributors to mechanical injuries in hospitals. Departments such as Pharmacy and Public Health recorded minimal mechanical risks, reflecting their limited reliance on heavy equipment.

Health-seeking behaviour after exposure varied considerably across departments. The highest levels of professional treatment seeking were recorded in the Medical Ward (75.0%) and Emergency Unit (75.0%), with relatively high rates also observed in the Public Health Unit (60.8%), Maternity Ward (57.5%) and Laboratory (50.0%). These results suggest that departments with high biological exposure and stronger infection-prevention protocols are more likely to pursue professional care. Previous studies in Ghana have shown that routine infection-control training and readily accessible post-exposure prophylaxis services are associated with higher rates

of professional treatment seeking among clinical staff *(Appiah et al., 2021; Sunkwa-Mills et al., 2023)*.

By contrast, non-clinical departments such as Pharmacy (0.0%), Finance (33.3%) and Records (18.2%) demonstrated notably low professional treatment uptake despite documented chemical and psychosocial risks. Similar gaps have been reported in other African settings, where ancillary staff often receive limited occupational health training and have less access to post-exposure services (*Tawiah et al., 2022)*. These findings point to the need for targeted interventions to sensitise non-clinical staff to the importance of timely health-seeking behaviour.

Patterns of reporting after exposure mirrored those of treatment seeking. Security personnel recorded the highest reporting rate (100%), followed by the Medical Ward (71.4%) and Laboratory (70.0%). Moderate reporting was seen in the Emergency Unit (50.0%), Surgical Ward (50.0%) and Pharmacy (62.5%). In contrast, Theatre (22.2%), Maintenance/Cleaning (28.6%) and the Public Health Unit (31.4%) exhibited markedly low reporting levels. These differences highlight the role of departmental culture, supervisory practices and perceived management responsiveness in shaping the willingness of staff to report incidents *(International Labour Organization, 2024; Tawiah et al., 2022).* Studies from South Africa and Ethiopia similarly emphasise that strong leadership and active occupational health committees are critical to building a culture of safety and reporting *(Ali et al., 2024; Baidoo et al., 2025; Mtikitiki et al., 2025)*.

In summary, the study demonstrates that occupational health risks and health-seeking behaviour are not uniform across hospital departments. Clinical units face the highest biological risks and generally exhibit better treatment-seeking and reporting practices, whereas non-clinical units experience significant chemical, ergonomic and psychosocial hazards yet show poorer engagement in post-exposure care and reporting. Strengthening occupational health and safety policies to

include all categories of staff, supported by strong institutional leadership and robust reporting systems, will be vital to improving worker safety and sustaining an effective, resilient healthcare workforce in Ghana.

CHAPTER SIX

SUMMARY OF FINDINGS, RECOMMENDATIONS, AND CONCLUSION

6.0 Summary of Key Findings

This study examined the association between occupational health risks and health-seeking behaviours (HSB) among healthcare workers (HCWs) in three selected health facilities in the Ashanti Region of Ghana. The finding reviews that respondent differed significantly by age, sex, marital status, staff type, and work experience across facilities. Afrancho contributed the largest share of participants (48.2%), with Kenyasi staff slightly older on average and more often married; clinical cadres predominated overall (77.9%). Risk profiling showed marked facility variation. Kenyasi reported significantly higher biological (90.7%), physical (58.9%), and ergonomic (79.6%) hazards than Afrancho and Adansi North (all $p<0.001$). In contrast, chemical, psychosocial, and mechanical risks were statistically similar across sites, indicating system-wide exposures to disinfectants/reagents, stress/violence, and equipment-related injuries. Aggregate risk burden was highest at Kenyasi (mean exposures 3.41 vs. 2.34-2.51 elsewhere).

Bivariate analyses linked treatment choice to sex (males self-treated more: 67.5% vs. 43.5% females), facility (self-treatment highest at Adansi North: 80.5%), staff category (non-clinical 71.4% vs. clinical 45.7%), and experience (≥11 years more likely to seek professional care). Perceiving staff shortage as the main hazard was associated with self-treatment (67.6%), while consistent PPE use aligned with professional care; mere OHS policy awareness did not. Mental-health/psychosocial factors were largely null except that the presence of a stress-management system was associated with greater self-treatment bivariately. After controlling for covariates, older HCWs (31-40; ≥41) were less likely to seek professional care than 20-30-year-olds (AOR≈0.05 and 0.007, both $p<0.01$). Married (AOR=12.55) and cohabiting (AOR=62.47) staff

were more likely to seek care. Compared with Adansi North, workers at Afrancho had much higher odds of professional treatment (AOR=14.98, p=0.02). Non-clinical cadres trended lower (AOR=0.061, p=0.05). Longer experience (≥11 years) increased odds (AOR=9.95, p=0.05). Importantly, facilities without stress-management systems had sharply reduced care seeking (AOR=0.05, p=0.01), and poor emotional support independently reduced professional treatment (AOR≈0.034, p=0.03). Other factors (sex, education, violence exposure, access to mental-health support, OHS training) were not independent predictors. Bivariately, marital status predicted reporting (married/cohabiting > single). The single strongest driver was experienced injury: 70.7% reported vs. 24.6% without injury (χ^2 $p<0.01$). OHS training and refusing unsafe tasks for lack of PPE also increased reporting. In adjusted models, absence of injury drastically reduced reporting (AOR=0.02, $p<0.01$), while workplace assault (AOR=20.71, $p<0.01$) and lack of access to mental-health support (AOR=41.24, $p<0.02$) increased reporting suggesting that severe or unsupported psychosocial contexts heighten formal documentation. Demographic and most workplace variables were not independent predictors after adjustment. Biological risk clustered in Medical (92.9%), Laboratory (90.0%), Surgical (90.0%), Maternity (82.5%); chemical exposure peaked in Pharmacy and Stores/Procurement (both 100%); physical risks were highest in Radiology (100%) and Maintenance/Cleaning (85.7%); ergonomic strain was widespread, especially Maintenance/Cleaning (100%) and Finance (75%); psychosocial risk was universal but greatest in Security (100%). Professional treatment seeking and reporting were strongest in Medical and Emergency (both 75% treatment; reporting up to 71.4%), but notably weaker in several non-clinical units (Pharmacy 0% treatment; Records 18.2%).

6.1 Conclusion

This study assessed occupational health risks and their association with health-seeking behaviours (HSB) among healthcare workers (HCWs) in three selected health facilities in the Ashanti Region, Ghana. The findings revealed that occupational risks and post-exposure behaviours among healthcare workers vary markedly by facility and department in the Ashanti Region. Kenyasi Health Centre bore the heaviest biological, physical, and ergonomic burdens, while chemical, psychosocial, and mechanical risks were broadly similar across sites, indicating system-wide exposures. Demographically, treatment-seeking differed by sex, facility, staff category, and experience; however, in adjusted models, older age predicted greater self-treatment, whereas marital/cohabiting status, longer tenure, and employment at Afrancho increased professional care-seeking. Institutional climate mattered: absence of stress-management systems and poor emotional support independently suppressed professional treatment.

Reporting behaviour was driven primarily by direct injury; workers without injuries were far less likely to report. Experiences of workplace assault and limited access to mental-health support also heightened reporting, suggesting that severe or unsupported contexts push staff toward formal documentation. Departmentally, clinical units (Medical, Maternity, Laboratory, Surgical) faced the highest biological risks and tended to report and seek professional care more consistently, while several non-clinical units despite notable chemical, ergonomic, and psychosocial hazards showed weaker engagement in care and reporting.

Overall, the study highlights the need for both targeted, facility-specific interventions especially at high-risk sites like Kenyasi and organization-wide strategies to strengthen psychosocial support, reporting systems, and occupational health practices. These measures should explicitly include non-clinical staff to ensure comprehensive protection and promote timely health-seeking,

addressing the objectives of identifying occupational risks and examining their influence on healthcare workers' behaviours.

6.2 Recommendations and Policy Implications

Drawing from the study's findings, several key recommendations are made to inform policy, institutional practice, and workforce support in Ghana's health sector.

6.2.1 Government, MOH and Ghana Labour Commission

1. Allocate resources to strengthen occupational health and safety (OHS) infrastructure, especially in under-resourced facilities like Kenyasi Health Centre.
2. Develop national policies to enforce standardized reporting and treatment protocols for healthcare worker exposures.

6.2.2 Ghana Health Service should:

1. Implement nationwide training programs on OHS awareness, reporting procedures, and professional treatment-seeking for all HCWs.
2. Monitor and evaluate facility compliance with OHS standards and provide technical support where gaps exist.

6.2.3 Hospital management should:

1. Ensure adequate staffing, infection-control systems, and protective equipment to reduce biological, physical, and ergonomic risks.
2. Foster a supportive environment to reduce stigma associated with reporting, particularly for clinical staff.
3. Promote professional care-seeking and discourage self-treatment through in-service training and mentoring programs.

6.2.4 Occupational Health and Safety Committees should:

1. Regularly update and communicate OHS guidelines to ensure that workers are aware of changes and compliance expectations.
2. Conduct regular risk assessments to identify department-specific hazards and develop targeted mitigation strategies.

6.2.5 Departmental heads and supervisors should:

1. Encourage a culture of safety by leading by example in reporting and care-seeking practices.
2. Monitor staff compliance with OHS protocols and provide immediate feedback and support where lapses occur.
3. Address gender- and role-specific barriers to reporting and treatment, ensuring all staff feel supported.

6.3 Future Research Directions

Future research should adopt longitudinal designs to assess how occupational health risks and behaviours evolve over time. These designs will help identify causal relationships and long-term trends. Qualitative studies are also recommended to uncover the nuanced experiences of HCWs, particularly around stigma, coping strategies, and cultural influences on health-seeking behaviour. Exploring the voices of HCWs could shed light on emotional and psychological dimensions that are often overlooked in quantitative research. Comparative studies between urban and rural facilities could be conducted to determine the extent of disparities in occupational health protections and service delivery. Such research could inform equitable resource allocation, programs, mobile reporting systems, and ergonomic workplace redesigns. These evaluations will be crucial for scaling successful interventions and reforming institutional practices.

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APPENDICES

APPENDIX I: WORK PLAN

Activities	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER
Literature Review						
Ethical Clearance						
Data Collection						
Data Entry						
Data Analysis						
Report Writing						
Review And Revision						
Final Submission						

APPENDIX II: BUDGET

Activities	Estimated Cost (GHS)	Suggested Budget (GHS)
Research Assistant	5,000	5,500
Transportation	3,000	3,500
Accommodation	2,000	2,500
Food and Refreshments	1,500	2,000
Questionnaires and Stationery	1,000	1,500
Data Analysis Software	2,000	2,500
Miscellaneous (contingency fund)	1,000	2,000
Total	**16,500**	**20,000**

APPENDIX III: CONSENT/ASSENT FORM

TITLE OF STUDY: OCCUPATIONAL HEALTH RISKS AND HEALTH-SEEKING BEHAVIOURS AMONG HEALTHCARE WORKERS IN THREE SELECTED HEALTH FACILITIES IN ASHANTI REGION.

This research work is research carried out as part of the requirement of the awarding of a Master of Philosophy degree in Environmental and Occupational Health Education from the Faculty of Environment and Health Education, Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development. The research will be for about six months in 2025. The information gained through this study will benefit the larger society by in dealing with the issue of occupational health risks and Health-seeking behaviour

In this study, there will be questions regarding personal activity, perceptions and individual thoughts that may be embarrassing and or unusual. However, the risk of participation will be no greater than those encountered on day-to-day basis. Please note that participation is fully voluntary and you may refuse to, or discontinue participating in the study at any time without facing any sanctions.

You are assured of strict anonymity and confidentiality on any information you give. Only the researcher will have access to the answered questionnaires. Confidentiality and privacy will be maintained by keeping all materials under lock and key.

I have read the foregoing or it has been read to me. I have had the opportunity to ask questions and any questions I have asked have been answered to my satisfaction. I, therefore, consent voluntarily to participate in this study.

Signed: ……. Thumbprint Witness:

……

For further information or clarifications, please contact the following: Principal Researcher: Quarshie Daniel: danayiqua@gmail.com +233599649999/+233501307778

APPENDIX IV: STUDY QUESTIONNAIRE
QUESTIONNAIRE TO INVESTIGATE OCCUPATIONAL HEALTH RISKS AND HEALTH-SEEKING BEHAVIOURS AMONG HEALTHCARE WORKERS

SECTION A: DEMOGRAPHIC INFORMATION

1. **What is your age group?.....**
2. **What is your gender?**
    A. Male
    B. Female
3. **What is your marital status?**
    A. Single
    B. Married
    C. Co-habitation
    D. Divorced
    E. Widowed
4. **What is your highest level of education?**
    A. Certificate
    B. Diploma
    C. Bachelor's Degree
    D. Master's Degree
5. **Which of the following health facilities do you work at?**
    A. Adansi North District Hospital
    B. Afrancho Polyclinic
    C. Kenyasi Health Centre
6. **Are you a clinical or non-clinical staff member at this hospital?**
    A. Clinical
    B. Non-Clinical
7. **How many years have you worked in your current role?.....**
8. **Which department do you currently work in?**
    A. Outpatient Department (OPD)
    B. Emergency Unit
    C. Surgical Ward

D. Medical Ward
E. Maternity Ward
F. Laboratory
G. Pharmacy
H. Radiology
I. Administration
J. Security
K. Maintenance/Cleaning
L. Records
M. Finance
N. Public Health Unit
O. Stores / Procurement Unit
P. Theatre / Operating Room

SECTION B: IDENTIFICATION AND CHARACTERIZATION OF OCCUPATIONAL HEALTH RISKS

1. **What types of occupational hazards are you frequently exposed to? (Select all that apply)**
   - **A.** Biological (Blood, Body Fluids, Airborne Infections)
   - **B.** Chemical (Disinfectants, Cleaning Agents, Drugs)
   - **C.** Physical (Noise, Radiation, Heat, Slips and Falls)
   - **D.** Ergonomic (Lifting Patients, Awkward Postures, Repetitive Movements)
   - **E.** Psychosocial (Stress, Aggression, Burnout, Harassment)
   - **F.** Mechanical (Faulty Equipment, Injuries from Tools/Machines)
2. **Do you receive routine medical check-ups or screenings through your facility?**
   - A. Yes
   - B. No
3. **Have you experienced any work-related injury before?**
   - A. Yes
   - B. No
4. **If yes, what type of injury did you experience?**
   - A. Needle-stick injury

B. Back injury/musculoskeletal strain
C. Burn or cut
D. Slip or fall
E. Repetitive strain injury
F. Allergic reaction Crush injury (e.g., from faulty beds or equipment)

5. **How many times have you experienced this injury?.....**
6. **What do you think contributes most to occupational hazards in your unit? (Check all that apply)**
   A. Lack of training
   B. Inadequate PPE
   C. Staff shortage
   D. Unsafe procedures
   E. Poor supervision
   F. Long working hours and fatigue
   G. Faulty or poorly maintained equipment
   H. Overcrowded or poorly ventilated workspaces
   I. Poor infrastructure (e.g., slippery floors, poor lighting)

SECTION C: KNOWLEDGE AND USE OF SAFETY POLICIES & PPE

1. **Is there an OHS policy for your facility?**
   A. Yes
   B. No
2. **Who ensures that the OHS policy is implemented?**
   A. Facility/Medical Superintendent
   B. OHS Committee
   C. Hospital Administrator
   D. Departmental Heads / Unit Managers
   E. Health and Safety Officer
   F. Infection Prevention and Control (IPC) Coordinator
   G. Ghana Health Service (GHS) District Health Directorate
   H. I don't know
3. **Have you received OHS training in the past year?**

A. Yes

B. No

4. **Are you updated when OHS guidelines change?**

A. Yes

B. No

5. **Do you have the necessary PPEs for your work?**

A. Yes

B. No

6. **How often are PPEs available for your use?**

A. Always

B. Often

C. Sometimes

7. **How consistently do you use PPEs during procedures?**

A. Always

B. Often

C. Sometimes

D. Rarely

E. Never

8. **Have you ever refused to carry out a task due to lack of PPE?**

A. Yes

B. No

9. **How often do you run out of essential PPE during care?**

A. Never

B. Rarely

C. Sometimes

D. Frequently

10. **Are replacement PPEs provided on short notice during shortages?**

A. Yes

B. No

SECTION D: HEALTH-SEEKING BEHAVIOURS

1. **What is your first response after an occupational injury?**

A. Reporting

B. Not Reporting

2. **Have you reported an occupational injury before?**

   A. Yes

   B. No

3. **Who do you report an injury to in your department?**

   A. Immediate Supervisor / Line Manager

   B. Department Head / Unit In-Charge

   C. Health and Safety Officer

   D. OHS Committee Representative

4. **Were you satisfied with the response to your report?**

   A. Very satisfied

   B. Satisfied

   C. Neutral

   D. Dissatisfied

   E. Very dissatisfied

5. **Have you ever refused to report an occupational injury to your supervisor?**

   A. Yes

   B. No

6. **How do you handle occupational injuries when they happen?**

   A. Self-Treatment

   B. Seek professional

7. **Is follow-up support provided after incidents?**

   A. Yes

   B. No

8. **Do you feel supported when you report a workplace injury?**

   A. Yes

   B. No

SECTION E: MENTAL HEALTH AND PSYCHOSOCIAL RISKS

1. **Is there a system for managing stress or burnout in your workplace?**

   A. Yes

B. No

2. **How do you manage stress or burnout at your workplace?**
    A. Go on leave
    B. Travel or take time off
    C. Talk to a mental health professional (e.g., counselor, psychologist)
    D. Engage in religious or spiritual practices
    E. Talk to friends, colleagues, or family
    F. Participate in recreational activities (e.g., sports, hobbies)
    G. Sleep or rest more
    H. Use self-medication or over-the-counter drugs
    I. Attend stress management or wellness programs
3. **Do you feel safe from aggression/violence at work?**
    A. Always
    B. Sometimes
    C. Never
4. **Have you ever been verbally or physically assaulted at work?**
    A. Yes
    B. No
5. **If Yes, by who?**
    A. Colleague
    B. Patient
    C. Both Colleague and Patient
    D. Patient Relatives
    E. All the above
6. **Do you know where to access mental health support at work?**
    A. Yes
    B. No
7. **Would you use psychological counselling services if offered?**
    A. Yes
    B. No
8. **Have you ever taken leave due to burnout or emotional fatigue?**

A. Yes

B. No

9. **Have you ever cried or broken down due to work-related pressure?**

A. Yes

B. No

10. **How common is burnout in your department?**

A. Very Common

B. Common

C. Not Common

11. **How would you rate the emotional support at your workplace?**

A. Excellent

B. Good

C. Poor

D. None received

SECTION F: INTERDEPARTMENTAL COMPARISONS

1. **Have you worked in another department before?**

A. Yes

B. No

2. **Do all departments have equal access to PPEs?**

A. Yes

B. No

3. **Are OHS trainings done department-wide or only in selected units?**

A. All Department

B. Only some units

C. Training is based on specific roles, not departments

D. No formal OHS training has been conducted

4. **Are hazard reporting systems consistent across departments?**

A. Yes

B. No

C. Not sure

THANK YOU FOR PARTICIPATING.

APPENDIX V: ETHICAL CLEARANCE

Kwame Nkrumah University of Science and Technology, Kumasi

College of Health Sciences
SCHOOL OF MEDICINE AND DENTISTRY

COMMITTEE ON HUMAN RESEARCH, PUBLICATION AND ETHICS

Our Ref: CHRPE/AP/362/25

24th April, 2025

Mr. Quarshie Daniel
Department of Public Health Education
Akenten Appiah Menka University of Skills
Training and Entrepreneurial Development.
KUMASI-GHANA.

Dear Sir,

LETTER OF APPROVAL

Protocol Title:	***"Occupational Health Risks and Health-Seeking Behaviours among Healthcare Workers in Three Selected Health Facilities in Ashanti Region."***
Proposed Site:	***Adansi North District Hospital, Afrancho Polyclinic, Kenyase Health Centre.***
Sponsor:	***Self-Sponsored.***
Students:	Mr. Quarshie Daniel.
Supervisor:	Prof. Isaac Monney

Your submission to the Committee on Human Research, Publications, and Ethics on the above-named protocol refer.

The Committee reviewed the following documents:

- A notification letter of 8th April, 2025, from the Regional Health Directorate Ashanti (study site) indicating approval for the conduct of the study in the region.
- A Completed CHRPE Application Form.
- Participant Information Leaflet and Consent Form.
- Research Protocol.
- Questionnaire.

The Committee has considered the ethical merit of your submission and approved the protocol. The approval is for one year, renewable after that, from **24th April 2025 to 23rd April 2026**. The Committee may, however, suspend or withdraw ethical approval at any time if your study is found to contravene the approved protocol.

Data gathered for the study should be used for the approved purposes only. Permission should be sought from the Committee if any amendment to the protocol or use, other than submitted, is made of your research data.

The Committee should be notified of the actual start date of the project and would expect a report on your study, annually or at the close of the project, whichever one comes first. It should also be informed of any publication arising from the study.

Thank you for your application.

Yours faithfully,

Rev. Prof. John Appiah-Poku.
Honorary Secretary
FOR: CHAIRMAN

Room 7, Block L, School of Medicine and Dentistry, KNUST, University Post Office, Kumasi, Ghana
Tel: +233 (0) 322 063 248 Mobile: +233 (0) 205 453 785 Email: chrpe.knust.kath@gmail.com / chrpe@knust.edu.gh

APPENDIX VI: LETTER OF SUPPORT

GHANA
HEALTH
SERVICE
REGIONAL HEALTH DIRECTORATE, ASHANTI

P. O. Box 1908 - Kumasi
DIGITAL ADDRESS: AK-037-9113

Quote this number and date on all correspondence

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

Date: 8TH APRIL, 2025

THE CHAIRPERSON
COMMITTEE ON HUMAN RESEARCH, PUBLICATION AND ETHICS
ROOM 7, BLOCK J
SCHOOL OF MEDICAL SCIENCES
KNUST
KUMASI.

LETTER OF SUPPORT

Daniel Quarshie, an MPhil in Environment and Occupational Health Education student at Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development (AAMUSTED) intends to conduct a study titled **"Occupational Health Risk and Health Seeking Behaviour among Healthcare Workers in Three Selected Health Facilities in Ashanti Region"**.

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

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

Thank you

DR. FRED ADOMAKO-BOATENG
REGIONAL DIRECTOR OF HEALTH SERVICES
ASHANTI REGION

Cc: Daniel Quarshie (Principal Investigator)

Email: rdhs.ar@ghs.gov.gh
Tel:03220-22089/23651
Fax: 03220-26219

APPENDIX VII: APPROVAL LETTER FROM THE GHANA HEALTH SERVICE

GHANA HEALTH SERVICE

Your Health - Our Concern

GHANA
HEALTH
SERVICE
REGIONAL HEALTH DIRECTORATE, ASHANTI

P. O. Box 1908 - Kumasi
DIGITAL ADDRESS: AK-037-9113

Quote this number and date on all correspondence

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

Date: 2ND MAY, 2025

MEDICAL SUPERINTENDENTS AND FACILITY INCHARGE
ADANSI NORTH DISTRICT HOSPITAL
AFRANCHO POLYCLINIC
KENYASE HEALTH CENTRE

INTRODUCTORY LETTER

Approval has been given to Daniel Quarshie, an MPhil student of the Akenten Appiah-Menka University of Skills Training and Entrepreneurial Development to conduct a study entitled **"Occupational Health Risks and Health-Seeking Behaviours among Healthcare Workers in Three Selected Health Facilities in Ashanti Region".**

Ethical approval has been granted with KNUST CHRPE Approval ID: **CHRPE/AP/362/25**

Kindly provide the needed support to undertake this study.

Thank You

DR. FRED ADOMAKO-BOATENG
REGIONAL DIRECTOR OF HEALTH SERVICES
ASHANTI REGION

Cc: Daniel Quarshie (Principal Investigator)

Email:
rdhs.ar@ghs.gov.gh
Tel:03220-22089/23651
Fax: 03220-26219