

**EFFECTS OF OCCUPATIONAL SAFETY AND HEALTH PROGRAMS  
ON EMPLOYEE PERFORMANCE (A CASE OF PYRETHRUM BOARD  
OF KENYA)**

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*Effects of  
occupational safety*



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## DECLARATION

This research project is my own work and has not been presented for examination in any university. It is therefore submitted to the department of Business Administration Kenyatta University for the award of Master Degree in Business Administration

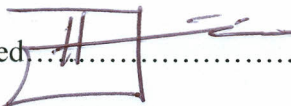
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## **DEDICATION**

I dedicate this research project to my family, and entire Kenyatta University

## ACKNOWLEDGEMENTS

This project would not have been possible without the guidance and the help of several individuals who in one way or another contributed and extended their valuable assistance in the preparation of this project. First, to my heavenly Father who gave me the strength through difficult and trying times, I give Him the glory and honour. I thank my family for their patience, continuous support and encouragement.

## ABSTRACT

The main objective is to establish effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya. The study objectives were; To identify Occupational Health and Safety programs in place that affect employee performance, To identify the kind of health and safety problems that employees go through because of the type of their work, To examine the impact of low standards of occupational health safety programs on productivity, To establish the measures undertaken by management of pyrethrum board of Kenya to curb the effects of occupational health safety of employees. The study adopted employed a descriptive research design to agree on the effects of occupational safety and health programs on employee performance at pyrethrum board of Kenya. A sample of 132 employees was derived. The determination of the sample was done using Cochran's (1977) formulas. Questionnaires were used as the main data collection instruments and a pilot study was conducted to pre-test questionnaires for validity and reliability. Descriptive statistics data analysis method was applied to analyze numerical data gathered using closed ended questions aided by Statistical Package for Social Sciences (SPSS Version 17). Pearson correlation was carried out to establish the relationship between the research variables. The findings were presented using both descriptive and inferential statistics methods. The study found that presence of occupational healthy safety department affected employee performance. The presence of first aid and fire extinguishers at precise points in the company affects employee performance. Pyrethrum Company does not organize workshop, seminar and lecturers on safety precaution and presence of a hazard assessment data affects employee performance. The study further concludes that employees involved in an accident at work place are compensated employee work place is safe, there is lack of hazard assessment data due to system failure that causes accidents. There is lack of equipment, material and clothing for occupational health safety. Finally, the study concludes that those employees have a safe place of employment. Employees have a safe means of access to work. Employees are not aware of compensation in case an accident occurs at the place of work. Employees do not know their legal rights concerning occupational health. The study recommends that employer should provide safe working environment since feeling safe at work ranks as a very important factor in job satisfaction. Part of the employer's social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions. Every workplace should demonstrate respect for the natural environment and occupiers should work towards achieving the goals of no accidents, no harm to people and no damage to the environment. Employers should take it as their responsibility to ensure the working environment is safe.

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## OPERATIONAL DEFINITION OF TERMS

**A health and safety policy** is a method of action that influences and guides actions that promote effective safe working procedures, occupational hygiene and safety training. It addresses the types of hazards associated with the workplace; it discusses the active and on-going participation of employees.

**A health and safety program** is a definite plan that contains the health and safety elements of an organization, objectives that make it possible for the company to achieve its goal in the protection of its workers at the workplace.

**Employee performance-** is everything about the performance of employees in a firm or a company or an organization. It involves all aspects that directly or indirectly affect and relate to the work of the employees

**Hazard Control:** Any means used to eliminate or reduce a hazard

**Hazard:** Any potential danger of injury or illness to a person, or damage to property.

**Health** The Act does not define the terms safety and health. The World Health Organization has defined health, thus, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity".

**Incident:** An occurrence in the workplace that results, or may have resulted in, injury, illness or property damage.

**Occupational safety and health-** the promotion and maintenance of the highest Degree of physical, mental and social well-being of workers in all occupations

**Safety behaviour** The behaviour required to complete an activity safely Safety state of being safe: freedom from injury or danger

**Safety management system-**A structured, systematic means for ensuring that what the organisation does is effectively managed to meet high standards of safety

**Workplace health & safety committee.** An occupational health and safety committee is a forum for cooperative involvement of employees representing both labour and management which assists in bringing the internal responsibility system into practice

**Workplace Inspections** Planned systematic appraisals of the workplace to identify hazards, assess and control risks, and to ensure a safe and healthy workplace complying with OHS legislation.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the Study

The right to safe and healthy working conditions has dramatically gained a lot of interest at the global, regional and national levels. Countries around the world have recognized the universality, inalienability, interdependency and indivisibility of the human right to safe and healthy working conditions (Occupational Health and Safety Act, 2000). Occupational health and safety (OHS) management protects the safety, health, and welfare of people at the workplace. In 1950, the first session of the joint International Labor Organization (ILO) and the World Health Organization (WHO) Committee on Occupational Health adopted a definition of occupational health. The definition was subsequently revised in 1995 and states that “Occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations, prevent amongst workers from health disorders caused by their working conditions and placing and maintenance of the worker in an occupational environment adapted to his physiological and psychological capabilities” (Guidotti, 2011).

Occupational health and safety has become a crosscutting disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. The human resource managers today are faced with crucial issues of occupational health and safety than before. The reason is that the workers, just like any other resources require maintenance and care in order to maximize their productivity (Casio, 1996). It is against this background that health and safety should not be viewed as a separate function or responsibility but as a broader initiative that aims at improving productivity, profitability and competitiveness of a firm (Pike, 2000).

The EU sets basic legal requirements for OH&S legislation, but OH&S regulations are the responsibility of each individual Member State. This means that within Europe OH&S legislation differs. However, OH&S in the EU is characterized by cooperation between the employer and the employee (through unions, work councils and worker representatives), and it is recognized that a safe and healthy work environment has benefits for both the employer and employee (European Agency for Safety and Health at Work, 2007a).

In America, there is the Occupation Health and Safety Act 1970, which is supplemented by the National Institute for Occupational Health and Safety (Schuler & Huber, 1993). Moreover, there is seriousness of health and safety at workplace illustrated by governments in most countries making it a policy issue particularly in Africa. For example, in African countries, health risks and safety programs in business and workplaces are not often measured. Therefore, it is important to ensure employees are always free from any health and safety hazards because employees who work in a good work environment are more productive (Schuler & Huber, 1993).

All occupational health and safety programs are geared towards fostering a safe working environment. This area has dramatically developed a lot of interest in Kenya following the enactment of the new Constitution of Kenya and the Occupational Health and Safety Act No. 154 that came into force on 26 October 2007. Occupational Health and Safety Act No. 154 saw many workplaces, which had hitherto operated without institutional and individual capacity for health and safety management having to develop the requisite mechanisms in order to improve the safety of the working environment and escape liabilities (Odhiambo, 2011). The corpus of law in Kenya dealing with occupational safety and health is contained in the international legal instruments, which emphasize that everyone is entitled to the right to safe and healthy working conditions.

Working conditions are the physical settings which employees are exposed to while carrying out their duties. Most organizations are concerned with providing a safe and healthy working environment for their employees. Safety and Health in this case encompasses security, protection and well-being of workers, which is essential to their productivity. Not all situations affecting employee Safety and Health can always be anticipated. Nevertheless, management has the responsibility to implement, enforce, evaluate and review issues related to Safety and Health in the organization, which is part of humanitarianism. International labor laws also require that reasonable levels of Safety and Health be maintained in the work environment (Armstrong, 2006). Safety policies and programs are concerned with protecting employees and other people from any dangers in relation to what the company produces or any activity that is part of the company. Safety is the condition of being protected against failure, damage, error, accidents or harm. In the modern industries, Safety and Health management concerns go beyond the physical condition of the workplace. It is also concerned with employees mental and emotional well

being. Because of the importance of Safety and Health, employees at all levels in the organization should be involved (Dessler, 2001).

The importance of Safety and Health should not be overlooked as it affects production, quality and financial results in any organization, instead it should be managed in the same way as other aspects of the organization. There is an increasing problem of mainstreaming acceptable Safety and Health standards in the industry. Incidents of Safety and Health causes are rising every year especially in industries; therefore management has a mandate of establishing strategies and policies that protect employees from risks associated with their working environment. The human resource department is expected to emphasize the safety of employees at the work place and ensure that there is no interruption in production and quality due to lack of safety precautions (Dessler, 2001).

In Kenya, the Work Injury Benefits Act 2007 covers compensation for all employees, for injuries sustained at the workplaces. It is an improvement of the earlier Workman's Compensation Act, which only covered selected group of workers: those earning sh. 400,000 yearly. However, employers are resisting implementation claiming it will increase labor costs (Nyakang'o, 2005). The Ministry of Labor reports that more than half of the industrial accidents and injuries in Kenya go unreported. It estimates that reported occupational fatalities and injuries for the years 2000 to 2004 were 1528, 1923, 1332, 1599, and 1387. This is viewed against the background that factories and other work places have to be registered by the Department of Occupational Health and Safety but, by the end of 2004, only 11,387 such enterprises were registered excluding the 1.3 million micro and small enterprises (Nyakang'o, 2005).

The Pyrethrum Board of Kenya was established in 1934 to oversee all activities related to the production and processing of pyrethrum for the benefit of growers and consumers. Therefore, it has to adhere to the Factories Act (2007), which was meant to make provisions for health, safety and welfare of persons employed in factories and other places of work, and for matters incidental there to and connected therewith (Muchiri, 2000). However, a number of occupational infections and injuries affecting staff lead to decreased employee productivity. As the duration of a person's employment in an unpleasant environment increases, his/her fitness is compromised leading to reduced performance. Some of the tasks being done manually should be carried out mechanically. Most areas of work in the industry are dark, dusty, hot and noisy. There are high

levels of absenteeism and ill health due to lack of sound occupational health safety (OHS) programs leading to increased loss of working time (Muchiri, 2000). Therefore, it is important to evaluate the effectiveness of Safety and Health programs in the industry on determine their effects on employee and their performance.

### **1.1.1. Employee performance**

Employee performance is higher when they are physically and emotionally able to work and have a desire to work. Higher levels of employee performance lead to higher levels of productivity, which in turn can lead to higher profits. Greater gains may be experienced through the direct influence of positive worker health on individual or group productivity, improved quality of goods and services, greater creativity and innovation, enhanced resilience and increased intelligent capacity (Riedel et al., 2001, p 167). However, increased occupational injuries and infections have led to accident, illness, time lost, absenteeism, and turnover rates, meaning that compensation costs led to the decrease in productivity of the employee and the organization, Riedel et al( 2001, p 167).

Workplace injuries can force employees to miss shifts, or slow down their performance because they are not physically capable of maintaining their typical pace. Long-term unsafe work conditions cause long-term consequences such as repetitive stress injuries or respiratory ailments from breathing unsafe particles without proper protection. These conditions interfere with an employee's ability to perform a job for long term, increasing turnover and forcing your company to waste valuable time training replacements. Health and safety prevention and intervention programmes play a critical role on employee's performance as these types of programmes can improve the physical and psychological well-being of the workforce, which in turn reduces absenteeism and presenteeism. Such programmes improve the organizational climate, which enhances employees' desire to work and directly raises human performance. Improved organizational climate, morale, and employment relationships as well as higher profits have the potential to reduce the health and safety risks (Oxenburgh, et al, 2004).

## **1.2 Statement of the Problem**

From the foregoing background studies, most companies have failed to implement the Workman Compensation Act that would ensure compensation of all injuries. Their excuse to failure of implementation is that it would increase labor costs (Nyakang'o, 2005). The International Labor

Organization (ILO) and the World Health Organization (WHO) require that occupational health should aim at the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. However, most companies have failed to comply with the requirement claiming that it is costly for them to develop and maintain a good Occupational Health and Safety System (WHO, 1995).

The management of the Pyrethrum Board of Kenya in Nakuru has neglected the safety and health of their workers who work with defective and machines that rarely undergo maintenance. Such demeaning conditions and defective machineries have resulted in high accidents within the company, as workers are concentrated on company's performance. They have failed to provide protective clothing and devices that could protect them from the dust, and other harmful emission during the processing of the pyrethrum. They have failed to provide adequate training and educational programs that could provide awareness to employees on the hazards they are prone to and how to avoid their side effects (Nyakang'o, 2005). This negligence on employees' occupational safety and health status has led to increased occupational health and safety risks, leading to illness, absenteeism and worker compensation thus affecting their performance and that of the organization at large. Therefore, the study sought to investigate the effectiveness of Safety and Health programs in the industry and determine their effects on employee and their performance.

### **1.3. Objectives of the study**

#### **1.3.1. Main objective**

The main objective was to establish effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya.

#### **1.3.2. Specific Objectives**

- i. To identify Occupational Health and Safety programs in place that affect employee performance
- ii. To identify the kind of health and safety problems that employees go through because of the type of their work

- iii. To examine the impact of low standards of occupational health safety programs on productivity
- iv. To establish the measures undertaken by management of pyrethrum board of Kenya to curb the effects of occupational health safety of employees

#### **1.4 Research Questions**

- i. What kind of occupational health & safety programs affecting employees' performance?
- ii. What kind of health and safety problems encountered by employees at their place of work
- iii. What impact do low standards of occupational health safety have on productivity?
- iv. How does the attitude of the management affect the occupational health and safety of employees?

#### **1.5 Significance of the study**

The study explored the effects of occupational safety and health programs on employee performance. This could act as an assessment on the employee performance in relation to the effects of occupational safety and health programs and the results could be adopted by the company in crafting strategies to cushion themselves from employee performance decline.

This study could be of great significance to policy makers in the organizations in that by establishing the relationship between the occupational safety and health programs and employee performance. Organizations could assess the performance of one using the other and in planning for improving employee performance.

The study will enable Government and other employers who have the legal responsibilities to provide safe workplace and systems of work, to consult with employees and to keep them informed about health and safety matters.

The study would also suggest to employers to adopt Occupational Health Safety Management System that would systematically eliminate the possibility of accident, illness, injury or fatality in the workplace by ensuring that the hazards in the workplace are eliminated or controlled so far as is reasonably practicable in a systematic manner, rather than waiting for a crisis to occur. The

study will benefit future researchers and writers about occupational healthy safety management systems in various organizations by providing strong, further points of reference.

### **1.6 Scope of the study**

This study was confined to Pyrethrum factory Nakuru that has 200 employees. The study focused on sampled workers in the factory. The study focused on identifying the kind of health problems that employees go through because of the type of their work, examine the impact of low standards of occupational health safety on productivity and assess the attitude of management towards the occupational health safety of employees.

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

Owing to the limitations of time and financial constraints problems, the study undertook a case study of Pyrethrum Board of Kenya.

There are many companies, organization and government institutions such as Tea factory, mining companies, hospitals, schools just to mention but a few, which have experienced industrial unrest due to poor occupational safety and health programs in place, which in turn affect the performance of employees. However, the study has selected the Pyrethrum Board of Kenya and the findings and recommendation will not apply universally to all companies but it will apply to Pyrethrum Board of Kenya.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1. Introduction

This chapter presents a review of the literature on effects of occupational safety and health programs and employee performance. The review is divided into three sections; one covering the theoretical literature and theoretical framework that generally discusses an overview of occupational safety and health programs and employee performance in an organization; and the empirical literature that discusses previous studies linking occupational safety and health programs and employee performance. It also covers the conceptual framework that discusses on the variables of the study.

#### 2.2 Theoretical review

Along with the diversity of safety and health promotion and intervention approaches, many different theories and models address safety and health behavior. In fact, many of the approaches to safety and health intervention are derived from some theory or model of behavior change.

##### 2.2.1 Economic Theory

An employer will determine whether to prevent workplace accidents or illnesses by comparing the cost of prevention with the cost of not taking such action. Employers that fail to reduce workplace hazards can expect to pay increased labor costs because workers will demand additional compensation for enduring occupational safety and health risks. For a given level of workers' compensation, workers will demand a wage premium that compensates for any inadequacies in ex-post compensation (Walter, 1974). In other words, assuming workers are fully informed about job risks, they will seek compensation equal to the expected cost of an injury or illness not covered by workers' compensation. In addition, the employer may have to pay for the cost of recruitment and training of additional workers to replace those persons who are injured or killed and other related costs. To avoid these expenses, an employer will make safety and health improvements until the cost of additional precautions is more than paying wage premiums and other related costs. In this manner, labor markets should produce the abatement of some safety and health hazards and workers should be compensated (*ex ante and ex post*) for the risks that remain. The employer's assumption of these costs will make the market for the employer's product or service more efficient. Because the employer assumes these costs, the

price of the product or service will reflect the cost to society of the production of the good or service, including the cost of occupational illnesses and injuries (Walter, 1974).

### 2.2.2 Social cognitive theory

The concept of self-efficacy and outcome expectancy has been widely used in a variety of health-related settings, Bandura (1997). Even though there are many health related models that have had been used successfully to design interventions to achieve positive results (for instance health belief model, several other theories were selected. These theories included the theory of reasoned action, theory of planned behavior, protection motivation), self-efficacy. They were chosen because of the many successful applications of the theories in a variety of settings and due to significant overlap of determinants between social cognitive theory and similar health related theories. In a history of social cognitive psychology, Barone, Maddux, and Snyder (1997) traced the American forerunners of the sub-field to such early psychologists as John Dewey (1859- 1952), James Baldwin (1861-1934), and George Mead (1863-1931). Although Dewey, Baldwin, and Mead were discussing such things as philosophy, developmental psychology, and sociology, these early psychologists laid the groundwork for two social cognitive theory tenets still used today. The first tenet describes how psychology needs to include the social context within the study of human behavior because people are essentially social in nature. The second principle illustrates how we use our cognitions for avenues of thinking and communicating to adapt to social contexts. As such, “social cognitive psychology interprets cognition as a part of social acts” (Barone, et al, 1997, p. 11).

Of the early frames of reference for social cognitive theory (i.e., social gestalt, constructivist, information processing, social learning), this section focuses on self- evaluation/regulation (i.e., control theory, goal-setting theory, self-efficacy). This section is further narrowed to self-efficacy theory, Bandura, (1997) in that goal-setting theory, Lock & Latham (1990) overlaps with self-efficacy theory, and control theory is seen as too limiting or mechanistic to cover the diversity of human behavior, Barone, et al (1997). Throughout life, people strive to gain control of the various aspects of their environment. Individuals try to gain control over desired outcomes (or attainments) and achieve control over the undesirable events. From a social cognitive perspective, people are exposed to various interdependent circumstances every day (that is, reciprocal causation). According to (Bandura 1997), people must determine the best approach to

these situations, assess their perceived competence; that is, self-efficacy to carry out their intentions that are human agency, and determine if the behavior they perform will produce the desired outcome; that is, outcome expectancy. Similarly, they must also decide the importance of obtaining the outcome; that is, outcome value.

### **2.2.3 Self-Efficacy**

Self-efficacy, originally defined as a person's belief in his or her ability to perform a specific behavior to produce an outcome, has since been expanded by Bandura's (1997) to refer to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainment" (Bandura, 1997, p. 89). Efficacy beliefs can vary in level (increasing difficulty of behavior), generality (similarity of behaviors), and strength (perseverance). From Bandura's perspective (1997), people's self-efficacy influences many aspects of their every-day life. Once an individual's self-efficacy forms for a particular behavior or set of behaviors, these beliefs guide the person's aspirations, behaviors, efforts, and reactions. However, these behaviors are seen more as probabilistic rather than inevitability through reciprocal determinism, Geller (1996). In other words, three interdependent factors, behavior, person, and environment, influence each other depending upon the situation.

### **2.2.4 Outcome Expectancies**

Outcome expectancies have also played an important role in social cognitive theory. Outcome expectancy is the belief that a particular behavior will result in a certain outcome. Outcome expectations take three different forms: physical, social, and self-evaluative. Physical outcomes of engaging in a behavior can be pleasant or aversive sensory experiences, Taylor (1991). There can also be positive social outcomes such as interest, praise, and recognition, as well as negative social outcomes like disapproval, rejection, or penalties. People also have certain outcome expectancies about how they view themselves. Whereas outcome expectancies have different forms; that is, Physical, social, and self-evaluative, all of these forms can vary in their importance or value. Outcome value has been recently proposed as another significant predictor variable within self-efficacy theory with its own moderators. Outcome value can vary in dimension, displacement, and velocity. Taylor (1991) proposed that an outcome's dimension, positive or negative properties, could differentially affect people's emotions or moods. For example, negative outcomes could produce more cognition, affect, physiology, and behavior in

some people than the opposite positive outcomes. Furthermore, satisfaction with outcomes varies with their displacement from outcome value expectancies to post outcome change (that is, displacement relation). In addition to displacement relation, Hsee and Abelson (1991) also proposed velocity relation. The authors found that people are not only engaging in a behavior to receive an outcome, they are seeking a greater rate (or velocity) of change in the outcome itself, except if it is negative.

Therefore, my research will be anchored on this theory because employee performance greatly depends on satisfaction on the outcome of their performance, which is determined by the physical and social environment at their workplace. The theory further explains the need for employers to ensure that all rewards for safe work is seen as valuable by each employee and the rewards are received after attaining safety goals.

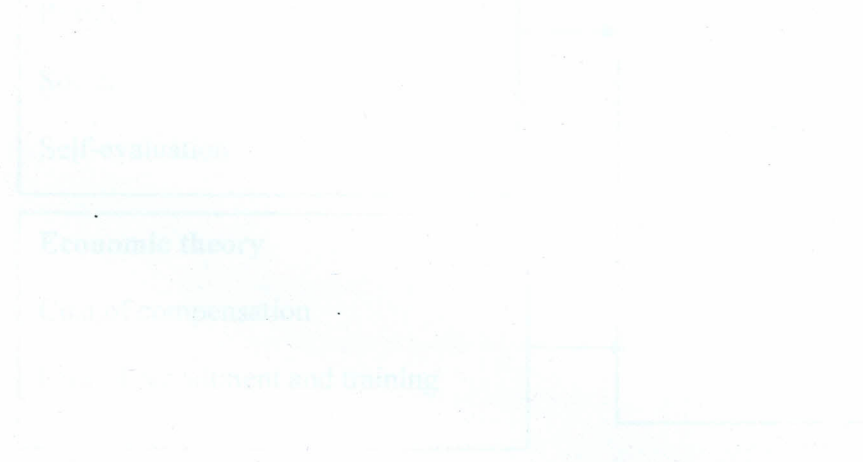
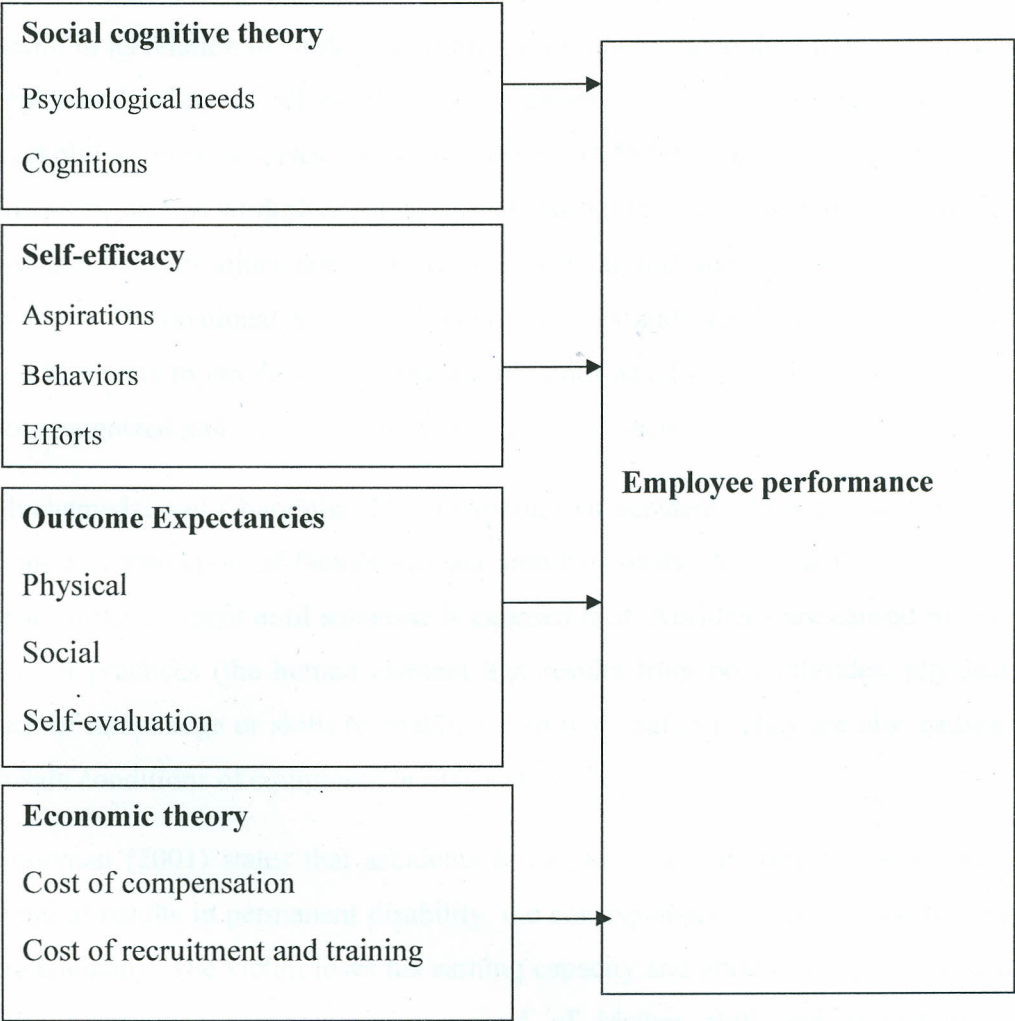


Figure 2.11 Theoretical framework  
Source: Adopted from Armstrong (1997)

**Theoretical framework**



**Figure 2.1: Theoretical framework**

**Source: Adopted from Armstrong (1997)**

### 2.3 Empirical review

Muchemedzi and Charamba (2006) define occupational health as a science concerned with health in its relation to work or working environment. According to Oxenburgh et al. (2004), the health and safety of all employees are closely linked to the company's productivity in all workplaces. In most cases, Occupational Health Safety (OHS) 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. Occupational health and safety policies and practices are not carried out fully. As a result, threats to employees' safety are not eliminated in time because accident-prone areas are not recognized and taken care of before accidents occur.

Muchemedzi and Charamba (2006) explain that accidents do not arise from a single cause but from a combination of factors that act simultaneously. A potentially unsafe situation does not result in 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. Presenteeism is a common concept amongst the workforce. Presenteeism is one of the major results of poor OHS practices. Some infections and illnesses are not reported to the industrial nurse. Some workers are also reluctant to seek medical attention. These workers come to work as if everything is normal, but in the real sense, their health and fitness is poor. This concept should be eliminated in order to increase productivity.

According to Armstrong (2006), the achievement of the highest standard of Safety and Health in the workplace is important because the elimination or the minimization of Safety and Health hazards and risks is the moral, as well as the legal responsibility of employers. This leads to change of employee's attitudes towards better Safety and Health measures (Armstrong, 2006). The Safety and Health Executive (HSE) estimates that, in United Kingdom, about 5,000 people

die at work every year, and several hundreds of thousand injured from bad health. It is also estimated that apart from the pain and misery caused to those directly or indirectly involved, the total cost to employers on work related injury is very high. In turn, this affects the performance or productivity of employees, since most of the working time and money is spent on treating and compensating the injured and court cases: a situation that also applies to Kenya.

McCunney (2001) demonstrates that the health risks and failure of employees to participate in fitness and health promotion programs are associated with higher rates of employee absenteeism. McCunney's contribution can only be valid if the fitness programs are in place. There is need for the employer's participation in ensuring that OHS programs and policies are existent. If these OHS programs are in place, it is more likely that the worker participates in order to preserve his/her life. Towers (2003) explain that it is important to empower, educate and persuade workers to exercise their powers in the protection of their OHS. Employees are left to form their own OHS committees, which are not taken seriously by the management

### **2.3.1 Organizations and Occupational Safety and Health Act**

Various unions, employers and employees, as well as governments especially in American and European continents have made substantial efforts to accomplish effective and efficient task performance toward promoting occupational safety and health in organizations. The widespread concern about employee safety and health in United States led to the passage in 1970 of the most comprehensive law regarding worker safety. This act is known as the Occupational Safety and Health Act of 1970 but is frequently referred to simply by its initials: OSHA. At the time OSHA was passed, approximately 15,000 work-related deaths occurred in the United States every year (Denisi & Griffin (2005)).

Safety constitutes one of the essential human needs, as postulated by Abraham Maslow in his theory of needs hierarchy. Feeling safe at work ranks as a very important factor in job satisfaction, (Kreitner, 2007). In attempt to satisfy this need, certain organizations incorporate into their policy thrusts, guaranteeing workers' safe work execution under a climate capable of enhancing the physical, mental, and emotional conditions. Organizational policy of this nature is often categorized under health and safety. Under work environment, Hall and Goodale (1996) describe employee health as the absence of illness or disease resulting from the interaction of

employee and the work environment. In general term, health means a state of complete physical, emotional, mental, and social ability of an individual to cope with his environment, and not merely the absence of disease or infirmity (Hippocrate, 1991). Health is the art and science of preventing disease, prolonging life, promoting physical and mental health, sanitation and personal hygiene, control of infections and organization of health services (Lucas, 2001).

On the other hand, safety means freedom from the occurrence or risk of injury or loss, Aswathappa (2004). He described industrial or employee safety as the protection of workers from the danger of industrial accidents. Safety can as well be referred to as the absence of injuries due to the interaction of the employee and the work environment (Lucas, 2001). In a general perspective, safety means a condition of being safe from undergoing or causing hurt, injuries or loss. Hence, safety policies may encompass activities directed at either reducing or complete removal of hazardous conditions capable of causing bodily injuries. Organizational safety policy, according to Aswathappa (2004), specifies the company's safety goals and designates the responsibilities and authority for their achievement. According to him, such policy statement must emphatically declare the safety of employees and the public, safety taking precedence over expediency, every effort made to involve all managers, supervisors and employees in the development and implementation of safety procedures and safety legislation to be complied with. Organizational health and safety in the context of this paper is concerned with the health and safety of workers, which Annah (2004) described as part of human security and as a basic human right. According to ILO (2005), organizational health and safety focuses on the development of specific measures and programs, aimed at protecting employees in the course.

Most of the reported accidents are those seeking compensation under the Workman's Compensation Act. In 2003, data indicated that, 41% of accidents in Kenya were from mining, construction and transport, 28% from machine operators and assemblers while other occupations share 31% of workplace accidents (Kenei, 1995). This shows that these occupations are injury prone while both the employer and employees treat matters of safety casually. The figure of accidents victims shows an increase, which is a pointer that the working environment is still unsafe (Mberia, 2001). Defective and unmaintained machines are also associated with high accident rate in Kenya. Inadequate operation procedures and non-fencing of dangerous machines

were identified as potential hazards to employees. These hazards may range from noises and vibrations from machines to radiation (Kenei, 1995).

Every workplace should demonstrate respect for the natural environment and occupiers should work towards achieving the goals of no accidents, no harm to people and no damage to the environment. It should be noted that most employers in Kenya have not taken it as their responsibility to ensure the working environment is safe, clean and health (Kariuki, 2003). Even though workers, including foreigners and immigrants, theoretically have the right to remove themselves from situations that endanger health or safety without jeopardy to their employment, this right has not been enforced effectively, and workers are reluctant to do so due to the risk of losing their jobs. For example on 5 May 2007, a Company dismissed 28 tea workers for striking over poor working conditions. However, the Kenya Plantation Union and the Minister for Labor came to the rescue of the workers and fought for their reinstatement (Kariuki, 2003).

### **2.3.2 The Impact of occupational safety and health on organizations**

Organizations incur high costs due to poor safety and health programs and efforts. Dorman (2000) notes that some of the indirect costs of occupational accidents include interruption of production immediately after the accident, lowering morale of co-workers, and staff time taken up with investigating and preparing reports on the accident. Other are recruiting and training costs for replacement workers, reduced quality of recruitment pool, damage to equipment and materials, reduction in product quality following the accident and reduced productivity of injured workers on light duty. Overhead costs of spare capacity maintained to lessen the potential effects of any accidents (Dorman, 2000). These costs bring negative consequences on organizations, such as deterring its ability to accomplish set goals and diminishing the competitive advantage position of the firm in the marketplace.

### **2.3.3 Health and Safety at Work**

According to Cole (2002), employer has a common law duty to provide a safe place of work for his or her employees and is liable under common law for accidents encountered by his or her employees in the course of their employment. The duties regarding health and safety, which the employer owes his or her employees include the provision of a safe place of employment, the provision of safe means of access to work, the provision of safe systems of working and the

provision of adequate equipment, materials and clothing to enable employees to carry out their work safely. Part of the employer's social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions, (Ayodele & Olubayo-Fatiregun, 2010).

#### **2.3.4 Government Role**

Occupational health and safety is part of the National Health Service, as implied in section 10 of the Public Health Act Cap 242 of the Laws of Kenya. The government has through the ministry of Health has insisted on the need to initiate the occupational health and management system at workplaces by setting a clear policy and allocating the necessary resources for its implementation. Ratification of the relevant conventions would assist in requiring reporting on the progress by the International Labor Office (ILO) in accordance with Article 22 of the ILO constitution. The Kenyan OHS legislation has been reviewed to include the ILO-OSH conventions. The government has compelled industries to employ an officer or manager who has been trained in occupational health and safety, or one who has undergone a course in Environmental Health Sciences (Ayodele & Olubayo-Fatiregun, 2010). The professional group to be targeted should be the public health officers. Small industries should be allowed to utilize services from a health and safety firm, preferably managed by public health officers

#### **2.3.5 Building an Effective Health and Safety Management System**

A health and safety management system involves the introduction of processes designed to decrease the incidence of injury and illness in the employer's operation, Alberta (2006). The successful implementation of this system requires management commitment to the system, effective allocation of resources, and a high level of employee participation. For the system to be effective, management must show leadership and commitment to the program. To achieve this, management should put the organization's expectation around health and safety into writing by developing a health and safety policy (Dessler, 1997). Employees who forms part of health and safety committee, should be involved in writing the policy to be signed by senior operating officer indicating and confirming the commitment of management. Clearly defined and well communicated health and safety roles and responsibilities for all levels of the organizations will create an expectation of a standard level of performance and accountability among employees,

contractors, and visitors. All levels must be aware of their individual roles and responsibilities under both state law and company standards. For a health and safety management system to be effective, management at all levels, should demonstrate their support for the health and safety program. This may be demonstrated through management, participation in health and safety leadership training meetings, facility inspections incident investigations among others (Dessler, 1997).

It is important for workers to be involved in the development of the system in order to create ownership as well as help a better fit with the culture of the organization. Employers are required to assess a work site for existing and potential hazards before work begins. Hazard assessment data could be used to determine what worker training needs to be done, and to build the content of employee orientations and job training hazard assessment data could be used as the basis for inspection checklists. In the case of incident investigation, hazard assessment and control data can be used to help determine if a system failure was the cause of an incident (ibid).

## 2.4. Conceptual Framework

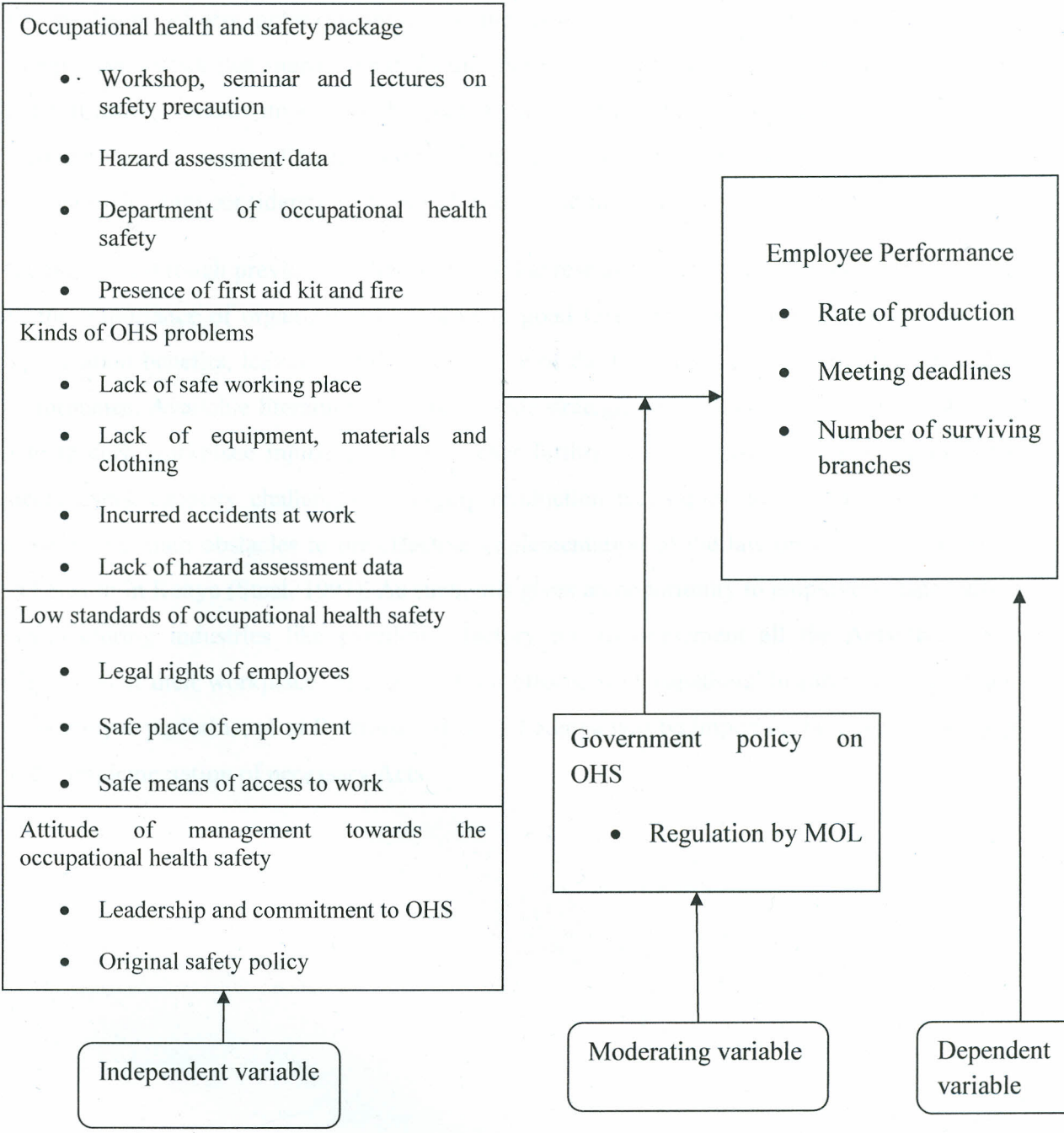


Figure 2.2: Conceptual framework

Source own 2012

## 2.5. Summary and gaps to be filled

The backbone of any organization lies in the hands of its human labor force, which is an indispensable asset that management should make certain and oversee its proper management and utilization towards improving the performance of the organization. However, this has not been the case to many of them who concentrate on ensuring maximum profits are achieved without taking into consideration the workforce behind that success (Staal, 1997).

Having gone through previous studies, much of the research relating to OHS has mainly focused on the importance of organizations developing good OHS management systems, and how the organization benefits, leaving out the importance of the OHS programs to employees and their performance. Available literature does not provide strategies, policies and procedures that would help to curb workplace injuries. The researcher further notes that lack of proper enforcement mechanisms, capacity challenges, emerging production techniques and creating new risks as some of the main obstacles to the effective implementation of the law on Occupational Safety and Health in Kenya (Staal, 1997). As such, this gives an opportunity to employers, especially in manufacturing industries like pyrethrum factory not to implement all the Acts that protect employees at their workplace. The research on effects of Occupational healthy safety programs on employee performance at Pyrethrum Board of Kenya will be important because of such gaps in the implementation of necessary Acts.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This chapter covers the research design and methodological procedures that was used in data collection and analysis. The coverage includes the research design, location of the study, population of study, sampling procedure and sample size, instrumentation, data collection, and data analysis.

#### **3.2. Research Design**

This study employed a descriptive research design to agree on the effects of occupational safety and health programs on employee performance at pyrethrum board of Kenya. Saunders et al, (2009) says that descriptive research portrays an accurate profile of persons, events or situations. This design offers to the researchers a profile of described relevant aspects of the phenomena of interest from an individual, organizational and industry-oriented perspective. It presents data in a meaningful form that helps the researchers to understand the characteristic of a group in a given situation, to think systematically about aspects in a given situation, offer ideas for further research and helps to make certain simple decisions. Miller's (1991) descriptive research is the process of collecting data in order to answer questions concerning the current status of the subject study. Therefore, the design enabled the researcher to gather data from a wide range of respondent on the effects of OSH programs on employee performance.

#### **3.3. Target Population**

The target population was made up of all staff of the pyrethrum factory in Nakuru that has 200 staff members.

##### **3.3.1. Sample size**

A sample of 132 employees was derived. The determination of the sample was done using Cochran's (1977) formulas. In Cochran's formula, the alpha level is incorporated into the formula by utilizing the t-value for the alpha level selected (for example, t-value for alpha level of 0.05 is 1.96 for sample size above 120). For categorical data, 5% margin of error is acceptable (Krejcie & Morgan 1970). Cochran's sample size formula for categorical data is:

$$n = \left\{ \frac{t^2 (p)(q)}{(d^2)} \right\}$$

$$n = \frac{(1.96)^2 (.5)(.5)}{(.05)^2} = 384$$

Where:

$n$  = the desired sample size

$t^2$  = value of selected alpha level of .025 in each tail = 1.96 (the  $\alpha$  level of .05

indicates the level of risk the researcher is willing to take. True margin of error may exceed the margin of acceptable margin of error

$(p)(q)$  = estimate of variance = 0.25 ( $p$ -Maximum possible proportion (.5)\* 1-maximum possible proportion (.5) produces maximum possible sample size)

$d$  = acceptable margin of error for proportion being estimated = .05 (the error researcher is willing to accept)

Therefore, for a population of 200, the required sample is calculated as follows:

$n$

$$n_f = \frac{n}{(1 + n/\text{Population})}, \quad \text{where } n_f \text{ is the target sample size}$$

384

$$n_f = \frac{384}{(1 + 384/200)} = 132$$

Using the Krejcie and Morgan sample size table, the researcher found that the sample was 132 employees (Krejcie & Morgan, 1977). This is supported by what was calculated by using Cochran's (1977) formula.

### 3.3.2. Sampling procedure

The study applied stratified random sampling in order to achieve the desired representation from the various employees' subgroups in the population. The subject was selected in such a way that the existing subgroups in the population are more or less reproduced in the sample. After sampling at each subgroup, simple random sampling proportional to size based on the relative number of employees in each department was used. A sample should be optimum; fulfils the requirements of efficiency, representativeness, reliability and flexibility (Kothari, 2004). Proportionate allocation was used by sampling fraction in each of the strata that is proportionate to that of the total population.

**Table 3.1: Proportionate distribution of employees in their departments**

Department number	Name of department	Total staff	
		N	n
1	Human resource & administration	9	6
2	Factory	119	79
3	Crop department	10	7
4	Accounts	20	13
5	Audit	2	1
6	Product development& marketing	20	13
7	Laboratories	20	13
	<b>TOTAL</b>	<b>200</b>	<b>132</b>

Source: *Pyrethrum Company, Human resource department Registry 2012*

### **3.4. Data Collection Instruments**

Open and closed ended questionnaires were prepared and administered for the staff respectively. According to Kothari, (2004) the questionnaire method is the most suitable tool for collecting data. It is economical in terms of time and cost compared to other methods. The Questionnaires facilitated easy and quick responses within a short period. In addition, it gave respondent freedom to express their views or opinions and to make suggestions.

### **3.5. Data Collection Procedures**

The study relied on primary data using a questionnaire, which was administered on drop and pick from selected respondent in factory. The study also relied on secondary data from the pyrethrum factory Reports. Questionnaires were distributed to the sampled population by the researcher for filling by the respondents. The questionnaires are simplified as much as possible so that all respondents have a clear meaning of each of the question.

### **3.6. Validity of Data Collection Tools**

A test is valid if it measures what it claims to measure, Babbie, (1991). The questionnaires were used in this study to design and measure pyrethrum factory's OHS programs and employee performance. To ensure that it is valid expert judgments was sought from the supervisor, lectures at Kenyatta University to test face for reliability and construct validity.

### **3.7. Reliability of the Study**

Reliability of a test is the accuracy of the scores that are free of errors. It is the degree of consistency that an instrument or procedure demonstrates Fraenkel & Wallen, (2000). To ascertain the validity and reliability, a pre-testing of the instrument was done. Pre testing identifies problems, isolates the problems, and solve before the actual study.

### **3.8. Data Analysis and presentation**

After data cleaning, the data was coded and entered in the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 19. This research is expected to yield both qualitative and quantitative data. Qualitative data was analyzed qualitatively using content analysis based on analysis of meanings and implications emanating from respondents information and documented data. Descriptive statistics was employed to analyze quantitative



## CHAPTER FOUR

### DATA ANALYSIS AND INTERPRETATION

#### 4.1 Introduction

This chapter presents analysis and findings of the study as set out in the research methodology. The study findings were presented on to establish effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya. The data was gathered exclusively from the questionnaire as the research instrument. The questionnaire was designed in line with the objectives of the study.

##### 4.1.1 Response Rate

The study targeted 200 respondents in collecting data with regard to establishing the effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya. From the study, 132 out of the 200 sample respondents filled-in and returned the questionnaires making a response rate of 66%. This reasonable response rate was made a reality after the researcher made personal calls and visits to remind the respondent to fill-in and return the questionnaires.

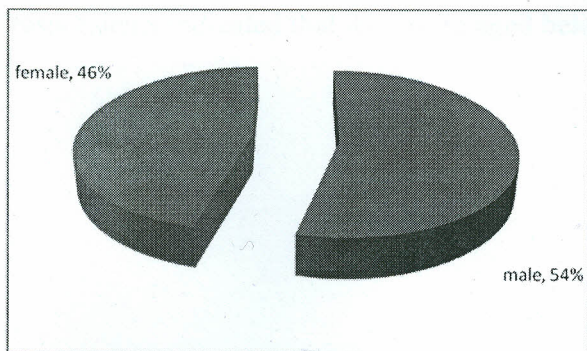
Reliability refers to the extent to which a measuring instrument contains variable errors that appear inconsistency from observation during any one measurement attempt or that vary each time a given unit is measured by the same instrument. Construct validity is established by relating measuring instruments to a general theoretical framework in order to determine whether the instrument is tied to the concepts and theoretical assumptions they are employing (Nachmias & Nachmias, 2008). SPSS was used as the tool of analysis to test the relationship between the dependent variable and the four independent variables as indicated in the table below. Cronbach's alpha of well above 0.7 implies that the instruments were sufficiently reliable for the measurement. As most item total correlations were reasonably high, the construct validity of the instruments was considered reasonable (Brown, 2000).

**Table 4.1: Reliability and Validity**

Variable/Construct description	Item Means	Item Standard deviations	Coefficient Reliability	Alpha
Effect of employee performance on occupational health & safety programs	5.8	2.8	0.769	
Health and safety problems encountered by employees at their place of work	8.7	2.6	0.763	
Impact of low standards of occupational health safety	6.0	1.8	0.769	
Attitude of the management on occupational health of employees	4.7	2.5	0.776	

**4.2 Demographic Information**

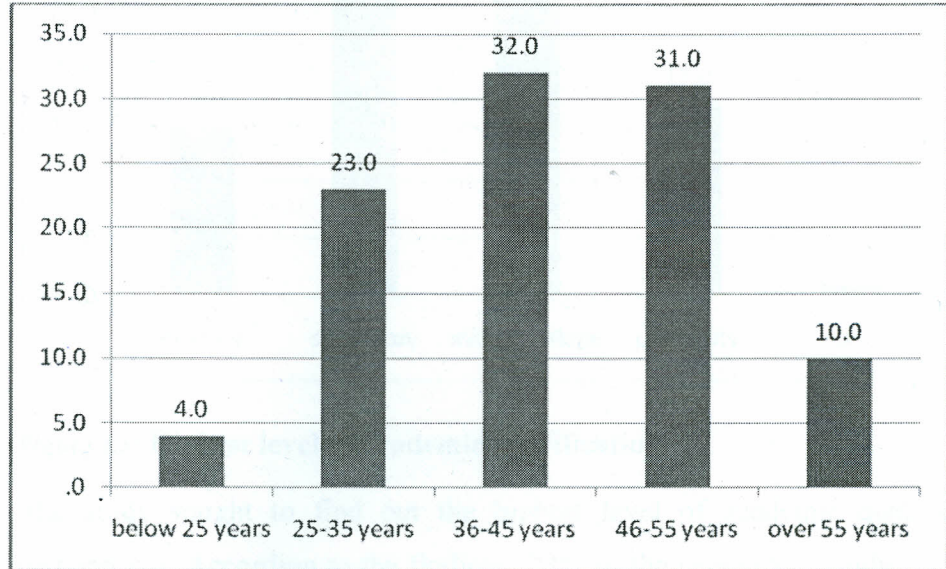
**Gender of the respondents**



**Figure 4. 1: Gender of the respondents**

The study sought to find the gender of the respondents. From the findings, 54% of the respondents indicated that they were male while 46% of the respondents indicated that they were female.

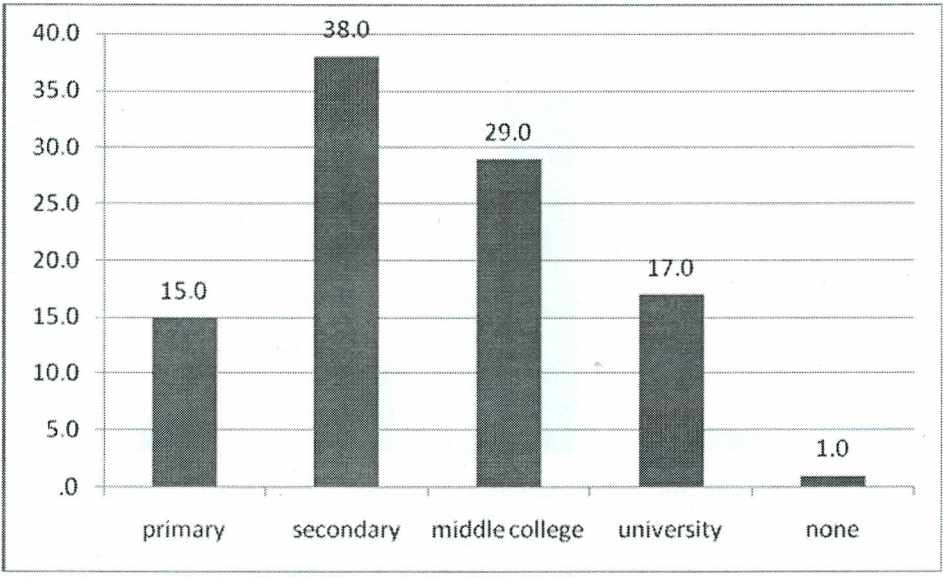
### Age of the respondents



**Figure 4.2: Age of the respondents**

The study sought to find out the age of the respondents. According to the findings, 32% of the respondents were aged between 36- 45years, 31% of the respondents indicated that they were aged between 46 -55 years, 23% of the respondents indicated that they were aged between 25 to 35 years 10% of the respondents indicated that they were over 55 years while 4% of the respondents indicated that they were aged below 25 year.

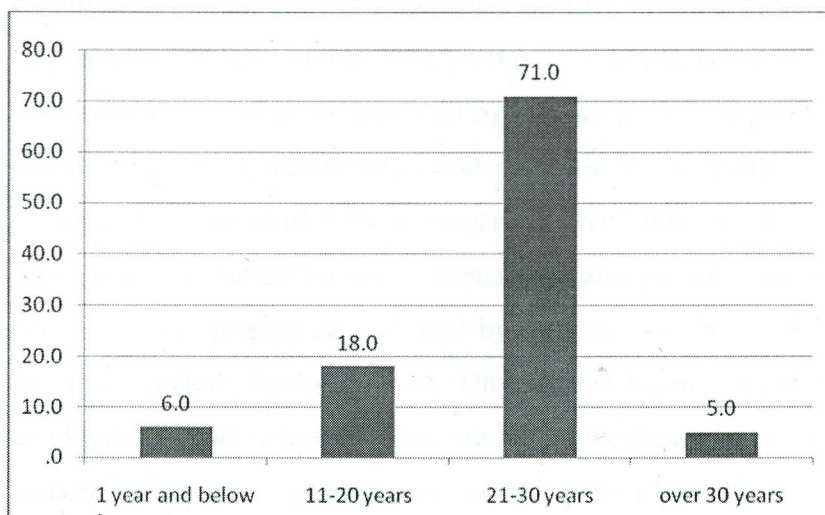
### Highest level of academic qualification



**Figure 4.3: Highest level of academic qualification**

The study sought to find out the highest level of academic qualification attained by the respondents. According to the findings, 38% of the respondents indicated that they had gone up to secondary, 29% of the respondents indicated that they had gone up to middle college, 17% of the respondents indicated that they had gone up to university, 15% of the respondents indicated that they had gone up to primary, while 1% of the respondents indicated that they had not gone to school.

## Duration of work with the company



**Figure 4.4: Duration of work with the company**

The study sought to find out the duration of time the respondent had worked in the company. According to the findings, 71% of the respondents indicated that they had worked between 21-30 years, 18% of the respondents indicated that they had worked between 11-20 years, 6% of the respondents had worked for 1 year and below, while 5% of the respondents indicated that they had worked for over 30 years.

**Table 4.2: Effect of employee performance on occupational health & safety programs**

	Strongly disagree	disagree	indifferen	Agree	Strongly	mean	stdev
Pyrethrum company organizes workshop, seminar and lecturers on safety precaution	14	57	8	20	1	2.0	0.994
Presence of occupational healthy safety department	5	24	35	22	14	4.5	1.906
Presence of a hazard assessment data	2	35	33	13	11	2.2	1.035
Presence of first aid and fire extinguishers at precise points in the company	1	28	28	31	12	3.5	1.029

The study sought to find out the level of agreement of the respondents on effect of employee performance on factors of occupational health & safety programs. According to the findings, the respondents strongly agreed that presence of occupational healthy safety department affected employee performance as indicated by a mean of 4.5, respondents agreed that Presence of first aid and fire extinguishers at precise points in the company affects employee performance as indicated by a mean of 3.5, respondents disagreed that Pyrethrum company organizes workshop, seminar and lecturers on safety precaution and presence of a hazard assessment data affects employee performance as indicated by a mean of 2.0 and 2.2 respectively. This relate to the literature review by (Ayodele & Olubayo-Fatiregun, 2010) who argues that part of the employer’s social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions.

**Table 4.3: Health and safety problems encountered by employees at their place of work**

	Strongly disagree	disagree	indifferent	Agree	Strongly agree	mean	stdev
Employee work place is safe	3	59	5	30	3	3.9	1.03
There is lack of equipment, material and clothing for occupational health safety	8	45	32	10	5	2.4	0.85
There is lack of hazard assessment data due to system failure that causes accidents	6	47	31	10	6	3.4	0.83
Employees involved in an accident at work place are compensated	5	31	38	22	4	4.5	0.94

The study sought to find out the level of agreement of the respondents on the Kind of health and safety problems encountered by employees at their place of work. According to the findings, the respondents strongly agreed that employees involved in an accident at work place are compensated as indicated by a mean of 4.5, the respondents agreed that employee work place is safe as indicated by a mean of 3.9, the respondents were indifferent that there is lack of hazard

assessment data due to system failure that causes accidents as indicated by a mean of 3.4, the respondents disagreed that there is lack of equipment, material and clothing for occupational health safety as indicated by a mean of 2.5. This relates to the literature review by Cole (2002), who argues that, employer has a common law duty to provide a safe place of work for his or her employees and is liable under common law for accidents encountered by his or her employees in the course of their employment.

**Table 4.4: Impact of low standards of occupational health safety**

	Strongly disagree	disagree	indifferent	Agree	Strongly agree	mean	stdev
Employee know their legal rights concerning occupational health	9	45	12	33	1	2.4	1.05
Employees have a safe means of access to work	2	30	33	33	2	3.7	0.89
Employees have a safe place of employment	36	25	30	7	2	4.6	0.9
Employees are aware of compensation incase an accident occurs at the place of work	4	44	30	20	2	3.0	0.9

The study sought to find out the level of agreement of the respondents on the statements concerning the impact of low standards of occupational health safety. According to the findings, the respondents strongly agreed that employees have a safe place of employment as indicated by a mean of 4.6, the respondents agreed that employees have a safe means of access to work are aware of compensation incase an accident occurs at the place of work as indicated by a mean of the 3.7, respondents were indifferent that employees are aware of compensation incase an accident occurs at the place of work as indicated by a mean of 3.0, the respondents disagreed that employees know their legal rights concerning occupational health as indicated by a mean of 2.4. This is in literature review: Feeling safe at work ranks as a very important factor in job satisfaction, (Kreitner, 2007). In attempt to satisfy this need, certain organizations incorporate into their policy thrusts, guaranteeing workers' safe work execution under a climate capable of

enhancing the physical, mental, and emotional conditions. Organizational policy of this nature is often categorized under health and safety. Under work environment, Hall and Goodale (1996) describe employee health as the absence of illness or disease resulting from the interaction of employee and the work environment.

**Table 4.5: Attitude of the management on occupational health of employees**

	Strongly disagree	disagree	indifferent	Agree	Strongly agree	mean	stdev
Management is committed to occupational health safety of employees	11	55	8	21	5	2.4	1.1
Pyrethrum company has an organizational health safety policy	7	43	22	21	7	3.1	1.5

The study sought to find out the level of agreement of the respondents on the factors concerning the attitude of the management on occupational health of employees. According to the findings, the respondents were indifferent that Pyrethrum Company has an organizational health safety policy as indicated by a mean of 3.1, and disagreed that management is committed to occupational health safety of employees as indicated by a mean of 2.4. In relation to the literature review, the successful implementation management on occupational health of employees system requires management commitment to the system, effective allocation of resources, and a high level of employee participation. For the system to be effective, management must show leadership and commitment to the program. To achieve this, management should put the organization's expectation around health and safety into writing by developing a health and safety policy (Dessler, 1997). For a health and safety management system to be effective, management at all levels, should demonstrate their support for the health and safety program. This may be demonstrated through management, participation in health and safety leadership training meetings, facility inspections incident investigations among others (Dessler, 1997).

**Table 4.6: Results of employee performance**

	Strongly disagree	disagree	indifferent	Agree	Strongly agree	mean	stdev
Production of pyrethrum has steadily increased in the past five years	17	63	8	11	1	2.2	0.87
Employees are able to meet working deadlines	13	43	32	11	1	2.4	0.89
Pyrethrum company has been able to produce quality products for the market	7	47	25	15	6	2.7	1.02

The study sought to find out the level of agreement of the respondents on the following statements concerning the results of employee performance. According to the findings, the respondents strongly agreed that Pyrethrum Company has been able to produce quality products for the market as indicated by a mean of 2.7, the respondents strongly agreed that employees are able to meet working deadlines as indicated by a mean of 2.4, the respondents strongly agreed that Production of pyrethrum has steadily increased in the past five years as indicated by a mean of 2.2.

### 4.3 Regression Analysis

This section presents a discussion of the results of inferential statistics. The researcher conducted a multiple regression analysis so as to determine the relative importance of each of the variables with respect to investigate the establish effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya. The researcher applied the statistical package SPSS, enter and compute the measurements of the multiple regressions for the study. Findings are presented in the following tables;

**Table 4.7: Model Summary**

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate
1	.851 <sup>a</sup>	.763	.873	.579

a. Predictors: (Constant), Effect of employee performance on occupational health & safety programs, Health and safety problems encountered by employees at their place of work, Impact of low standards of occupational health safety, Attitude of the management on occupational health of employees.

b. Dependent Variable: employee performance

Coefficient of determination explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (employee performance) that is explained by all the 4 independent variables (Effect of employee performance on occupational health & safety programs, Health and safety problems encountered by employees at their place of work, Impact of low standards of occupational health safety, Attitude of the management on occupational health of employees ).

The four independent variables that were studied, explain 76.3% of variance in strategy implementation as represented by the  $R^2$ . This therefore means that other factors not studied in this research contribute 23.7% of variance in the dependent variable. Therefore, further research should be conducted to investigate the role of vendor inventory management on organization profitability in retail outlets in Kenya

**Table 4.8: ANOVAs**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	2.915	4	.729	50.472	.002 <sup>b</sup>
1 Residual	103.085	95	1.085		
Total	106.000	99			

a. Predictors: (Constant), Effect of employee performance on occupational health & safety programs, Health and safety problems encountered by employees at their place of work, Impact of low standards of occupational health safety, Attitude of the management on occupational health of employees

b. Dependent Variable: employee performance

The F critical at 5% level of significance was 7.67. Since F calculated is greater than the F critical (value = 50.472), this shows that the overall model was significant. The significance is less than 0.05, thus indicating that the predictor variables Effect of employee performance on occupational health & safety programs, Health and safety problems encountered by employees at their place of work, Impact of low standards of occupational health safety, Attitude of the management on occupational health of employees explain the variation in the dependent variable which is employee performance subsequently, we reject the hypothesis that all the population values for the regression coefficients are 0. Conversely, if the significance value of F was larger than 0.05 then the independent variables would not explain the variation in the dependent variable.

**Table 4.9: Multiple Regression Analysis**

Model	Coefficients <sup>a</sup>				
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.658	0.367		9.969	0
Effect of employee performance on occupational health & safety programs	2.163	0.124	1.162	3.313	0.003
Health and safety problems encountered by employees at their place of work	4.019	0.122	2.02	2.153	0.005
Impact of low standards of occupational health safety	3.015	0.12	3.015	5.126	0.001
Attitude of the management on occupational health of employees	2.024	0.119	1.025	0.202	0.002

a. Dependent Variable: employee performance

From the regression findings, the substitution of the equation ( $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4$ ) becomes:

$$Y = 3.658 + 2.163X_1 + 4.019X_2 + 3.015X_3 + 2.024X_4$$

Where Y is the dependent variable (employee performance),  $X_1$  Effect of employee performance on occupational health & safety programs,  $X_2$  is Health and safety problems encountered by employees at their place of work variable,  $X_3$  is Impact of low standards of occupational health safety variable,  $X_4$  is the Attitude of the management on occupational health of employees .

According to the equation, taking all factors (Effect of employee performance on occupational health & safety programs, Health and safety problems encountered by employees at their place of work, Impact of low standards of occupational health safety, Attitude of the management on occupational health of employees) constant at zero, performance will be 3.658. The data findings also show that a unit increase in Effect of employee performance on occupational health & safety programs will lead to a 2.163 increase in employee's performance .; Health and safety problems encountered by employees at their place of work variable, will lead to a 4.019 increase in employee's performance.; a unit increase in Impact of low standards of occupational health safety will lead to a 2.965 increase employee's performance .; a unit increase in Attitude of the management on occupational health of employees will lead to a 3.015 in organization's profitability and a unit increase in information communication technology will lead to 2.204 increase employee's performance .This means that the most significant factor is Health and safety problems encountered by employees at their place of work variable, followed by Attitude of the management on occupational health of employees.

At 5% level of significance and 95% level of confidence, Effect of employee performance on occupational health & safety programs had a 0.003 level of significance; Health and safety problems encountered by employees at their place of work had a 0.005; Impact of low standards of occupational health safety 0.001 and Attitude of the management on occupational health of employees had a 0.002 e implying that the most significant factor is Health and safety problems encountered by employees at their place of work followed by Effect of employee performance on occupational health & safety programs.

## **CHAPTER FIVE**

### **SUMMARY OF THE FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

The chapter provides the summary of the findings from chapter four, and it also gives the conclusions and recommendations of the study based on the objectives of the study. The objectives of this study were to establish the effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya.

#### **5.2 Summary of the Findings**

The study sought to find out the level of agreement of the respondents on effect of employee performance on factors of occupational health & safety programs. According to the findings, the respondents strongly agreed that presence of occupational healthy safety department affected employee performance as indicated by a mean of 4.5, respondents agreed that Presence of first aid and fire extinguishers at precise points in the company affects employee performance as indicated by a mean of 3.5, respondents disagreed that Pyrethrum company organizes workshop, seminar and lecturers on safety precaution and presence of a hazard assessment data affects employee performance as indicated by a mean of 2.0 and 2.2 respectively. This relate to the literature review by (Ayodele & Olubayo-Fatiregun, 2010) who argues that part of the employer's social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions.

The study also found out that the respondents strongly agreed that employees involved in an accident at work place are compensated as indicated by a mean of 4.5, the respondents agreed that employee work place is safe as indicated by a mean of 3.9, the respondents were indifferent that there is lack of hazard assessment data due to system failure that causes accidents as indicated by a mean of 3.4, the respondents disagreed that there is lack of equipment, material and clothing for occupational health safety as indicated by a mean of 2.5. this relates to the literature review by Cole (2002), who argues that , employer has a common law duty to provide a safe place of work for his or her employees and is liable under common law for accidents encountered by his or her employees in the course of their employment.

Further the study found out that the respondents strongly agreed that employees have a safe place of employment as indicated by a mean of 4.6, the respondents agreed that employees have a safe means of access to work as indicated by a mean of the 3.7, respondents were indifferent that employees are aware of compensation incase an accident occurs at the place of work as indicated by a mean of 3.0 ,the respondents disagreed that employees know their legal rights concerning occupational health as indicated by a mean of 2.4 .This is in literature review: Feeling safe at work ranks as a very important factor in job satisfaction, (Kreitner, 2007). In attempt to satisfy this need, certain organizations incorporate into their policy thrusts, guaranteeing workers' safe work execution under a climate capable of enhancing the physical, mental, and emotional conditions. Organizational policy of this nature is often categorized under health and safety. Under work environment, Hall and Goodale (1996) describe employee health as the absence of illness or disease resulting from the interaction of employee and the work environment.

In addition the study found out that respondents were indifferent that Pyrethrum Company has an organizational health safety policy as indicated by a mean of 3.1, and disagreed that management is committed to occupational health safety of employees as indicated by a mean of 2.4. In relation to the literature review ,the successful implementation management on occupational health of employees system requires management commitment to the system, effective allocation of resources, and a high level of employee participation. For the system to be effective, management must show leadership and commitment to the program. To achieve this, management should put the organization's expectation around health and safety into writing by developing a health and safety policy (Dessler, 1997). For a health and safety management system to be effective, management at all levels, should demonstrate their support for the health and safety program. This may be demonstrated through management, participation in health and safety leadership training meetings, facility inspections incident investigations among others (Dessler, 1997).

Finally the study found out that respondents strongly agreed that Pyrethrum Company has been able to produce quality products for the market as indicated by a mean of 2.7, the respondents strongly agreed that employees are able to meet working deadlines as indicated by a mean of 2.4,

the respondents strongly agreed that Production of pyrethrum has steadily increased in the past five years as indicated by a mean of 2.2.

### **5.3 Conclusion**

The study concludes that that presence of occupational healthy safety department affected employee performance as indicated by a mean of 4.5, that Presence of first aid and fire extinguishers at precise points in the company affects employee performance as indicated by a mean of 3.5, Pyrethrum company do not organize workshop, seminar and lecturers on safety precaution and presence of a hazard assessment data affects employee performance as indicated by a mean of 2.0 and 2.2 respectively. This relate to the literature review by(Ayodele & Olubayo-Fatiregun, 2010) who argues that part of the employer's social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions.

The study further concludes that employees involved in an accident at work place are compensated as indicated by a mean of 4.5, employee work place is safe as indicated by a mean of 3.9, there is lack of hazard assessment data due to system failure that causes accidents as indicated by a mean of 3.4, there is lack of equipment, material and clothing for occupational health safety as indicated by a mean of 2.5. This relates to the literature review by Cole (2002), who argues that , employer has a common law duty to provide a safe place of work for his or her employees and is liable under common law for accidents encountered by his or her employees in the course of their employment.

Finally the study concludes that that employees have a safe place of employment as indicated by a mean of 4.6, employees have a safe means of access to work as indicated by a mean of the 3.7, employees are not aware of compensation incase an accident occurs at the place of work as indicated by a mean of 3.0 , employees do not know their legal rights concerning occupational health as indicated by a mean of 2.4 .This is in literature review: Feeling safe at work ranks as a very important factor in job satisfaction, (Kreitner, 2007). In attempt to satisfy this need, certain organizations incorporate into their policy thrusts, guaranteeing workers' safe work execution

under a climate capable of enhancing the physical, mental, and emotional conditions. Organizational policy of this nature is often categorized under health and safety. Under work environment, Hall and Goodale (1996) describe employee health as the absence of illness or disease resulting from the interaction of employee and the work environment.

#### **5.4 Recommendation.**

The study recommends that employer should provide safe working environment since feeling safe at work ranks as a very important factor in job satisfaction, (Kreitner, 2007). In attempt to satisfy this need, certain organizations should incorporate into their policy thrusts, guaranteeing workers' safe work execution under a climate capable of enhancing the physical, mental, and emotional conditions. Aswathappa (2004), specifies the company's safety goals and designates the responsibilities and authority for their achievement. According to him, such policy statement must emphatically declare the safety of employees and the public, safety taking precedence over expediency, every effort made to involve all managers, supervisors and employees in the development and implementation of safety procedures and safety legislation to be complied with.

The study also recommends that every workplace should demonstrate respect for the natural environment and occupiers should work towards achieving the goals of no accidents, no harm to people and no damage to the environment. Employers should take it as their responsibility to ensure the working environment is safe, clean and health (Kariuki, 2003).

Further the study recommends Part of the employer's social responsibilities toward employees, of necessity, should encompass industrial workers being given opportunities to participate in periodic workshops, seminars and lectures to sharpen their awareness on safety precautions, (Ayodele & Olubayo-Fatiregun, 2010). Employer should know that he/she has a common law duty to provide a safe place of work for his or her employees and is liable under common law for accidents encountered by his or her employees in the course of their employment Cole (2002).

Finally the study concludes that employees should form part of health and safety committee, and should be involved in writing the policy to be signed by senior operating officer indicating and confirming the commitment of management. Clearly defined and well communicated health and

safety roles and responsibilities for all levels of the organizations will create an expectation of a standard level of performance and accountability among employees, contractors, and visitors.

**5.5 Recommendation for further studies**

This study investigated effects of occupational safety and health programs on employee performance at Pyrethrum board of Kenya.

Further study should be carried out on implementation of occupational safety and health programs in organizations

Additionally a study should be carried out on the role of government in implementation of occupational safety and health programs in organizations

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## APPENDIX 1: INTRODUCTION LETTER

GEOFFREY ABUGA

KENYATTA UNIVERSITY

SCHOOL OF BUSINESS

Dear respondents,

I am student at Kenyatta University, pursuing a Degree of Masters of Business Administration, MBA. As a part of my degree completion, am required to conduct a research on effects of Occupational Health and safety programs on employee performance (A case study of Pyrethrum Board of Kenya). I will appreciate any help in the filling of the questionnaire. The response obtained is strictly for research work only and the motive of the research is not inclined to denying the respondent his/her right of confidentiality. Any response provided is highly appreciated.

Thank You.

Geoffrey Abuga

MBA STUDENT

Kenyatta University

## APPENDIX II: A SURVEY QUESTIONNAIRE

### SECTION A

#### Respondents' Bio Data

Please tick [√] the answer applicable to you

1. What is your gender?

Male  Female

2. Which age bracket is applicable to you?

Below 25 years

25-35 years

36-45 years

46-55 years

Over 55 years

3. What is your highest level of academic qualification?

Primary  Secondary

Middle college  University

None

4. For how long have you been working here?

1 year and below

1-10 years

11-20 years

21-30 years

Over 30 years

**SECTION B: Effect of occupational health and safety program on employee performance:**

In this section you are requested to tick [√] against the number in the scale with regard to the statement provided. The options are:

Strongly disagree      1

Disagree                      2

Indifferent                  3

Agree                              4

Strongly agree              5

1. To what extent do you agree with the following statements concerning effect of occupational health & safety programs on employees' performance

Statement	1	2	3	4	5
Pyrethrum company organizes workshop, seminar and lecturers on safety precaution.					
Presence of occupational health safety department					
Presence of a hazard assessment data					
Presence of first aid and fire extinguishers at precise points in the company					

**SECTION C: Kind of health and safety problems encountered by employees at their place of work**

In this section you are requested to tick [√] against the number in the scale with regard to the statements provided. **Please [√] tick ounce.** The options are:

- Strongly disagree      1
- Disagree                      2
- Indifferent                      3
- Agree                              4
- Strongly agree              5

2. To what extent do you agree with the following statements concerning the kind of health and safety problems encountered by employees at their place of work

Statement	1	2	3	4	5
Employee working place is safe					
There is lack of equipments, material and clothing for occupational health safety					
There is lack of hazard assessment data due to system failure that causes accidents					
Employees involved in an accident at work are compensated					

**SECTION C: Impact of low standards of occupational health safety on productivity:**

In this section you are requested to tick [√] against the number in the scale with regard to the statements provided. *Please tick [√] ounce.* The options are:

- Strongly disagree            1
- Disagree                      2
- Indifferent                  3
- Agree                         4
- Strongly agree              5

5. To what extent do you agree with the following statements concerning the Impact of low standards of occupational health safety

Statement	1	2	3	4	5
Employees know their legal rights concerning occupational health					
Employees have a safe means of access to work					
Employees have a safe place of employment					
Employees are aware of compensation incase an accident occurs at the place of work					

**SECTION E: The attitude of the management on occupational health of employees**

In this section you are requested to tick [✓] against the number in the scale with regard to the statement provided. *Please tick [✓] ounce.* The options are:

- Strongly disagree            1
- Disagree                      2
- Indifferent                   3
- Agree                         4
- Strongly agree              5

6. To what extent do you agree with the following statements concerning the attitude of the management on occupational health of employees

Statement	1	2	3	4	5
Management is committed to occupational health safety of employees					
Pyrethrum company has an organizational health safety policy					

**SECTION F: Employee performance**

In this section you are requested to tick [✓] against the number in the scale with regard to the statement provided. *Please tick [✓] ounce.* The options are:

- Strongly disagree            1
- Disagree                      2
- Indifferent                   3

Agree 4

Strongly agree 5

7. To what extent do you agree with the following statements concerning the results of employee performance

Statement	1	2	3	4	5
Production of pyrethrum has steadily increased in the past five years					
Employees are able to meet working deadlines					
Pyrethrum company has been able to produce quality products for the market					

### APPENDIX III: DETERMINATION OF SAMPLE SIZE FOR RESEARCH ACTIVITIES

Table for determining needed size  $s$  of a randomly chosen sample from a given finite population on  $n$  cases such that the sample proportion  $p$  will be within  $\pm .05$  of the population proportion  $p$  with a 95 percent level of confidence

Population	Sample size	Population	Sample	Population	Sample size
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346

85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Adapted from R.V. Krejcie and D.W. Morgan, "Determining sample size for Research Activities," *Educational and Psychological Measurement*, 30(3), p, 608, copyright q 1970 by sage publications, Inc. Reprinted by Permission of sage Publications, Inc.