

**THE EFFECT OF HEALTH AND SAFETY STANDARDS ON PRODUCTIVITY
IN GHANA RUBBER ESTATES LIMITED**

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BY

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ABSTRACT

This study is about the effect of health and safety standards on productivity. The objective was to identify the health and safety standards in Ghana Rubber Estates Limited, to determine the effect of health and safety standards on employees' productivity, to determine employees' level of understanding of health and safety policies, to assess the attitude of management towards the health and safety of employees and to identify challenges of the implementation of health and safety standards in the organization. The study was limited to the management and production staff of Ghana Rubber Estates Limited. Research questionnaire and interview guide were developed and distributed to a sample of 120 workers comprising of both production staff as well as management. Responses received were from the entire sample. The study revealed that employees' productivity is influence by management safety practices and safety programmes, management attitude towards health and safety, investigation of accidents, supervisors' safety, and training of employees on safety standards held in the organisation. It also revealed that health and safety standards if managed effectively have a positive impact on productivity. It was therefore recommended that organizations should put in place active health and safety committees which should be given full mandate to implement their recommendations. Moreover, copies of organisational safety and health procedures should be given to employees so that they may be aware of the laid down policies, rules and safety precautions to reduce accidents in the organisation as well as health and safety measures should be in place and employees should be trained on how to use the emergency facilities in case of a problem. There should be a continuous review of occupational health and safety policies, to ensure that firms have up to date safety measures in place.

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DEDICATION

I dedicate this work to my husband and children

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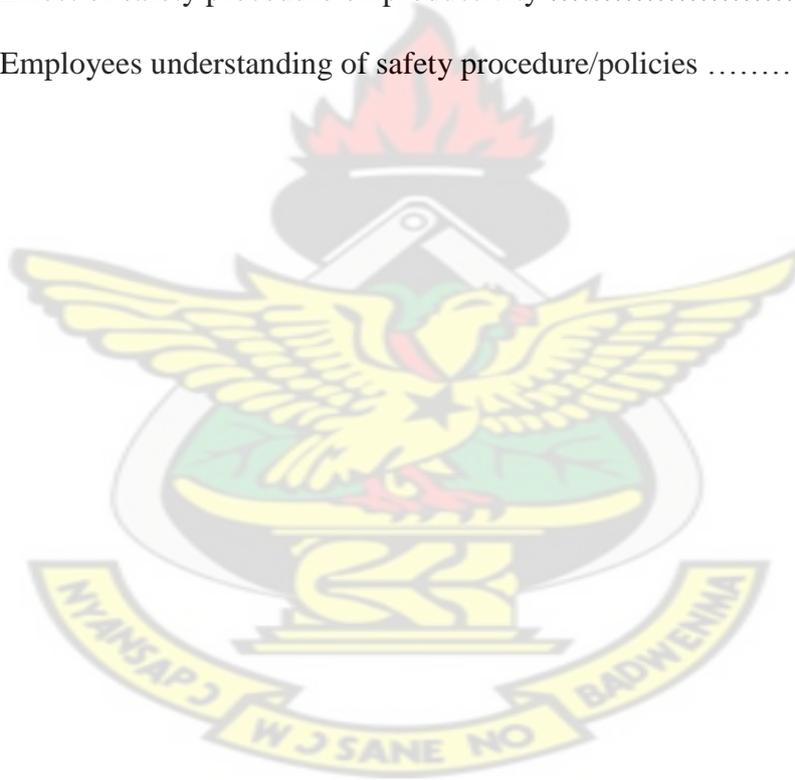
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CHAPTER ONE

INTRODUCTION

This chapter entails the background of the study which captured health and safety standards on an organisation's productivity and how it can boost higher performance. The chapter also covers statement of the problem, purpose of the study, significance of the study, organisation of the study and limitation of the study.

1.1 Background to the Study

Occupational health and safety is a process of ensuring that people stay safe and healthy in the workplace to increase workers capacity to perform. The workplace has become an integral part to the viability of business for employers, labour union, the society as well as the government. The quality of the workplace environment has an impact on the level of employees' motivation and performance. How well employees engage with the organisation, especially the immediate environment influences to a great extent their error rate, level of innovation and collaboration with other employees as well as absenteeism and ultimately affect the number of years they stay on the job. Health and safety standards instituted by organisations is aimed at the promotion and maintenance of the highest degree of physical, mental, social well being of workers in all sectors that have an impact on the health of employees.

In the globalised world, the relative edge of developing countries such as Ghana lies with the cost of labour. Labour cost has become an important consideration in product and service development as most firms aim to maximize productivity from their workforce and equipment. Lehtinen, (2001) argued that health and safe working conditions improve productivity and will thus, help developing countries become competitive in the

globalised world economy and that is why many organisations are making efforts to ensure that health and safety is managed at the work place effectively. According to Hughes, (2007), health is the protection of the body and mind of people from illness resulting from work. He also defined safety as a protection of people from physical injury. Hughes, (2007), however explained health and safety as, the welfare of people at work that is, the protection of facilities to maintain the health and well-being of individuals at the workplace. Safety hazards according to Cole, (2002), are those aspects of the work environment that have the potential of immediately causing violent harm to an employee whilst health hazards slowly and cumulatively lead to deterioration of an employee's health.

Productivity is what people can produce at a given period with the least effort and resources. It is also a ratio that measures how well an organisation put resources into goods and services. Work environment can be seen as the circumstances, influences, stress, competitive, cultural, demographic, economic regulator and technological factors that affect the survival, operations and growth of an organisation.

According to Sundstrom et al, (1994), most people spend about seventy percent of their lives within the work environment which greatly influence their mental status, actions, abilities and performance. Better outcomes and increased productivity is assumed to be the result of better workplace environment. Alternatively, various literature pertaining to the study of the environment of work indicated that the factors such as dissatisfaction, cluttered workplaces and physical environment are playing a major role in the loss of employees' productivity (Carnevale, 1992).

The goal of organisations in instituting health and safety programs is to foster a safe and risk free work environment for the employees and the stakeholders at large to ensure efficiency of personnel and the end result to maximize productivity. Productivity has been an essential contributor to corporate success due to the fact that occupational health and safety has a direct translation of it into cost savings and profitability. An unsatisfactory work environment can have an adverse effect on worker motivation that tends to make minimal effort towards work thereby lowering performance.

The rubber firm is considered to be one of the most dangerous working environments for employees. Workers are exposed to hazards ranging from the use of chemicals, complex machines and working tools, odor, noise, factory waste, unguarded machinery, inadequate fire precautions and often, working under pressure for high productivity.

Health and Safety standard is very important in the manufacturing sector since a lot of employees have lost their lives whilst others have sustained various degrees of injuries through accidents. Although knowledge and experience are important parts of safe work and prevention of accidents, employees' aptitude and approach to work is also essential for ensuring a healthier working environment. According to Casio, (1996) it is easy to bypass the safe way to work but is often the precursor to an accident.

Industrial safety in Ghana is both a public and private issue. Manufacturing sector can be safe and enjoyable if employees follow the standardised procedures. It is regrettable that both employees and employers have demonstrated minimal commitment to reducing the level of accidents in the industry. Health and safety at the work place involve prevention or reduction of accidents and hazards such as injuries, material for production defects,

equipment frequent breakdown, which affects production as well as the prevention of the employee's health problems such as emotional stress, lung diseases due to frequent inhaling of smokes, and so on. Employees are entitled to carry out their work in a safe environment, free from harm. However, in most times the basic right is violated due to a dearth of information on workplace health and safety standards. Individuals are often exposed to health and safety risks from their work. The International Labour Organisation, (2005) estimates that, some 6,000 workers die each day as a result of work-related accidents or illness. The total cost of such accidents and ill health have been estimated by the International Labour Organisation to equal 4 per cent of global Gross Domestic Product. The traditional approach to safety in the workplace used the 'careless worker' model. It was assumed by most organisations and the accident prevention bodies that most of the accidents were due to an employee's failure to take safety seriously while on the job.

Health and safety if put in place contribute to a good working environment as people spend most of their time at the workplace and so their working environment should be made safe, favorable and conducive to enhance a high level of productivity and to increase income for both the employer and employee. Good health at work helps improve employee's health in general and also the productivity and competitiveness of businesses. Furthermore, workplace problems of health and safety exert a high cost for social protection systems and therefore workers need to be provided with suitable working conditions if their general wellbeing is to be enhanced. According to Stranks, (2000) all workers have a right to work in places where risks to their health and safety are properly controlled but due to poverty and illiteracy, people choose to work in any establishment or undertake any duty assigned in order to earn a living.

The main causes of injury in the selected firms for the study include slipping or tripping of employees on the work floors, machine related issues, exposure to noise, odor, dust as well as exposure to various chemicals. To this effect, employers have to take reasonable steps as a legal responsibility to ensure health, safety and welfare of their employees at work in order not to be found liable for any personnel injury. The employers responsibility to the employees include a duty to provide safe plant and machinery and safe working premises, a safe system of work and competent trained and supervised staff. Certain groups of employees may require more care and supervision than others for example disabled workers, pregnant workers and illiterate workers etc.

Workplace health and safety raises the question of economic costs. The economic cost of occupational health and safety to the organisation is double-edged. On the one hand, health and safety measures which protect employees from the hazards of the workplace can conflict with management's objective of containing production costs. On the other hand, effective health and safety policies can improve the performance of employees and the organisation, by reducing costs associated with accidents, disabilities, absenteeism, or illness. There are also indirect costs associated with work-related accidents. The indirect costs include overtime payments necessary to make up for lost production, cost of retaining a replacement employee, a wage cost for the time spent by human resource manager personnel recruiting, selecting and training the new employee and, in less typical cases, the cost associated with loss of revenue on orders cancelled or lost if the accident causes a net long-term reduction on sales as well as the negative effect on morale in workers which may also lead to possible reduction in the quality of work (Rousseau, 1998).

Overall, the costs of most work-related accidents or illnesses to workers and their families and to employers are very high. On a national scale, the estimated costs of occupational accidents and illnesses can be as high as three to four per cent of a country's gross national product. In reality, no one really knows the total costs of work-related accidents or diseases because there are a multitude of indirect costs which are difficult to measure besides the more obvious direct costs. Investment in safety prevention will lead to a significant decrease in occupational accidents and diseases which will also help save lives, prevent enormous human suffering and financial resources through employee absenteeism.

As Health and Safety standards play a vital role in working environment to reduce levels of occupational accidents and diseases, it relies on the cooperation of both employers and employees to ensure a 'self-generating effort' between 'those who create the risks and those who work with them' (Robbins, 2004). It is therefore important for organisations to treat every employee's complaint seriously and to ensure that they feel safe and healthy. A healthy and safe work environment helps to reduce costs and improve organisational effectiveness. If work-related illness and accidents can be transposed on to the balance sheet, the organisation can apply the same management effort and creativity to designing and maintaining a healthy and safe workplace as managers customarily apply to other facets of the business. As Robbins, (2004), stated 'accident prevention can be integrated into the overall economic activity of the firm'.

1.2 Statement of the Problem

In recent years some workers have temporarily or permanently been disabled by work related accidents as a result of inadequate safety knowledge on handling machines and equipment, neglecting to follow simple procedure in accomplishing task or management not providing the right safety standards and resources for employees.

Every business has the legal responsibility to ensure the health and safety of employees and other people affected by the business activities such as customers and suppliers. Poor health and safety practices lead to illness, accidents and significant cost to the business. Effective health and safety practices pay for themselves and improve the reputation organisations have with customers, regulators and the employees.

The human resource is one of the versatile resources an organisation depends on for production. Therefore, an effective and efficient use of the human resource will translate into the overall effectiveness and efficiency of the organisation. Although, many organisations accept the human resource as an important resource, 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 organisation work in safe and healthy environment that will promote their optimum utilization. It should be emphasized that accidents are costly both to the affected worker and the organisation. Therefore, every effort should be made by management and employees in order to avoid occupational accidents from occurring.

Manufacturing is one of the most physically challenging environments employees do work. Workers encounter many hazards and other issues that compromise their safety such as excessive noise, operating on dangerous/complex machines and conditions that

cause injury to employees. Casio, (1996) noted that machines and work environment have been the major causes of safety hazards. Most employees are less concerned about safety precautions at work, their cost, effect and benefit to themselves and the organisation as a whole. This is as a result of ignorance and negligence to safety measures and regulations instituted by the organisation.

Workers do not adhere to the precautionary measures put in place with the organisation such as wearing of personal protective equipment, machines usage, and inadequate system of delivery and storage of materials, inadequate information for task to be accomplished as well as poor level of understanding of health and safety policies put in place by the organisation. The effect of insufficient instructions on safety standards result in accidents leading to rampant loss of lives, injury and damages to properties. This has a negative impact on the organisation as employees are not motivated to do their best on the job that trigger performance. Thus, resources that would have been used to develop staff, given as incentives or alternatively expanding the business operations would be used in paying for medical bill, and hiring of temporary workers, paying for compensation and related court issues which also has its impact on the organisation.

Although Management and employees are making efforts to ensure safety in the workplace, accidents at the workplace keep on increasing which indicate that work environment is still unsafe. It is in this vein that the study has chosen to examine the effect of health and safety standards on the organisation's productivity in Ghana Rubber Estates Limited and how it can boost higher performance of employees and make recommendation on the health and safety of employees in the organisation.

1.3 Research Objectives

1.3.1 General objectives:

The main objective seeks to evaluate the effect of health and safety standards of employees on productivity.

1.3.2 Specific objectives:

The specific objectives of the study include to:

- 1 identify health and safety standards in Ghana Rubber Estates Limited
- 2 determine the effect of health and safety on employees' productivity.
- 3 examine employees' level of understanding of health and safety policies of the organisation.
- 4 assess the attitude of management towards the health and safety of employees.
- 5 identify the challenges of health and safety standards in the organisation

1.4 Research Questions

The following research questions were used to achieve the objectives of the study.

These include;

- 1 What are the safety standards put in place in the organisation?
- 1 How has health and safety standards affected employees' productivity?
- 2 What is the level of employees understanding of health and safety policies of the organisation?
- 3 What is the attitude of management towards health and safety of employees?
- 4 What are the challenges of health and safety standards in the organisation?

1.5 Significance of the Study

One of the primary goals of organisations is to optimize human resource to achieve set targets. Issues of health and safety within organisations are critical in the accomplishment of tasks. Industrial accidents and illness make up one of the largest part of loss of production time in the industry and these injuries have posed a major challenge to most manufacturing industries. Companies have suffered long spells of production shortfalls, compensation payment, insurance premiums and legal battles due to injury, reduction to the quality of life, family problems and decrease of life-span and other effects which is impossible to evaluate its qualitative cost on the employee, organisation, society and the nation in general.

Health and safety of workers is a moral responsibility within our society that cannot only depend on productivity criteria within a particular company but can also have a serious consequence for individual workers, society and the nation as a whole. It is of the hope that the study would boost the morale of employees and ensure job security at all times by getting a better understanding of health and safety practices in the organisation. The study would also help the employees to comply with organisational health and safety standards which in the long run would reduce accidents and injuries at the workplace thereby increasing their performance and productivity.

This study would serve as the bases for increasing the awareness of health safety as well as identifying the weaknesses of the various strategies that employers adopt to enhance health and safety standards and recommend the possible ways of improving them. Employers would appreciate the cost of equipping employees with the right protective clothing and standards to ensure accident free environment.

Findings and recommendation offered should not only add to existing literature for academic purposes, but also provide useful insights and guidelines for enhancing the quality of health and safety among employees in organisations.

1.6 Limitation of the Study

As with many human endeavors, the study was not without any shortcomings. Some of the requirements in the questionnaire were sensitive company information and as such, employees and employers were reluctant in answering questions which was critical in providing the necessary response for the study as they were of the view that providing the right answers may affect them directly or indirectly.

1.7 Organisation of the Study

This dissertation is organized into five chapters. Chapter one presents the background to the study, problem statement, objectives (both general and specific). It also outlines the research questions, significance, as well as the limitations of the study. The second chapter reviews relevant literature on the concepts and core issues of the study while chapter three explains how the study was conducted. Methodological issues considered here include the study design, study population, sample size and sampling procedure and instrumentation, sources of data and procedure for data analysis and presentation. Chapter four discusses and analyzes the results of the study while chapter five summarizes, offers recommendations and conclusion for the study.

CHAPTER TWO

REVIEW OF LITERATURE

2.1 Introduction

This chapter seeks to review related literature of the study through a historical background information of health and safety standards in Ghana, various literature on health and safety to empirical analyses.

2.2 Historical background information of health and Safety standards in Ghana

In Ghana, the Occupational Health and Safety Act was established under the Factory Offices and Shops 1970 (Act, 328). The main provisions of the Act are intended to bring it in line with internationally accepted standards on safety, health and welfare of employees. The occupational health and safety activities stated under the Act, include, creating safe work and work environment and promoting the safety, health and welfare of employees in order to ensure effective utilisation of human capabilities thereby promoting increased productivity.

Although Ghana does not have a national policy on Occupational Health and Safety, the Ghana Labour Act, 2003 (Act 651) has made provision for Occupational Health and Safety. Provisions made under Part XV Section 118 of the Act include placing a responsibility on employers to ensure a safe and healthy working environment and obligation on employees to use safety appliances provided by the employer in compliance of the employer's instructions.

It is generally known that developing countries like Ghana lack relevant policies to adequately cater for the health and safety of employees (Quainoo,2001). Accident rate in

the manufacturing and construction in developing countries are known to be at levels that are several times higher than in the industrialized countries (Clarke, 2005). In the case of Ghana, Quainoo, (2001) noted that the Factories Inspectorate Division spanning a period between 1987 and 1996 showed that many accidents occur in Ghanaian factories that go unnoticed and are not reported in the media. Available statistics indicate that about 734 persons sustained various kinds of injury with 55 fatalities in 1997 at workplaces in Ghana. Another 898 work-related injuries and 54 deaths were recorded in 1998. In 1999 alone, 57 fatalities occurred with 1,190 injuries (Micah & Aikins, 2002)

Bavon, (2000) remarked that in Ghana, the current legislation (Labour regulation, 2007, L.I, 1833) does not meet the standards of a good compensation system for the modern worker. A draft policy jointly developed by the Ministries of Labour, Health and Mines and Energy as far back as 2000 is yet to be adopted. In the absence of a national occupational safety and health policy in Ghana, two main statutes have charted the course for the provision of services over the years. These are the Factories, Offices and Shops Act, (328) of 1970 and the Mining regulations 1970 LI 665. These have driven the implementation in the labour and mining sectors respectively. Other statutes that have a bearing on health and safety are the Workmen's Compensation Law 1987, Environmental Protection Agency Act, (490) of 1994. (Bavon, 2000).

The vast majority of industries including the agriculture and most of the informal sector are not specifically covered. Besides, the provisions are very limited in scope for prevention. Preventive strategies like risk assessments, medical surveillance and control hazards are not catered for. According to Clark, (2005), there is lack of specification of standards which should form the yardstick against which services are to be evaluated.

Thus in general Ghana like many other developing countries has a long way to go in designing and implementing occupational safety and health policies and programmes that could enhance the welfare of its working force.

2.3 The Concept of Occupational Health Safety (OHS)

Safety involves more than the typical dictionary definition of “free from accident”. The World Health Organisation, (1999) defines health as a “state of complete physical, mental and social well being and not merely the absence of disease or infirmity”. Thus health and safety refer to the preventing and protecting people from injury and occupational disease in any form due to hazards and risk that may harm, injure, cause unsafe environment to people or damage equipment or the facilities put in place at the workplace.

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The International Labour Organisation, (1996) defines occupational health and safety as a discipline with a broad scope involving many specialized fields. In its broadest sense, it aims at the:

1. promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations;

2. prevention among workers of adverse effects on health caused by their working conditions;
3. protection of workers in their employment from risks resulting from factors adverse to health;
4. placing and maintenance of workers in an occupational environment adapted to physical and mental needs; and
5. adaptation of work to humans.

A healthy workplace as defined by World Health Organisation, (1999) definition, is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace by considering the following, based on identified needs:

1. health and safety concerns in the physical work environment;
2. health, safety and well-being concerns in the psychosocial work environment including organisation of work and workplace culture;
3. personal health resources in the workplace; and
4. ways of participating in the community to improve the health of workers, their families and other members of the community.

Health and safety hazards and risk must be managed and controlled to achieve high level safety performance. Management entails leadership, authority and co-ordination of resources, together with planning and organisation, communication, selection, training of subordinates, accountability and responsibility. To achieve occupational safety and health objectives all parties involved at the workplace such as management, personnel or workers and union officials and people concerned have to be visibly committed to the health and safety programmes.

2.4 Safety and Productivity in Organisation

Productivity is generally seen as a measure of the amount of output generated per unit of input. In many countries, public sector productivity has been assumed to be zero in the national accounts. According to Boyle (2006), output of the government sector has been measured as equal in value to the total value of inputs. This output one-forth input convention has increasingly come under scrutiny in recent years. The challenge is to devise alternative estimates based on output measurement in a public sector context where collective services are provided and where there is, in most instances, no market transaction in services provided to individuals (Boyle, 2006).

Putnam, (1993) rejects the idea of including outcomes in productivity measurement. He opined that productivity should focus on outcomes (changes in health rather than patients treated; changes in educational status rather than numbers of lessons taught) includes changes over which the government has no control. Holzer and Seok-Hwan, (2004) argue that although the concept of productivity has been utilised for many years, it is often simplified, misinterpreted and misapplied. According to them, the concept of performance may represent a more attractive conceptual path toward improvement. Still, both concepts are underlying premises of public administration and the core of an ongoing effort that persists because it addresses a fundamental linkage: a productive society is dependent upon a high-performing government. In fact, the use of the concept of productivity has been intermingled with the concept of performance (Jackson, 1999).

According to Holzer & Seok-Hwan, (2004) productivity and performance are functions of many factors ranging from top management support, committed personnel at all levels, a performance measurement system, employee training, reward structures, community

involvement and feedback to correction of budget-management decisions. It is thus important to build up capacities for productivity improvement. Productivity at organisational and process levels has focused on manufacturing industry; it is based on an assumption of an organisational core process as an industrial production process (Gummesson, 1992).

McCunney (2001) intimated that productivity is also often linked to discussions concerning general efficiency. Productivity is understood in a wider sense and combined to rationalisation of work and improvement of wellbeing in the work community. McCunney (2001), views productivity as a conceptual phenomenon and widening the concept weakens its characteristics as a tool for research and development.

At the core of the healthy organisation perspective is the relationship between healthy work contexts and organisational, rather than individual, outcomes. Productivity or organisational performance is one set of outcomes. Most research linking employee health to productivity takes a conventional health promotion perspective. This reflects the expansion in the United States of workplace wellness programs in a drive to reduce employer medical care costs (Baker and Green, 1991).

Muchemedzi and Charamba, (2006), view occupational health and safety as a science concerned with health in its relation to work or working environment. Oxenburgh et al., (2004), intimated that the health and safety of all employees is closely linked to the company's productivity in all workplaces. In most cases, occupational health safety is largely measured by negative outcomes such as workplace injury and illness but these measures have a shortfall, for instance, a low incidence of injury does not necessarily

mean that adequate safety systems and controls are in place (Health and Safety Executives, 2006).

2.5 Measuring Productivity

According to Gunderson (2002) a number of researchers have been developing performance indicators to measure the impacts of a range of workplace practices on firm-level performance. Examples include gross or net sales per worker, the ratio of physical input to output, and the scrap rate and uptime for production equipment. The choice of the outcome variable is constrained by the data available for the firms or industries under study (Stainer and Stainer, 2000). In studies of workplace innovation, such as job redesign, teams, reduced hierarchy, or the delegation of responsibility, it is difficult to measure productivity accurately and consistently (Stainer and Stainer, 2000).

According to Brinkerhoff and Dressler (1990), understanding how healthy work environments affect productivity also requires more detailed analysis of individual worker's job performance than presently available. Brinkerhoff and Dressler (1990), opined that productivity reflects results as a function of effort. They however intimated that efficiency (input to output) and effectiveness (the process of getting a task done) do not necessarily equate with productivity, because the latter takes into account the end cost of the product or service. For example, working harder may not have the same productivity payoffs as working smarter, which may not require more time or effort. Both kinds of effort may vary in their effects depending on the specific organisational context.

Productivity depends on an individual's job performance (Jex, 1998). In assessing how work environments contribute to worker well-being, it is important to distinguish between

‘task’ and ‘contextual’ performance (Parker and Wall, 1998). The latter refers to helpful coworkers, communication, ‘entrepreneurship’, innovative activities, initiative, adaptation to change, and flexibility. These reflect workplace social relationships and are critical as more organisations depend on team work for their success (Yeatts and Hyten, 1998). Duxbury and Higgins, (1997) stress that, supportive managers are a key ingredient of effective teams, just as they are crucial to employee well-being. The healthy organisation model draws on the population health literature dealing with environmental influences. This mirrors organisational performance research which tries to situate individual workers in their workplace context. As Demmin, (1986), argues, most variance in worker performance is due to the attributes of work systems, not individuals.

Furthermore, in organisational behaviour research, there are many unanswered questions about how job designs affect contextual features of performance (Parker and Wall 1998). Yet at the same time, workplace innovation studies suggest that greater employee participation and autonomy affect learning and skill development, which in turn may contribute to productivity (Bélanger, 2000; Black and Lynch 2000). One point of convergence is that many innovative work organisation practices and job designs are documented to make jobs less stressful and healthier (Karasek and Theorell, 1990).

Muchemedzi and Charamba, (2006) explain that accidents do not arise from a single cause but from a combination of factors which act simultaneously. A potentially unsafe situation does not cause an accident until someone is exposed to it. Accidents are caused by the result of unsafe acts or practices (the human element that results from poor attitudes, physical conditions and lack of knowledge or skills to enable one to work safely). They are also caused by the result of unsafe conditions of equipment or materials.

Koopman, (2001) states that accidents bring pain and suffering to the worker and his family. When it results in permanent disability, the consequences are disastrous for both the victim and the company. The victim loses his earning capacity and ability to enjoy a normal active life, and the society and company are deprived of his/her skill and contribution to production. The 1969 Frank Bird Accident Ratio study on causes of accidents found out that 88% of accidents are caused by unsafe acts of persons, 10% are caused by unsafe mechanical or physical conditions and the remaining 2% are unpreventable.

According to McCunney, (2001) the primary beneficial impact of occupational health and safety on productivity is reduced absenteeism. McCunney, (2001), demonstrates that the health risks and failure of employees to participate in fitness and health promotion programmes are associated with higher rates of employee absenteeism. There is need for much emphasis on the employer's participation in ensuring that health and safety programmes and policies are existent. If these health and safety practices are set, it is more likely that the worker participates in order to preserve his/her life. However, absenteeism may be encountered but may be completely neither unjustified on medical grounds nor attributable to unsafe conditions or hazardous events in the workplace. It is difficult to demonstrate conclusively the extent to which business prosperity benefits from good health and safety or on the contrary, to say that prosperous businesses have good health and safety because they are able to afford it (Health and Safety Executive, 2006).

The Health and Safety Executive, (2006) argue that there is clearly a vicious circle in that, a healthy and happy workforce is more productive, leading to increased investment in

health and safety to reduce accidents, which in turn leads to further productivity gains. The Health and Safety Executive, (2006) further explains that genuine productivity gains can be realized by those businesses that invest in high performance health and safety practices. However, the Health and Safety Executive, (2006) also recognizes the need to have a positive attitude by many organisations if they are to move on from simply attaining minimum legal compliance toward implementing the best practice of health and safety. For those organisations that make the transition, the rewards are well worth the effort. In other words, when an organisation is committed to health and safety best practice and implements it in a properly managed manner.

2.6 The Employee and the Working Environment

According to Fleming & Lardner (2000), employees' physical well-being such as the mind and body needs to be in a state of good health and well-being to concentrate on a job assigned. This is a prime prerequisite for productivity. High productivity brings a sense of achievement for the individual as well as marginal increase in profits for the organisation. A positive working environment for employees is the common goal of all employers and managers in organisations. Such an environment encompasses favorable working conditions, timely management feedback and an understanding of job goals and prorate.

According to Professor Jorma Saari (2010), of Centre of Expertise for Human Factors at Work, Finnish Institute of Occupational Health, a healthy workplace is an environment where health risks are recognised and controlled if they cannot be removed. In a healthy workplace, the work is designed to be compatible with people's health needs and limitations and employees and employers recognise the responsibilities they bear for their

own health and that of their colleagues. A safe workplace is an environment where, to the highest degree, workers' well-being physical, mental and social is promoted and maintained. All possible efforts are made to prevent workers' ill health caused by working conditions, to protect workers in their employment from factors adverse to their health, and to place and keep workers in their individual physiological and psychological conditions while also promoting and maintaining a work environment that is free of harassment (Jorma, 2004).

Studies have shown that employers are also willing to make wage concessions in order for employees to work in better environment. It is the quality of the employee's work place environment that impacts on the level of employee's motivation and subsequent performance. How well they engage with the organisation especially with their immediate environment influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and ultimately, how long they stay in the job (Knight, 2005). Work environment means the milieu around a person; it is the social and professional environment in which a person is supposed to interact with a number of people. The working environment according to Wheatley (1995), is the quality of working conditions; however, the procedures for trying to develop the workplace standard should also be addressed. The working environment has been a priority area in several countries and these countries have requirements for systematic efforts in this field.

From the view point of Knight (2005), a positive working environment for employees is the common goal of all good owners and managers of an organisation. Such an environment encompasses favorable working conditions, good ventilation, timely

management feedback and an understanding of job goals. He also states that creating a working environment in which employees are productive is essential to increased profits for an organisation, corporation or small business. Principles of management that dictate how exactly to maximize employee productivity center around two major areas of focus: personal motivation and the infrastructure of the work environment. One of the key factors in leveraging human resource in giving up their best on the job is found through motivational incentives. While the most obvious incentive for increasing employee productivity is often thought to be based on salary and promotions, this is not always the case. In fact, recent thought on the true nature of optimal human resource management has concluded that in a large number of cases, salary has less to do with motivation than do other important factors (McKenzie and Smeltzer, 1997).

In addition Goldstein (1982), has indicated that a healthy level of communication and personal motivation in the workplace, the actual physical layout of an office is extremely important when it comes to maximizing productivity. While many managers and business owners choose to suffice with a certain minimum level of office accessories, they may be ignoring what can amount to a major obstacle on the path to increasing employee productivity. Vencevich, (1995) identified that employees must be given a workspace that they can call their own whether it is an office, cubicle, workshop or even a desk in open space, there should be a high level of importance placed on helping workers foster a sense of “place” in the company. Along with this, office managers should ensure that equipment at the work place is ergonomic and sound. Indeed, it has been found out that a productive work environment requires management that is able to positively motivate its employees in an infrastructure that is amenable to employees’ needs. A widely accepted assumption is that better workplace environment produces better results. Mostly

the office is designed with due importance to the nature of job and the individuals that are performing the job.

The performance of an employee is measured actually by the output the individual produces in relation to productivity. At corporate level, productivity is affected by many factors such as employees, technology and objectives of the organisation. It is also dependent on the physical environment and its effect on health and employees' performance. Other factors include employees applying the skills they learnt during training programs once they return to their workplace. Tending to the structural and interpersonal aspects of each of these factors enables employees to apply the required skills in a consistent and habitual way (Knight, 2005).

According to Moos, (1994) work environment preferences can be measured using three dimensions of work environment settings: system maintenance, goal orientation, and relationship dimensions. System maintenance refers to how orderly and organized the work setting is, how clear it is in its expectations, and how much control it maintains. Goal orientation assesses the degree to which an environment encourages or stifles growth through providing for participation in decision making and autonomy, maintaining a task orientation, and providing job challenges and expectations for success and accomplishment. The relationship dimension measures the degree of interpersonal interaction at the work environment, such as the social communication exchanges and cohesion among workers, and the friendship and support provided by co-workers and management. These work environment preferences have been shown to affect individuals' personal functioning at work (Billings and Moos, 1982). Examination of work environment preferences can help identify organisational factors that may be problematic,

and can guide interventions aimed at reducing employee stress and increasing the health and safety in a variety of work settings.

2.7 Safety Standards and Health Problems Faced by Employees

In most accidents, managers and supervisors almost instantaneously point fingers at human efforts and unsafe actions as the ultimate cause without probing deeper into the root cause of the accident. Such incidents occur due to multifaceted factors. Human errors and unsafe actions caused by illiteracy, lack of training, poor supervision, technical flaws relating to design, layout, machine guarding and arrangement of work (Krishnan, 1999). Very often it is found out that accidents occur in activities ancillary to the main purpose of the organisation, and these activities are given less safety focus by the management. Safety standards is a orderly arrangement of interdependent activities and related procedures that drives on organisation health and safety performance. According to Bryan, (1999), it can be defined as the plan to reduce and eliminate hazards and risk at workplace.

According to occupational Health and Safety Act 651, health and safety means the conditions or factors that affect the well being of employees, temporary workers, contractors, personnel, visitors and any other person at the workplaces. It is a part of the overall management system that facilitates the management of the occupational health and safety risk that are associated with the business of the organisation. This includes the organisation structure, planning activities, responsibilities, practices, procedures, processes and resources for developing, implementing, achieving, reviewing and managing the organisation's health and safety policy.

From the view point of Wayne, (2002), each employer has a general duty to provide a place of employment free from recognized hazards, they also have the special duty to comply with all health and safety standards. The Occupational Health and Safety Act to date, has issued a large number of detailed standards covering numerical environmental hazards. The occupational health and safety standard governs potentially unsafe work condition that employees may be exposed to, for example, the Act states that the employer must provide suitable protective clothing's such as safety shoes, cap, aprons and appropriate tools and equipment for their employees to carry out task. The Act also states that suitable first aid facilities must be provided or be available at the workplace as well as safety signs placed at specific risk and hazardous points to warn employees as well as to ensure that the employer provides the maximum level of comfort at the workplace.

The Act also charges the employers and employees to report incidents and accident in the workplace for at least three years. Majority of such standards were acknowledged as helpful and important by all organisations. The health and safety at work defines the duties and obligations of both employers and employees in ensuring that the workplace is maintained as a safe working environment. This Act consolidated many previous enacted safety requirements and made employees responsible for their own safety. Employers are obliged to avoid health and safety hazards and secure a safe working plant and implement code of practice for safety and emergency evacuation. Employers have the duty of issuing a written statement of general policy with respect to health and safety matters in their organisation and implementation for the revision with the organisation and also to provide for the appointment of safety representatives (Labour Act, 651).

In accordance with the Factory, offices and shops Act, (1970), employees have the duty to take reasonable care for their own health and safety and that of other persons who may be affected by their operations. Again they are to co-operate with the employer or any other person who has a duty to carry out under the same Act. In the view of Pantry (1995), work – related illness and injuries have been a feature of employment since industrialization begun. Such illness and injuries clearly have important physical, emotional and financial consequence for workers and their families, society and the nation as a whole. Sickness absence costs the UK economy approximately €400 – 500 per employee each year. Over 200 people die in accidents at work each year. Occupational health means keeping oneself free from illness associated with conditions at work. Work-related illnesses are a major health problem in the UK today (World Health Organisation, 2002). Hazards at work may or may not be obvious such as exposure limits in which many substances and environments established under cost regulations, exposure limits maybe exceeded accidentally.

According to Cole, (2002), the highest numbers of accidents occurring in organisations' (manufacturing) premises was due to persons falling, slipping or tripping. Therefore, floor surfaces must be of a suitable construction to reduce this risk. A major reason for the high incidence of this kind of accident is that water and grease are likely to be spilt, and the combination of these substances is treacherous and makes the floor surface slippery. For this reason any spillage must be cleaned immediately and warning notices put in place, where appropriate, highlighting the danger of the slippery surface.

2.8 The Working Environment and Performance of employees

Every worker has the right to work in a healthy and secure environment. It is the prime duty of the employers to give their labor force with an environment that is safe, healthy and friendly. Workers' health and safety should be the prime concern of all the employers. A worker of an industry or organisation is liable to work in an environment where his safety and health are properly taken care of.

The workplace is the setting in which many people spend the largest proportion of their time. Indeed, for many people, particularly in developing countries, the boundary between their home and workplace environments is blurred, since they often undertake agricultural or cottage industry activities within the home. Growth of the latter has often been spurred by population growth and rapid urbanization, in combination with economic development, and in parallel with larger, more conspicuous industrial development (Pantry, 1995).

In favourable circumstances, work contributes to good health and economic achievements. However, the work environment exposes many workers to health hazards that contribute to injuries, respiratory diseases, cancer, musculoskeletal disorders, reproductive disorders, cardiovascular diseases, mental and neurological illnesses, eye damage and hearing loss, as well as to communicable diseases (Weeks, et al, 1991).

In an article presented by the World Health Organisation, the current global labour force stands at about 2600 million and is growing continuously. Approximately 75% of these working people are in developing countries. The officially registered working population constitutes 60–70% of the world's adult male and 30–60% of the world's adult female

population. Each year, another 40 million people join the labour force, most of them in developing countries. Workplace environmental hazards are therefore a threat to a large proportion of the world population (World Health Organisation, 1999).

Workplace design and processes may promote organisational success by creating environments that support work quantity, quality, and style, while improving turnover and absentee rates (Mohr, 1992). Over the years, many organisations have been trying new designs and techniques to construct office buildings, which can increase productivity, and attract more employees. Many authors have noted that, the physical layout of the workspace, along with efficient management processes, is playing a major role in boosting employees' productivity and improving organisational performance (Vancevich, 1995).

According to Cole (2002), the key factors that affect employees' productivity and performance fall into two categories: Management driven factors which include the development of organisational plans such as the allocation of responsibilities at all levels of the organisation, definition of job descriptions and the degree of access to the management and administrative support needed to complete their tasks, working patterns, shift-working, break times, absence or holiday cover and health and safety policies, including the provision of training, development of safe working practices and the adequate supply of protective clothing and equipment.

The other factors that affect performance and productivity arise from the work premises, office or factory design, machinery and workshop tools, workspace availability, light intensity, weather, temperature ventilation, humidity, noise, vibration, hygiene and

welfare facilities. A factory, workshop, production floor design, function often follows from when an office is configured to maximize employee interaction, then collaboration becomes an integral part of every workday. Office designs based on setting up work areas wherever they are needed in the production floor can raise satisfaction while boosting density.

In recent times the organisations design is a critical ingredient to the success of any business operation. However, most companies have a remote or mobile workforce, diverse employee demographics, specific corporate and branding objectives, an international workforce and global clients. According to Neal, (2000) an employee's workplace is responsible for 24 per cent of their job satisfaction level and this can affect staff performance by five per cent for individuals and 11 per cent for teams.

The workforce is the most valuable asset of any business and as such serious attention should be given to the physical environment of the office which is more likely to increase staff productivity. Poor workplace design, by contrast, is linked to lower business performance and higher level of stress experienced by employees physical, psychological, and social well-being and consequently work performance.

Clark (2005) observed that the costs of unhealthy and unsafe workplaces have been well documented and are calculated in terms of absenteeism. According to the World Health Organisation Report, (2002), one person in four suffers from a mental health problem at some point in their life. A 2006 report commissioned by five leading mental health charities states that at least one million adults in the UK are out of work with mental health problems.

Work-related stress is the root cause of a significant degree of mental ill health. Stress can manifest itself in absenteeism, reduced productivity, and increased staff turnover. Excessive stress can lead to fatigue, impaired judgment and decision-making and the onset of both mental and physical health problems. The impact of health on performance is demonstrated by a study of employees at the US banking giant Wachovia, which found that employees who are put through an energy renewal program outperformed a control group by 15% to 20% in achieving bottom line targets for sales and business growth (Phillips, 1995).

2.9 Safety and Health Culture

Health and Safety is encompassed among other disciplines of industrial hygiene that affect employees and other related persons at workplace. Although, working environment has improved considerably during recent times, but occupational accidents still occur. The prevention of work related injuries still remains as a major problem faced by all employers. Every organisation has some common internal characteristics that identified as its culture. These characteristics have often become invisible to those inside, but may be startling to outsiders coming from a different culture. Health and safety culture within a company is closely linked to the workforce's attitudes in respect to safety as they share the company's risk, accidents and incidents.

According to Glendon and McKenna (1995), effective safety management is both functional (involving management control, monitoring, executive and communication sub-systems) and humanistic (involving leadership, political and safety culture sub-systems paramount to safety culture). The role of management and the involvement of all

employees as important key players in health and safety culture are important in order to cultivate the positive beliefs, practices, norms and attitudes among all in the company. Building a safety culture on so many diversities is not an easy task. But it had been proven that companies with good health and safety cultures have employees with positive patterns of attitude towards safety and health practices. Companies need to gather safety related information, measure safety performance and bring people together to learn how to work more safely.

Rousseau (1988), defined culture as, “the ways of thinking, behaving and believing that members of a social unit have in common”. Reason (2000), identified a number of characteristics that go to make up such a safety culture. These include, an informed culture, reporting culture, flexible culture, just culture and learning culture. An informed culture he said, refers to those who manage and operate the systems knowledge about the human, technical, organisational and environmental factors that determine the safety of the system as a whole, whilst a reporting culture is the willingness in which people report errors and near misses. A just culture is an organisation where an atmosphere of trust is present and people are encouraged or even rewarded for providing essential safety-related information- but where there is also a clear line between acceptable and unacceptable behaviour. On the other hand, a flexible culture takes different forms but is characterised as shifting from the conventional hierarchical mode to a flatter professional structure. Again, a learning culture is the willingness and the competence to draw the right conclusions from its safety information system, and the will to implement major reforms when the need is indicated.

Glendon and McKenna, (1995) also identified four critical indicators of safety culture which include, the effective communication which leads to commonly understood goals

and means to achieve them at all levels, good organisational learning, whereby organisations are able to impact on relatively how much time and attention is essentially paid to health and safety as well as external factors such as financial health of the organisation, the prevailing economic climate and impact of regulation and how well these are managed.

2.10 Occupational Injuries

According to Weeks et al, (1991), the area of safety seeks to make workplaces safe for workers within organisations. The concept of safety is that of occupational health, where the goal is to prevent the occurrence of illnesses among workers because of exposures at their place of work. The greatest number of injuries seen at work, most of which are preventable involve hearing loss, musculoskeletal disorders, and cumulative trauma problems such as carpal tunnel syndrome. He stated that equipment and motor vehicle injuries specifically, make up the largest number of fatalities related to the workplace. In addition, there are always thousands of cases of broken bones, machine cutting –off parts of the body, materials getting into the eyes, burns, and similar injuries that occur each year. The nature of these problems varies by work environment, age, gender, and other factors, but hundreds of thousands of individuals suffer from workplace-related injuries each year. Many of those who get injured go on to have a permanent disability that may threaten their livelihoods.

A variety of professionals specialize in issues of occupational safety. For example, certified industrial hygienists are the most experienced at assessing workplaces and monitoring workers to see what kinds of exposures are actually taking place. With regard to safety issues, certified safety professionals constitute a group well qualified to assess

safety at workplaces and to put in place safety programs for workers. Other occupational safety professionals include engineers who can make assessments in the workplace. Along with industrial hygienists, they can address such issues as ventilation or other protective measures (Weeks, et al 1991).

The Trade Union's position on occupational health and safety is to ensure that work is made safer by modifying the workplace and any unsafe work processes. This means that the solution is to remove the hazards, not to try to get workers to adapt to unsafe conditions. Requiring workers to wear protective clothing which may not be suited or designed for the climate of the organisation is an example of forcing workers to try to adapt themselves to unsafe conditions which is also shifting the responsibility from management to the worker. This implies that work can be made safer if workers change their behavior or if employers only hire workers who never make mistakes. (Weeks, et al 1991)

2.11 Organisational Role and Attitude to Health and Safety

The role of organisations in the promotion of safety can be termed as safety management and is often reflected on the attitudes, beliefs, perceptions and values that employee share in relation to safety. According to Stranks, (2000), health and safety is a major concerns for management. Management's attitudes and approach towards accident prevention are always reflected in the supervisory force of the organisation. Thus if the employer is not genuinely interested in preventing accidents no one else is likely to be since the basic fact applies to every level of management and supervision. Beach, (2000) stated that, accident control programme results from top management's efforts and is demonstrated if employee's co-operation and participation are to be obtained. This means that

management should setup information and control systems so that the health and safety performances are monitored and corrective actions initiated when required.

According to Pantry, (1995) management should ensure that procedures are implemented by making supervisor accountable for health and safety performance in their areas and by providing them with help, guidance and training they may need to carry out their responsibilities effectively. The membership of such committee must be drawn across the organisation to review practices and conditions and make suggestion to improve health and safety performance.

2.12 Management Commitment

According to Jorma, (2004) management is responsible for most of the safety issues within organisations because they control the assignment of resources, establish and implement the methods of work as well as develop the policies. From the view point of Beach (2000), safety improvement of an organisation is the responsibility of top management, though an important role is played by workers and team members in order to achieve the overall objectives of the company. Beach (2000), also revealed that management's commitment to safety is a major factor affecting the success of safety programmes in industries and this parameter is capable of discriminating between high and low accident rate organisations.

Management commitment remains a key component of contemporary safety climate research (Lees, 2002). According to Less (2002), this commitment can manifest itself through management participation in safety committees, consideration of safety in job design, review of pace of work, accident and near-miss incident investigation and follow-

up actions, priority assigned for safety, occupational health programmes etc. Investment by organisations in these areas fosters perceptions of the company's commitment and builds worker loyalty in areas such as safety behaviour (Mearns, et al, 2003). Employees perceptions will reflect how employees believe that safety is valued in the organisation (Neal, 2000).

The motivation to perform a job in a safe manner is a function of both the individual's own commitment concern for safety as well as management's expressed concern for safety. Safety commitment of the management must result in an observable activity on the part of the management and must be demonstrated in their behaviour as well as their words (Mearns, et al, 2003). In order to develop a successful health and safety programme, it is essential that there be strong management commitment and strong worker participation in the effort to cease and maintain a safe and healthy workplace. Management commitment determines the phase and the direction of safety and health activities and it portrays the values that are placed on health and safety management as preserved by the employees. Without employees' involvement health and safety performance would never be achieved. There would be high result of achievement of health and safety when both management commitment and employees' involvement are in joint hands in pursuit for a safe and healthy working environment.

2.13 Employee Involvement in Health and Safety

Workers' involvement may be termed as the willingness of employees' to accept the responsibility for their behavior in creating an accident free workplace. From a management perspective, workers involvement refers to the ability of workers to directly influence or form the management and work process in an enterprise (Cohen and

Michael, 1999). The term employee refers to every employee in the organisation at every level and in every department. Workers involvement is a process involving behavior that is dynamic, action oriented and problem solving that continuously seeks for improvement in a safety conscious environment.

According to Schein, (1992) there is the need to increase safety for individuals if they are to feel secure and capable of changing behaviors and adapting to new policies and procedures. Thus, employees' involvement means that employees have a substantial voice in health and safety decisions and also have the leverage to initiate and achieve health and safety improvement as well as hold themselves and others accountable for their actions as well as taking pride in the health and safety performance record of the organisation.

Contrary to workers' involvement, employee pessimism could paralyze problem solving activities of individuals and workgroups because employee pessimism behavior carries enormous negative consequences for individual and for the organisation where they work. From the view of Oyan (2000), employee pessimism was found to correlate with poor safety performance. He also viewed workers' involvement as a means of improving both the overall health and safety conditions at the workplace. When employees are aware of managements sincere interest in them, they will respond in kind. In this type of an environment on the one hand, employee innovation, thinking, suggestion and decision making evolve to the benefit of the employee and the organisation alike.

High employee morale and commitment decreases absenteeism and turnover. High employee morale and commitment are associated with high safety performance. According to Alazab (2003), based on the studies of the United Kingdom's health and

safety executive found out that companies that promoted employee involvement in health and safety issues frequently saw a reduction in accidents and injuries and there were improvement in hazards awareness and productivity.

From the study on safety by Costigan (2001), it was revealed that the highest scores of six variables was management commitment and employees' involvement followed by workplace analysis as (Inspection, audits and hazards correction) and the third on the rank was safety and health training.

2.14 Empirical Analyses on occupational health and safety

There is evidence that providing a healthy and safe working environment has the potential to increase labour productivity and in turn increase business profits. It is also evident that there are certain requirements needed to ensure the success of health and safety intervention and subsequent increase in productivity. Such requirements include a good level of cooperation between the management and employees and the working environment in which employees are engaged to work.

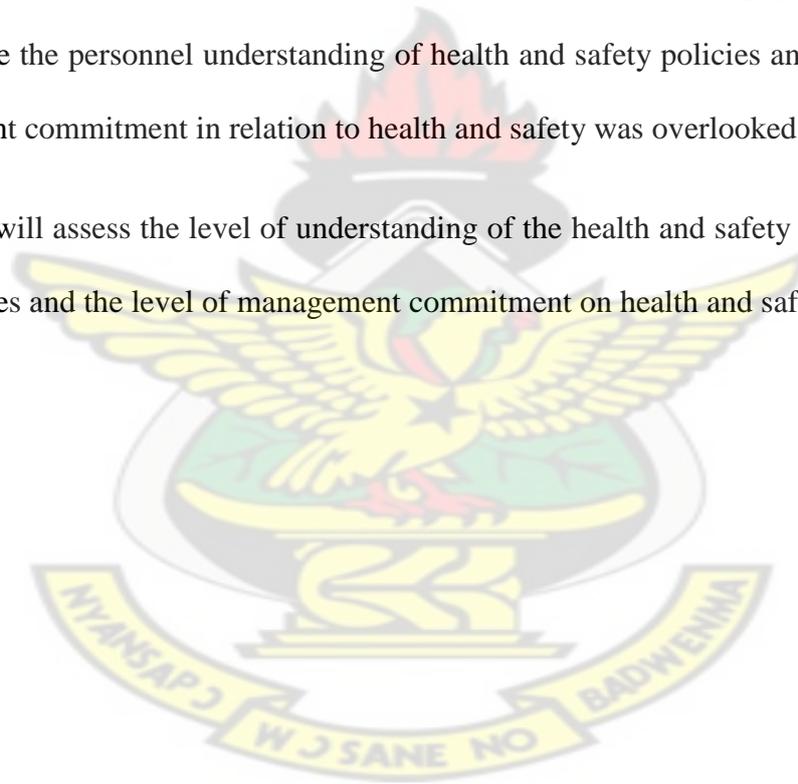
A number of researches have been conducted in the sub-sectors of the manufacturing industry, construction industry, service industry, petroleum and plastics, and electronics. One of such studies is by Makori (2008) on the influence of occupational health and safety of manufacturing firms in Kenya.

The researcher used a convenient sample by selecting all the manufacturing firms in Western Kenya. Validity and reliability of the research instruments were done by using the retest method using one of the manufacturing firms. Data collected from all the manufacturing firms were collected and analyzed using descriptive statistics and

inferential statistical tools like Pearson correlation, simple regression and one way ANOVA. The study findings showed a moderate positive relationship between occupational health and safety programmes and organisational performance of manufacturing firms. This was an indication that health and safety programs were not efficient in the studied firms, thus, affecting organisational performance of these firms in terms of sales, profitability, production, order delivery, reputation, target achievement, product quality and production costs.

However, the review of the literature has revealed a number of key gaps in the research. This include the personnel understanding of health and safety policies and Act as well as Management commitment in relation to health and safety was overlooked in the research.

This study will assess the level of understanding of the health and safety policies and Act of employees and the level of management commitment on health and safety.



CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter describes the methods and procedures used to collect and analyse data in order to determine the health and safety standards in Ghana Rubber Estates Limited. Sections of the chapter include the study design, population, sample size and sampling procedures, instrumentation, data collection and procedures for analysis and presentation.

3.2 The study area

The study was carried out in Ghana Rubber Estates Limited, a manufacturing firm which has the largest industrial rubber plantation in Ghana. The company is headquartered in Takoradi, the Western Region of Ghana. The factory which processes cuplumps into finished goods called crumb rubber is located at Apimenim also in the Ahanta West District in the Western Region of Ghana.

Subjects of the study specifically included management, supervisors/line managers and factory operational workers. The company draws employees from diverse social, cultural, educational and economic background with varied perceptual orientations. It is therefore not farfetched to presume that these employees may hold different opinions on how health and safety of employees is ensured within the organisation and its impact on their work performance.

3.3 Study Design

A study design is a plan that explains the basic structure of the study. It provides the procedural outline for the conduct of the study (Amedahe, 2004). The study adopted a descriptive survey design to collect data for analysis. The survey design was consistent

with the description by Sarantakos (2004) and Fraenkel and Warren (2002), that surveys are methods of data collection in which information is gathered through oral or written interviews and could be structured, more formal or a combination of the approach. The authors stressed the need for consistency throughout the exercise to curtail errors.

Descriptive surveys focus on eliciting information about the nature and status of specific phenomena at a given time. It involves collecting data in order to test hypotheses about the current state of affairs of the subject under study (Gay, 1992). According to Newman (2003), survey systematically asks subjects the same questions about a situation or a programme and measure several variables for purposes of gaining insights about previous behaviours, experiences or characteristics. A survey has the additional advantage of being relatively less expensive in terms of funds requirements, time and number as well as the kinds of participants required for successful analysis. The descriptive survey is also very useful for generalizing from a sample to a population so that inference can be made about the characteristics, attributes or behavior of the population. The descriptive survey design was in the researchers view, the most appropriate and helpful in determining the perception and attitude of respondents on the variables studied.

3.4 Population

According to Fraenkel and Warren (2002), population refers to the complete set of individuals (subjects or events) having common characteristics in which the researcher is interested. For the purpose of this study, the target population comprised of management, supervisors/line managers and factory operation staff of Ghana Rubber Estates Limited. Out of a total of 202 eligible staff, 120 selected staff comprising 30 females and 90 males was selected for the study.

3.5 Sampling and Sampling Procedures

According to Amedahe (2004), sampling is the process of selecting a portion of the population to represent the entire population in the study. A sample consists of a carefully selected unit of the population for a particular study (Sarantakos, 2005). The general notion held by many researchers is that the larger the sample sizes the lower the risk of sampling errors occurring. However, Burns, (2000), contended that the sample size depends on the nature of the population, the kind of data to be elicited, the nature of the analysis to be carried out and the availability of funds for the study. The main function of a sample is to allow researchers to conduct a study to individuals from the population so that the results of their study can be used to derive conclusions that would apply to the entire population. The sample size must be representative of a good size of the population from which it was drawn to warrant statistical analysis.

Payne and Payne (2004) presented a table from which sample size for conducting a study can be selected. Based on this, the sample for the study was selected. In this study the target is 202, therefore the required sample size is 120. All the 12 management staff were purposively selected because they are the decision making body regarding health and safety. Thirty (30) supervisors/line managers and 78 operational staff were randomly selected respectively for the study.

The sampling techniques used in this study were stratified sampling, probability random sampling and purposive sampling. First the sample population was stratified, the major criterion being by the roles of the respondents. Thus the stratified sample comprised three strata made up of, Management staff, Supervisors/Line managers and the Factory

Operational Staff. According to Sarantakos (2005), stratified sampling is a probability sampling procedure in which the target population is divided into a number of strata, and the sample is drawn from each stratum. The resulting sample makes up the final sample for the study.

The probability sample was adopted to select the sample from the population. Probability sampling is a sampling technique where the samples are gathered in a process that gives all the individuals in the population equal chances of being selected. Top management who represents the final decision making body for the organisation were purposively sampled. This is because, purposive sampling technique allows for the selection of subjects who are more likely to provide the right information for the study (Osuala, 2005).

The middle/line managers and factory operational staff were randomly selected from the groups of production, supervisors, workers in the maintenance and warehouse of the organisation. The researcher adopted random sampling procedure to select individuals because random sampling method ensures high reliability of sample, high degree of representatives and allows for generalisation of research findings (Kumar, 1999). The table below represents the eligible and selected staff from the organisation selected for the study.

Table 3.1: The sample size of Respondents in the selected area

Category of Respondents	Eligible staff	Selected staff
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Management staff	12	12
Supervisors/Line managers	65	30
Operational Staff	125	78
Total	202	120

Source: Survey data 2012 n=120

3.6 Instrumentation

According to Fraenkel and Warren (2002), getting a sufficient number of questionnaires completed and returned for meaningful analysis is one of the bane in using descriptive survey design. For the researcher to minimize the propensity for this challenge occurring, a semi-structured interview was used to elicit data from management. This technique was used to reduce interviewer bias and achieve a high degree of consistency in the procedure adopted. The technique also enabled the researcher to elicit information from individuals in the best position to do so.

Another instrument used was a self administered questionnaire. Questionnaires serve as a method of gathering data which is descriptive of current events, conditions or attributes of a population at a particular point in time (Burns, 2000). According to Dane (1990), the aim of questionnaire is to collect data from large group and widespread people as well as to generate reliable and valid data from a high proportion of a population within a reasonable period and at a minimum cost. Questionnaire is used to compile objective data or any information regarding to the characters' quality. The advantages of using the design of questionnaire is based upon consideration as the subject provides true information, therefore information would be reliable; and subjects' interpretation to the

questions asked, is likely to be the same as interpreted by the researcher. Beside the advantages, it is economical and faster as compared to other designed method.

3.7 Data Collection

The researcher applied primary data in order to describe the real condition of the safety practices and safety improvement. At the same time, secondary data in this research were also used to affirm primary data collected.

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3.7.1 Source of data

Basically, there are two sources of data for this study which include the primary data and secondary data.

The primary source is an original document or first-hand information. Primary sources include historical, eyewitness account, result of experiments pieces of creative writing and many others. In relation to this study, the primary data was the information received from questionnaire and interview guide.

The secondary source of data refers to data that have been collected and collated by another person or organisation other than the researcher herself. For purposes of this study, the secondary data that the researcher relied on included various literature on the topic under research, research reports, textbooks, periodicals and other publications with relevant information for this study.

3.7.2 Data collection technique

Data for the main study were collected within a period of three weeks. The data were collected by the use of questionnaires and interview guide. All operations for the collection of the data were done by the researcher. The questionnaire for supervisors/line managers and operational staff was made up of 36 items based on the objectives of the study. The interview guide was made up of 17 items. The respondents were given two weeks to respond to the questionnaire beginning 1st April, 2012 and ending 14th April 2012. After one week of distribution of the questionnaire, the researcher went round to remind the respondents of the number of days they were left with and also replaced lost questionnaire. In the case of the interview guide, the last week was used by the researcher to book appointments with various Executives. The date, time and venue for the interview sessions were scheduled. All information gathered was organized for processing and analysis.

3.8 Data Validity and Reliability

The raw data obtained from the survey were scrutinized for validity and reliability by way of sorting, editing and coding in order to eliminate or at least minimize errors, omissions, as well as other discrepancies capable of compromising sound judgment.

3.9 Procedures for data analysis and presentation

Data were analyzed using frequencies and percentages tables. Other statistical programs like the Statistical Package for Service Solution (SPSS) version 16.0 was used to analyze and interpret the data collected from respondents. The likert scale questions were encoded before entry into the computer. The qualitative aspects of the data were summarized in the form of text for easy description and analysis. Therefore, qualitative

and quantitative techniques were employed to present, describe and interpret data collection and to draw adequate conclusion on the findings.

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CHAPTER FOUR

ANALYSIS, DISCUSSION AND REPRESENTATION OF RESULTS

4.1 Introduction

This chapter presents the views from respondents which were elicited to find out the effects of health and safety standards on productivity in Ghana Rubber Estates Limited. Primary data were collected through questionnaires to address the objectives of the study which were to: identify health and safety standards in the organisation; determine the effect of health and safety on employees' productivity; determine employees' level of understanding of health and safety policies; access the attitude of management towards the health and safety of employees and identify the challenges of health and safety standards in the organisation. The results are discussed in accordance with the research questions and attempts are also made to relate findings to alternative or supportive views as stated in the literature review.

Frequency distribution tables are presented and which contain the percentage for each response. To facilitate interpretation of the data, responses to items on the Likert-type scale, mostly involving 'agree', 'disagree', and 'yes', 'no' were scored 2 and 1 respectively. The presentation of findings is preceded by background information on the respondents.

4.2 Presentation and Analysis of Preliminary Data

The first part of this chapter is a presentation and analysis of the preliminary data obtained from the study. It involves the background information of the respondents. The variables involved are gender of respondents, age, educational background and the

number of years they have worked in the organisation. Data obtained have been presented in Tables 4.1.1, 4.1.2, 4.1.3, and 4.1.4.

4.3 Gender of Respondents

The respondents were asked to indicate their gender by ticking the appropriate column they belonged. The purpose was to find out the number of males and females who actually participated in the study. Table 4.1.1 shows that out of the 120 respondents who participated in the study, majority 90 of the respondents representing 70.8% were males, while the remaining 30 respondents representing 29.2% being females. Naturally, males and females have different attitudes and views toward events at the work place (Singer, 1996).

Table 4.1.1 Gender of respondents

Gender	Frequency	Percentage (%)
Male	90	70.8
Female	30	29.2
Total	120	100

Source: Field data, 2012

4.4 Age of Respondents

Table 4.1.2 depicts the age distribution of respondents who participated in the study. The purpose was to find out the average age of the employees who are actively involved in the operations within the organisation. A close look at the Table shows that 29 respondents representing 24.2% fall within the age brackets 20-29 years; 49 representing 40.8% fall within the age brackets 30-39 years. Nineteen respondents representing 15.8% fall within 40-49 years while the remaining 23 representing 19.2% fall within the age brackets 50-59

years. The data shows that majority of the employees in the organisation fall within 30-39 years.

Table 4.1.2 Age of respondents

Age	Frequency	Percentage (%)
20 - 29 years	29	24.2
30 - 39 years	49	40.8
40 - 49 years	19	15.8
50 - 59 years	23	19.2
Total	120	100

Source: Field data, 2012

4.5 Educational Background of Respondents

The respondents were asked to indicate their educational background. The purpose was to find out the educational/academic qualifications of employees who participated in the study. Table 4.1.3 shows responses elicited, 33 respondents representing 27.5% have obtained JSS/Middle school certificates; 61 representing 50.8% have obtained SSS/GCE/O Level while the remaining 26 representing 21.7% have obtained tertiary degree. The data shows that majority of the employees have attained some level of education whose opinions and views are guided and well informed.

Table 4.1.3 Educational background of respondents

Educational background	Frequency	Percentage (%)
JSS/Middle School	33	27.5
SSS/GCE/O Level	61	50.8
Tertiary	26	21.7
Total	120	100

Source: Field data, 2012

4.6 Working Experience of Respondents

Table 4.1.4 depicts the working experience of employees who participated in the study. The objective was to determine how long and consistent employees have worked in the organisation. The data gathered shows that 32 respondents representing 26.7% have worked between 1-5 years in the organisation; majority (45) representing 37.5% have worked between 6-10 years in the organisation; 30 representing 25% have worked between 11-15 years in their company while 13 representing 10.8% have worked for more than 21 years. The available data shows that majority (37.5%) of the employees have been working for more than five years and therefore have acquired the necessary competencies and consistency in their work.

Table 4.1.4 Work experience of respondents

Work experience	Frequency	Percentage (%)
1 - 5 years	32	26.7
6 - 10 years	45	37.5
11 - 15 years	30	25.0
Above 21 years	13	10.8
Total	120	100

Source: Field data, 2012

4.7 What is the safety standards put in place in the organisation?

The research question sought the views of employees on the safety standards that have been put in place at their organisation. The objective was to identify the safety standard in the organisation. It sought the views on availability of safety policy, health and safety unit, job safety procedure handbook and risk assessment in the organisation. The views elicited from respondents have been presented in Table 4.1.5.

Table 4.1.5 Employees awareness of safety procedure

Statement	Yes N (%)	No N (%)	Total N (%)
Does the company have a safety policy?	110(91.7)	10(8.3)	120(100)
Does the organisation have a written health and safety policy that includes programmes and procedures for environmental, health, safety (EHS) and working conditions?	95(79.2)	25(20.8)	120(100)
Is the organisation's written health and safety policy or programs available to all employees?	97(80.8)	23(19.2)	120(100)
Are you aware of any accidents/ diseases that had occurred in your company for the past 12 months?	98(81.7)	22(18.3)	120(100)
Does the organisation have procedures for employees for reporting pains or other diseases in relation to the job processes?	35(29.2)	85(70.8)	120(100)
Does the organisation have an accident book or similar accident record system?	115(95.8)	5(4.2)	120(100)

Source: Field data, 2012

It can be observed from Table 4.1.5 that majority (110) of the respondents representing 91.7% intimated that the company has a safety policy while 10 representing 8.3% postulated that company do not have a safety policy. Ninety five respondents representing 79.2% said the company has a written health and safety policy that includes programmes and procedures for environmental, health, safety and working conditions; however, 25 respondents representing 20.8% said that the company does not have a written health and safety policy that includes programmes and procedures for environmental, health, safety

and working conditions. According to Schein (1992), there is the need to increase safety for individuals if they are to feel secure, capable of changing behaviour and adapting to new policies and procedures and thus employee's involvement means that employees have a substantial voice in health and safety decisions.

It can further be seen from the Table that majority (97) of the respondents representing 80.8% intimated that the organisation's written health and safety policy or programs are available to all employees while the remaining 23 representing 19.2% said that the organisation's written health and safety policy or programs is not available to all employees. Again, majority (98) respondents representing 81.7% opined that they are aware of any accidents/diseases that have occurred in the company for the past 12 months, however, 22 representing 18.3% said that they are not aware of accidents/diseases that have occurred in the company for the past 12 months. Eighty five (85) respondents representing 70.8% intimated that the company has no procedures for employees for reporting pains or other diseases in relation to the job processes while 35 respondents representing 29.2% intimated that the company does have procedures for employees for reporting pains or other diseases in relation to the job processes.

According to Pantry (1995), management should ensure that procedures are implemented by making supervisors accountable for health and safety performance in their areas. He further stressed that employees must be provided with help, guidance and training they may need to carry out their responsibilities effectively. This is further supported by International Labour Organisation's (1996) assertion that placing and maintenance of workers in an occupational environment adapt to physical and mental needs and adaptation of work to humans.

It can further be observed from Table 4.1.5 that overwhelming majority (115) of the respondents representing 95.8% said that the company has an accident book or similar accident record system while the remaining 5 representing 4.2% said that the company does not have an accident book or similar accident record system. The finding is in line with International Labour Organisation, (1996) views that occupational health and safety aims at prevention among workers of adverse effects on health caused by their working conditions and protection of workers in their employment from risks resulting from factors adverse to health.

World Health Organisation (2002) further stated that workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of workers and the sustainability of the workplace by considering the health and safety concerns in the physical work environment and personal health resources in the workplace.

4.8 How has health and safety standards affected employees' productivity?

The research question sought the views of employees on how health and safety standards have affected their productivity. The objective was to determine the effect of health and safety on employees' productivity in the company. It sought the views on adequate and comfortable working environment, physical conditions, sufficiently equipped for typical operational and implementation of the health and safety act. Frequencies of respondents were calculated to aid interpretation of the responses.

A look at Table 4.1.6 depicts that majority (96) of the respondents representing 80.0% said that the implementation of health and safety standards in the organisation will make employees feel safe while 24 representing 20.0% disagreed that the implementation of health and safety standards in the organisation will make employees feel safe. Majority (115) of the respondents representing 95.8% agreed that adequate and comfortable working environment as well as safety practices will affect productivity positively. Nonetheless, 5 representing 4.2% disagreed. This is in agreement with Holzer & Seok-Hwan, (2004) that, productivity and performance are functions of many factors ranging from top management support, committed personnel at all levels, a performance measurement system, employee training, reward structures, community involvement and feedback to correction of budget-management decisions. It is thus important to build up capacities for productivity improvement.

From the Table again, majority (105) of the respondents representing 87.5% agreed that their work area is sufficiently equipped for their typical operational needs (normal storage, movements, etc), while the remaining 15 representing 12.5% disagreed. On the issue of whether the practice of health and safety will protect employees from injuries and illness, majority (106) representing 88.3% agreed, while the remaining 14 representing 11.6% disagreed. According to Mohr, (1992) the workplace design and processes promote organisational success by creating environments that support work quantity, quality, and style, while improving turnover and absentee rates. This has been supported by Vancevich, (1995) as he posits that the physical layout of the workspace, along with efficient management processes, plays a major role in boosting employees' productivity and improving organisational performance.

The views elicited from respondents have been presented in Table 4.1.6

Table 4.1.6 Effect of safety procedures on productivity

Statement	Agree N (%)	Disagree N (%)	Total N (%)
Implementation of health and safety act in the organisation will make employees feel safe	96(80.0)	24(20.0)	120(100)
Adequate and comfortable working environment as well as safety practices will affect my productivity positively	115(95.8)	5(4.2)	120(100)
My work area is sufficiently equipped for my typical operational needs (normal storage, movements, etc).	105(87.5)	15(12.5)	120(100)
The practice of health and safety will protect employees from injuries and illness	106(88.3)	14(11.6)	120(100)
To enhance productivity, Job-specific health and safety training/education must be provided to all employees prior to starting a new job.	120(100)	0(0)	120(100)
Favorable environmental conditions (less noise, suitable temperature etc) provided at the work place will increase my productivity at work	113(94.2)	7(5.8)	120(100)
All employees are given the opportunity to voice out health and safety opinions/concerns	110(91.7)	10(8.3)	120(100)
Health and safety standards affects productivity	105(87.5)	15(12.5)	120(100)

Source: Field data, 2012

Table 4.1.6 further shows that all the 120 respondents representing 100% agreed that to enhance productivity, job-specific health and safety training/education must be provided to all employees prior to starting a new job. Majority (113) of the respondents agreed that favorable environmental conditions (less noise, suitable temperature etc) provided at the work place will increase productivity at work; nonetheless, 7 representing 5.8% disagreed. When it came to whether all employees are given the opportunity to voice out health and safety opinions/concerns, the majority (110) representing 91.7% responded in the affirmative, while the remaining 10 representing 8.3% disagreed. Cole, (2002) asserted that among the key factors that affect employees' productivity and performance include management driven factors which include the development of organisation plans, shift-working, health and safety policies, including the provision of training, development of safe working practices and the adequate supply of protective clothing and equipment.

Additionally, overwhelming majority (105) representing 87.5% agreed health and safety standards affects productivity, however, 15 representing 12.5% disagreed. According to Mohr, (1992) workplace design and processes may promote organisational success by creating environments that support work quantity, quality, and style, while improving turnover and absentee rates.

4.9 What is the level of employees' understanding of health and safety policies of the organisation?

The research question sought the views of employees on their level of understanding of health and safety policies of the company. The objective was to determine employees' level of understanding of health and safety policies in the company. It sought the views on controls in place to prevent new components/materials from entering facility,

investigation of accidents at the work place, training of employees in handling machines and equipments, identification of corrective/preventive actions and discrimination of employees who report accidents and near miss. Frequencies of respondents were calculated to aid interpretation of the responses. The views elicited from respondents have been presented in Table 4.1.7.

As observed from Table 4.1.7 majority (96) of the respondents representing 80% agreed that they do not have a copy of health and safety manual and orientation programs for health and safety provided by the company, while 24 representing 20% agreed. Majority (105) of the respondents representing 87.5% agreed that the company has health and safety procedures and regulations, however, 15 representing 12.5% disagreed that the company has health and safety procedures and regulations. Again, the Table shows that overwhelming majority (113) representing 94.2% of the respondents agreed that only approved working standards are used when performing work while 7 representing 5.8% disagreed that only approved working standards are used when performing your work.

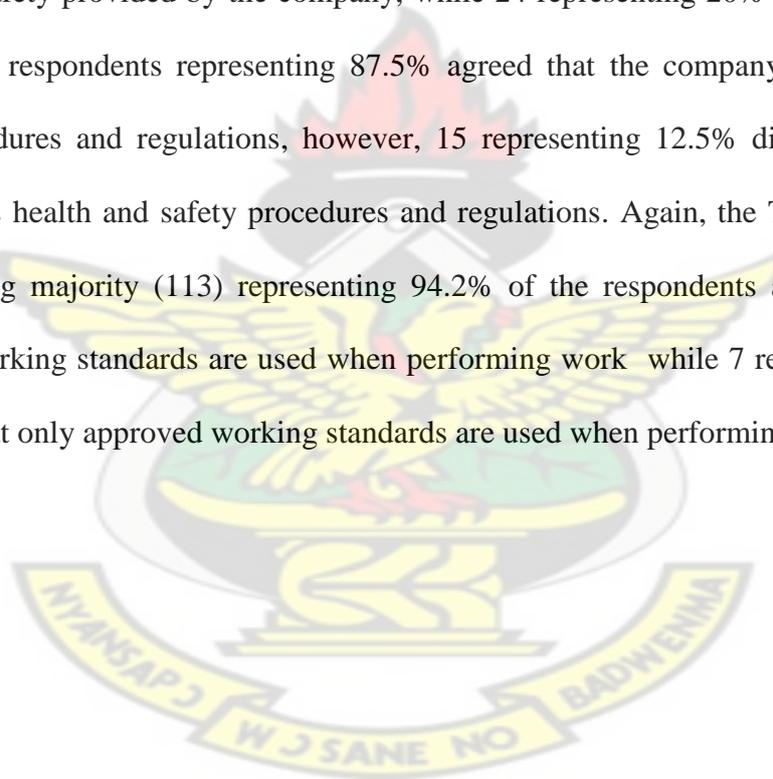


Table 4.1.7 Employees understanding of safety procedure/policies

Statement	Agree N (%)	Disagree N (%)	Total N (%)
Do you have a copy of health and safety manual and orientation programs for health and safety provided by your organisation?	24(20)	96(80)	120(100)
Does the organisation have health and safety procedures and regulations?	105(87.5)	15(12.5)	120(100)
Are only approved working standards used when performing your work?	113(94.2)	7(5.8)	120(100)
Do you have any knowledge of the Health and Safety Act?	27(22.5)	93(77.5)	120(100)
Has management advised you on the health and safety aspect of your job schedule?	101(84.1)	19(15.9)	120(100)
Do you notify management about the health problems experienced in performing your duties	110(91.6)	10(8.4)	120(100)

Source: Field data, 2012

According to Weeks et al, (1991) organisational safety seeks to make workplaces safe for workers within organisation and that the goal is to prevent the occurrence of illnesses among workers because of exposures such as components, and flammable and combustible materials from entering the facility at the place of work. They further stated that employees should be given proper training in handling the use of equipment and motor vehicle. According to the Factory, Offices and Shop Act 1970, Act (328) and the Labour Act 2003, Act 651 of Ghana, employers are required to give employees

orientation on legislation governing health and safety, copies of health and safety policy are to be made available to employees and they are to be trained on health and safety practices to ensure incident free workplace environment.

Krishnan (1999), further stated that incidents occur due to multifaceted factors such as human errors and unsafe actions caused by illiteracy, lack of training, poor supervision, technical flaws relating to design, layout, machine guarding and arrangement of work and that very often accidents occur in activities ancillary to the main purpose of the organisation, and that these accidents need to be investigated to determine root causes and examined to prevent a reoccurrence.

Twenty seven respondents representing 22.5% agreed that they have knowledge of the Health and Safety Act, however, 93 representing 77.5% disagreed that they do not have any knowledge of the Health and Safety Act. It can further be seen from the Table that majority (101) respondents representing 84.1% agreed that management advised them on the health and safety, however, 19 representing 15.9% disagreed. One hundred and one respondents representing 84.1% postulated that appropriate steps are taken to adhere to the safety and health policy statement while 19 representing 15.9% disagreed with the statement. According to Wayne, (2002) each employer has a general duty to provide a place of employment free from recognized hazards; they also have the special duty to comply with all health and safety standards. Additionally, World Health Organisation, (2002) intimated that health, safety and well being of workers and the sustainability of the workplace should be paramount by considering the psychosocial work environment including organisation of work and ways of participating in the community to improve the health of workers, their families and other members of the community.

One hundred and ten respondents representing 91.6% agreed that they do notify management about the health problems experienced in performing their duties while the remaining 10 representing 8.4% disagreed. According to Clark, (2005) there is lack of specification of standards which should form the yardstick against which services are to be evaluated. Thus Ghana like many other developing countries has a long way to go in designing and implementing occupational safety and health policies and programmes that could enhance the welfare of its working force.

4.10 What is the attitude of management towards health and safety of employees?

The research question sought the views of management on their attitude towards employees' health and safety in the company. The objective was to access management's attitude towards the health and safety of employees in the company. It sought management's views on provision of training for supervisors and new employees, evaluation of safety supervisors, investigation of accidents, the usage of standard forms and implementation of safety precautions.

As a way of balancing the views expressed by the employees on the issues of health and safety policies and procedures, opportunity was given to management to access their attitude towards employees' health and safety in an interview schedule. Their responses were varied on this subject.

One of the interview questions sought to find out whether management provide training to improve supervisors' capability in conducting work programme. Management asserted that they do provide training to improve supervisors' capability in conducting work programme of members but not on health and safety. However, in-house training is

offered to both supervisors/line managers and other operational staff when accident occurs. Again, the management posited that when evaluating supervisors' achievement, work safety factor forms part of the criterion. The views express by management supports the views of Jorma, (2004) who accessed that management is responsible for most of the safety issues within organisations because they control the assignment of resources, establish and implement the methods of work, train supervisors as well as develop the policies.

Another interview question sought to find out if management investigate accidents upon receipt of accident report. The heads posited that they do investigate accidents which are major upon receipts of report. One member said that major accident investigation is done on three levels. Firstly with the immediate supervisor, organisation health and safety committee, and the third special investigation depending on the level of injuries. On how important does work safe quality record keeping to the company, the heads opined that 'it helps to evaluate and review the existing safety standards and come out with new innovative ones'. In the view of Beach, (2000) safety improvement of an organisation is the responsibility of top management, and as a result investigation should be carried out to find out the root cause of the accidents and other occurrences, he further pointed out that an important role is played by workers in reporting accidents and adhering to safety rule and regulations and thus helps to achieve the overall objectives of the company.

The interview with management reveals that they do not require safety certificate when they recruit new employees into the company. One of heads said that 'it is not mandatory to require safety certificate when a new employee is recruited. The interview further revealed that heads do provide incentives to employees engaged in ensuring safety at the

work place. They however said at the start of most operational duties, supervisors convey verbal work and safety instructions to employees before commencement of work.

When it comes to whether the management hold discussion regarding safety awareness and the use of posters in the promotion of safety awareness. The responses gathered indicated that management hold discussion with employees regarding safety awareness and uses of posters in the promotion of safety awareness. The heads intimated that they do consult employees about their health and safety concerns but provide employees with written health and safety information. They however admit that reducing employees' injuries and illness influence productivity greatly.

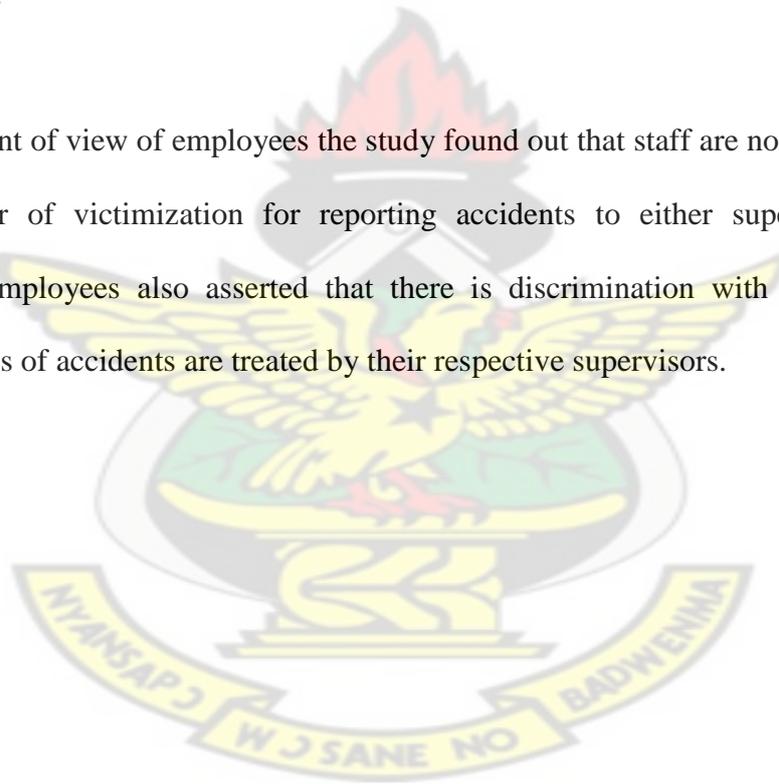
The findings was consistent with Zohar, (2000) who reveals that management's commitment to safety is a major factor affecting the success of safety programmes in industries and this parameter is capable of discriminating between high and low accident rate organisations. He further stated that this commitment can manifest itself through management participation in safety committees, consideration of safety in job design, review of pace of work, accident and near-miss incident investigation and follow-up actions, priority assigned for safety, occupational health programmes etc.

4.11 What are the challenges of health and safety standards in the organisation?

The research question sought the views of management and employees on the challenges associated with health and safety standards in the organisation. The objective was to identify the challenges of health and safety standards in the organisation.

Management agreed that there were some key challenges facing the organisation in managing occupational health and safety. Notably among these challenges was the non availability of health and safety professionals to be recruited, lack of capacity to design health and safety policy and lack of funding to provide all the necessary resources needed to manage health and safety practices to meet what had been described as health and safety best practice. It further came to light from the study that, employees do not adhere to the rules and procedures set to ensuring health and safety in the organisation. Again most of employees were reluctant to use the safety equipment that had been provided by management.

From the point of view of employees the study found out that staff are not given adequate training; fear of victimization for reporting accidents to either supervisors or line managers. Employees also asserted that there is discrimination with regards to how reported cases of accidents are treated by their respective supervisors.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the research process and the major findings from the study. It then draws conclusions and makes recommendations for policies and practice. Suggestions are also made for future research.

5.2 Overview of the Study

The study was conducted in the Ghana Rubber Estates Limited to access the effects of health and safety standards on productivity in the organisation. The study purposed to identify health and safety standards in Ghana Rubber Estates Limited and to determine the effects of health and safety on employees' productivity. It also aimed at determining employees' level of understanding of health and safety policies in the organisation. Additionally, it purposed to assess the attitude of management towards health and safety of employees and to identify the challenges associated with health and safety standards in the organisation. Descriptive research design was used to conduct the study. The target population consisted of employees and management in the selected organisation. The total sample size was 120.

Simple random sampling technique was used to select the employees while purposive sampling technique was used to select management. Questionnaire and structured interview were designed and used to collect data for the study. The items were administered personally by the researcher. The research instruments were designed with the assistance of the supervisor. Data collection lasted for three weeks. The data were

edited, coded, presented and analysed using statistical tools such as percentages, frequency tables, were used to summarise the data and the results were presented in the form of tables for discussion which aided in answering the research questions. Even though various recommendation techniques were adopted to reduce the cumulative effects of the limitations on the study, their impacts on the findings were not entirely ruled out.

5.3 Key Findings

The study revealed that majority (91.7%) of the employees who participated in the study postulated that the organisation has put in place a safety policy as well as the company having a safety unit and a coordinator. It again came to the fore when majority 95.8% of the employees intimated that the organisation has an accident book or similar accident record system in which accidents and near miss are recorded. However, majority, 70.8% disagreed that the organisation has procedures for employee for reporting deceases in relation to their job.

It again emerged all respondents 100% affirmed that the safety procedures put in place would have a positive impact on productivity. Again 91% admitted that all employees are given the opportunity to voice out health and safety opinions to management.

With the issue of employees' understanding of health and safety procedures, 87% asserted that the organisation has a safety procedure. However 80% of the respondents did not have health and safety manual to guide their operations. 77% indicated that they do not have knowledge of the health and safety Act. The study revealed that employees' right to health and safety are not maintained and also the organisation does not take

appropriate steps to assist employees to exercise their right to health and safety under the law, policies and procedures.

The study also revealed that the organisation has not trained employees extensively on health and safety. The employees who participated confirmed that only major accidents are investigated to determine the root cause and examined to prevent a future reoccurrence. With regards to whether employees are properly trained in the handling and use of machines, equipment, flammable and combustible materials, majority 94.2% responded in the affirmative.

It further came to fore when majority 84.1% of the respondents said that information of the current safety and health status and activities are not communicated to employees through the right channel.

On the other hand, employees are reluctant to report accidents and near misses to management because of fear of victimization.

5.4 Conclusions

Based on the findings it can be concluded that occupational health and safety practices at Ghana Rubber Estates is not in conformity with what has been described as “best practices”. This is because, responsibilities of employees and management are not clearly spelt out with regards to health and safety. Employees are not trained in strategies for protection against hazards at the workplace.

Increasingly, occupational health and safety is recognized as an issue that can impact on the effective functioning of firms and economic growth of the country. Safety of employees is primarily important at any workplace be it the manufacturing, construction, utility, educational institution or hospital. The importance of safety at work place cannot be over simplified. Labour productivity measures the extent to which labour is efficiently used. From the study, it can also be deduced that health and safety of the worker, the better the motivation to boost productivity. Therefore, if an organisation does not adequately invest in the competence of its labour force, in modernizing its plants and factories or in improving the efficiency of its operations, it would affect the organisation. Adaptation of safety measures, policies and procedures not only ensure safety of life of the employee and fellow workers but also their family dependents.

The findings of the study have shown that employees' productivity in Ghana Rubber Estates Limited, is influenced negatively by poor management of safety practices and safety programmes, bad management attitude towards health and safety, and training of employees on safety standards in the organisation. Therefore all stakeholders should play active roles accordingly in measuring safety and continuous improvement in integrated safety management systems. It must however be admitted that no quantitative review could be done due to the absence of reliable figures on production and health records that could be applied for such an analysis.

5.5 Recommendations

From the findings and conclusions of the study, the following recommendations are made.

Management should be more responsible for the needs and concern of their employees' safety and health by being more sensitive to the problems of the employees. This can be carried out by the provision of a suggestion box or other avenues for employees to give their suggestions on how safety can be improved.

Furthermore, management should put in place policies and structures for improving occupational health and safety within the organisation. Management should not wait to form ad hoc committees after an accident has occurred in the organisation. Near misses should also be investigated thoroughly to forestall re-occurrence of accident in the near future.

Management should allocate funds and invest in occupational health and safety programmes. This programme should include proactive measures like near miss reporting, accident investigations, risk assessment, auditing for compliance and using inherently safe technologies.

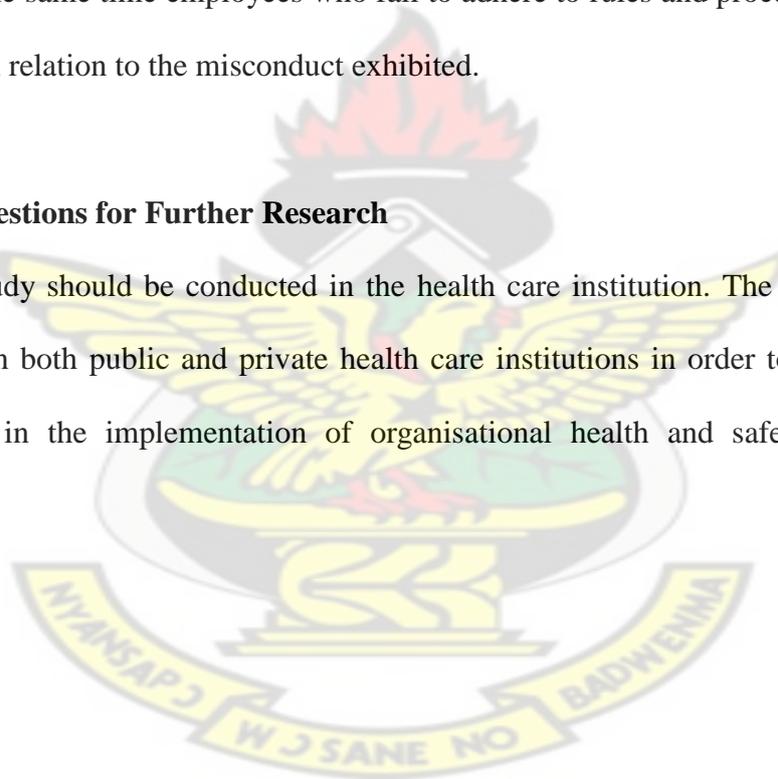
Again, organisations should put in place active health and safety committees which should be given full mandate to implement their recommendations. Moreover, copies of organisational health and safety procedures should be given to employees in order to make them aware of the laid down policies, rules and safety precautions to reduce accidents in the organisation.

Health and safety measures should be in place and employees should be trained on how to use the emergency facilities in case of a problem. There should be a continuous review of occupational health and safety policies, to ensure that firms have up to date safety measures in place.

The organisation should organize competitions among departments on practicing good health and safety practices so that employees will be more motivated and aware of ergonomics. Certificate should be awarded and recognition given to the department that excels. At the same time employees who fail to adhere to rules and procedures should be sanctioned in relation to the misconduct exhibited.

5.6 Suggestions for Further Research

A similar study should be conducted in the health care institution. The study should be carried out in both public and private health care institutions in order to compare these two sectors in the implementation of organisational health and safety policies and procedures.



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APPENDIX I

**INSTITUTE OF DISTANCE LEARNING – KWAME NKRUMAH UNIVERSITY
OF SCIENCE AND TECHNOLOGY (CEMBA)**

QUESTIONNAIRE

This questionnaire is to investigate the effect of health and Safety Standards on employees’ productivity. I hereby would like your statement as objective as possible regarding to the subject matter. The purpose of the study is purely academic and is not in any way an attempt to intrude into your privacy. You are assured that all the information provided will be treated confidentially. Your cooperation by responding truthfully and sincerely to this questionnaire is very essential to achieving the thesis objectives.

Please tick (✓) in the appropriate box

SECTION A

1. Gender: Male [] Female []
2. Age: a. below 20 years [] b. 20 – 29 years []
 c. 30 – 39 years [] d. 40 – 49 years [] e. 50 -59 years []
 f. 60 + years []
3. Educational Background: a. Primary [] b. JSS/Middle School []
 c. SSS/GCE O/Level [] d. Tertiary [] e. Others (Specify) []
4. Please describe briefly your main activity in the business:
.....
5. Kindly state your department:
.....
6. Working Experience:
 a. 1 – 5 years [] b. 6 – 10 years []
 c. 11 – 15 years [] d. 16 – 20 years [] e. above 21 years []

SECTION B

Please tick (√) in the appropriate box

Statement	Yes	No
8. Does the organisation have a safety policy?		
9. Does the organisation have a written health and safety policy that includes programmes and procedures for environmental, health, safety (EHS) and working conditions?		
10. Is the organisation's written health and safety policy or programs available to all employees?		
11. Are you aware of any accident/ deceases that has occurred in your company for the past 12 months?		
12. Does the organisation have procedures for employees for reporting pains or other deceases in relation to the job processes?		
13. Does the organisation have an accident book or similar accident record system?		

Please indicate the extent of your agreement with the following statements by ticking '√' on the scale that most nearly reflects the extent to which you agree or disagree. Using this key

- 5 = Strongly Agree (SA)
- 4 = Agree (A)
- 3 = Disagree (D)
- 2 = Strongly Disagree (SD)
- 1 = Neutral (N)

Statement	SA	A	D	SD	N
14. Implementation of health and safety act in the organisation will make employees feel safe.					
15. Adequate and comfortable working environment as well as safety practices will affect my productivity positively.					
16. My work area is sufficiently equipped for my typical operational needs (normal storage, movements, etc).					
17. The practice of health and safety will protect employees from injuries and illness.					
18. To enhance productivity, Job-specific health and safety training/education must be provided to all employees prior to starting a new job?					
19. Favorable environmental conditions (less noise, suitable temperature etc) provided at the work place will increase my productivity at work.					
20. All employees given the opportunity to voice out health and safety opinions/concerns?					
21. Health and safety standards affects productivity					

22. Please state the type of health problems being encountered at the work place:

.....

23. What effect does it have on your schedule?

.....

24. In a month how many days do you stay at home as a result of health problems. Kindly state

.....

Please tick (√) in the appropriate box

Statement	Yes	No
25. Do you have a copy of health and safety manual and orientation programs for health and safety provided by your organisation?		
26. Does your organisation have health and safety procedures and regulations?		
27. Do you have any knowledge of the Health and Safety Act?		
28. Are only approved working standards used when performing your work?		
29. Has management advised you on the health and safety aspect of your job schedule?		
30. Do you notify management about the health problems experienced in performing your duties?		

Please tick (√) in the appropriate box

Statement	Yes	No
31. Are you aware that there is a health and safety coordinator and committee in the organisation?		
32. Is there a senior management representative responsible for health and safety, within the organisation?		
33. Do employees have the ability to approach management on issues of concern with regards to their health and safety?		

34. In your opinion what is the company/management philosophy regarding health and safety of employees?

.....

35. In what way does your organisation practise health and safety? Please state.

.....

.....

36. In general, are you satisfied with the health and safety practices implemented at your work place?

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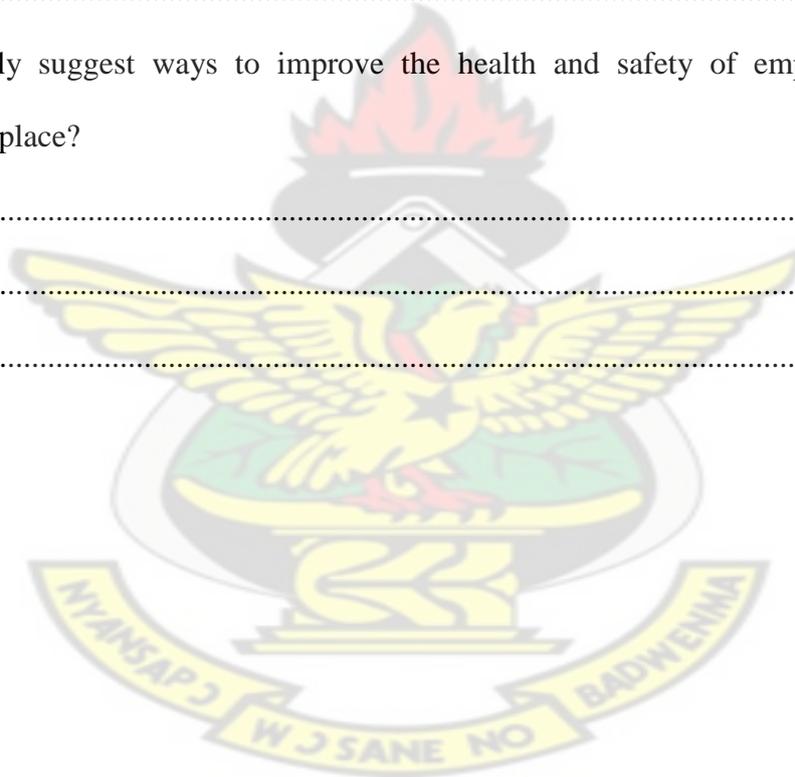
.....

37. Kindly suggest ways to improve the health and safety of employees at your workplace?

1.

2.

3.



APPENDIX II

INTERVIEW FOR MANAGEMENT

INSTITUTE OF DISTANCE LEARNING – KWAME NKRUMAH UNIVERSITY
OF SCIENCE AND TECHNOLOGY (CEMBA)

Statement	Yes	NO	Comments
1. Does the management in provide Training to improve supervisors capability in conducting Work Program?			
2. Does your company whenever they evaluate their supervisors achievements, inserts Work Safety Factor as a supervisors capability?			
3. In increasing the safe work level, does your company have standard forms for safe work quality records?			
4. How important does Work safe Quality record in the company's management?			
5. Does your company provide Investigation Program upon accident report?			
6. Is there an Investigating Team to investigate work accident in your company?			

7. On recruiting new employees, does your company look upon safety Certification?			
8. Does your company provide certain incentive to employee implementing company's Safety Management?			
9. Is there some sort of an umbrella to provide cooperative program on work safe communications upon the management and their employees?			
10. In your company, is it common to convey work and safety method instructions by your supervisor in verbal before commencing work?			
11. Does your company provide training program on Implementing Safety Precaution,			
12. Does your company provide program on Discussion Regarding safety awareness,			
13. Does your company provide program to expose posters for safety awareness,			
14. Have you provided employees with other written health and safety			

information?			
15. Are you satisfied that people requiring specific health and safety information instruction, supervision, training and consultation have received it? Eg on dangerous machinery?			
16. Do you consult employees about their health and safety concerns?			
17. What challenges does management encounter with regards to health and safety in the organisation?			

