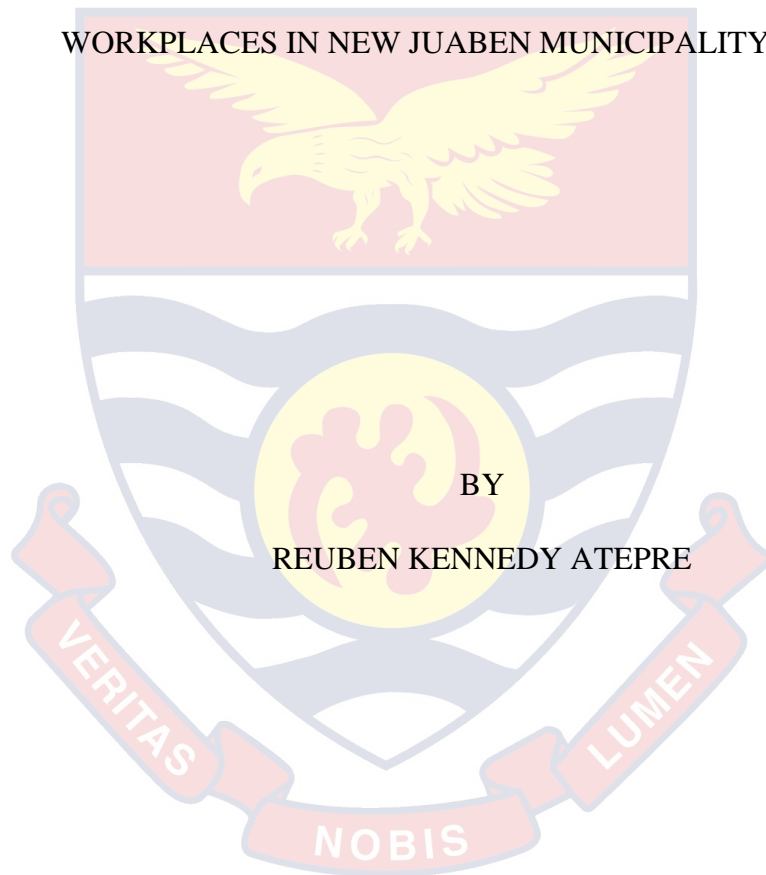


PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

EVALUATION OF HEALTH AND SAFETY PRACTICES AT  
WORKPLACES IN NEW JUABEN MUNICIPALITY, GHANA



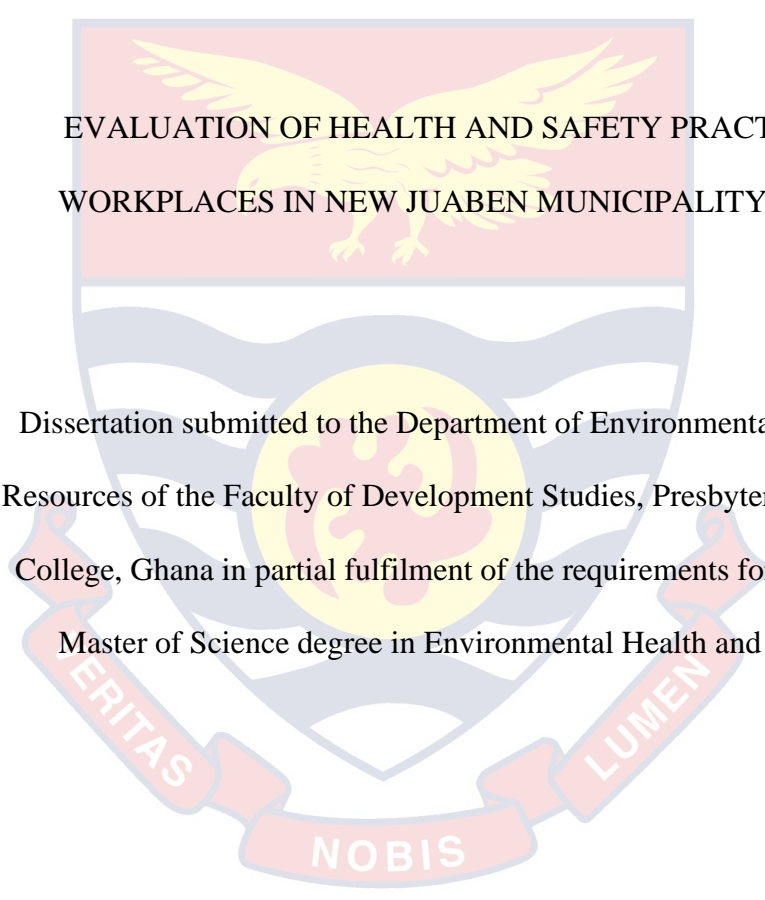
2020

PRESBYTERIAN UNIVERSITY COLLEGE, GHANA

FACULTY OF DEVELOPMENT STUDIES

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

MANAGEMENT



EVALUATION OF HEALTH AND SAFETY PRACTICES AT  
WORKPLACES IN NEW JUABEN MUNICIPALITY, GHANA

Dissertation submitted to the Department of Environmental and Natural Resources of the Faculty of Development Studies, Presbyterian University College, Ghana in partial fulfilment of the requirements for the award of Master of Science degree in Environmental Health and Sanitation

BY

REUBEN KENNEDY ATEPRE

SEPTEMBER 2020

## DECLARATIONS

### Candidate's Declaration

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

Name: **Reuben Kennedy Atepre**

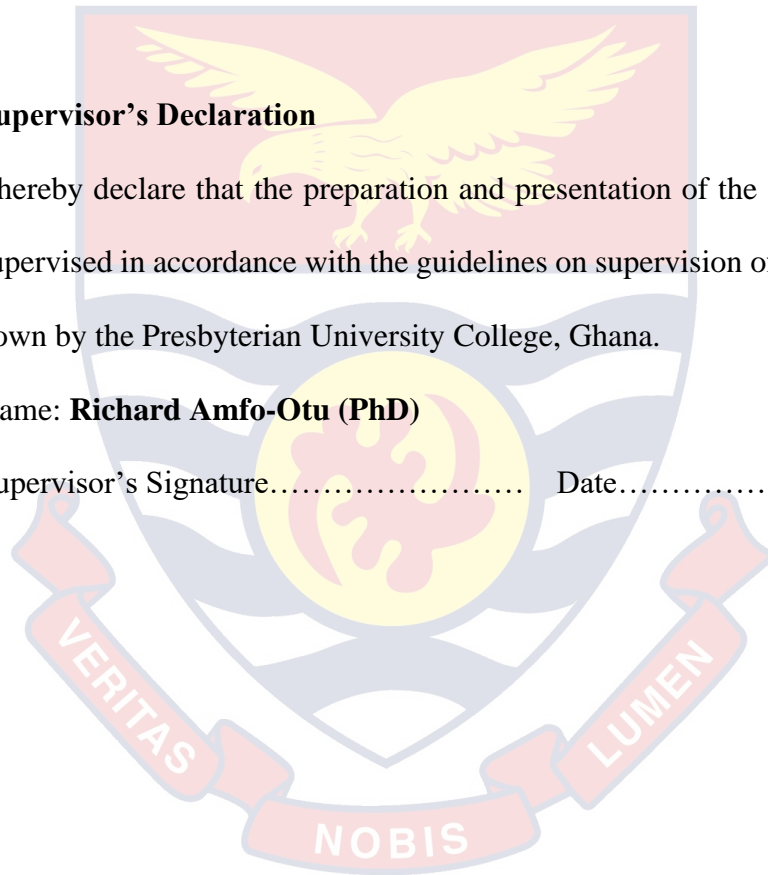
Candidate's Signature..... Date.....

### Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the Presbyterian University College, Ghana.

Name: **Richard Amfo-Otu (PhD)**

Supervisor's Signature..... Date.....



## ABSTRACT

This study evaluates problems and issues related to Occupational Health and Safety at Eastern Regional Hospital Koforidua (ERHK) and Electricity Company of Ghana (ECG) all in Koforidua. The study was a descriptive survey and views of 130 respondents comprising of 110 junior staff and 20 senior staff members from ECG and ERHK in the New Juaben Municipality were sought using self-developed questionnaire. Primary and secondary sources of data collection method were used and data collected from the field was processed and analysed through the use of Statistical Package for Social Sciences (SPSS) version 21. The study reveals that 50% of the respondents strongly agreed that their institutions provides safe place of work for all employees of the organisation, 55% of the respondents disagreed that the organisation provides adequate equipment, materials (personal protective equipment) and clothing to enable employees to carry out their work safely and 50% of the respondents strongly agreed that staffs must put on protective clothing in the performance of their duties.

Moreover, 70% agreed that the institution provides notices on all health and safety measures, 60% of the respondents agreed that Co-worker ensures the safety of fellow worker at the workplace and that 50% agreed that the institution provides Safety induction, orientation and refresher courses to employees in the organisation. Based on the findings of the study it is recommended that, Management should regularly organize education, training, workshops, seminars on health and safety issues, publish materials on health and safety and many other steps to include safety consciousness in the minds of workers.

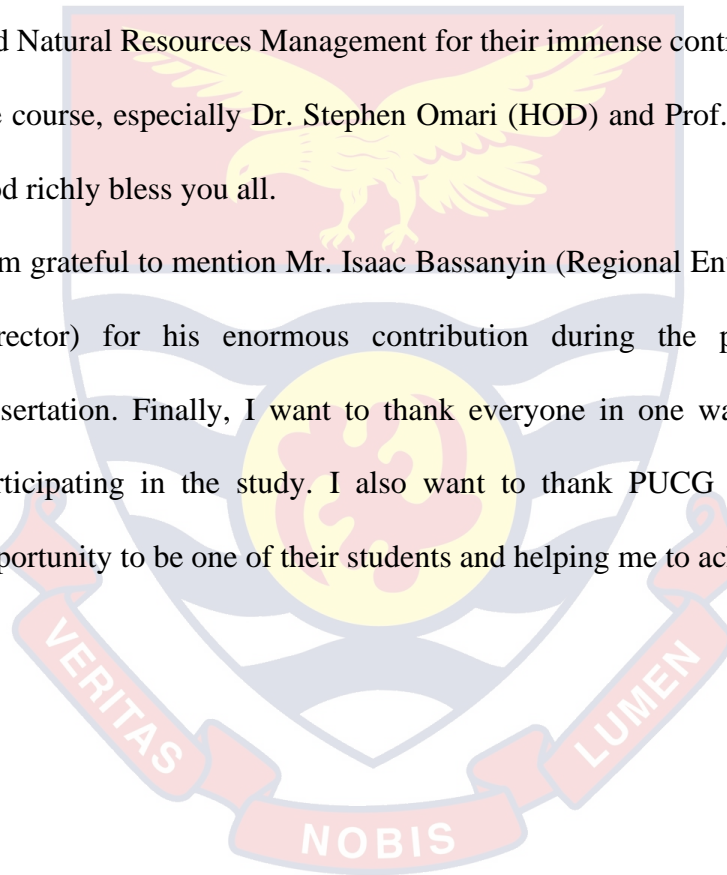
## ACKNOWLEDGEMENTS

I will like to thank the Almighty God for His grace and favor that has made it possible for me to complete this work successfully.

My deepest gratitude goes to my supervisor Dr. Richard Amfo-Otu for his guidance, support and numerous feedbacks in the development of this Dissertation.

I also wish to acknowledge the lecturers of the Department of Environmental and Natural Resources Management for their immense contribution throughout the course, especially Dr. Stephen Omari (HOD) and Prof. Edward D. Wiafe, God richly bless you all.

I am grateful to mention Mr. Isaac Bassanyin (Regional Environmental Health Director) for his enormous contribution during the processing of this dissertation. Finally, I want to thank everyone in one way or the other for participating in the study. I also want to thank PUCG for giving me the opportunity to be one of their students and helping me to achieve my dreams.



## DEDICATION

Dedicated to my parents, Madam Vincentia Amenyaglo and Mr. Francis Atepre,  
my Siblings, my wife, Monica and my children Eyram and Aseye.



## TABLE OF CONTENTS

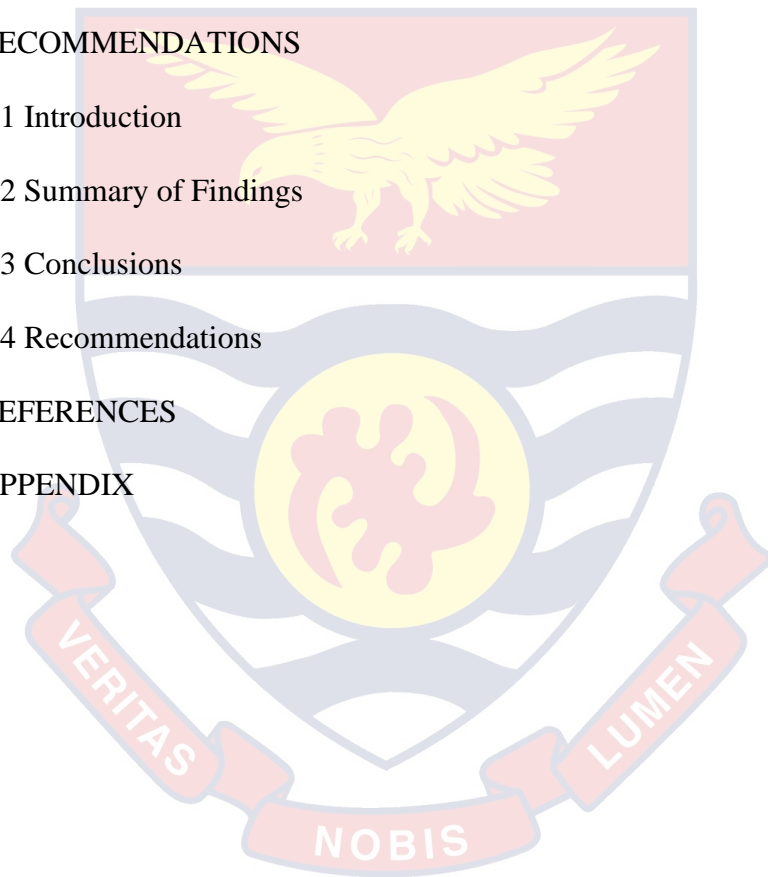
DECLARATIONS	ii
ABSTRACT	iii
ACKNOWLEDGEMENTS	iv
DEDICATION	v
TABLE OF CONTENTS	vi
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER ONE:INTRODUCTION	1
1.1 Background of the Study	1
1.2 Statement of the Problem	3
1.3 Research Objective	5
1.4 Research Questions	6
1.5 Significance of the Study	6
1.6 Delimitation of the Study	6
1.7 Limitations of the Study	7
1.8 Organization of the Study	7
CHAPTER TWO:REVIEW OF RELATED LITERATURE	8
2.1 Introduction	8
2.2 Fundamental Principles of Occupational Health and Safety	8
2.3 Causes of Health and Safety Hazards at The Workplace	10
2.3.1 Physical Hazards	10
2.3.2 Chemical Hazards	11
2.3.3 Biological Hazards	12
2.3.4 Ergonomic Hazards	15

2.3.5 Psychosocial Hazards	16
2.4 Health and Safety Methods	17
2.5 Challenges of good Health and Safety Practices	17
CHAPTER THREE: RESEARCH METHODOLOGY	19
3.1 Introduction	19
3.2 The Study Area	19
3.3 Map of the Study	21
3.4 Study Design	21
3.5 Study Population	22
3.6 Sampling Method	22
3.7 Sample size	23
3.8 Sources of Data	23
3.9 Research Instrument	23
3.10 Pre-testing	24
3.11 Data Collection Method	25
3.12 Data Analysis and Interpretation	25
3.13 Ethical Consideration	26
CHAPTER FOUR: RESULTS AND DISCUSSION	27
4.1 Introduction	27
4.2 Demographic and Socioeconomic Characteristics of Respondents	27
4.3 The Institution Provides Safe Place of Work	29
4.4 Provision of Adequate Personal Protective Equipment	30
4.5 Institutions Provision of Notices on All Health and Safety Measures	31
4.6 The Institution Provides Safety Induction, Orientation and Refresher Courses to Employees	32



4.7 Conducting Periodic Fire Drills at Workplace to Check for Emergency Responses and Preparedness	33
4.8 The Institution Conducts Periodic Reviews to Assess Health and Safety Standards in The Work Place	34
4.9 Respondents' Views on Health and Safety Practices	35
4.10 Wearing Protective Clothing in The Performance of Their Duties	36
4.11 Co-Worker Ensures the Safety of Fellow Worker	37
4.12 The Organisation Ensures That Employees Are Not Subjected to Any Unreasonable Risks in The Workplace	38
4.13 Management's Timely Response to Health and Safety Concerns	39
4.14 Trained Personnel for Incident Investigation Procedures at The Workplace	40
4.15 Effective Incident Reporting Procedures	41
4.16 Management's Provision of Appropriate Remedy for Addressing Accident Occurrence	42
4.17 Provision of Health and Safety Materials Had Been A Cost Burden on The Organisation	43
4.18 Huge Working Population with Low Literacy Rate and Abysmal Awareness of Health and Safety Is A Challenge	44
4.19 Lack of Clarity About the Issues Surrounding Health and Safety in The Organization Is A Problem	45
4.20 Getting the Right Personnel to Help in Promoting Health and Safety Practices in The Organization Is A Challenge	46
4.21 Management Commitment to Health and Safety Had Been A Challenge	47

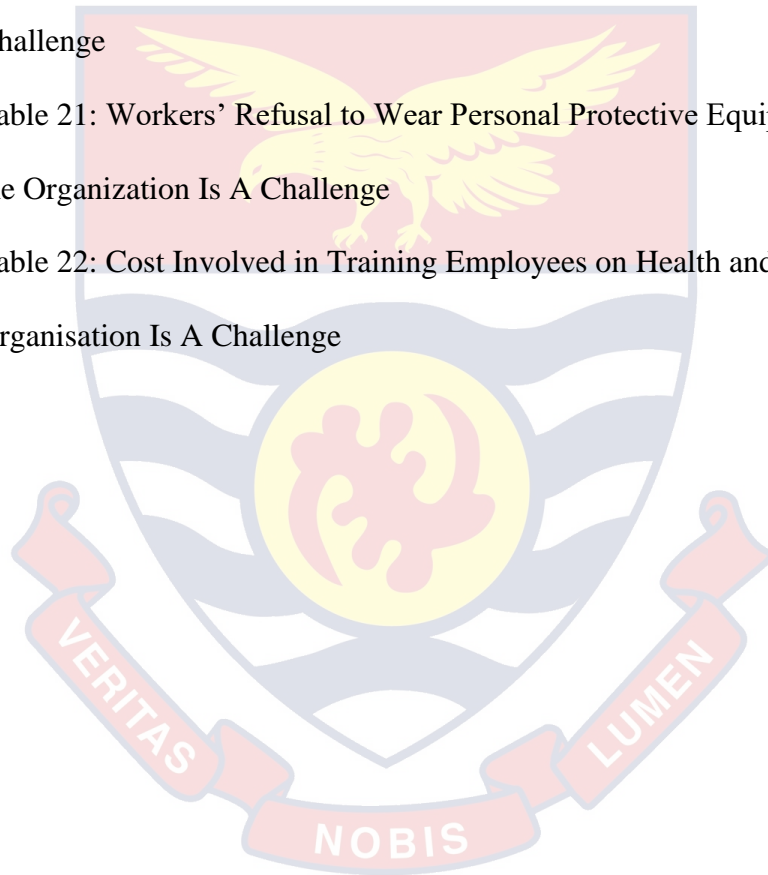
4.22 Workers' Refusal to Report Minor Injuries or Near Misses Is A Challenge	48
4.23 Workers Refusal to Wear Personal Protective Equipment (PPE) In the Organization Is A Challenge	49
4.24 Cost Involved in Training Employees on Health and Safety in The Organisation Is A Challenge	50
CHAPTER FIVE:SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	52
5.1 Introduction	52
5.2 Summary of Findings	52
5.3 Conclusions	54
5.4 Recommendations	54
REFERENCES	56
APPENDIX	68



## LIST OF TABLES

Table 1: Sex of Respondents	27
Table 2: Educational Level of Respondents	28
Table 3: Number of Years at Post	29
Table 4: The Institution Provides A Safe Place of Work	30
Table 5: Provision of Adequate Equipment, Materials (Personal Protective Equipment) And Clothing to Enable Employees to Carry Out Their Work safely	31
Table 6: Institution Provide Notices on Health and Safety Measures	32
Table 7: Management conducting periodic fire drills at workplace to check for emergency responses and preparedness	34
Table 8: The Institution Conducts Periodic Reviews to Assess Health and Safety Standards in The Workplace	35
Table 9: The concept of Health and Safety practices	36
Table 10: Wearing Protective Clothing in The Performance of Their Duties	37
Table 11: Co-Worker Ensures the Safety of Fellow Worker	38
Table 12: The Institution Ensures That Employees Are Not Subjected to Any Unreasonable Risks in The Workplace	39
Table 13: Trained Personnel for Incident Investigation Procedures in The Organisation	41
Table 14: Effective Incident Reporting Procedures	42
Table 15: Management Provides Appropriate Remedy for Addressing Accidents Occurrence	43
Table 16: Huge Working Population with Low Literacy Rate and Abysmal Awareness of Health and Safety Is A Challenge	45

Table 17: Lack of Clarity About the Issues Surrounding Health and Safety in The Organization Is A Problem	46
Table 18: Getting the Right Personnel to Help in Promoting Health and Safety Practices in The Organization Is A Challenge	47
Table 19: Management Commitment to Health and Safety Had Been A Challenge	48
Table 20: Workers' Refusal to Report Minor Injuries or Near Misses Is A Challenge	49
Table 21: Workers' Refusal to Wear Personal Protective Equipment (PPE) In the Organization Is A Challenge	50
Table 22: Cost Involved in Training Employees on Health and Safety in The Organisation Is A Challenge	51



## LIST OF FIGURES

Figure 1: Organisation Provides Safety Induction, Orientation and Refresher Courses to Employees	33
Figure 2: Managements' timely response to health and safety concerns	40
Figure 3: Provision of Health and Safety Materials Had Been A Cost Burden on The Organisation	44



## LIST OF ABBREVIATIONS

ECG	: Electricity Company of Ghana
EEC	: European Economic Community
ERHK	: Eastern Regional Hospital, Koforidua
EU	: European Union
GDP	: Gross Domestic Product
GSS	: Ghana Statistical Service
HRM	: Human Resource Management
ILO	: International Labour Organisation
IOHA	: International Occupational Hygiene Association
NOHSC	: National Occupational Health and Safety Commission
OHS	: Occupational Health and Safety
OSHA	: Occupational Safety and Health Administration
SMS	: Safety Management System
SPSS	: Statistical Package for Social Sciences
WHO	: World Health Organisation

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Background of the Study

A healthy workforce is vital for sustainable social and economic development on global, national, and local levels. The classic approach to ensuring health and safety in the workplace has depended mainly on the enactment of legislation and inspection of workplaces to ensure compliance with health and safety standards. While this approach has been effective in controlling many specific occupational hazards since the Industrial Revolution, it has not been very effective in the past several decades, particularly in developing countries, for several reasons (WHO, 2001). Occupational health and safety is a cross-disciplinary area concerned with protecting the safety, health and welfare of people engaged in the work or employment (Whitner, 2001). The goal of all occupational health and safety programmes aim to foster a safe work environment. As a secondary effect, Whitner contended that it might also protect co-workers, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the work place environment. It may involve interactions among many subject areas, including occupational medicine, occupational (industrial) hygiene, public health, and safety engineering, and chemistry and health physics. Whitner (2001) identified safety hazards to include those aspects of the work environment that have the potential of immediate and sometimes violent harm to an employee; for example, loss of hearing, eyesight or body parts, cuts, sprain, bruises, broken bones, burns and electric shock.

The responsibility of ensuring healthy and safe working environment is ultimately placed on the shoulders of employers of companies. The International Labour Organization (1959), places a responsibility on the part of employers to protect employees from all health hazards that may pose threat to the safety and health. Section 118 (1) of the Ghana Labour Act of 2003, Act 651 states inter alia 'it is the duty of an employer to ensure that every worker employed by him/her works under satisfactory, safe and healthy conditions'. It is worth mentioning that some organizations have placed responsibility for employee health and safety with Chief Executive Officers. This approach is typical of smaller organizations with threats in this area or with mid-size organisation with few of such health threats.

Large organisations seeing health and safety of their employees do set up safety departments usually under the purview of the human resources management team and Safety Officer. Osuala (2005) indicated that providing safety to the employees at the workplace has a moral dimension as well. Though it is a legal requirement and fetches monetary compensation in case of failure but it cannot bring back an individual's life. Osuala (2005) further explained that eliminating the causes of accidents and counselling employees at workplace play a substantial role in saving the operating costs, increasing productivity and ensuring reliability and dependability from the employees. As noted earlier, safety culture is something all employers and employees are interested in achieving. Khatri (2010) emphasized that while many Austrian employees and employers felt confident about their organisation's safety culture, the vast majority recognize there is more work to be done.



According to the ILO and WHO estimates, every year, more than 12 million people die of workplace related diseases and accidents. More than 160 million workers fall ill every year owing to workplace hazards (ILO, 2014). Figures released in Britain indicated that the estimated prevalence of self-reported work-related illness during the 2012/2013 period was 2.4 million, equating to 4.7 percent of people ever employed. An estimated 29% of this total (0.6 million people ever employed) were accident cases. On the average, each person suffering took an estimated twenty-three days off work in the twelve-month period. On average of the working population, this represents an annual loss of 1.2 days per worker (Health and Safety Executive, 2012). Apparently, less than one percent of organisational and national research focuses on issues concerning occupational health and safety practice (Barling & Zacharatos, 2014). Apart from little research attention on occupational health and safety issues, in general, there is also an acute lack of literature on these matters. Particularly, most African countries are struggling with occupational health and safety practices as few attempts from the industries and the governments are notable (LaDou, 2010).

### **1.2 Statement of the Problem**

There is no doubt that the human resource that an organization has, is one of its versatile resources. Therefore, an effective and efficient use of the human resource will translate into the overall effectiveness and efficiency of the organization. Though many organizations accept this to be true, they fail to realize that as part of their human resource management practices, there is the need for management to ensure that personnel in the organization work in safe and healthy environment that will promote their optimum utilization. It should

be highlighted that accidents are costly to both the affected worker and the organization. Therefore, every effort should be made by management and employees in order to avoid them from happening at the work place. As an organisation the employees are exposed to varied kinds of hazards. Therefore, failure to institute adequate health and safety measures in place by management to protect employees from these hazards and risks will lead to avoidable deaths and ultimately lead to loss of staff (NDA 2006). Inadequate training on acceptance and compliance to safety and health measures also hinder its effectiveness. In fact, safety and health in the organization have to be everybody's concern. On the contrary, this is not the case in most organizations, Cole G. A. (2002). There is lack of cooperation between management and employees in making health and safety issues effective, Logasakthi, K. *et al* (2013).

Failure to identify these hazards and understanding their implications on the personal lives of all staff in the organisation will be consequential. More so, ensuring that regular monitoring and review of these measures are important to examine their effectiveness. Nonexistence of these measures hinders job performance and the employee suffers the ultimate consequence. Employee attitudes play a significant part in health and safety. According to Takala *et al* (2014), most employees are not committed to the idea of safety and fail to cooperate with safety initiatives, hence making safety measures become ineffective. Indeed, any safety measure or action on the part of government or employer may prove unsuccessful if the employees are not committed to the idea of safety. Employers also fail to see occupational health and safety as a

process. It is not enough to institute safety measures and fail to provide adequate training and education on these measures and rules (OSHA 2003).

In essence, conscious effort by management to put in place safety measures and ensure that these rules are adhered to compels employees as well to be safety conscious at all times. (Nachimas, E. R. & Nachimas G. T. 2009) stated that a wider view of occupational safety and health is necessary for management of the organisation to formulate correct policies concerning safety that is commensurate with international standards, compatible with national policies and at the same time, meet the organizational objectives of providing quality health care and personal satisfaction. It is in line with this that this research seeks to assess the effectiveness of health and safety measures of the Electricity Company of Ghana (ECG), Koforidua, and the Eastern Regional Hospital (ERH), Koforidua. It is also to examine the departments, units of the institutions and to assess the awareness of employees about the health and safety standards at the workplaces

### **1.3 Research Objective**

The main objective of the study is to evaluate the health and safety practices at ECG, and ERH, Koforidua.

The specific objectives of this study are:

- i. To examine health and safety standard frameworks adopted by the workplaces
- ii. To assess the awareness level of employees about the health and safety standards at the workplaces
- iii. To examine the level of compliance to the health and safety standards at the workplace.

- iv. To analyse the challenges associated with the promotion of health and safety practices at the workplace.

#### **1.4 Research Questions**

- i. What are the health and safety practices at the workplace?
- ii. What are the levels of compliance of health and safety standards at the workplace?
- iii. What are the levels of awareness of employees about the health and safety standards at the workplaces?
- iv. What are the challenges associated with the promotion of health and safety practices at the workplace?

#### **1.5 Significance of the Study**

The importance of this study can be seen in diverse ways. The study could provide bases for the formulation of effective occupational health and safety policies at the workplace. The piece of work will also provide the opportunity for employees, employers to identify their specific respective roles in health and safety issues. It will also provide bases for other workplaces to adopt the recommendations in the formation of effective health and safety measures in their institutions as well. The work will be used as reference material for policy makers in making decisions concerning health and safety practices and policies.

#### **1.6 Delimitation of the Study**

The study covers institutions in Koforidua because of time and financial constraints. However, the above-mentioned shortfalls, does not hamper the credibility of information that was contained in the study.

### **1.7 Limitations of the Study**

The present study encountered the issue of time constraints and the difficulty in collecting data from some of the staff. Some of the questionnaires were not returned calling for replacements. Other respondents delayed in making available the filled questionnaires to the researcher. In spite of these, all efforts were done to ensure that adequate data was collected to ensure the quality of the research was not affected.

### **1.8 Organization of the Study**

The study is organized into five chapters. Chapter One deals with the introduction covering background of the study, statement of the problem, research questions, justification of the study, objectives, methodology, scope, limitations as well as organization of the study. Chapter Two provides an overview of existing literature. This chapter provides a review of already existing literature on this topic. Chapter Three gives the profile of the selected Municipality that was studied. It also describes the data that form the basis for the research reported in this paper and provides an overview of the methods or the methodology used in the study. Again, it dealt with the theoretical framework and the empirical model that underpin the analysis of the data. Chapter Four reports the results of the empirical analysis. That is, it deals with the presentation, analysis and discussion of the data collected from the field. Chapter Five, which is the last chapter look at the summary of the work, findings and conclusions of the research and made recommendations to management of the institutions involved.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### 2.1 Introduction

Theoretical and empirical literature on health and safety practices among workers have been reviewed in this chapter, the concept of health and safety as well as the causes of health and safety hazards at workplaces are well elaborated. Additionally, health and safety assessment methods and challenges associated with health and safety are also stated.

#### 2.2 Fundamental Principles of Occupational Health and Safety

The International Occupational Hygiene Association (IOHA) generally defines occupational health and safety (OHS) as the science of anticipation, recognition, evaluation and control of hazards arising in or from the workplace that could impair the health and well-being of workers, taking into account the possible impact on the surrounding communities and the general environment (ILO, 2009). From a historical perspective, occupational safety has primarily focused on the best ways for humans to adapt to machines through training, typically from the point of view of how humans should adjust to fit the machines and not the other way around. A number of incidents during World War II, however, revealed that sometimes systems were not working regardless of how well-trained the operators were. Airplane crashes occurred without any obvious mechanical failures and enemy readings were missed on the radar despite highly skilled monitors (Wickens & Holland, 2000). Psychologists were then brought in to analyze the operator–machine interface and identify potential problems as well as recommend solutions for improved safety (Macworth, 1950). This practical need resulted in a shift in interest from the design of humans to the



design of machines to fit humans, which became known as ergonomics or human factors engineering. The field of human factors later evolved to apply not only to aviation and warfare, but also to a broad range of products that humans interact with in their daily lives, such as toys, telephones, cars, medical devices, and computers (Wickens & Holland, 2000). In an organizational context, much research has been carried out regarding, for example, visual fields, hearing abilities, memory capacity, multitasking, and similar cognitive aspects in relation to different work tasks.

The most effective strategy for managing health and safety in the health services and for providing health care is to incorporate occupational health and safety into an institution's managerial objectives. Handling health and safety objectives in the same way that objectives dealing with finances, the services, or quality are handled will help attain a high-performance standard in health and safety. The employer should have overall responsibility for the protection of workers' safety and health, and provide leadership for occupational safety and health activities in the organization. (ILO-OSH, 2001). All workers have rights. Workers, as well as employers and governments, must ensure that these rights are protected and must strive to establish and maintain decent working conditions and a decent working environment. More specifically: work should take place in a safe and healthy working environment; conditions of work should be consistent with workers' well-being and human dignity; work should offer real possibilities for personal achievement, self-fulfillment and service to society (ILO, 1984).

## 2.3 Causes of Health and Safety Hazards at The Workplace

According to recent estimates released by the ILO (2014), each year 2.78 million workers die from occupational accidents and work-related diseases (of which 2.4 million are disease-related) and an additional 374 million workers suffer from non-fatal occupational accidents. It is estimated that lost workdays globally represent almost 4 per cent of the world's GDP, and in some countries, this rises to 6 per cent or more (Hämäläinen *et al.*, 2017; Takala *et al.*, 2014). Occupational health and safety literature suggest that, there are various causes of health and safety hazards that are peculiar at the workplace. These causes were identified by Ochsner and Greenberg (1998). Although the importance of improving safety and health at work is increasingly widely recognized, providing an accurate picture of its global scale remains difficult (Rushton *et al.*, 2017). The systematic collection and analysis of reliable and comparable data have varied both geographically and over time, which means that comparing trends and data is challenging. In addition, even in countries with the longest and most well-established data collection systems, under-reporting, particularly of non-fatal occupational accidents and especially work-related diseases, is common (Takala *et al.*, 2017).

### 2.3.1 Physical Hazards

Under this, traumatic injury remains a significant problem and ranges from the trivial to the fatal (DeJoy, 2000). He asserted that common causes of fatal injury include rock fall, fires, explosions, mobile equipment accidents, falls from height entrapment and electrocution. Moreover, other less common but recognized causes of fatal injury include flooding of underground workings, wet-fill release from collapsed bulkheads and air blast from block carving



failure. According to Nachimas and Nachimas (2009), the systematic application of risk management techniques has contributed to a substantial decline in injury frequency rates in developed nations as against poor countries where accidents are frequent.

They were of the view that further improvement, however, is required to reach rates acceptable to the wider community. A review work done by Osuala (2003), on measures to control physical hazards covers system safety and risk management in mining. Iwundu, (2000) emphasized that heat and humidity are encountered in tropical areas and in deep underground mines, where the virgin rock temperature and air temperatures increase with depth, due principally to the geothermal gradient and auto-compression of the air column. According to Harvey et al. (2001) whole body vibration is commonly experienced whilst operating mobile equipment, such as load-haul-dump units, trucks, scrapers and diggers. This can cause or exacerbate pre-existing spinal disorders. A poorly maintained road and vehicle contribute to the problem. Occupations involving substantial outdoor work appeared not to be associated with an increased risk of melanoma.

### **2.3.2 Chemical Hazards**

Chemical hazards are a major occupational health and safety issue in Australian workplaces. Management of chemical hazards requires the combined efforts of Occupational Health and Safety (OHS) specialists, including generalist OHS professionals, occupational hygienists and occupational health practitioners. Emphasis is placed on the importance of working with a range of OHS specialists to ensure a range of skills is directed at preventing fatality,

injury, disease and ill health arising from this complex area of occupational health and safety.

The Australian National OHS Strategy 2002–2012 included “prevent occupational disease more effectively” as one of five national priorities (NOHSC, 2002, p. 5). Of eight identified categories of occupational disease, three are associated with chemical hazards – cancer, respiratory disease and contact dermatitis (NOHSC, 2002). From 2000–01 to 2006–07, a decreasing trend was observed for contact dermatitis; however, there was no clear increase or decrease evident in the rates of respiratory disease or occupational cancers (Safe Work Australia, 2010a). Thus, chemical hazards remain a major occupational health and safety (OHS) issue in Australian workplaces. While chemical hazards are often associated with Major Hazard Facilities and chemical transport, they are ubiquitous in workplaces and so are within the scope of practice of all generalist OHS professionals (OSHA, 2004). The modern approach to chemical hazard control encompasses both the reactivity and toxicity of chemicals

### **2.3.3 Biological Hazards**

Estimates suggest that circulatory system diseases (31 per cent), work-related cancers (26 per cent) and respiratory diseases (17 per cent) contribute to almost three-quarters of the total work-related mortality. Diseases are the cause of the great majority of work-related deaths (2.4 million deaths or 86.3 per cent), in comparison to fatal occupational accidents (which make up the remaining 13.7 per cent). Together, these account for 5 to 7 per cent of deaths globally (Christopher & Murray, 2016). Biological hazards refer to organisms or organic matters produced by these organisms that are harmful to human health. These

include parasites, viruses, bacteria, fungi and protein. In general, there are three major routes of entry for these micro-organisms into our body, i.e. through the respiratory system, transmission through contact with body fluids of the infected or contact with contaminated objects (ILO, 2006). The harmful effects posed to human health by these biological hazards are mainly of three types - infections, allergy and poisoning. Biological hazards, also known as biohazards, are organic substances that pose a threat to the health of humans and other living organisms. Generally speaking, biological hazards include pathogenic micro-organisms, viruses, toxins (from biological sources), spores, fungi and bioactive substances. Biological hazards can also be considered to include biological vectors or transmitters of disease (Murray & Lopez, 1996).

Outside the health arena, biological hazards include substances that cause social and economic disruption, property damage and environmental degradation, such as insect plagues or infestations. Worldwide, it is estimated that around 320 000 workers die each year from communicable diseases caused by work-related exposures to biological hazards (Driscoll *et al.*, 2005; OSHA, 2007). Humans are exposed to biological hazards in the work environment in a variety of ways. For example, workers in health care professions are exposed via contact with human bodily matter, such as blood, tissues, saliva, mucous, urine and faeces, because these substances have a high risk of containing viral or bacterial diseases. Likewise, people who work with live animals or animal products (blood, tissue, milk, eggs) are exposed to animal diseases and infections, some of which (zoonosis) have the potential to infect humans (e.g. Q-fever, avian flu or Hendra virus) or cause serious allergy via sensitization. For instance, it is estimated that up to one third of people exposed to laboratory

animals develop allergies (Harrison 2001) that can sometimes result in anaphylactic shock and death. Similarly, in a study of zoo veterinarians, 32% reported an allergy to the animals they treated and many report allergies to cats, pigs and poultry (Jeyaretnam & Jones, 2000). Exposure to biological hazards in the work environment can also occur when people are in contact with laboratory cell cultures, soil, clay and plant materials, organic dusts, food, and rubbish, wastewater and sewerage (OSHA, 2003). Exposure to moulds and yeasts is common in some industrial processes involving metal and wood, in museums and libraries, in workplaces with air conditioning systems and high humidity, and in the Construction industry (OSHA, 2003). Exposure to biological hazards is therefore widespread and the risk of exposure is not always obvious. Although Safe Work Australia (or its predecessors) has published a specific Code of Practice for the management of exposure to the blood borne viruses hepatitis and HIV (NOHSC, 2003) and an information guide about diseases acquired from animals (NOHSC, 1989), currently Australia has no official regulations or Codes of Practice relating to work-related exposures to biological hazards generally. Australian Standards has developed a standard for Safety in Laboratories (AS2243.3) microbiological aspects and containment facilities. There are also numerous other relevant standards for work undertaken in the health care industry e.g. AS/NZS 3816 (1998) Management of Clinical and Related Wastes. The Australian Department of Health and Aging has published Infection Control Guidelines<sup>2</sup>

The European Union (EU) has a directive on ‘biological agents’ (EEC, 1990), which are defined as ‘microorganisms, including those that have been genetically modified, cell cultures and human endoparasites, which may be able

to provoke any infection, allergy or toxicity'. These biological agents are classified into four risk groups according to their level of risk of infection. Group One agents are unlikely to cause human disease. A Group Two agent can cause human disease and might be a hazard to workers, but is unlikely to spread to the community and usually has effective prophylaxis or treatment available. Group Three agents can cause severe human disease and present a serious hazard to workers.

#### **2.3.4 Ergonomic Hazards**

Most recent figures suggest that ergonomic factors, injury risk factors, particulate matter, gases, fumes and noise make the largest contributions to the total global burden of occupational disease (Driscoll, 2018). There is also some evidence that the relative contributions of various occupational risk factors are changing. Of 18 exposures measured in the Global Burden of Disease Survey 2016, only occupational exposure to asbestos had fallen between 1990 and 2016 while all other exposures increased (by almost 7 per cent) (Gakidou *et al.*, 2017). In recent years, the quality, health, knowledge and safety requirements in many countries have been more stringent than was the case previously seen. Some research finding concluded that pressures from communities have led to the enactment of various safety legislations and safety standards in different countries. (Dejoy & Southern, 1993). Ahonen *et al.* (2002) argue that different international and national safety standards provide guidance to help organizations develop their safety management systems (SMS) with respect to varied business needs and requirements.

Despite the fact that people are working and spend most of their working hours at the workplace, little attention and resources are accorded to health and

safety at work (Michaels et al., 1985). In emerging economies, workplace safety and health has been overlooked in their industrial development policy and strategies. They are mostly focused on the production volume or profit undermining the latent effect of dissatisfactory working environment. For instance, in Ethiopia, there was no workplace safety and health related stringent policy standing alone for the manufacturing industries. When it is focused on the workplace safety and health it is to mean that there should be both rules of effective resource utilization and safe workplace environment for employees where their health is considered and insured. Safe workplaces are profitable workplaces, whether measured in a company's bottom line, its market share, its broader consumer reputation, or its ability to attract and retain workers, managers, or investors. Healthy people are expected to contribute more to productivity and innovation. However, absenteeism from workplace site causes productivity loss (Michaels *et al.*, 1985).

### **2.3.5 Psychosocial Hazards**

A study conducted by Flippo in (2003) on 'alcoholism' have revealed that drug and alcohol abuse has been a difficult issue to deal with at workplaces, but policies and procedures are now in place in most large mining operations. Debate continues about how to measure psychosocial impairment. Eninger (2006) noted nevertheless, mining operations commonly require the measurement of urinary drug metabolites and breath or blood alcohol on pre-employment and following accidents.

However, companies tend to locate in area that do not have establishment of permanent townships. As a result, there has been a trend towards 'drive-in-drive-out' operations, with mine employees separated from



their families and communities during work periods. Expatriate placements are also common in mining and the associated psychosocial hazards have been reviewed recently (Chen and Hayes). Unfortunately, fatal and severe traumatic injuries continue to occur in mining and often have a profound impact on morale. Post-traumatic stress disorders sometimes develop in witness, colleagues and managers.

#### **2.4 Health and Safety Methods**

Safety and health can be assessed and studied from different angles. Guldenmund (2010) distinguished three broad strategies in assessing health and safety at workplaces which include the academic (anthropological), analytical (psychological) and the pragmatic. These distinct approaches each entail specific methods and instruments to assess an organization's health and safety culture.

#### **2.5 Challenges of good Health and Safety Practices**

The challenges which may be associated with Health and Safety practices have been classified by Gavin and Matherly (1997) into three main and overlapping aspects; people, process and technology. The 'people' problems ranged from the risk of employees' emotional or psychological stress, reduction of loyalty to loss of internal expertise and the fact that there is lack of commitment among employees to provide and be brother's keeper to minimised industrial injury. Malhorta (2004) agreed to this by adding that the lack of cooperation; among workers themselves contribute among others to industrial accidents. The 'process' meanwhile comprises of two classifications; incompatibilities between the authority (government safety department in charge of health and safety in organisations) and the organisation itself, and the

inability of organisation to sufficiently implement their decision to comply with health and safety standards. Among others, authorities' in industrial health and safety programs only implement general health and safety programs applicable to all industries and companies but do not take into recognizance specific company demand.

At the same time, Mansfield (2001) has found that many companies have embarked on health and safety practices without any formal methodology or guidance. There is lack of progressive and innovative human resource management (HRM) philosophies, policies and processes, (including a proactive and collaborative approach) thereby practicing health and safety on ad hoc basis. A work done by Ingalls, (2002) on 'measures on safety performance' identify that there is also a high cost of providing health and safety materials at work places which deters management from fully executing health and safety standards in companies thereby leaving employees at the mercy of unsafe work environment. Further, DeJoy *et al.* (2000) wrote that unqualified safety officers employed to manage the health and safety issues in many companies has been the bane of industrial accidents thereby causing needless industrial injuries and loss of life. There is lack of routine, regular and seasoned training courses on safety management for workers to appreciate the need for occupational health and safety precautions. Finally, there is lack of governmental control and monitoring program to visit business organizations particularly mining companies to unravel whether these companies comply with certain minimum safety standard.



## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This segment describes the methods as well as the procedure that was adopted for the study. It contains the target population, sources of data, the sampling techniques and the research instruments. Further, this chapter describes the type of research method that was used, the data collection procedure and the profile of the study area.

#### 3.2 The Study Area

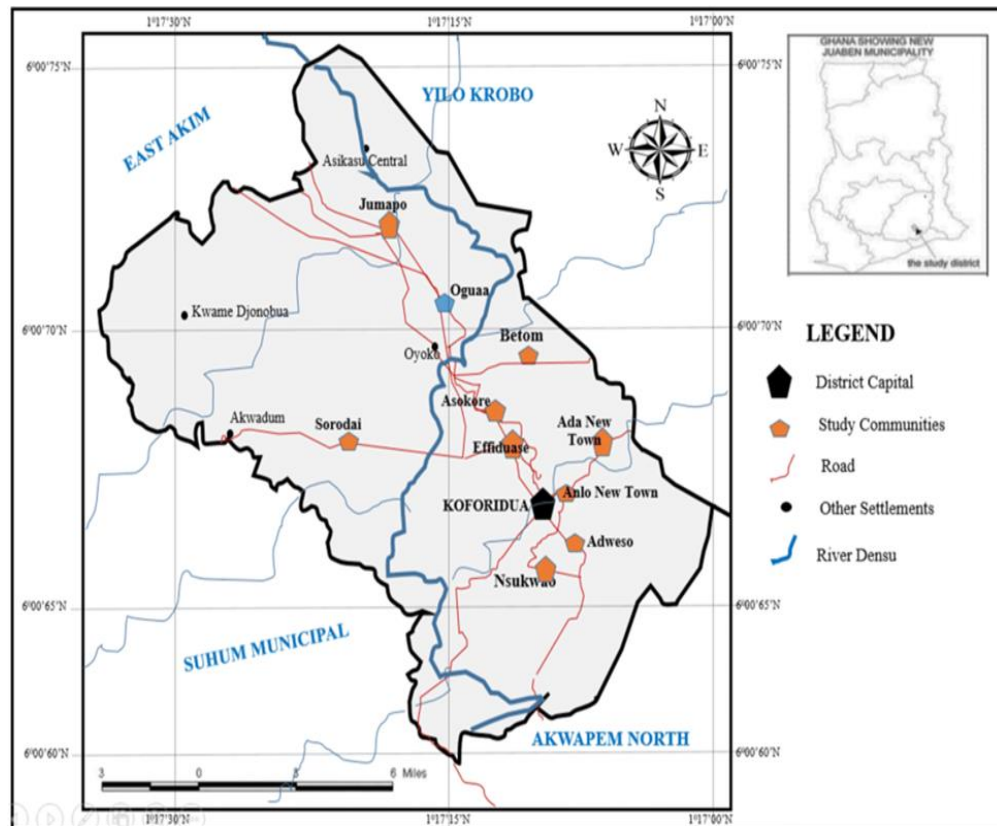
The study area is Koforidua, is a city and capital of Eastern Region in southern Ghana. Koforidua has a settlement population of 183,727 people in 2010 (GSS, 2010a), The city is an amalgamation of 2 Municipalities New Juaben North and South. The centre of the city is made up of a blend of colonial and present-day architecture. Koforidua serves as the administrative headquarters of the Eastern Region and the capital of the State of New Juaben. It also doubles as the seat of the New Juaben Municipal Assembly as well as the headquarters of the Eastern Regional House of Chiefs. It is located about 85 kilometres North-West of Accra and West of the foothills of the Obuotabiri Mountains. The town is sited near the Western end of the natural crossing between the Densu and Nsukwa river basin and easily accessible from all sides. The land in the Municipality is generally undulating with heights ranging between 152m and 198m above sea level. The highest area is the mountain belt along the eastern boundary of the Municipality locally called Obuotabiri. The Municipality is largely drained by the Densu River and its tributaries, which serve as the main source of drinking water for residents. The River has a dam

constructed at Densuano from which treated water is transmitted to the Koforidua township and its suburbs. Few waterfalls are found at different sections of the Densu River.

Status About 66.4 percent of the population aged 15 years and older are economically active while 33.6 per cent are economically not active. Of the economically active population, 92.7 percent are employed while 7.3 percent are unemployed. For those who are economically not active, a larger percentage of them are students (62.1%), 12.4 percent perform household duties and 3.9 percent are disabled or too sick to work. About 63 percent (62.8%) of the unemployed are seeking work for the first time.

Majority (51.2%) of the working population are into service and sales, followed by craft and related works. A higher percentage of females (35.7%) are into service and sales than males (20.1%). Majority of male workers (27%) are rather into craft and related works. Wholesale and retail is the predominant industry for both male (19.6%) and female (42.5%) workers in the Municipality. Employment status and section More than half (53.1%) of the employed population are self-employed without employees. Females (64.0%) are more likely to be self-employed without employees than males (40.9%). About one third (31.3%) of the working population are employees, with higher percentage of males being employees (40.9%) than females (21.7%). Three quarters (75%) of the employed population are in the private informal sector (GSS, 2010b)

### 3.3 Map of the Study



### 3.4 Study Design

This was a case study focusing on ECG and ERHK. The study made use of a cross-level analysis or survey as the research design. Surveys are used to collect large amounts of information from individuals in a population (Mayoux, 2005). A cross-sectional survey is an observational survey used to study a population at a point in time. Cross-sectional surveys involve the use of a sample of the population and generalize the views or behaviours of that group by assuming that they are typical of the whole population (Mayoux, 2005). In this case, therefore, the views of selected sample of managers, supervisors' technicians and other non-technical staff at ECG and ERHK were ascertained to ensure the cross-level analysis of the study. The survey was constructed in

such a way so as to ensure reliable and reduced bias to the barest minimum. A survey is reliable if the measurement is consistent (i.e. the same results are produced at different times under the same condition) (Mayoux, 2005). Validity refers to the degree to which an account is accurate or truthful. In addition, the study was guided by the structure developed from prior studies and other empirical literature on the subject.

### **3.5 Study Population**

The targeted population for the study are the workers specifically from, Electricity Company of Ghana (ECG), and Eastern Regional Hospital, Koforidua. In this case, therefore, the views of selected sample of managers, supervisors' technicians and other non-technical staff at ECG and ERHK were ascertained to ensure the cross-level analysis of the study.

### **3.6 Sampling Method**

Sampling is a method of choosing the size of a research work from the whole population. This enables the researcher to reduce the size of the population in order to access relevant information. The study employed the stratified sampling method in selecting the population for the study and simple random to select from each strata. This method was used because the total population of the study is known. It also allows for scientific generalization. In specific terms, stratified random sampling was employed for the study. According to Mayoux (2005), stratified sampling is a method used to divide a population into homogeneous subgroups (strata). Each stratum is then sampled individually. The use of this method involves dividing the population into homogeneous subgroups and then taking a simple random sample in each subgroup

### 3.7 Sample size

The random sampling technique was adopted for the study to select one hundred and thirty (130) persons selected across all sections of the organisations. It was made up of 20 senior staff and 110 junior staff selected randomly. The size of 130 was to make the research work relatively easy, since involving all employees was impossible due to the size of the population. The 130 persons selected randomly represented about 10% of the whole population. This helped to reduce the level of error and increase the level of precision. It was assumed that responses might not vary much from respondents from the same section therefore increasing the sample size from one category was not likely to make any meaningful difference.

### 3.8 Sources of Data

In carrying out this study, both primary and secondary data sources were employed. Primary data was gathered from a field survey. Primary data enables the researcher to have firsthand knowledge of the source of his information, which enabled him to assess the credibility of the data source. Secondary data were gathered from books, journals, articles, accident reports and other firm level data. The use of secondary data afforded the researcher the opportunity to relate the present study to previous findings in relation to safety and health practices in the construction, mining and other sectors. These data were used for literature review and formed the basis for questionnaire design and data analysis. Data collected were both qualitative and quantitative in nature.

### 3.9 Research Instrument

As said earlier, data was collected from respondents from all the various workplaces who are involved in day-to-day operation. The questionnaires

elicited extensively from those respondents on the practices of health and safety at their workplaces. Data was collected by face-to-face interaction based on structured questionnaires. The questionnaires were evaluated in order to ensure that they are valid for use before administering them. All of the questions were pre-coded with multiple-choice responses. The questionnaire is made up of four sections to cover information about the respondents, assessing health and safety practices at the workplace, examining the level of compliance of health and safety standards at the workplace, and the challenges associated with the promotion of health and safety.

### **3.10 Pre-testing**

Once the research strategy was finalized, it was wise to try out the technique chosen as the main data collection device (LaDou, 2010). Pre-testing fulfills the role of a dress rehearsal and is useful for the following reasons that include providing an estimate of the time required to administer each individual instrument to complete a questionnaire. It also brings up the main flaws in the questionnaire bringing its main weaknesses, ambiguities, etc., of individual questions if pre-formulated questions and or response categories are to be used and finally it illustrates the kind of data, which will result from the main study. According to Creswell (2005), testing is important to establish the face validity of an instrument and to improve items, format and the scale. On the basis of pre-testing, the questionnaire was further improved and standardized. To ascertain the reliability and validity of the instrument, a pilot test was conducted using the instrument at ECG and ERHK, Koforidua.

Problems such as the inability of some junior staff members to read and respond to the items properly, some items not clear to respondents, etc. were detected



and corrected by re-framing them to ensure that items were responded to making the instrument more reliable.

### **3.11 Data Collection Method**

Survey questionnaire was used in the study. These are self-administered questionnaire survey. The self-administered questionnaire were given out to the respondents to complete. Some of the completed questionnaires were collected right after on the spot whilst others were retrieved at a later date. At the end of the instrument administration, 130 questionnaires duly completed were retrieved.

### **3.12 Data Analysis and Interpretation**

The data collected from the respondents was sorted and edited for analysis. The questionnaires were organised and classified according to the patterns given by the respondents and the responses from the questionnaires were organised in line with the research questions. Descriptive statistics included frequencies and their percentages. The analysed data were summarised and findings are reported as a description of the total population of the study. In this descriptive analysis, data retrieved are presented in the form of frequencies, mean, graphs (line graphs and bar chart) and percentages were used to highlight the respondent's perception on the research topic. Data recorded and analysed by the use of Statistical Package for Social Sciences (SPSS) version 21 software. The analysis was based on data collected from respondents. In effect, 130 questionnaires were administered to respondents. The researcher collected all the 130 questionnaires sent out to respondents representing 100% response rate.

### 3.13 Ethical Consideration

An introductory letter was sent to the ERHK and ECG, to ask for permission to conduct the research. Administrative Clearance was also obtained from all the institutions in which the study was conducted. Ethical clearance was sought as well from the respondents that all information provided by them in this study will be treated as confidential and their anonymity was assured.





## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### 4.1 Introduction

This chapter discusses the results of the study in line with the specific objectives. Issues discussed include the background characteristics of respondents, health and safety framework of the institution, awareness level of employees on health and safety standards, level of compliance to the health and safety standards and the challenges associated with the promotion of health and safety practices at the workplace.

#### 4.2 Demographic and Socioeconomic Characteristics of Respondents

Out of the 130 respondents who participated in the study, 12% and 53% of the respondents from ECG and ERHK respectively were females while 88% and 47% from ECG and ERHK respectively were males as shown in Table 1.

**Table 1: Sex of Respondents**

Sex	ECG		ERHK	
	No. of Employees	Percent	No. of Employees	Percent
Male	53	88	33	47
Female	7	12	37	53
Total	60	100	70	100

**Source: Field Survey (2020)**

The dominance of males in Table 1 could be explained by the socio-cultural perception that the Power sector, which ECG is one of them, is a male vocation where a lot of strength is needed to perform their daily duties. On the other hand, the dominance of females at ERHK, could be due to the perception

of females carrying the heaviest burden when it comes to family caretaking duties. Most of the respondents interviewed were literate, as much as 95% of the respondents indicated they have had tertiary education experience (see Table 2). The reason is that these days most workplaces recruit educated people because they are responsible in turning the fortune of the workplaces and the availability of tertiary education opportunities for the working group at the workplace is one of the reasons why there is a high number of literates at the workplace.

**Table 2: Educational Level of Respondents**

Responses	No of employees	Percent
No education	0	0
Primary education	0	0
Secondary education	7	5
Tertiary education	123	95
Total	130	100

Source: Field Survey (2020)

Those with secondary education constituted 5% of the total respondents but there was no record of respondents with primary or no education. With higher educational level of respondents, the researcher believes that the respondents would be able to understand the research topic and give appropriate responses to the questionnaires. The respondents were asked to indicate the number of years they have been at post and their response are indicated in Table 3. It is clear that 20(15%) respondents have been between 0 – 5 years at post, 39(30%) have been at post between 6 – 10 years, 39(30%) have been at post between 11 – 15 years, 12(10%) have been at post between 16 – 20 years and

in fact, 20(15%) have worked for 21 years and above. The minimum and maximum years of respondents captured by the survey were 1 year and 31 years respectively with the mean years of 17. The average years of respondents at post, is a clear indication that the respondents have vast experience in their various departments and could be in the best position to give responses for this research work.

**Table 3: Number of Years at Post**

No of years at post	No of employees	Percent
0 – 5 years	20	15
6 – 10 years	39	30
11 – 15 years	39	30
16 – 20 years	12	10
21 years and above	20	15
Total	130	100

**Source: Field Survey (2020)**

### 4.3 The Institution Provides Safe Place of Work

In response to this aspect as indicated in Table 4, 50% of the respondents strongly agreed that their institution provides safe place of work for all employees. Other, 20% of the respondents agreed that their institution provides safe place of work, 15% of the respondents disagreed that their institution provides safe place of work and 15% of the respondents strongly disagreed that their institution provides safe place of work. It can be realized that no respondent indicated neutral as to whether their institution provides safe place of work for all employees. The fact that the respondent agrees with the provision of safe place of work, attest to the fact that the organisation adheres to provisions

in Factories, Offices and Shops Act (Act 328, 1970) where institutions are obliged to provide safe place of work to their employees.

**Table 4: The Institution Provides A Safe Place of Work**

Responses	No. of employees	Percent
Strongly Agree	65	50
Agree	25	20
Disagree	20	15
Strongly Disagree	20	15
Neutral	0	0
Total	130	100

Source: Field Survey (2020)

#### 4.4 Provision of Adequate Personal Protective Equipment

In this regard, 50% of the respondents disagreed that their workplace provides adequate equipment, materials (personal protective equipment) and clothing to enable employees to carry out their work safely. 15%, 10%, 15% and 10% of the respondents strongly agreed, agree, strongly disagreed, agreed and neutral respectively as shown in Table 5. Most respondents disagreed because they were of the view that most workers are not given adequate personal protective equipment at their workplaces. This result is in contradiction with section 25 of the Factories, Offices and Shop Act (Act 328, 1970) which enjoins organisations to provide adequate equipment, materials (personal protective equipment) and clothing to enable employees to carry out their work safely

**Table 5: Provision of Adequate Equipment, Materials (Personal Protective Equipment) And Clothing to Enable Employees to Carry Out Their Work safely**

Responses	No. of employees	Percent
Strongly Agree	20	15
Agree	13	10
Disagree	65	50
Strongly Disagree	20	15
Neutral	12	10
Total	130	100

**Source: Field Survey (2020)**

#### **4.5 Institutions Provision of Notices on All Health and Safety Measures**

In Table 6, respondents' views were solicited on whether the institution provides notices on all health and safety measures, the responses are presented in figure 3. It was realized that as much as 80% agreed that the organisation provides notices on all health and safety measures appropriately. They stated that information covers all the units of the workplace. Again, 10% of the respondents strongly agreed that their institution provides notices on all health and safety measures, 5% of the respondents disagreed and 5% of the respondents strongly disagreed that their institution provides notices on all health and safety measures. Gibbons (2006) postulated in his study that visible signs and notices must be pasted on all danger sites to prevent injuries and death resulting from work place accidents.

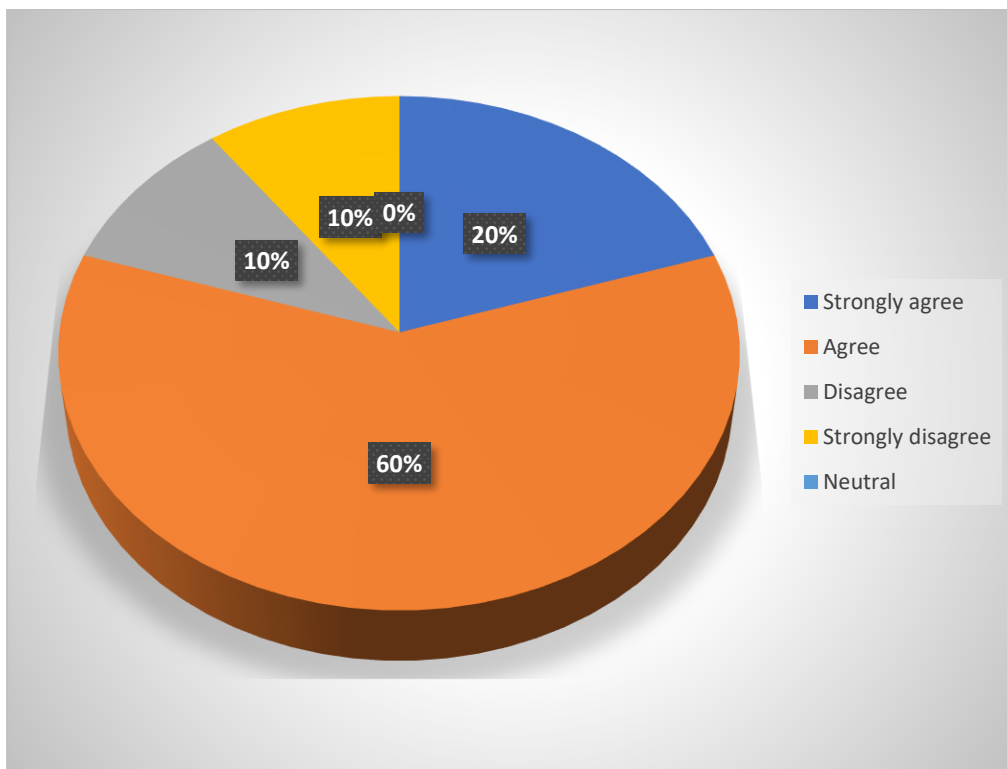
**Table 6: Institution Provide Notices on Health and Safety Measures**

Responses	No of employees	Percent
Strongly agree	13	10
Agree	104	80
Disagree	7	5
Strongly disagree	6	5
Neutral	0	0
Total	130	100

**Source: Field Survey (2020)**

#### **4.6 The Institution Provides Safety Induction, Orientation and Refresher Courses to Employees**

On these issues, it was found that 60% (representing 78 of the respondents) agreed that their institution provides safety induction, orientation and refresher courses to employees. This indicates that institutions constantly trains its workers on health and safety issues. Further, 20% of the respondents strongly agreed, 10% of the respondents disagreed, 10% of the respondents strongly disagreed and 0% of the respondents were neutral as shown in Figure 1.



**Figure 1: Organisation Provides Safety Induction, Orientation and Refresher Courses to Employees**

**Source: Field Survey (2020)**

Provision of safety induction, orientation and refresher courses to employees support the claim made by Shain (2009) that; continued education and training (including induction services, orientation and refresher courses) ensure that all employers become aware of potential health and safety hazards and how they can protect themselves against industrial accidents.

#### **4.7 Conducting Periodic Fire Drills at Workplace to Check for Emergency Responses and Preparedness**

On this area, the researcher found out that 50% agreed that their institutions conduct periodic fire drills at workplace to check for emergency responses and preparedness. Further, 30% of the respondents strongly agreed institutions conducts periodic fire drills at workplace to check for emergency responses and preparedness, 10% each of the respondents disagreed and



strongly disagreed respectively for the study. This confirms work done by Rue (2008) which revealed that the periodic inspection of organisation equipment demonstrates the preparedness of the institution towards health and safety practices.

**Table 7: Management Conducting Periodic Fire Drills at Workplace to Check for Emergency Responses and Preparedness**

Responses	No. of employees	Percent
Strongly Agree	39	30
Agree	78	60
Disagree	13	10
Strongly Disagree	0	0
Neutral	0	0
Total	130	100

**Source: Field Survey (2020)**

#### **4.8 The Institution Conducts Periodic Reviews to Assess Health and Safety Standards in The Work Place**

Again, respondents were asked to state the extent of their agreement and disagreement on whether their institution conducts periodic reviews to assess health and safety standards, Table 8 gives their responses. From the data collected, 50% of the respondents agreed that the institution conduct periodic reviews to assess health and safety standards at the work place, 20% of the respondents strongly agreed that the institution conducts periodic reviews to assess health and safety standards, 25% of the respondents disagreed that the institution conduct periodic reviews to assess health and safety standards and 5% of the respondents stated they were not sure. This issue supports Denisi and

Griffin (2005) position that periodic reviews of assessing health and safety standards helps prevents industrial accidents.

**Table 8: The Institution Conducts Periodic Reviews to Assess Health and Safety Standards in The Workplace**

Responses	No. of employees	Percent
Strongly Agree	25	20
Agree	65	50
Disagree	33	25
Strongly Disagree	7	5
Neutral	0	0
Total	130	100

**Source: Field Survey (2020)**

#### 4.9 Respondents' Views on Health and Safety Practices

Information retrieved from the respondents indicated that all of them understand the concept of health and safety practices at the workplace and their views are contained in Table 9. It shows that 75% of the respondents understanding of the concept of Health and Safety practices involves a process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace. Respondents' assertion confirms the views expressed by World Health Organisation (WHO) in 1995 where health and safety involve the various measures put in place to ensure the general wellbeing of workers and the sustainability of the workplace. Whiles 5% of the respondents stated that the concept of health and safety practices encompasses a state of complete physical, mental and social wellbeing of workers, 10% of

the respondents stated that it is a process of achieving health and well-being of workers and the surrounding community, 5% of the respondents indicated that health and safety practices are made up of process of protecting all members of the workforce against hazardous substances and prevention of workplace accident and 5% of the respondents stated others.

**Table 9: The Concept of Health and Safety Practices**

Categories	No. of employees	Percent
A state of complete physical, mental and social wellbeing of workers.	6	5
A process of achieving health and well-being of workers and the surrounding community.	13	10
A process of protecting all members of the workforce against hazardous substances and prevention of workplace accident.	6	5
A process to protect and promote the health, safety and wellbeing of workers and the sustainability of the workplace.	98	75
Others	6	5
Total	130	100

**Source: Field Survey (2020)**

#### **4.10 Wearing Protective Clothing in The Performance of Their Duties**

Respondents were asked to indicate their agreement or disagreement on whether staffs must put on protective clothing in the performance of their duties. Table 10 shows their responses. It was deduced that while 50% of the

respondents strongly agreed that staffs must put on protective clothing in the performance of their duties, only 5% of the respondents strongly disagreed on this issue.

**Table 10: Wearing Protective Clothing in The Performance of Their Duties**

Responses	No. of employees	Percent
Strongly Agree	65	50
Agree	25	20
Disagree	20	15
Strongly Disagree	7	5
Neutral	13	10
Total	130	100

**Source: Field Survey (2020)**

Furthermore, 20% of the respondents agreed that staffs must put on protective clothing in the performance of their duties, 15% of the respondents disagreed that staff must put on protective clothing in the performance of their duties and 10% of the respondents indicated neutral. Burton (2008) was of the view that industrial accident prevention at work places largely depend on the strict adherence to the use of personal protective equipment like safety hard hats and helmets, gloves, high-visibility clothing, eye protection, safety footwear and safety harnesses.

#### **4.11 Co-Worker Ensures the Safety of Fellow Worker**

As indicated in Table 11, 50% of the respondents agreed that Co-worker ensures the safety of fellow worker at the workplace. Shain (2009) emphasized that health and safety practices can be effective so long as workers or employers

take upon themselves the duty to protect their fellow workers. Shain describes this as a collaborative effort in health and safety practices in organisation.

**Table 11:Co-Worker Ensures the Safety of Fellow Worker**

Responses	Number of employees	Percent
Strongly agree	25	20
Agreed	65	50
Disagree	13	10
Strongly disagree	7	5
Neutral	20	15
Total	130	100

**Source: Field Survey (2020)**

Additionally, 20% of the respondents strongly agreed that co-worker ensures the safety of fellow worker, 10% of the respondents disagreed that co-worker ensures the safety of fellow worker and only 5% of the respondents strongly disagreed. Most respondents agreed because employees of their workplace always pursue for a common purpose of ensuring the welfare of their members. It must be noted that 15% of the respondents were neutral.

#### **4.12 The Organisation Ensures That Employees Are Not Subjected to Any Unreasonable Risks in The Workplace**

In this regard, 70% of the respondents agreed that their institution ensure that employees are not subjected to any unreasonable risks in the workplace. Moreover, 20% of the respondents strongly agreed and 10% of the respondents disagreed. However, there were no respondents indicating strongly disagreed and neutral.

The respondents' agreement shows that the organisation complies with both the provisions of Ghana labor Act (Act 651) and Workmen compensation Act (PNDCL 187) which emphasized that workers are not subjected to any unreasonable risks at the workplace.

**Table 12: The Institution Ensures That Employees Are Not Subjected to Any Unreasonable Risks in The Workplace**

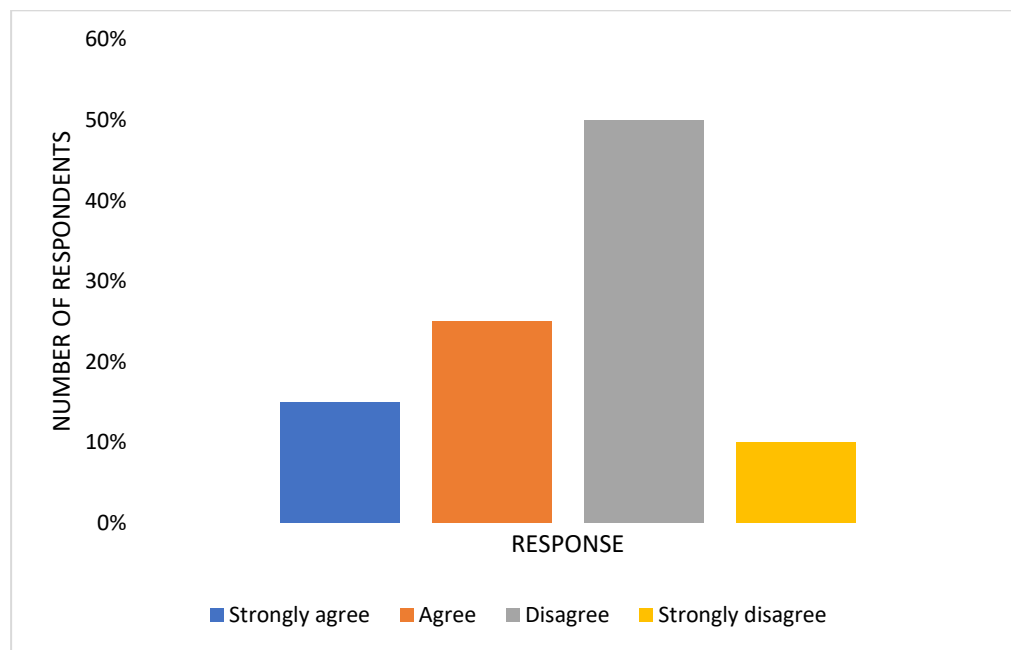
Responses	No of employees	Percent
Strongly agree	26	20
Agree	91	70
Disagree	13	10
Strongly disagree	0	0
Neutral	0	0
Total	130	100

Source: Field Survey (2020)

#### 4.13 Management's Timely Response to Health and Safety Concerns

Information received from respondents indicates that Management do response to safety concern raised by workers. The researcher further inquired from respondents how regular management respond quickly to safety concern, Figure 2 gives their responses. From Figure 2, 50% of the respondents disagreed that management timely respond to health and safety concern, 25% of the respondents agreed that management do timely respond quickly to health and safety concern, 15% of the respondents strongly agreed that management timely respond to health and safety concern and only 10% of the respondents strongly disagreed. Most respondents disagreed that Management do regularly respond

quickly to health and safety concerns raised by workers because such concerns have to be addressed through the hierarchy of the administration.



**Figure 2: Managements' timely response to health and safety concerns**

**Source: Field Survey (2020)**

#### **4.14 Trained Personnel for Incident Investigation Procedures at The Workplace**

On this area, 60% of the respondents agreed that the organisation has well trained personnel for incident investigation procedures, 20% of the respondents disagreed, 15% of the respondents strongly agreed and only 5% of the respondents strongly disagreed that the institution has well-trained personnel for incident investigation procedures as shown in Table 13. Again, the study agrees with Denisi and Griffin (2005) that incident investigation procedures should be conducted by trained personnel so that the incident will not be aggravated.



**Table 13: Trained Personnel for Incident Investigation Procedures in The Organisation**

Category	No. of employees	Percent
Strongly Agree	20	15
Agree	78	60
Disagree	25	20
Strongly Disagree	7	5
Total	130	100

Source: Field Survey (2020)

#### 4.15 Effective Incident Reporting Procedures

Regards to this issue, respondents were asked to indicate the extent of their agreement on the incident reporting procedure in respondent's department, table 10 gives the responses retrieved from the respondents. From Table 14, it was clear that 70% of the respondents agreed that their department has effective incident reporting procedure, 15% strongly agreed that their department has effective incident reporting procedure, 10% disagreed and only 5% strongly disagreed. Effective incident reporting procedure is important in detecting causes of accidents at work places. The respondent's agreement supports a recommendation proposed by Korunka and Lueger (2009) that management of organisations should institute an effective incident reporting procedures to ensure that incidents are well reported to management for redress.

**Table 14: Effective Incident Reporting Procedures**

Category	No. of employees	Percent
Strongly Agree	20	15
Agree	91	70
Disagree	13	10
Strongly Disagree	6	5
Total	130	100

Source: Field Survey (2020)

#### **4.16 Management’s Provision of Appropriate Remedy for Addressing Accident Occurrence**

On the issue of whether management provides the appropriate remedy for addressing accidents occurrence or not, while only 20% of the respondents agreed that management provide appropriate remedy for addressing accidents occurrence, as much as 75% of the respondents disagreed that management provides appropriate remedy for addressing accidents occurrence as indicated in Table 15. Most of the respondents disagreed because remedies are not implemented on time. This result is in agreement with the work of Clake (2006) which indicates that effective health and safety practices in organisation do not only dwell on putting measures in place to avoid occurrence of accidents but also providing appropriate remedy for addressing occurrence of accidents.

**Table 15: Management Provides Appropriate Remedy for Addressing Accidents Occurrence**

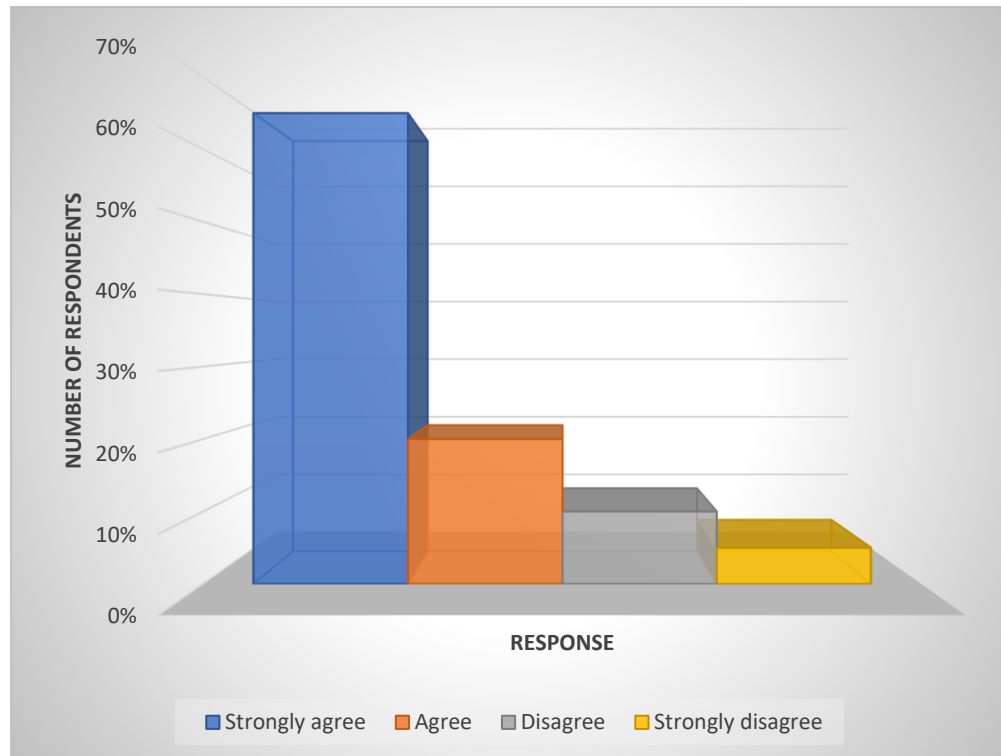
Category	No. of employees	Percent
Strongly Agree	7	5
Agree	25	20
Disagree	25	75
Strongly Disagree	0	0
Total	130	100

Source: Field Survey (2020)

#### **4.17 Provision of Health and Safety Materials Had Been A Cost Burden on The Organisation**

Under this section, respondents were asked to indicate their agreement or disagreement of whether provision of health and safety materials had been a cost burden on the organisation and their responses are contained in the Fig 3. From fig 3, as much as 65% of the respondents strongly agreed that the provision of health and safety materials had been a cost burden on the organisation, 20% of the respondents agreed, 10% of the respondents disagreed and 5% of the respondents strongly disagreed that the provision of health and safety materials had been a cost burden on the organization. The fact that majority of respondents strongly agreed that the provision of health and safety materials had been a cost burden on the organization, supports a work done by Ingalls, (2002) on ‘measures on safety performance’ where he identified that there is also a high cost of providing health and safety materials at work places

which deters management from fully executing health and safety standards in organisations thereby leaving employees at the mercy of unsafe work environment.



**Figure 3: Provision of Health and Safety Materials Had Been A Cost Burden on The Organisation**

Source: Field Survey (2020)

#### **4.18 Huge Working Population with Low Literacy Rate and Abysmal Awareness of Health and Safety Is A Challenge**

On this issue, 45% of the respondents agreed that the huge working population with low literacy rate and abysmal awareness of health and safety is a challenge. This agrees with Nachimas and Nachimas (2009) opinion that employees with low literacy and lack of awareness of health and safety practices is a major problem facing organisations in Africa. Further, 20% of the respondents strongly agreed that the huge working population with low literacy rate and abysmal awareness of health and safety is a challenge, 20% of the

respondents disagreed, 5% of the respondents strongly disagreed. Additionally, 10% of the respondents are neutral as to whether the huge working population with low literacy rate and abysmal awareness of health and safety is a challenge or not. These are contained in Table 16.

**Table 16: Huge Working Population with Low Literacy Rate and Abysmal Awareness of Health and Safety Is A Challenge**

Responses	No. of employees	Percent
Strongly Agree	25	20
Agree	60	45
Disagree	25	20
Strongly Disagree	7	5
Neutral	13	10
Total	130	100

Source: Field Survey (2020)

#### **4.19 Lack of Clarity About the Issues Surrounding Health and Safety in The Organization Is A Problem**

In response to this aspect, while as much as 50% of the respondents disagreed that lack of clarity about the issues surrounding health and safety in the organization is a problem, 25% of the respondents agreed lack of clarity about the issues surrounding health and safety in the organization is a problem. Moreover, 15% of the respondents strongly agreed that lack of clarity about the issues surrounding health and safety in the organization is a problem and 5% of the respondents strongly disagreed. Additionally, 5% of the respondents were neutral (see Table 17). This supports DeJoy, *et al.* (2000) analysis that lack of

clarity on health and safety practices in workplaces are problems facing many organisations in recent times.

**Table 17: Lack of Clarity About the Issues Surrounding Health and Safety in The Organization Is A Problem**

Responses	No. of employees	Percent
Strongly Agree	20	15
Agree	33	25
Disagree	65	50
Strongly Disagree	6	5
Neutral	6	5
Total	130	100

**Source: Field Survey (2020)**

#### **4.20 Getting the Right Personnel to Help in Promoting Health and Safety Practices in The Organization Is A Challenge**

Respondents were also asked to indicate their agreement or disagreement of whether getting the right personnel to help in promoting health and safety practices in the organization is a challenge; their responses are contained in Table 18. From the table, 25% of the respondents strongly agreed that getting the right personnel to help in promoting health and safety practices in the organization is a challenge, 20% of the respondents agreed, 40% of the respondents disagreed and 10% of the respondents strongly disagreed. Additionally, 5% of the respondents were neutral. The response from respondents on this issue however goes contrary to DeJoy, *et al.* (2000) assertion that unqualified safety officers employed to manage the health and safety issues in many organisations has been the bane of industrial accidents

thereby causing needless industrial injuries and loss of life. This may be due to the fact that, the institutions are interested in protecting the health and safety of their workers that is why they employed qualified health and safety officers.

**Table 18: Getting the Right Personnel to Help in Promoting Health and Safety Practices in The Organization Is A Challenge**

Responses	No. of employees	Percent
Strongly Agree	33	25
Agree	25	20
Disagree	52	40
Strongly Disagree	13	10
Neutral	7	5
Total	130	100

Source: Field Survey (2020)

#### 4.21 Management Commitment to Health and Safety Had Been A Challenge

As indicated in Table 19, while 50% of the respondents strongly agreed that management commitment to health and safety had been a challenge, only 5% of the respondents strongly disagreed on this issue. Further, 20% of the respondents agreed that management commitment to health and safety had been a challenge, 20% of the respondents disagreed that management commitment to health and safety had been a challenge and 5% of the respondents indicated neutral. Respondents' agreement confirms the opinion held by Mastrangelo *et al.* (2008) that health and safety practices can only be effective when management are highly committed to it. Mastrangelo *et al* however indicated



that rampant industrial accidents especially in South Africa, Zimbabwe and Ghana might be attributed to a large extent managerial negligence.

**Table 19: Management Commitment to Health and Safety Had Been A Challenge**

Responses	No. of employees	Percent
Strongly Agree	65	50
Agree	25	20
Disagree	25	20
Strongly Disagree	7	5
Neutral	7	5
Total	130	100

Source: Field Survey (2020)

**4.22 Workers’ Refusal to Report Minor Injuries or Near Misses Is A Challenge**

Further, respondents’ views were also solicited on whether workers’ refusal to report minor injuries or near misses is a challenge at the workplace; the responses are presented in Table 20. It was found that as much as 70% of the respondents agreed that the workers refusal to report minor injuries or near misses is a challenge in the institution. Malhorta (2004) agreed to this by adding that the lack of co-operation among workers themselves contribute among others to industrial accidents. The respondents indicated that workers’ refusal to report minor injuries or near misses because of fear of being sacked, poses as a major obstacle in the promotion of health and safety at the workplace. Again, 10% of the respondents strongly agreed that workers’ refusal to report minor

injuries or near misses is a challenge, 10% of the respondents disagreed and 10% of the respondents strongly disagreed.

**Table 20: Workers’ Refusal to Report Minor Injuries or Near Misses Is A Challenge**

Responses	No. of employees	Percent
Strongly Agree	13	10
Agree	91	70
Disagree	13	10
Strongly Disagree	13	10
Neutral	0	0
Total	130	100

Source: Field Survey (2020)

**4.23 Workers Refusal to Wear Personal Protective Equipment (PPE) In the Organization Is A Challenge**

In this aspect, 60% of the respondents agreed that workers’ refusal to wear personal protective equipment’s (PPE) in the organization. Additionally, 15% of the respondents strongly agreed that workers’ refusal to wear personal protective equipment (PPE) in the organization is a challenge, 15% of the respondents disagreed and only 5% of the respondents strongly disagreed. It must be noted that 5% of the respondents were neutral (see Table 21). Burton (2008) also agrees to this issue that industrial accident prevention at work places largely depend on the strict adherence to the use of personal protective equipment like safety hard hats and helmets, gloves, high-visibility clothing, eye protection, safety footwear and safety harnesses. He indicates that many

workers refuse to wear the protective equipment and this is posing a challenge to institutions, as workers often get involved in industrial accidents.

**Table 21: Workers’ Refusal to Wear Personal Protective Equipment (PPE) In the Organization Is A Challenge**

Responses	No of employees	percent
Strongly agree	20	15
Agree	78	60
Disagree	20	15
Strongly disagree	6	5
Neutral	6	5
Total	130	100

Source: Field Survey (2020)

#### **4.24 Cost Involved in Training Employees on Health and Safety in The Organisation Is A Challenge**

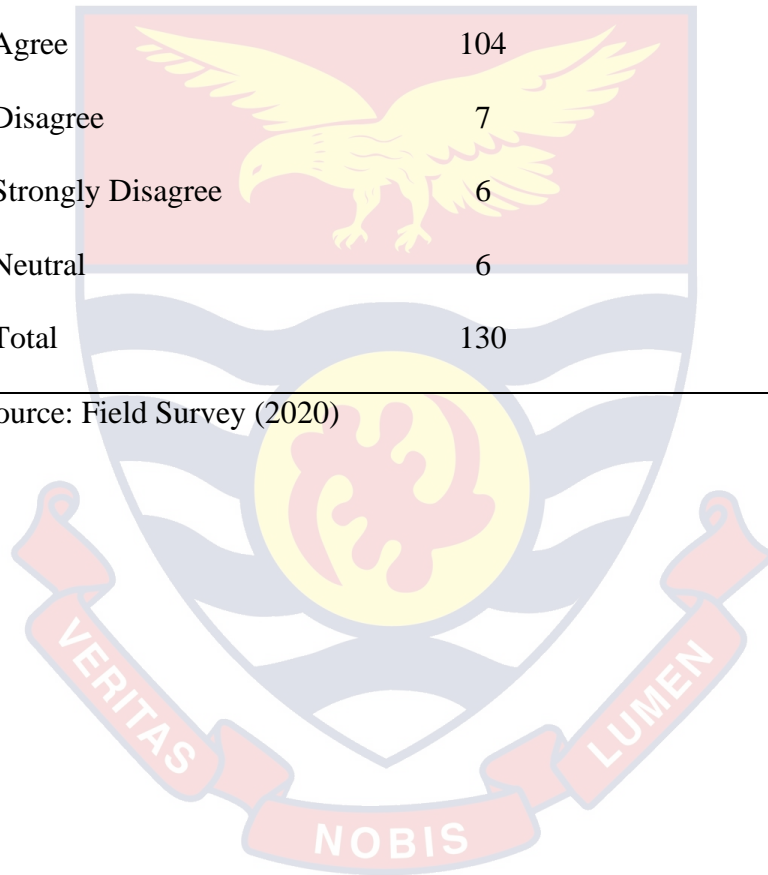
Under this section, as much as 80% of the respondents agreed that the cost involved in training employees on health and safety in the organisation is a challenge, 5% of the respondents strongly agreed, 5% of the respondents disagreed and 5% of the respondents strongly disagreed that the cost involved in training employees on health and safety in the organisation is a challenge as shown in Table 22. Here, most of the respondents emphasized that cost associated with training employees on health and safety practices are higher and sometimes prevents the organisation from occasionally undertaking this exercise.

This supports the view held by Mastrangelo *et al.* (2008) that costs involved in training employees on health and safety pose the biggest challenge to employers at the workplace.

**Table 22: Cost Involved in Training Employees on Health and Safety in The Organisation Is A Challenge**

Responses	No. of employees	Percent
Strongly Agree	7	5
Agree	104	80
Disagree	7	5
Strongly Disagree	6	5
Neutral	6	5
Total	130	100

Source: Field Survey (2020)



## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Introduction

In this chapter, the summary of findings and conclusions which are derived from the analysis are formally documented here. Again, the conclusions are made against the findings of this study. Finally, policy recommendations are also made in this chapter.

#### 5.2 Summary of Findings

Information retrieved from the respondents indicated all of them understand the concept of Health and Safety practices at their workplaces as majority expressed their view as the practices involves a process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace. Respondents' indication confirms the views expressed by WHO (1995) where health and safety involve the various measures put in place to ensure the general wellbeing of workers and the sustainability of the workplace. The study reveals that 50% of the respondents strongly agreed that their institutions provides safe place of work for all employees of the organisation, 55% of the respondents disagreed that the organisation provides adequate equipment, materials (personal protective equipment) and clothing to enable employees to carry out their work safely and 50% of the respondents strongly agreed that staffs must put on protective clothing in the performance of their duties.

Moreover, 70% agreed that the institution provides notices on all health and safety measures, 60% of the respondents agreed that co-worker ensures the safety of fellow worker at the workplace and that 50% agreed that the institution

provides Safety induction, orientation and refresher courses to employees in the organisation. Furthermore, 40% agreed that the institution conducting periodic fire drills at workplace to check for emergency responses and preparedness.

The study found that, 70% of the respondents agreed that management makes sure that employees are not subjected to any unreasonable risks at the workplace, 60% of the respondents agreed that the institution conduct periodic reviews to assess health and safety standards in the work place and 50% of the respondents disagreed that management timely respond to health and safety concern of workers. Further, 60% of the respondents agreed that the institution has well trained personnel for incident investigation procedures, 70% of the respondents agreed that their department has effective incident reporting procedure, and as much as 75% of the respondents disagreed that management provides appropriate remedy for addressing accidents occurrence.

It is clear that the information gathered from respondents revealed that as much as 85% of the them strongly agreed that the provision of health and safety materials had been a cost burden on the institution and 45% of the respondents agreed that the huge working population with low literacy rate and abysmal awareness of health and safety is a challenge in the organisation. 50% of the respondents disagreed that lack of clarity about the issues surrounding health and safety in the organization is a problem and about 60% of the respondents disagreed that getting the right personnel to help in promoting health and safety practices in the organization is a challenge.

Again, 50% of the respondents strongly agreed that management commitment to health and safety had been a challenge, 70% of the respondents agreed that workers' refusal to report minor injuries or near misses is a challenge

in the organisation and 60% of the respondents agreed that workers' refusal to wear personal protective equipment (PPE) in the organization is a challenge. As much as 80% of the respondents agreed that the cost involves in training employees on health and safety in the organisation is a challenge and 45% of the respondents agreed that changing from the command and control style to engagement of the workforce on health and safety issues is a problem.

### **5.3 Conclusions**

After evaluating the health and safety practices at the workplace, the researcher found out that, more than 50 percent of the respondents strongly agreed that their institution provides safe place of work for all employees and nearly two thirds agreed that the management ensures that employees are not subjected to any unreasonable risks at the workplace and that management encourages workers to record near minor injury at the work place. However, more than 50 percent of the respondents strongly agreed that lack of management commitment, workers' refusal to report minor injuries or near misses and the cost involved in training employees on health and safety at the workplace are major problems. The study recommends that management should not only provide adequate protective clothing, they should put in place a monitoring team tasked to go round to check whether the staff really put on their protective clothing and materials given.

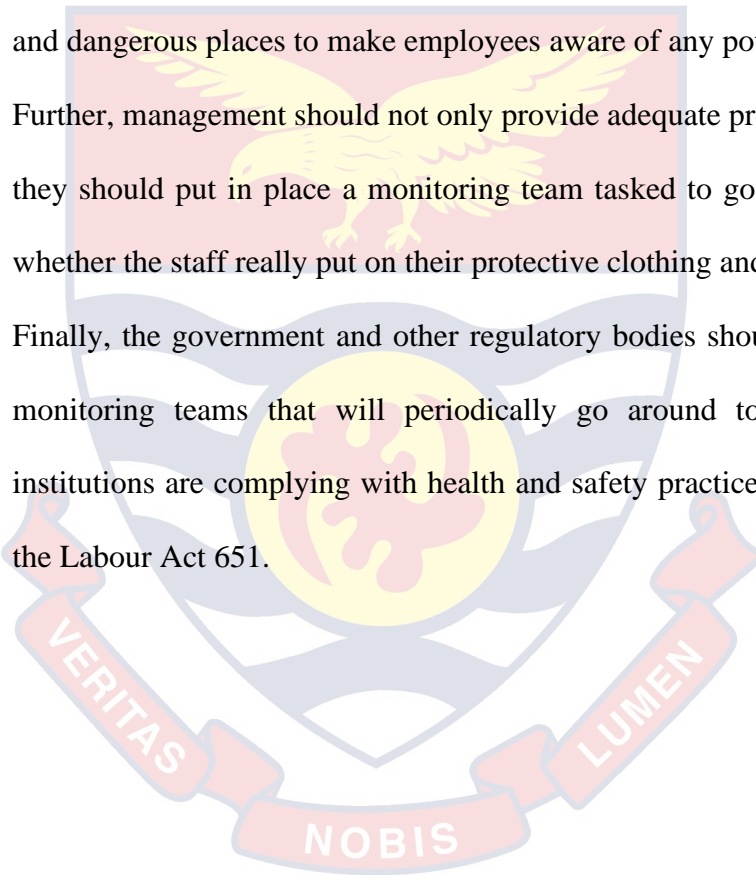
### **5.4 Recommendations**

Based on the findings of the study a number of recommendations have been made to stakeholders involved in the management of health and safety practices. Management should regularly organize education, training, workshops, seminars on health and safety issues, publish materials on health



and safety and many other steps to include safety consciousness in the minds of workers.

1. Management should conscientize employees to understand that safety and health practices are the obligation of both management and employees and this will go a long way to help make the work place safer.
2. Management should constantly and regularly display warning notices on defective and faulty equipment and machines and or other potential hazard and dangerous places to make employees aware of any potential danger.
3. Further, management should not only provide adequate protective clothing, they should put in place a monitoring team tasked to go around to check whether the staff really put on their protective clothing and materials given.
4. Finally, the government and other regulatory bodies should also establish monitoring teams that will periodically go around to check whether institutions are complying with health and safety practices as stipulated in the Labour Act 651.



## REFERENCES

- Accenture, G. H. (2001). The adoption of high-involvement practices and processes in emergent and developing firms: a descriptive and prescriptive approach. *Human Resource Management*, 42(4), 337–356.
- Alberta, E. K. O. (2006). Effect of state workplace safety laws on occupational injury rates. *Journal of Occupational and Environmental Medicine*, 43(12), 1001.
- Ahonen, G. (2002). *Good Practice in Occupational Health Services: A Contribution to Workplace Health*. WHO Regional Office for Europe, World Health Organization, EUROPE.
- Amponsah-Tawiah, K., & Mensah, J. (2016). *Occupational Health and Safety and Organizational Commitment: Evidence from the Ghanaian Mining Industry*. University of Ghana Press.
- Antonsen, T. K. (2009). Inside OSHA's Black Box: What Is the Link Between Inspections, Citations, and Reductions in Different Injury Type? *Law and Policy* 27, 219-37.
- Annah, B. V. (2004). Inside the Black Box: How do OSHA Inspections Lead to Reductions in Workplace Injuries? *Law and Policy*, 27(2), 219-237.
- Aryeetey, F. K., (2004). Randomized Government Safety Inspections Reduce Worker Injuries with No Detectable Job Loss. *Science*, 336(6083), 907-911.
- Aswathappa B. N. (2000). A new-generation, safety contest in the mining industry A long-term evaluation of a real-life intervention. *Safety Science* 48(5): 680-686.

- Ayodele, R. & Olubayo-Fatiregun, S. (2010). Occupational health and safety: effectiveness of economic and regulatory mechanisms. *Workers' Compensation: Foundations for Reform*: 187–218.
- Barling, J., & Zacharatos, B. (2014). *Human Resource Management Strategy and Action*. England: Clays Limited.
- Barney, D. G. (1991). Quality management practices and operational performance: empirical evidence for Spanish industry, *International Journal of Production Research*, 41(12), 2763–2786.
- Brauger, G. L., E., F. D., A., K. X., & T, L. Q. (2009). Safety, courts and crime: occupational safety and health prosecutions in the Magistrates' courts. *Policy and Practice in Health and Safety*, 1(1), 105–127.
- Brooks, V. F. (2008). Mining safety regulation and the firm: understanding the compliance process. *Food Policy* 23(1): 9-23.
- Chamberland, D. K. (2003). Taking self-managed teams to Mexico, *Academy of Management Executive*, 13 (3): Pp 15-25.
- Christopher, P., & Murray, J. (2016). Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: a systematic analysis for the Global Burden of Disease Study 2015". *Lancet*, 388, 1459–544.
- Clake, G. L. (2006). What determines efficacy? The roles of codes and guidance material in occupational safety and health regulation. *Policy and Practice in Health and Safety*, 7(2), 3–29.
- Cole, G. (2002). *Personnel and Human Resource Management* (5th ed.). Continuum International Publishing Group.

- Creswell, J. W. (2005). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.
- Davis. (2001). The use of incentives/feedback to enhance workplace safety: A critique of the literature. *Journal of Safety Research* 20:7-19.
- Dessler, U. L. O. (2005). Estimating the technical and scale efficiency of Greek commercial banks: The impact of credit risk, off-balance sheet activities, and international operations, *Research in International Business and Finance*, 22 (3): Pp 301-318.
- DeJoy, C. E. (2000). Implementing and evaluating a system of generic infection precautions: Body substance isolation. *American Journal of Infection Control*, 18, 1–12.
- Denisi, Y. and Griffin, E. (2005). Teaching health and safety: Problems and possibilities for learner entered training. *American Journal of Industrial Medicine* 22:665-676.
- Dorland, E. O. (2001). Effect of educational programs, rigid sharps containers and universal precautions on reported needle stick injuries in health care workers. *Infection Control & Hospital Epidemiology* 12:214-219.
- Driscoll, T. 2018. “The 2016 global burden of disease arising from occupational exposures” in *Occupational and Environmental Medicine*, 75(Suppl 2): A1–A650
- Eklof, D. L. (2008). Motivational and organizational factors affecting implementation of worker safety training. *Occupational Medicine: State of the Art Reviews*, 9(2), 240.

Factories, Offices and shops Act 328 (1970) Section 8. Available at <http://www.melr.gov.gh/wp-content/uploads/2015/11/Factories-and-Shops-Act.pdf>

Eninger, D. E. (2006). *Development and evaluation of an employee hazard reporting and management information system in a hospital*. Safety Sciences.

Flippo, R. T. (2003). A participatory workplace health and safety training program for ethylene oxide. *American Journal Industrial Medicine*, 22, 651–664.

Gakidou, E., Afshin, A., Abajobir, A., Abate, K. A., C., A., K., A.-A., F, A., A., A., S., A., V., & Abu-Raddad, L. (2017). *Global, regional and national comparative risk assessment of 84 behavioural, environmental and occupational, and metabolic risks or clusters of risks, 1990–2016: a systematic analysis for the Global Burden of Disease Study*.

Gavin, W., & Matherly, X. F. (1997). A behavioral approach to occupational safety pinpointing and reinforcing safe performance in a food manufacturing plant. *Journal Safety Research*, 63, 434–445.

Gauthey, E. T. (2005) Employee attitudes towards hearing protection as affected by serial audiometry. In: *Personal Hearing Protection in Industry* (Ed: PW Alberti, Raven Press, N.Y.) 491-501.

Ghana News Agency (2009). Fire guts Kumasi Central Market, Accra Ghana. News Agency (Accra).

Ghana Statistical Service (2010a). 2010 National Analytical Report. Ghana Statistical Service.

Ghana Statistical Service (2010b). Regional Analytical Report, Eastern Region.

Ghana Statistical Service.

Gilmer, R., & Haller, V. M. (2004). Evaluation of health and safety working conditions and work practices in jobs involving hazardous materials.

Paper presented at Amer Publ Hlth Assoc Meeting, New York City, NY.

Gottfredson, R. L. (2004). Behavioral technology for reducing occupational exposures to styrene. *J Appl Behav Anal* 19:3-11.

Gottfredson, R. L. (2005). Human resource practices and firm performance of multinational corporations: influences of country origin, *International Journal of Human Resource Management*, 9 (4): Pp 632-652

Guldenmund, U. (2010). An investigation of the durability of behavioral procedures for reducing workers' exposures to a suspect carcinogen. Special Report to National Institute for Occupational Safety and Health, Cincinnati OH 45226.

Gupta, W. M. & Singhal, B. (1993). *Organization and Environment*, Cambridge: Harvard University Press.

Guzzo, T. E., & Dickson, E. (2000). Employee accidents: Influences of personal characteristics, job characteristics and substance use in jobs differing in accident potential. *J Safety Res* 24(4):205-221.

Hale, E. Q., & Hale, R. (2005). A flexibility intervention to reduce the incidence and severity of joint injuries among municipal fire fighters. *Journal of Occupational Medicine* 32:631-637.

Hall, E., & Goodale, T. L. (2007). Worker training and education in occupational safety and health: A report on practice in six industrialized western nations (Part 2). *Journal of Safety Research* 13:73-87.



- Harvey, J., Bolam, H., Gregory, D. & Erdos, G. (2001), "The effectiveness of training to change safety culture and attitudes within a highly regulated environment", *Personnel Review*, Vol. 30 No. 6, pp. 615-636.  
<https://doi.org/10.1108/EUM0000000005976>
- Haddel, E. T., & Ojikutu, P. (2005). Is safety training worthwhile? *Journal of Occupational Accidents* 6:17-33.
- Hämäläinen, P.; Takala, J.; Boon Kiat, T. 2017. Global Estimates of Occupational Accidents and Work-related Illnesses 2017 (XXI World Congress on Safety and Health at Work, Singapore, Workplace Safety and Health Institute).
- Health and Safety Executive (2012). Supervising for Safety in Mine working. Retrieved from <http://www.hse.gov.uk>.
- Hippocrate, X. V. (1981). Improving human capabilities for combined manual handling tasks through a short and intensive physical training program. *American Industrial Hygiene Association Journal* 51:610-614.
- Hoffman, U. & Stretzer, A. F. (1996), The long-term effects of a token economy on safety performance in open-pit mining. *Journal of Applied Behavioural Analysis* 20:215-224.
- Hopkins, D. R. (2006). Increasing completion of accident reports. *Journal of Safety Research* 18:65-71.
- Hughes, L (2008). Manual handling training and changes in work practices. *Occupational Health* Nov (11):402-406.



- Huselid, E. L. (2006). The transfer of training in work organizations: A systems perspective to continuous learning. *Occupational Medicine: State of the Art Reviews* 9(2): 241-259.
- ILO (2005). *Promotional framework for occupational safety and health*, Report IV (1), International Labour Conference, 93rd Session, Geneva,
- ILO (2006). *Occupational Safety and Health: synergies between security and productivity* (Geneva)
- ILO (2014). *Safety in Numbers: Pointer for a Global Safety Culture at work*. ILO Press, Geneva, Switzerland.
- International Labour Organization (2010). *Work related accidents and diseases take a heavy toll worldwide*. Retrieved from: <http://www.scielosp.org/scielo.php>
- International Labour Organization (2012). *Estimating the Economic Costs of Occupational Injuries and Illnesses in Developing Countries: Essential Information for Decision-Makers*. International Labour Organization, Switzerland, Retrieved from: [www.ilo.org/publns](http://www.ilo.org/publns).
- Ingalls, R. O. (2001). *Structured management training in underground mining-five years later*. Information Circular 9145, Bureau of Mines Technology Seminar, Pittsburgh, PA.
- Iwundu, T. Y. (2000). Increasing mine productivity and safety through management training and organization development: A comparative study. *Basic & Applied Psychology* 5:1-18.
- Jimenez, Sanz and Oppeneheim (1990). *Organizations: A quantum view*. Englewood Cliffs, NJ: Prentice Hall.

- Jossey-Bass Michie, J., & M, S.-Q. (2001). Labour Market Flexibility, Human Resource Management and Corporate Performance. *British Journal of Management*, 12(4), 287–306.
- Khatri, F. I. (1999). Cultural Influences on Informal Information Sharing in Chinese and Anglo-American Organizations: An Exploratory Study, *Accounting, Organizations and Society*, 24: Pp 561-582.
- Komaki G. (2008). Efficacy of an intervention to promote use of hearing protective devices by fire fighters. *Public Health Reports* 105:53-59.
- Knoch, E. A. and McGrath, E. T. (1996). Impact of people management practices on organizational performance: analysis of a causal model, *International Journal of Human Resource Management*, 14 (7): Pp 1246-1266.
- Kreitner, E. A. (2007). *Environmental Health and Safety CFR Training Requirements - 2nd Edition* Government Institutes, Inc., Rockville, MD
- Labour Act 651 (2003) Section 118. Available at <http://www.melr.gov.gh/wp-content/uploads/2015/11/LABOUR-ACT-2003.pdf>.
- La Dou, J. (2010). International Occupational Health. *International Journal of Hygiene Environmental Health*.
- Lado, O. P. & Wilson, Y. N. (1994). Human resource management systems and organizational performance: an analysis of the Spanish manufacturing industry, *International Journal of Human Resource Management*, 14 (7): Pp 1206-1226.

- Logasakthi, K., & Rajagopal, K. (2013). A study on employee health, safety and welfare measures of chemical industry in the view of Salem Region. *International Journal of Research in Business Management*, 1(1), 1–10.
- Lucas, Q. R. (2007). A new SCSR donning procedure. In: *Research and Evaluation Methods for Measuring Non-routine Mine Health and Safety Skills*. Vol I. University of Kentucky, Lexington, KY, Chapter 4.
- Lucas, W. R. (2001). A cross-sectional survey of workers and their training needs at 29 hazardous waste sites. *Applied Occupational & Environmental Hygiene* 9(9):605-611.
- Malhorta, E. L. (2004). Action on worksite health and safety problems: A followup survey of workers participating in a hazardous waste worker training program. *Amer J Indust Med* 30:730-743.
- Mansfield, E. W. (2001). Measuring the effectiveness of an industrial lift truck safety training program. *J Safe Res* 15:125-135.
- Michell K., (2010). National Education Representative. South African Society of Occupational Health nurses.
- Monto J. L. (2005). The impact of job insecurity on employee work attitudes, job adaptation, and organizational withdrawal behaviours. In J. M. Brett & F. Drasgow Eds. *The psychology of work: Theoretically based empirical research*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Murray C.; Lopez A. 1996. "The Global Burden of Disease: a comprehensive assessment of mortality and disability from diseases, injuries, and risk factors in 1990 and projected to 2020". *Global Burden of Disease and*

*Injury Series*, Vol. 1. (Cambridge, MA: Harvard Sch. Public Health/WHO/World Bank).

Nachimas, E. R. and Nachimas G. T. (2009). Safety program practices in high versus low accident rate companies -an interim report. DHEW (NIOSH) Publication No. 75-185) National institute for Occupational Safety and Health, Cincinnati, OH 45226.

Nagy, C. W. and Cenker, E. (2002). Principles of Multivariate Analysis: A User's Perspective, revised ed., Oxford: Oxford University Press.

Neo F, (2010). Modes of theorizing in strategic human resource management: tests of universalistic, contingency and configurational performance predictions, *Academy of Management Journal*, 39(4): Pp 802-835

*NDA annual health, safety, security and environment report*. (2006). Cumbria, UK: Nuclear Decommissioning Authority.

Ochsner, E. O. & Greenberg, E. T. (1998). Perspectives on protective behaviors in the workplace. In: *Taking Care: Understanding and Encouraging Self-Protective Behavior* (Ed: N. Weinstein; Cambridge University Press, New York, NY) 298-322.

Osuala, S. T. (2003). Factors in successful occupational safety programs. *Journal of Safety Research* 9:168-178.

Osuala, Q. O. (2005). Safety program practices in record-holding plants. DHEW (NIOSH) Publication No. 79-136, National Institute for Occupational Safety and Health, Cincinnati, Ohio 45226

Pigwork, F. L. O. (2003). Occupational electrocutions: Investigation and prevention. *Prof Safety* Pp: 34-39.

- Rue, W. Q. (2008). Compliance with training in managing assaultive behaviour and injuries from inpatient violence. *Hospital and Community Psychiatry* 41:558-560.
- Rundle, Q. T. Y. (1997). Measuring the impact of human resource management practices on hospitality firms' Performances, *International Journal of Hospitality Management*.
- Rushton, L. (2017). "The Global Burden of Occupational Disease" in *Current Environmental Health Report*, 4:340–348
- Seo (2004). The effects of body mechanics instruction on work performance. *American Journal of Occupational Therapy* 41:16-20.
- Shipton et al, (2005). *Creating High Performance Organizations*, San Francisco:
- Storey, D. K. (1995). Seven practices of successful organizations, *California Management Review*, 40 (2): Pp 96-124.
- Subramaniam, S. L. (2007). *Information and Control in Organizations*, Goodyear Publishing Company, Pacific Palisades, CA.
- Takala, J.; Hämäläinen, P.; Nenonen, N.; Takahashi, K.; Odgerel, C.; Rantanen, J. 2017. "Comparative Analysis of the Burden of Injury and Illness at Work in Selected Countries and Regions" in *Central European Journal of Occupational and Environmental Medicine*, 23(1-2):6-31.
- Takala, J.; Hämäläinen, P.; Saarela, K.; Yun, L.; Manickam, K.; Jin, T.; Heng, P.; Tjong, C.; Kheng, L.; Lim, S.; Lin, G. 2014. "Global Estimates of the Burden of Injury and Illness at Work in 2012" in *Journal of Occupational and Environmental Hygiene*, 11(5):326-337.

- WHO (2001), Occupational health; a manual for primary health care workers. Regional office for the Mediterranean, Pp 7
- Ward, T. McCreery, Q. Ritzman, F. C. and Sharma, N. (1998). Information sharing and firm performance in Japan, *Industrial Relations*, 30 (1): Pp 37-61.
- Whitner, N. T. (2001). Statistical power and analysis for the behavioral sciences 2nd ed. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Workmen's Compensation Act PNDCL 187 (1987). Available at <http://www.melr.gov.gh/wp-content/uploads/2015/12/WORKMENS-COMPENSATION-ACT.pdf>
- Wright, F. M. and Snell, D. R. (1991). The Knowledge creating company, *Harvard Business Review*, 69: Pp 96–104.
- Wright, G. V. (2000). The role of job security in understanding the relationship between employees' perceptions of temporary workers and employees' performance, *Journal of Applied Psychology*, 90 (2): Pp 389-98.
- Wright et al., (1994). The Proof of HR is in the Profits, *People Management*, February, Pp 42-43.
- Yeboah, R. (2008). Noise Reduction as Band Re-Saw. Baltimore: Johns Hopkins University Press
- Yuh, H. R. (2011). Development and pilot evaluation of a health and safety training program for foundry workers. *Appl Occup Env Hyg* 5:595-603.
- Zohar, V. L. (1980). Training design and performance improvement. In: *Productivity in Organizations: New Perspectives from Industrial and Organizational Psychology*, Jossey-Bass, San Francisco, CA)



**APPENDIX**  
**PRESBYTERIAN UNIVERSITY COLLEGE, GHANA**  
**DEPARTMENT OF ENVIROMENT AND NATURAL RESOUCES**  
**MANAGEMENT**  
**QUESTIONNAIRE**

This questionnaire is to enable me collect necessary information to complete my research on the topic:

“Evaluation of Health and Safety Practices at Electricity Company of Ghana and Eastern Regional Hospital, Koforidua”. All information provided in this study will be treated as confidential and your anonymity is assured.

**Section A: Demographic Characteristics of Respondents**

1. Sex 1= Male [ ] 2= Female [ ]
2. Marital status: 1=Single [ ] 2=Married [ ] 3=Divorced [ ] 4=Separated [ ]  
5= Widowed [ ]
3. Educational level: 1=Nil 2=Primary education 3=Secondary education  
4=Tertiary
4. How many years have you been at post?  
a. 0 – 5 [ ] b. 6 – 10 [ ] c. 11 – 15 [ ] d. 16 –20 [ ] e. 21years + [ ]

**Section B: Respondents’ Views on Health and Safety Practices**

5. Please tick from the options below to indicate your views on Health and Safety practices in your workplace.
  - i. A state of complete physical, mental and social wellbeing of workers. [ ]
  - ii. A process of achieving health and well-being of workers and the surrounding community. [ ]



iii. A process of protecting all members of the workforce against hazardous substances and prevention of workplace accident. [ ]

iv. A process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace. [ ]

Indicate your agreement with the following statements

6. My Institution provides safe work place.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

7. My Institution provides adequate equipment, materials and personal protective equipment (PPEs) to enable employees to carry out their work safely.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

8. Safety materials provided by my organization are used all the time during working hours.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

9. My company provides notices on all health and safety measures at the workplace.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

10. Safety induction and orientation are conducted by my organization at the workplace.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

11. Safety refresher courses are conducted by my organization at the workplace.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

12. Fire drills are conducted periodically at the workplace to check for emergency responses and preparedness of the workers and systems.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

12. Co-workers in my organisation ensure the safety of fellow workers.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

Section C: Level of compliance with Health and Safety in your workplace.

Please indicate your level of agreement or disagreement to the issues.

13. My organisation ensures that employees are not subjected to any unreasonable risks in the workplace.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

14. My organisation encourages workers to record near misses at work place.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

15. My organisation conducts periodic reviews to assess health and safety standards in the work place.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

16. Management respond quickly to safety concerns.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

17. Workplace inspections are conducted jointly by trained management and employee representatives.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

18. My company has persons trained for incident investigation procedure.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

19. My department has an effective incident reporting procedure that is known by employees.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

20. Management provide appropriate remedy for addressing accidents occurrence in my department.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

Section D: Challenges associated with the promotion of health and safety practices at your workplace. Please indicate your agreement or disagreement with the following questions.

21. The provision of health and safety materials is a financial burden on the organisation.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

22. The huge working population with low literacy rate and abysmal awareness of health and safety is a challenge.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

23. Lack of clarity about the issues surrounding health and safety in the organization is a problem.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

24. Getting the right personnel to help in promoting health and safety practices in the organization is a challenge.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

25. Getting management to be committed to health and safety had been a challenge to the organization.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

26. Workers refusal to report minor injuries or near misses as a result of fear of being sacked is a challenge.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

27. Workers refusal to wear personal protective equipment (PPEs) in the organization is a challenge

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

28. How to influence workers to change their culture and behaviours towards health and safety in the organization is a challenge.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

29. Cost involves in training employees on health and safety in the organisation is a challenge.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

30. Changing from the command and control style to engagement of the workforce on health and safety issues is a problem.

Strongly Agree [ ] Agree [ ] Disagree [ ] Strongly Disagree [ ] Neutral [ ]

