

**A SURVEY OF FACTORS AFFECTING SAFETY AND HEALTH PRACTICES OF
MANUFACTURING FIRMS' WITHIN THE TEA SECTOR IN KENYA**

(A case study of KTDA Ltd Managed Factories, West of Rift)

BY

KOECH K. H.

REG.NO

D53/OL/11059/07

KENYATTA UNIVERSITY LIBRARY

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT FOR THE
REQUIREMENT OF A MASTER OF BUSINESS ADMINISTRATION (MBA), (STRATEGIC
MANAGEMENT OPTION), SCHOOL OF BUSINESS**

KENYATTA UNIVERSITY

OCTOBER, 2011

Koeh, K. H
*A survey of factors
affecting safety and*



2012/390696

DECLARATION

This research project is my original work and has not been presented for any award in this or any other University.

Sign.....

Candidate's name-Koech Kiprono Henry


Reg.No-D53/OL/11059/07

Date.....18/10/2011.

Declaration by Supervisor

This research project has been submitted for examination with our approval as the University supervisors.

Name: Mr. Shadrack K. Bett

Sign..... Date.....20-10-2011

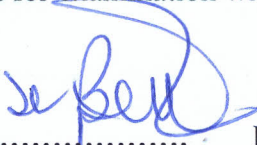
Name: Mr. Julius Murungi

Sign..... Date.....19/10/2011.

Declaration by Head of Department

This research proposal has been submitted for examination with my approval as the Head of Department.

Name: Mr. Shadrack K. Bett

Sign..... Date.....20-10-2011

Chairman Business Administration Dept.

TABLE OF CONTENTS

	Page
Declaration.....	i
Table of Contents.....	ii-iv
Dedication.....	v
Acknowledgement	vi
List of figures.....	vii
List of Tables.....	viii
Acronyms & Abbreviations.....	ix
Definitions of terms.....	x
Abstract.....	xi

CHAPTER ONE: INTRODUCTION

1.1 Background of the study.....	1
1.2 Statement of the problem.....	8
1.3 Objectives of the study.....	9
1.4 Research questions	10
1.5 Significance of the study.....	10
1.6 Scope of the study.....	10
1.7 Assumptions of the study.....	11

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction.....	12
2.2 Past studies /main review.....	12
2.2.1 Safety and Health practices.....	12
2.2.2 Employee Training	15

2.2.3 Customer demands.....	19
2.2.4 GOV'T Legislation.....	21
2.2.5 Requirements on ISO Certification.....	22
2.3 Critical review.....	27
2.4 Summary and conclusion.....	27
2.5 The conceptual framework.....	28

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction.....	30
3.2 Research design.....	30
3.3 Target population.....	31
3.4 Sample design.....	32
3.5 Data collection procedure/instruments.....	34
3.6 Data analysis.....	35

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction.....	36
4.2 General information of the respondents.....	37
4.3 Safety and Health practices.....	42
4.4 Training on Safety and Health practices.....	47
4.5 Customer Demands on Safety and Health practices.....	50
4.6 Legislation.....	52
4.7 ISO Certification Requirements.....	54

CHAPTER FOUR: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction.....	56
5.2 Answers to Research Questions.....	56
5.3 Conclusions.....	58
5.4 Recommendations.....	59
5.5 Suggestion for Further Research	60
REFERENCES.....	61
APPENDICES.....	64

DEDICATION

TO

My Almighty God and Jesus Christ, my **ONLY** Saviour, who through many competing activities at the time of carrying out my MBA degree course and this study, encouraged me to come up and subsequently write this research project to be what it is, Forever, I shall follow you, forever you will be my Past, Present and the Future to come-Amen.

Psalm 63:3-4

“Because your love is greater than my life, my lips will glorify you. I will praise you oh my God as long as I live, and in your Name, I will lift up my hands.”

AND

To my dear loving wife and true friend, Jennifer, and our sons Emmanuel and Abraham, you have truly stood with me in prayer and support during my happiness, and even in times of storm. Your constant demands and interferences have been welcomed distractions from my busy schedules of work and studies. To you all, I say, “You touch my life in a big way. May God give us long life and good health that we earnestly seek him and dwell in his house all the days of our life, to gaze upon the beauty of the Lord and seek him in his temple-Amen.”

AND

Finally, to my dear loving parents, Andrew and Veronica, whose continued love, encouragement, and my childhood academic support and sacrifice left an inspiring mark in my life to prosper academically which has driven me reach far, I say, “The sky is the limit and may the good God continue to sustain your lives and bless you more abundantly”

ACKNOWLEDGEMENT

I greatly acknowledge my sincere love and indebted thanks to my supervisors, Mr. S. K. Bett & Mr. J. Murungi for their guidance and support while writing this research project. They gave me the requisite skills and knowledge in planning and writing this research project. Without their tireless and selfless input, this work could have taken much longer. Also special thanks to the entire KU fraternity and the many lecturers who taught me, encouraged or advised me academically while undertaking my MBA studies, to you all, I say, "Thank you in a big way, God bless you mightily and work with you all the days of your life."

AND

To my class-mate and sincere friend, Mr. Pius Kipkurui, for your team fellowship, moral support and encouragement while students at KU for our MBA degree and the mutual contribution in availing relevant information and academic materials when need arose greatly helped us give shape to this work and the entire course. The dream of completing the MBA course and finally graduating, Class- 2011, has come, but I say, Let us trust and hold firmly to the Lord----Proverbs 3:5-6.

LIST OF FIGURES

	Page
Figure 1.1 The organization structure.....	7
Figure 2.1 The conceptual framework.....	28
Figure 4.1 Response rate.....	37
Figure 4.2 Gender distribution of the respondents.....	38
Figure 4.3 Respondent's experience.....	39
Figure 4.4 Level of Education.....	41
Figure 4.5 Safety and Health policy.....	43
Figure 4.6 Frequency of Safety and Health checks.....	44
Figure 4.7 Effectiveness of Safety and Health policies/committees.....	46
Figure 4.8 Training on Safety message transmission	48
Figure 4.9 Frequency of Customer on Safety and Health inspections.....	51
Figure 4.10 Violation on Legislation.....	53

LIST OF TABLES

	Page
Table 3.1 Population size.....	31
Table 3.2 Sample size.....	33
Table 4.1 Response rate.....	36
Table 4.2 Gender distribution of the respondents.....	38
Table 4.3 Respondents' experience.....	39
Table 4.4 Level of education.....	40
Table 4.5 Safety and Health policy.....	42
Table 4.6 Frequency of Safety and Health checks.....	43
Table 4.7 Effectiveness of Safety and Health policies/committees.....	45
Table 4.8 Training on Safety and Health.....	47
Table 4.9 Model summary of training.....	49
Table 4.10 Frequency of customer Safety and Health visits.....	50
Table 4.11 Model summary of customer demands.....	51
Table 4.12 Violation on Legislation.....	52
Table 4.13 Model framework of Legislation.....	53
Table 4.14 Model Summary of ISO Certification.....	54

ACRONYMS/ABBREVIATIONS

1. **CCOHS**-Canada's Centre for Occupational Health and Safety.
2. **C.E.O** – Refers to Chief Executive Officer
3. **GOV'T** – Government
4. **H.O.D** –Head of Department
5. **ISO**- International Organizations for Standardization
6. **K.T.D.A**- Kenya Tea Development Agency
7. **LTD** – Limited
8. **NIOSH**-National Institute for Occupational Safety & Health
9. **NO.** – Number
10. **OSH**- Occupational Safety & Health
11. **OSHA**- Occupational Safety & Health Act.
12. **TQM**-Total Quality Management.

DEFINITION OF TERMS

1. **Employees** – Unionized staff, managers and line managers
2. **Factory Companies** – KTDA Ltd organizations owned by small scale tea farmers
3. **Health** – Promotion and maintenance to the highest degree of physical, mental and social well-being of an individual.
4. **Management** – The group comprised of the manager and line managers
5. **Organizations**-Well structured and formal institutions which are ran and managed by human beings with a view to making profit.
6. **Respondents**- Employees to whom the questionnaire will be administered to.
7. **Safety**–The state of being safe and protected from danger or harm.
8. **Strategy**-A set of decisions and actions that results in formulation & implementation of strategies/targets designed to give organizational success.

ABSTRACT

This study intended to investigate the factors that affect safety and health practices of manufacturing firm's within the tea sector in Kenya by taking a survey study of KTDA Ltd managed factories, West of Rift. Traditionally, the company has enjoyed virtual monopoly in the tea sector which has grown over the years hence made Kenya a formidable world tea producer. However, competition from substitute products, new-entrants in tea business, supplier and demand bargaining power and competition rivalry have transformed the tea business environment. The objectives of the study were to investigate the factors of employee training, customer demands, Gov't legislation and adoption of requirements on ISO certification in work place safety and health practices. The significance of the study will be to KTDA top management and staff, the Gov't especially the Ministry of Labour and Human Resource Development, potential investors in tea beverage sub-sector and future researchers' interested in this field.

The study adopted a descriptive research design using structured and unstructured questionnaires as an instrument for data collection. Three districts were used for the purposes of the study to identify a target population size of 1872. A further sample size of 192 respondents (48 managers, 48 supervisors and 96 workers) were selected using a stratified random method for the study as it gives every element an equal chance of inclusion in the stratum.

The findings of the study were analyzed by the use of descriptive statistics that included frequency tables, graphs and pie charts based on the research questions designed at the beginning of the study and completed by the respondents. Conclusions and inferences were drawn from the results about the tea industry on safety and health practices. The researcher at the end of the study proved safety and health practices/standards are affected by the factors under study. Conversely, when an organization pursues favourable safety and health practices, it has a positive (+ve) effect on the employee and company performance even in a rival and competitive business environment.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The world continues its voyage towards modernization but it faces tremendous challenges of the 21st century. The rapid growth in the industry globally has raised concern on safety and health issues at the workplace, as more and more occupational accidents and injuries are becoming headline of news globally. Safety at work is a difficult and complex phenomenon, and the subject of safety and health performance across the industries is hard and demanding to achieve. It needs a lot of measures and policies to be applied on the ground. Additionally, safety and health performance is very complicated and sensitive concern of the organization to deal with, as it's the matter lives of people and resources who are involved in the project towards success (Enshassi *et al.*, 2008). However, the global occupational accident trends are rising due to lack of attention given to safety and health practices, safety procedures and improvement of methods to prevent accidents and injuries Jiang *et al.*, (2010). On the other hand, occupational accidents, diseases, injuries or near misses occur either due to lack of knowledge, training, lack of supervision or implementation rules to prevent or reduce accident occurrence. In addition, a human error leads to negligence, carelessness of workers, recklessness of workers and lack of monitoring and controlling. All these factors have influence on safety and health performance/practice or may lead to the weakening safety and health practices hence the high rate of accidents (Tharaldsen, 2010).

Accidents commonly occur in organizational operations, particularly in many manufacturing companies. The consensus among safety and health professionals is that up to ninety percent (90%) of all accidents occurring in the workplace may be attributed to behavioral factors (Mearns and Yule, 2009). The importance of understanding how behavior influences safety performance cannot be underestimated. A more important notion is that by increasing concentration and effort placed on the influence of human behavior, accidents and injuries can be significantly reduced in the workplace. Companies aiming toward and achieving dramatically improved occupational safety and health performance are doing so in an increasingly demanding business environment (Sherry, 1992). Government agencies and businesses both face unique challenges. Government

agencies must strive to develop and implement regulations that drive performance improvement in companies where that is needed, yet that don't limit innovation and continuous improvement in the most progressive and forward-looking companies. Individual businesses, on the other hand, must ensure that compliance to safety and health practices are met while looking beyond government conventions to achieve the desired overall standard of performance. The best solution to these potential dilemmas is for businesses and government agencies to work together to ensure that regulations play a positive role in the creation of focused safety and health management systems (Alli, 2001).

The organizations in Africa should invest heavily on workers compensation, medical claims, product liability litigation, and environmental clean-ups but these days the trend is showing the companies are more investing to upgrade the technological part of the company (Zedalis, 2009). If the management of the companies are able to invest in these direction the workers should be more to secure and will have strong commitment to their workplace due to safe and healthy working environment. The manufacturing organizations' worker should still need to follow the ethical codes and compliance arguments. However, health and safety professionals must not stop there. They must convince companies that committing to safety and health practices is not just the right thing to do in term of competitiveness, but also a legal requirement. According to Mearns and Yule (2009), the manufacturing industry in Africa is a high risk industry due to the nature of the industry and the difficult working conditions involved. Many manufacturers in Kenya have already have re-engineered their work sites with an eye toward safety, introducing ergonomic principles, acquiring improved safety equipment and establishing safer work environments. Companies now need to re-examine their employee job design and production activities for improved safety and health records.

1.1.1 Health and Safety

According to Jiang et al., (2010), occupational accident is defined as an occurrence arising from the course of work which results in non-fatal or fatal injury. There is a firm belief that business benefits directly, through reduced costs, and indirectly, through improved morale and increased productivity. Within companies known for safety and health excellence, safety and health is a shared value. If this value, both to the business and to all employees, is not shared, any

improvements in safety will very likely not be sustainable even if achieved for a period of time as the result of becoming a "priority." According to the European Process Safety Center (1994) Basic safety management include important elements such as politics, organization, management practices, procedures, monitoring and auditing.

The extract of the definition of management practice is to share the common beliefs and values that health and safety is at preference. The effectiveness of health and safety depends on how it can be achieved when there is a proper management of the interaction between people and technology. However, occupational accidents in the workplace do occur when there is no proper integration between the people who are tends to be safe and unsafe behavior as per their feedback. The most important motivational factors for the worker are to create a safety culture in recognition to their attitudes and behaviors of employees are critical to workers attitude and their behavior at work (Ali, et al, 2009).

The workplace safety and health can improve the workers' need to give importance to safety measure and related issues. It is a combine effort to recognize and then feel the responsibility to improve the safety and health practices. When dealing with large number of workers in the manufacturing industry, it is not a professional approach to completely rely on management staff to direct the workers to safety, as at that time, time is a critical factor to negotiate (Subramaniam, 2004). On the other hand, human factor deals with the discipline matters, which refers to human operations and work environments so that they match capabilities, limitation and needs base on human behavior. When the organization and job factors, and human and individual characteristics which influences behavior at occupation integrate favourable, it a manner that can helps promote the occupational safety and workers health.

Occupational Health is the promotion and maintenance to the highest degree of physical, mental, social well-being of employees in all occupations. It is also defined as the prevention of departures amongst workers from health, caused by their working conditions, the protection of workers in their employment from risks, resulting from factors adverse to health, the placement and maintenance of workers in occupational environment adapted/suited to his physiological ability i.e. the adaptation of work to man and each man to his job. Safety is a state of being safe and protected from danger or harm.

1.1.1.1 Reasons for Safety and Health practices in manufacturing firms

An occupational Safety and Health practice to any employee working in an industry is a human right just as each person has a right to a decent life. The practice also of safe and health working conditions of employees and their environment is a legal/statutory requirement hence should be complied with without undue compromise. A breach of this statutory duty, irrespective of whether an accident has occurred or not, will usually involve those concerned in criminal proceedings before a magistrate's court.

Safe and healthy working conditions has tangible economic effects hence it is part of total loss control strategy for strategic business growth and wealth creation, and employment for the community and the nation at large. At an individual level, the personal costs of an accident, emotional and financial implications can be quite high. Apart from pain and mental stress, it can cause a major life change. Injury insurance systems aim to protect the injured dependants but compensations vary significantly. From a corporate perspective, accidents can disrupt production, thus increasing the cost of operations.

Safety and health practices in a work place is also a global market demand thus helps to promote the positive image issues and customer satisfaction in the company's goods and services produced for the market. Finally, good occupational safety and healthy management in a work place promotes decent work agenda e.g. practical and documented displays on work instructions for workers on safety matters.

1.1.1.2 Importance of safety and health practices in a work-place

There are many reasons that can be realized by an organization pursuing a safe and healthy work place program. A few among them include reduction in workers compensation claims, reduced expenses related to injuries and illness, reduced employee absenteeism and lower staff complaints relating to accident occurrence.

Other reasons that relates to employee safety and health practices by an organization is that it improves employee morale and job satisfaction, increased job productivity and reduction in

insurance costs e.g. insurance premiums. It therefore good enough to say that a country's economic engine depends on both a healthy work force and a safe work place.

1.1.2 The Tea Sector

Tea was introduced into Kenya by a European, G.W.L Caine in 1903 from India. Since then, the country has for the last over 90 years cultivated tea commercially. Over the years, Kenya has grown into a formidable world tea producer, with an annual production of over 400 Million Kilograms and rated as the fourth largest tea producer and biggest exporter in the world (Tea Board of Kenya, 2009). This formidable growth has seen the tea industry grow into the most important agricultural sub-sector and the leading foreign exchange earner in Kenya.

Therefore, the Kenyan tea sector has traditionally been one of the greatest success stories in the country's agriculture, with steady growth in both production and earnings. The phenomenal growth has been attributed to favourable investment policies, particularly non-interference stance by the Tea Board of Kenya in production, processing and marketing of the crop.

Data from the Tea Board of Kenya (2009) however, indicates that earnings from tea exports have been fluctuating in the past five years despite the rise in volume production. The same data indicates that Kenya has about 158,000 hectares of land under tea. Out of this, 107,000 hectares (68%) are under small holder being managed by KTDA Ltd and 51,000 hectares (32%) are under large scale. Small-scale farmers market their produce through KTDA which is in-charge of production, processing and marketing of the finished product. Large scale producers in Kenya and who pose stiff competition to KTDA teas include Unilever, George Williamson, Eastern Produce and James Finlays. There is also a small percentage of privately owned estates e.g Kaisuku and Sasini teas. The government owned Nyayo Tea Zone teas deliver their crop to both nearby KTDA Factories and the multi-nationals.

Kenya is the largest exporter of black CTC (cutting, tearing and curling) teas and it accounts for over 20% of the global teas. Over 95% of the Kenyan tea is exported and about 5% is locally consumed. The majority of the Kenyan teas production is marketed through Mombasa auction, with Pakistan, United Kingdom (UK), Egypt and Afghanistan being the biggest buyers. Value addition is a key focus of the Kenyan tea sector including KTDA teas because of increasing

competition world wide and entrants of substitute products into the market. Other challenges facing tea industry in Kenya which have impacted on the operations of the tea sector players include vagaries of weather, increased cost of production (fuel, electricity & fertilizer costs) and reduction of small-scale holder farm sizes.

1.1.3 Tea Factories' Managed by KTDA Ltd

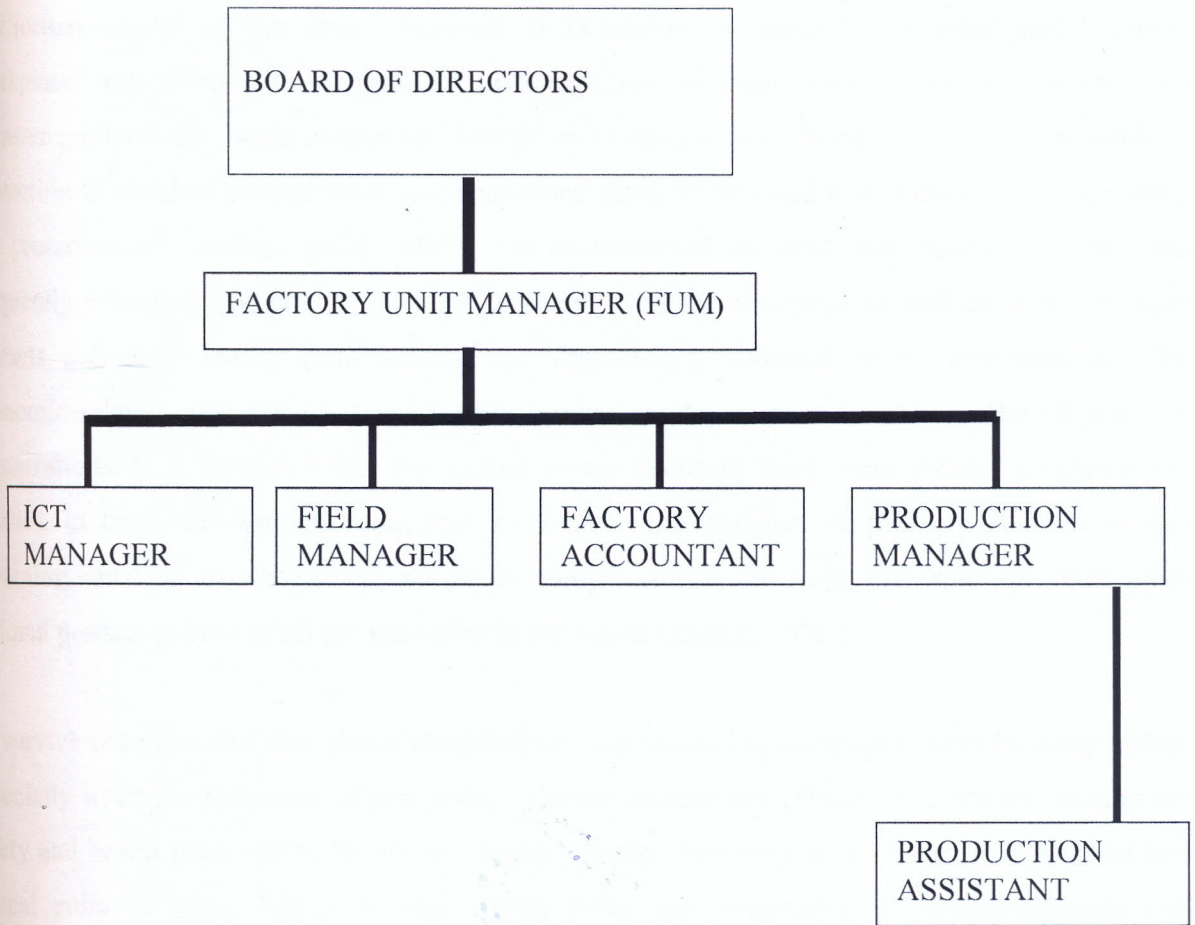
KTDA Ltd is an umbrella organization managing the operations of the 64 small holder Tea factory companies spread all over tea growing areas in Kenya. The Tea growing areas are sub-divided into East and West of Rift. East of Rift tea growing districts include: - Kiambu, Nyeri, Meru, Embu, Kirinyaga among others, while that of West of Rift include: - Bureti, Nandi, Kakamega, Vihiga, Kisii, Kericho among others.

Therefore, KTDA is a premier tea organization providing management services to small holder tea sector for effective production, processing and marketing of high quality teas. Her vision is to be the leading Management and Marketing Company of high quality tea products in the world and the mission is to provide effective management services to the tea sector for efficient production, processing and marketing of high quality teas and investing in related profitable ventures in a coordinated manner for the benefit of all shareholders and other stakeholders.

The then Kenya Tea Development Authority was formed in 1964 as a Government parastatal organization and the sole aim was to oversee the operations of tea business in the country. It was later changed to be Kenya Tea Development Agency (2000) hence registered as a private company as a result of liberalization and wholly responsible for managing the operations of small holder tea factory companies.

Each of the Factory companies' has a Board of six (6) Directors who are the representatives of the farmers and make policies and oversee the operations of these factories on their behalf. Each factory company also has six (6) K.T.D.A ltd seconded KTDA management staff, which is diagrammatically represented as follows:-

Figure 1.1-The organization structure



(Source: Company Records, 2010)

The FUM is the C.E.O of the Tea factory company and directly below him are the line managers who are the heads of their departments.

The company is licensed by the Government to produce, manufacture and market black tea both to local and overseas markets. As earlier stated, the bulk of Kenyan tea is sold through the Mombasa tea auction that has developed into one of the largest tea-marketing centres in the world.

1.2 Statement of the Problem

Occupational Safety and Health (OSH) activities are never considered within the sources of the intellectual capital of the firm. However, it is widely recognized that safer and healthier workplaces are, along with competitive advantage, one of firm's major objectives, as they can improve productivity, boost employees' morale and reduce costs (Thompson, 1997). The workers protection to accident related work had been done since 1970's and it is continuously improving the protection of workers (Alli, 2001), but occupational accident and injuries are still too frequently recorded. The cost perspective to society and the enterprise as well as to the workers impacts and their family (emotionally and financially), continue to be unacceptable. The economic related cost place a considerable burden on the competitiveness of the oil and gas organizations. It is predicted that the annual losses resulting from work related accidents and injuries, in terms of compensation, lost work-days, interruptions of production, training and retraining, medical expenses, and so on as compensations are over 4% from the total gross national product (GNP) of all the countries in the world (Zedalis, 2009).

To survive and grow in today global marketplace, manufacturing companies must be competitive, especially when the pressures of competing become intense and critical, it is not uncommon for safety and health practices to be given a lower priority. Not only is it wrong from a moral and ethical point of view, but it is also wrong from the perspective of competitiveness and profitability (Blanchard, 2009). Workers are the greatest assets any organization can have and the most important qualification of the worker is their physical strength and stamina. If a worker was injured, several equally qualified applicants were waiting to replace him or her. However, with the dawning of the age of high technology and the advent of global competition, this situation changed.

According to (OSHA, 2007) a good occupational safety and health system requires a tripartite approach involving the Government (GOV'T), employer and the employee for its successful implementation. All manufacturing firms are covered under (OSHA, 2007). Safety and health practices in a work place is a statutory requirement besides being a human right hence all employers should comply with to the latter. It is therefore critical for firms within the

manufacturing sector and more so KTDA Managed Factories to operate within this law statutory law on the issues of safety & health.

According to (KTDA Company records,2010) , each of the 64 Tea factories has a work-force of between 150-200 employees with an annual turn-over of 500,000-1 billion shillings, hence its safety and health practices is of great interest to the researcher. Incidences of industrial accidents and insurance claims have also been reported and registered at KTDA Factory companies though varying in number and magnitude. Although studies have been done on the issues of safety & health, less or none has been done on the factors that affect Safety and Health practices in KTDA Managed Factories.

It is against this background of knowledge about KTDA managed Factories and the nature of its operations in a challenging and changing business environment that the study seeks to determine if safety and health practices have been adopted as a strategic business asset for it to remain afloat and a success story into a foreseeable future.

1.3 Objectives of the Study

1.3.1 General objective

The general objective of the study was to investigate the factors that affect safety and health practices of manufacturing firms within the tea sector in Kenya.

1.3.2 Specific objectives

- (i)To determine if staff training has an effect on industrial safety and health practices in KTDA Managed Factories.
- (ii)To determine the effect of customer demands on industrial safety and health practices in KTDA Managed Factories.
- (iii)To establish whether legislation has an effect on safety and health practices in KTDA Managed Factories.
- (iv)To determine how requirements on ISO certification influences the safety and health practices in KTDA Managed Factories.

1.4 Research Questions

The study sought solutions to address the following questions:-

- (i) How staff training has affected industrial safety and health practices?
- (ii) How customer demands has affected compliance of safety and health practices?
- (iii) How legislation has impacted on safety and health practices?
- (iv) How requirements on ISO certification has impacted on safety and health practices?

1.5 Significance of the study

The study will be useful in the following ways:-

First, it will benefit the top management and staff of KTDA Ltd as it will be a source of valuable information in matters of safety and health practices. Secondly, the study will benefit the GOV'T especially the Ministry of Labour and Human resource development in terms of policy making regarding safety and health of all employees' across all organizations. Third, the study will benefit the potential investors in tea beverage sub-sector as it will be a useful source of information highlighting the linkages existing between the GOV'T, employer and employees in safety and health matters for its successful implementation.

Lastly, the study will form a background to future researchers who are interested in this field to explore further knowledge while at the same time adding to the existing knowledge bank.

1.6 The Scope of the study

The focus of this study was Kenya Tea Development Agency (K.T.D.A) Tea managed factory employees (Mgt & Factory workers). The study was conducted in the Tea managed factories, West of Rift.

KTDA West of Rift has 27 factories spread all over tea growing districts/regions i.e Kisii, Nyamira, Kericho, Nandi, Vihiga, Gucha and Bomet districts. The researcher focused on Kericho, Bureti and Bomet districts for the purposes of the study. The total numbers of factories in this region of West of Rift are twelve (12) all located in Bomet & Kericho counties of Rift Valley province.

It's also important to note that many organizations in Kenya have been pursuing continuous safety and health practices for sustained strategic change management of meeting GOV'T,

employer and employee changing demands especially after the economic liberalization and public enterprises privatization of the 1990s.

1.7 Limitation of the study

The researcher encountered time and financial constraints, and the lack of enough available research materials in this area of study that posed great challenge to this study. Nevertheless, the researcher tried to overcome part of these limitations by applying strategic management concepts from research materials, utilization of available information from KTDA library and the use of management skills learned in class with a view of bringing out safety & health practices in a tea manufacturing business.

1.8 Assumptions of the study

The study was conducted based on the following assumptions:-

That the Firm's employees understood the importance of the study and therefore they cooperated in filling the questionnaires appropriately and that there was no other extreme factors that influenced respondents answers apart from the one identified by the researcher.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter discusses literature review on the factors that affect safety and health practices of manufacturing firms' within the tea sector in Kenya. Specifically, it discusses literature that has been reviewed on staff training as a factor on industrial safety & health, how customer demands affect compliance on safety & health practices and how legislation impact on safety & health practices. Finally, it discusses literature that has been reviewed on how requirements on ISO certification affect safety and health practices in the place of an organization.

It also has a diagram on the model of the study or the conceptual framework of the research study. Lastly, the chapter also comprises of a section on critical review, summary and conclusion of the research study.

2.2 Past Studies / Main Review

2.2.1 Safety and Health Practices

Every year, there are thousands of people who suffer accidents, illnesses, injuries, near misses and even fatalities among other conditions in our communities and work places. Such people need individuals who can care for them in the initial critical moments immediately after the incidences so as to prevent a casualty's condition from becoming worse or may even save someone's life (DOHSS, 2010).

Therefore, deliberate efforts and policy decisions have to be made by all stakeholders to provide safe and healthy working conditions for all employees or other persons in order to prevent reduce or eliminate the occurrence of such incidences caused by unsafe & unhealthy work-places.

A good occupational safety and health system requires a tripartite approach involving the GOV'T, employer and the employee for its successful implementation. The GOV'T provides a national framework of OHS services and National legislation policy (OSHA, 2007). The *employer* implements the policy of OSH to ensure compliance while the employee promotes safety and health practices in the work place by observing all regulations concerning safety and health practices, taking reasonable care of self and others who may be affected by one's actions or omissions among other incidences in a work place.

2.2.1.1 Occupational Health and Hygiene

Occupational hygiene focuses upon the recognition, evaluation and control of occupational health hazards based upon the knowledge to the material used and the processes employed. The inspection of the production process and working conditions is required in the recognition exercises. Evaluation is the assessment of the magnitude of the hazards based on past experiences of the measurements of the prevailing hazardous factors and the comparison of the results with the established standards. Control of hazards is accomplished through the application of various technical, procedural and behavioral measures (NIOSH, 2011)

Occupational health is the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations. It is the prevention of departures amongst workers from health, caused by their working conditions, the protection of workers in their employment from risks resulting from factors of adverse health, the placement of workers in an occupational environment adapted to his physiological ability (NIOSH, 1998)

2.2.1.2 Occupational Safety and Health Hazards

Occupational hazards can be defined as any condition at work place that can cause temporary or permanent injury to the health of the workers and residents of the community. The hazards can be classified as follows: - (CCOHS, 2006)

First is the mechanical hazards which arise from machinery, plant and equipment. Secondly is the physical hazards arising from exposure to physical agents like noise, vibration and various forms of energy. Chemical hazards is another arise from exposure to chemical (gases, vapours, fumes, mists, liquids and solids). They are, by far, the largest and common classes of occupational hazards. Third is biological hazards- arise from exposure to biological agents (bacterial, fungi. They are commonly encountered in health care, agriculture and biotechnological industry.

Last but not least is the ergonomic hazards which arise from a wide range of factors in man-machine interface, stress, working exposure, work design and organization.

Arising from the above brief discussion on safety and health practices, it can now be implied that businesses operate in a dynamic environment of political, social, legal, economic and technological matrixes.

According to Pearce and Robinson (2002), all businesses operate in an open system. They constantly interact with its environment to survive, are environment dependent and depend on the environment for survival. Organizations require money, equipment and human resources from the environment as inputs. Resources go through transformation process in the company. It is important that the product has to be accepted in the environment for the company's success. An organization should be able to maintain the system; because any interference spells death for the organization. The firm's environment consists of remote environment, industry environment operating and the operating environment. The organization ought to know how and what to respond, to know whether the action should be pro-active or reactive in order to increase market share and safeguards customers. This requires new skills to help counter these challenges in the environment.

Johnson and Sholes (2002), state that environmental changes shape opportunities and challenges facing the organization, the paces of technological change, speed of global communication mean faster change now than never before thus, need to constantly adjust according to these changes to remain successful. According to (Kolter,1997), marketing concept holds that the key to achieving organizational goals lies in determining the needs and wants of the target market and delivering the desired satisfaction more effectively and effectively than competitors. This concept has been expressed in many colourful ways among others, the customer is always right, the customer is the king, at your service, your problem is our business, have it your way and you are the boss. A customer therefore is core to an organization and ought to be satisfied with the products of the organization for it to succeed in an ever changing environment (Kolter, 1997).To survive in a dynamic environment, organizational strategies need to focus on their customers and dealing with emerging environmental changes in its operating environment.

2.2.2 Employee Training

According to (DOHSS, 2010), employee training and availing of relevant information on safety & health matters in all work places serves to promote good occupational health and hygiene. It emphasizes that all employees in work place should have relevant information and adequate time to consider the implication of information in regard to their work safety and health practices. Written work procedures should be available and used, and should include what to do by individuals in case an accident or a problem occurs at the course of executing their duties. It further states that training and information of employees on work place safety and health practices should ensure effective communication with all cadres of employees as well as meeting equity considerations is achieved.

Cole (1996) defines training as preparation for an occupation or for specific skills, it's more narrowed in occupation than either education or development, it's a job oriented rather than personal. Pigors (1973) defines training as a complex changes in activity such as the acquisition of manual skills by semi-skilled workmen, the understanding of metal working processes by apprentices, the development of leadership practices and human relations skills by supervisors and executives.

Strauss (1998) discussed that the following were the purposes and reasons of training:-

2.2.2.1 Purpose of training

Strauss stated that training in an organization helps to promote greater job productivity and quality of work out-put and at the same time results in less scrap or spoiled work hence loss control is realized. He further said that such job performances increases profit making of a company resulting in reduced losses /expenses to the bear minimum.

Training of employees in an organization results in less need for close supervision since the employees know and understand what they are expected of and how to perform the given tasks. Adaptability of new methods among other purposes of training is easily achieved hence greater job satisfaction/morale and reduced labour turnover and absenteeism of company employees.

2.2.2.2 Reasons for training

Strauss (1998) said that there are many reasons for training employees and a few among them are the need for new or improved skills, change in work methods, labour shortages and a realization that performance is in-adequate hence necessitating the up-grading of some employees. Other reasons for training employees by an organization are the desire to reduce the amount of scrap and improve work quality, increase in the number of accidents (safety and health practices) and the need for promotions and transfers among others.

According to (Study Pack of Strathmore University, 2003), training progress are directed towards mastering and improving current job performance. Training programs are mainly concerned with technical aspects of the job and therefore are usually directed at employees.

Training of employees can be effected with different approaches, which are either internal or external. Internal approaches to training include development by level, job rotation, apprentice training, coaching, acting capacity etc. External approaches include traditional class-room lectures or working conferences among others. Consultants, universities, colleges and other professional bodies normally conduct them. External approach is usually used by organizations when skill or knowledge needed to do a given task is highly specialized and organization may have no one with in depth knowledge of the subject.

Employee training and development of organizational human resources is very essential for any organization that would like to be dynamic and growth oriented in a competitive business environment. Unlike other resources, human resources have rather unlimited potential capabilities that have to be continually identified and developed so as to match with the organization needs. Management scientists have categorized the competency requirements in organizational life as Technical, Managerial, Human and Conceptual. (Pareek, U. and T.V Rao, 1981).

Therefore, human resource specialists, training and development professionals, chief executives and line managers have tried to explore and understand the different mechanisms for training and developing employees and the linkages existing between them with the aim of having and sustaining a productive workforce in all aspects that include safety and health matters.

Training is a short-term process utilizing a systematic and organized procedure by which employees are imparted with technical knowledge and skills for a definite/specific job-related purpose. Employees are generally trained through special in-house or outside training programmes and are expected to submit proposals concerning any changes they would like to suggest on the basis of their new knowledge at the end of the training period. This concept of systematic training was originated by the Industrial Training Boards (1960s). Systematic training is planned and provided by people who know how to train the trainees.

Planned training, as defined by Kenney and Reid (1994), is a deliberate intervention aimed at achieving the learning necessary for improved job performance.

Hence, the objectives of training are:-

- i) To prepare employees for the job meant for them while on first appointment, transfer or promotion and to impart them the required skill and knowledge.
- ii) Assist the employees to function more effectively in their present positions by exposing them to the latest concepts, information, techniques and skills required in their particular field.
- iii) To build a second line of competent officers and prepare them to occupy more responsible positions among others.

Saleemi (1997) looks at training as an aid to employee continuous development. He says that employee development cannot be precisely assessed as it's a continuous process. He further says that development and progress of an individual employee while on employment is directly related to utilization of his capabilities.

Saleemi also gives that training give employees' confidence in handling jobs assigned to them hence job satisfaction. The resultant satisfaction leads to increased commitment to the organizational goals which in turn leads to greater career growth, individual promotion, better use of resources and improved productivity through the promotion of safe & health work environment. According to Armstrong (2001), training help people to grow within the organization in order that as far as possible, its future needs for human resources can be met from within through recognition and reward of individuals' hard work.

The management and the workers are crucial factors of production in any enterprise. The management employs the worker, pays wages, and regulates the working relations through rules,

regulations and by enforcing the labour laws that include safety & health practices (OSHA, 2007). He expects the worker to follow the said terms and conditions of work among others, who then contributes his resources to the maximum in pursuit of meeting company goals and objectives. The role played by each party cannot be adequately achieved unless there is proper and sufficient consultation between the two (Dr. Khayota, 2005).

According to New York, John Wesley (1975), training employees through communication could be approached through the following techniques.

First, is through lecture which means a talk given without much, if any, participation in form of questions or discussions on part of management. This method is quite suitable for large audiences where participation of the trainees is not possible because of numbers.

Secondly is a through a talk incorporating a variety of techniques and allowing for participation by the trainees. It may be in form of questions to the speaker or brief discussions during the course of the session.

This method is useful for putting across information to groups of not more than 20 trainees. Participation by trainees keeps their interests and helps them to learn.

Third is Job (skill) instruction-a session during which a job or part of the job is learned either by telling the trainee how to do the job, shown how to do the job or does the job under supervision. This approach is recommended for putting across skills by breaking down the job into small stages which are practiced. This gives the trainees confidence and helps them to learn. This method is more suitable when the skill to learn is one and depends on a lot of knowledge to be learnt.

Finally is through discussion meaning knowledge, ideas and opinions on particular subjects are freely exchanged among the trainees and the instructor.

This method is suitable where application of information is a matter of opinion, also when attitudes need to be induced or changed. The method is also suitable as a means of obtaining feedback to the instructor about the way in which trainees may apply the knowledge.

In summary (DOHSS, 2010), states that the success of an effective occupational safety & health management system should be a joint consultation involving employees, OSH representatives

and OSH committee in making decision about OSH matters, including the development and implementation of OSH policy, programs and review of systems. It also involves team meetings, local work place inspections and issue resolution processes.

2.2.3 Customer Demands

According to Cooper et al (1987), a customer is that person or groups of people who have value interests in our services in our products and/or services or who value it. He further says customers can be internal or external or both.

An internal customer is a person or group of persons or departments or units or both with whom you interact or relate in a process of providing products or services.

A market is a place where we sell our finished products or services to our customers; hence both the customer and the market must exist for a business transaction to be complete.

Cooper, J (1987) further states that customer expectation of service has increased, and in almost every market place, the customer is now more demanding and more 'sophisticated' than he or she was say 10 years ago. Industrial buyers are more demanding or professional to the point of asking the processes and conditions through which a product or service was produced to ascertain how safe and healthy the product/ service is for human consumption. Increasing use is made of formal 'vendor appraisal' systems and suppliers are more confronted with the need to provide 'just-in-time' delivery performances. Nevertheless, 'these' customer and market product/ service must be safe from both occupational and environmental perspective, (OSHA, 2007).

According to (Kolter,1997), market and customer concepts holds that key to achieving organization goals lies in determining the needs and wants of the target market and delivering the desired satisfaction more effectively and efficiently than competitors. This concept has been expressed in many colourful ways among others, the customer is the king, at your service, your problem is our business, have it your way and that you are the boss. A customer therefore is core to an organization and ought to be satisfied with the products of the organization for it to succeed in the ever changing business environment (Kolter, 1997). To survive, in a dynamic environment, organizational strategies need to focus on their customers and dealing with emerging

environmental change in its operating environment. Another aspect of customer/market demand on safety and health practices of manufacturing firms stems from audit reports.

According to British Standards Institutions(2007), organizations and/or customers employ the audit processes as a tool for evaluating the safety and health status of a work place and her environment in order to ascertain the processes and conditions under which customer goods and services are produced.

ISO 9000 series defines an audit as a systematic, independent and documented process of obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled. It further states that to ensure that the auditing process is effective and reliable as a management tool, it must be based upon a number of fundamental principles of ethical conduct, fair presentation, due professional care, independence and use verifiable sample evidence.

The three types of audits are described as:-

First party (Internal audit), means that an organization audits its own systems and procedures while the second party (External audits) means that an organization audits its own suppliers and sub-contractors aimed at determining their suitability and capability to supply products or services and meet purchasing requirements. (or vice-versa).

Finally, is the third party audits (External audits), is an audit by a body which is commercially or contractually independent of the organization, its supplier and customers. The objective of this audit is to determine whether an organization is meeting her documented policies and objectives.

Alan Rushton et al (2000), summarizes that sensitivity and favourable response to customer and market demands where safety and health practices are included in 'these' demands as a critical success factor for most companies has been emphasized in recent years. There are perhaps many different reasons for this resurgence in importance, but major changes stems from a growing realization that satisfying a customer is key in achieving competitive success. Companies that fail to appreciate this concept do so at their own peril because they may loose significant market share. The ability to improve service levels and maintain this improvement is a challenge that faces many companies. A few among the factors are:-

The growth in customer care expectation where service fulfillment has become a priority for any successful strategy. The growing professionalism of buyers-many buyers now recognizes the importance of service as well as price on product offering is another driving force in the business. The Market has become increasingly service sensitive hence there is little else to differentiate between products between competitors. The diminution of brand loyalty, where immediate product availability is the vital factor is another challenging improved service level to customers and sustenance of businesses to organizations.

Finally is the development of new ideas such as relationship marketing where fulfilling service expectation is key and customer retention is a priority for continued business.

2.2.4 Legislation

Under the laws of Kenya, life and good health for every individual is a right as stated in the bills rights, (Kenyan Constitution, Chapter 6 , part 2, Section 35, 2010). In our context of work place, employers are required to provide for safety, health and welfare of its employees and to maintain practices that are consistent with the standards set out in the Act, (OSHA, 2007).

Therefore, promotion of occupational safety and health practices to any working employee in an industry is a human right, just as each person has a right to a decent life. The Act further states that the GOV'T provides a national framework of occupational safety and health (OHS) services and national policy legislation. A department of DOHSS under the ministry of Labour and Human Resource Development is established for the promotion of OHS practices in all work places. The provision of the Act also specifies the measures to be taken by the appointed authorities responsible for the supervision of occupational safety and health services and the application of safety and health standards in a working environment. The regulations made there under, impose minimum standard conduct or care, which is absolute duty, upon any class of persons named herein.

For the success of the implementation of the Act, safety and health system as earlier said, requires a tripartite approach involving the Gov't, employer and the employee (OSHA, 2007). A breach of this statutory duty irrespective of whether an accident has occurred or not, is considered illegal and those concerned should be charged in-charged in a court of law for

endangering, both human life and health, which are basic human rights. If an employee sustains personal injuries either because of a breach of this statutory law, it will usually result in the concerned company having to pay damages to the injured person as compensation for the loss and also for the pain and suffering.

The DOHSS law enforcing agencies /officers visit the business facility or any other service provider and inspect and/or may carry out a 3rd party audit to enable them make informed decisions regarding control of technology for safe guarding worker safety and health practices. They look at the context of product parameters, machinery alignment, and employee working place, environmental conditions and effects among others. All these efforts aim at promoting decent work agenda for all work–place employees and the communities where the businesses are located.

According to (ISO 9001:2008), the findings of the audit / inspection process, in our case, safety and health practices in a work place should be documented; verifiable, objective, and independent and must be reported to the management in a closing meeting. The standards do not spell out the number of audits to the site but emphasizes that frequency of audits, depend on the on magnitude of non-conformities and correction effort by the management in an effort to comply with the Act.

According to Johnson et.al (2005), all organization exists in the context of complex political, economics, social, technological and legal world. The environment is dynamic hence effects different organization differently. Burnes (2004), further argued that there is considerable support for the view that the pace change is accelerating has never before and organizations have their way through in an increasingly complex environment in order for them to survive. Observance of the ruling law of a given country is paramount since the law is supreme and cannot be substituted. Therefore, occupational safety and health Act (OSHA, 2007), is not an exclusion from this statement since its part of the whole laws hence employers and employees should strive to comply with.

2.2.5 Requirement for ISO Certification

The development of quality management system can be defined in four (4) stages as discussed below: - (Dale & Plunketh, 1990).

First, quality inspection stage is a quality management that started with simple inspection based systems and under such a system one or more characteristics of product were examined, measured or tasted and compared with specified requirements in order to assess its conformity to the requirements standards (Kanji and Asher, 1993). Quality control stage is the second aspect of quality management system where under such a system, product tasting and documentation control became the main way of ensuring greater process control and reduced conformances of quality standards. Thirdly, is the quality assurance stage which came as a result of a change from an individual product quality towards systems quality. Here an organization sets up a system for control of what is being done. The system is audited to ensure it is adequate both in design and use. The major part in this stage is the use of 2nd and 3rd party audits to assess the effectiveness of the system and conformance to quality standards. Thus, the use of quality manual or procedures, work instructions, quality planning and quality audits is common characteristic of this stage. The fundamental difference between this stage and quality control stage is that quality assurance stage is prevention stage while quality control is inspection stage.

Fourth but not least is the Total Quality Management (TQM), stage. It is the highest level involving the application of quality management principles to all aspects of business. It is defined as a system of continuous improvement, employing participative management and centred on the needs of the customer. It requires that all principles of quality management system be applied in every branch and at every stage in the organization (ISO 9000:2005).

According to the company records (KTDA, 2010), all her 64 Tea Managed companies have been certified of ISO 9001:2008 by either SGS or BVQ consultants. This certificated ISO standard is part of ISO 9000 family which is based upon the eight management principles. The eight (8) management principles have been developed by ISO 9000 family for use by top management to lead their organizations towards improved performances by developing a business culture based upon eight principles across the entire organization.

2.2.5.1 Quality Management Principles (ISO 9000:2000 & ISO 9004:2000)

The eight quality management principles are discussed as follows:-

First is the principle of customer focus or orientation. It addresses the need to understand current and future customer needs, to meet customer requirements and exceed expectations. This is based

upon their customers. Secondly is the principle of continuous improvement which should be permanent objective of any organization to strive to attain her best. Third is the principle of top management to quality i.e. leadership to meet objectives, goals and targets of the organization. Leaders establish unity of purpose and direction of the organization.

Fourth is the principle of employee empowerment i.e. the need to fully involve all employees so that their abilities are used for the benefit of the organization.

Fifth is the principle of process approach to quality-means that results are achieved effectively and efficiently when resources and activities are managed as a process. Sixth is the principle of quality policy meaning the desire of an organization to pursue quality product/service in all processes in an effort to keep the business afloat. The principle forms the heart of the system as it defines management commitment to quality assurance and in doing so, not only provides direction for the system, but also provides the 'ultimate accountability'. Seventh is the principle of system approach to management. It means that the effectiveness and efficiency of an organization is improved by identifying, understanding and managing a system of interrelated processes needed to achieve stated objectives.

Eight & final management principle is the principle of management by 'facts' implies that effective decisions are based on the analysis of data and information that are documented and verifiable.

According to ISO 9000 series of standards it states that a good quality management system (QMS) is one that suits the organization exactly. Such a system requires time and effort to be developed, established, documented, maintained & improved. It further states that quality must not be allowed to suffer from competing interests of cost of production and service production.

2.2.5.2 Five Main Advantages of TQM

According to (ISO 9001, KTDA QMS manual, 2010) there are five main advantages of TQM as discussed below:-

TQM encourages a strategic approach to management at the operational level through involving multiple departments in a cross-functional improvements and a systemic innovation processes. It

also provides a high return on investment through improved efficiency across all processes and that it works equally well for service and manufacturing sectors, tea sector included.

TQM also allows organizations to take advantage of developments that enable managing operations as cross-sectional processes rather than individuals. Finally, TQM fits orientation towards inter-organizational collaboration and strategic alliances through establishing a culture of collaboration among different departments within the organization hence encourages team-work & interdependence.

2.2.5.3 Barriers to Successful TQM

The same manual, (ISO 9001, KTDA QMS manual, 2010) discusses barriers to successful implementation of TQM as:-

First, is that it results in lack of long -term commitment and leadership for management of implementing TQM strategies. Secondly, is the insufficient empowerment of workers to drive the process and the lack of cross-functional, cross-disciplinary efforts to promote employee team spirit. Thirdly, is the mis-directed focus-emphasis on the trivial many problems facing the company rather than a critical review of TQM implementation strategies.

Fourth is the emphasis on internal processes to the neglect of external-customer-focus results and the lack of focus in training and coaching of TQM champions and by extension all employees. The lack of cost-of-quality measurement, performance reporting and reward/formal recognition of systems is another (fifth) barrier to successful TMQ in an organization. Sixth & final, is the emphasis on quick fixes and low-level reforms, short tem performances at the expense of long-term improvements of the company's service and product provision to the market place.

Company records, (KTDA, 2010) also indicate that all the 64 Tea factories by KTDA Ltd have been fully certified for ISO 22000. According to this standard (ISO 22000:2005), food -borne hazards should be eliminated before the point of consumption (intake by the consumer). This standard further says that food safety hazards can occur at any stage of the food chain hence adequate control throughout the food chain is essential. Food safety should be ensured through the combined efforts of all the parties participating in the food chain.

ISO 22000 states that organizations within the food chain range from feed producers and primary producers through food manufacturers, transport and storage operators and subcontractors to retail and food service outlets (together with inter-related organizations such as producers of equipment, packaging material, cleaning agents, additives and ingredients) and all service providers are covered by this standards. KTDA Managed Factories are food manufacturing enterprises hence are included in this standard thus the deliberate desire to adopt it as a quality management tool in an effort to promote safety and health practices in her operations.

This International Standard (ISO 22000) specifies the requirements for a food safety management system that combines the following generally recognized key elements to ensure food safety along the food chain, up to the point of final consumption as discussed herein:-

First, is the interactive communication which is very essential along the food chain to ensure that all relevant food Safety hazards are identified and adequately controlled at each step within the food chain. System management is the second aspect, meaning that most effective food safety systems are established operated and updated within the framework of a structured management system and incorporated into the overall management activities of the organization since all processes operate as one unit.

Thirdly, is the pre-requisite programmes which say that the Standard can be applied independently of other management system standards. Its implementation can be aligned or integrated with existing related management system requirements, while organizations may utilize existing management system(s) to establish a food safety management system that complies with the requirements of this International Standard. Finally, is the Hazard Analysis and Critical Control Point (HACCP) principle where this International Standard integrates the principles of the Hazard Analysis and Critical Control Point (HACCP) system and application steps developed by the Codex Alimentarius Commission. By means of auditable requirements, it combines the HACCP plan with prerequisite programmes (PRPs).

Hazard analysis is the key to an effective food safety management system, since conducting a hazard analysis assists in organizing the knowledge required to establish an effective combination of control measures. During hazard analysis, the organization determines the strategy to be used to ensure hazard control by combining the PRP(s), operational PRP(s) and the HACCP plan.

In summary, KTDA Managed Tea Factories by adopting these International quality management system (QMS) serves to ensure that the Eight (8) management principles as earlier discussed (ISO 9001:2008) and when combined with the food safety standard (ISO 22000:2005) help to promote safe and healthy practices in their environment of work. The standards help to harmonize on a global level for all businesses in any industry whether small or big to strategically position themselves and to have an edge over others in a globally competitive environment.

2.3 Critical Review

In the literature, there are many other merits that an organization can benefit from by adopting good Safety and Health practices in a work place as a strategic business asset in a growing and explosive customer expectation where service fulfillment has become a priority for a successful strategy in a rival & competitive business environment (Cooper, J.1987). Besides this, increase in staff morale and greater job satisfaction leading to greater productivity, cost reduction and increase in the efficiency and effectiveness of employees in performing their jobs is realized. Finally, it results in change of attitude of employees such as handling customers positively, thinking favourably about the better performance of the company among other benefits not mentioned here. (Strauss 1998)

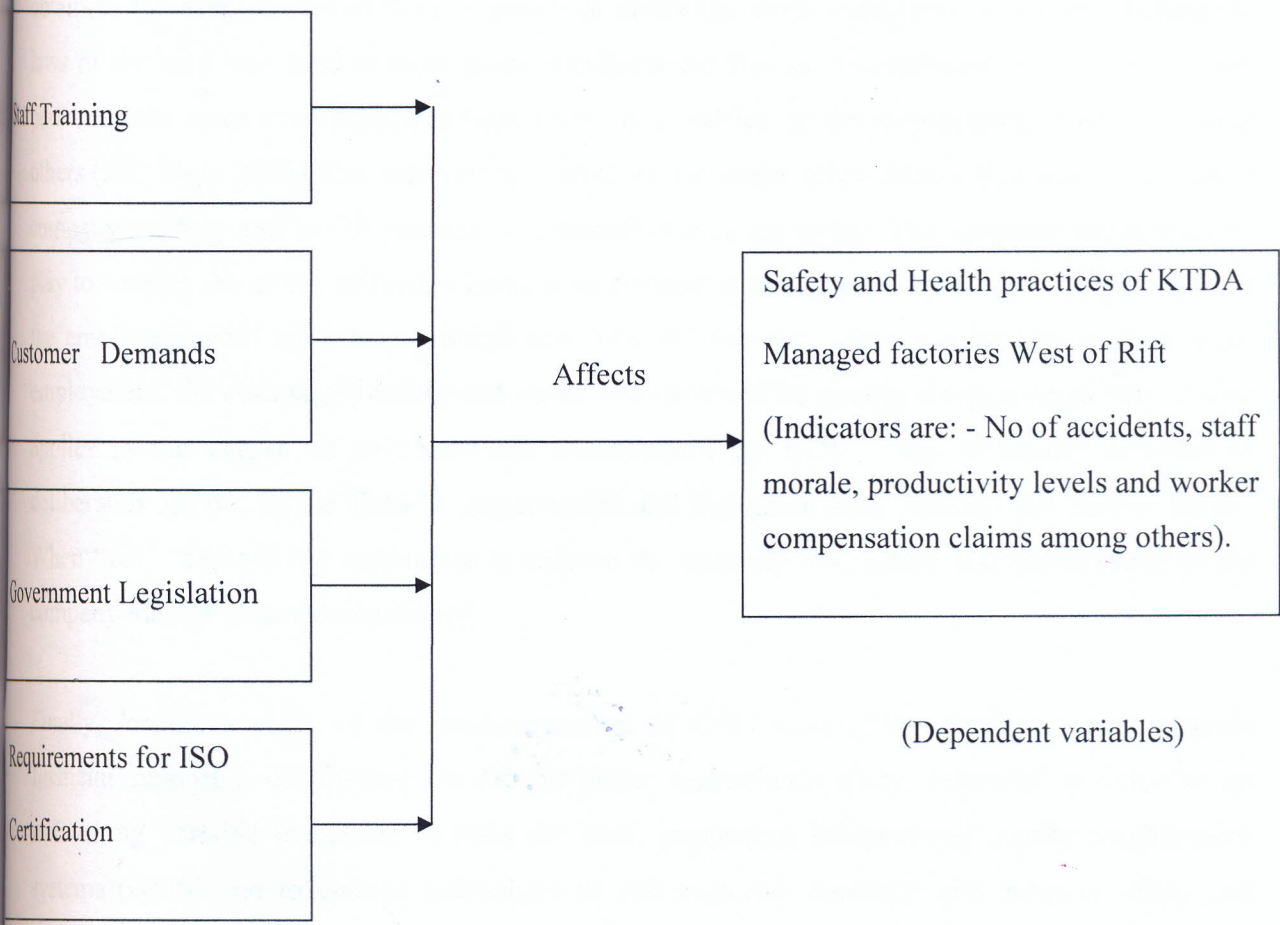
2.4 Summary and Conclusion

From the above review, we find that there is need to link Safety and Health practices to the factors that affect and trigger its status in any business enterprise so as to strategically manage and control them for the overall purpose of driving the vision, mission, objectives and goals successfully in a very competitive & dynamic environment.

2.5 The Conceptual Framework

The model of the study is summarized in the figure below -:

Figure 2.1, The conceptual framework.



(Independent variable)

(Source: Researcher,2011)

The above diagram shows that under favorable circumstances of good employee Safety and Health practices in all work places; it promotes and maintains the highest degree of physical, mental and social well-being in all occupations. It has the important dual function of human resource utilization and motivation. Therefore, by improving employee safety and health practice in work place, it reduces worker compensation claims, expenses related to injuries and illness, reduced employee absenteeism and lower staff complaints relating to accident occurrences. It

allows better use of human resource factor by giving them a feeling of mastery over their work and recognition by their management hence job satisfaction is increased.

When circumstances are unfavourable (intervening variables in place), these results may not be obtained, for example, when there is unsafe & unhealthy work conditions, it is illegal before the laws of the land may lead to work place accidents and illness, de-motivates the employee work performances apart from attracting huge losses & penalties' to the employers in question among others.(HR Mgt, 2005).The intervening variables represent other forces that may influence a company's safety and health practice in a manufacturing tea sector. The variables can come into play to counter the effect of factors being investigated/ studied by the researcher. For example, if the employees who have been trained and fully driving the safety and healthy matters leave employment, the company's safety and health practices will be greatly affected negatively. It also applies to the degree of strictness and commitment by GOV'T law enforcing agencies to deliberately go out in the field to inspect/audit and document their findings for further action. When 'this' team is not committed to enforce the standing law, safety and health status of the company may be affected negatively.

Finally, for the success of the implementation of OSH system, the employer must provide financial support to implement the factors under researcher's study. Financial resource as an intervening variable is needed to train the staff, implement International quality management systems (QMS) and to change technology to suit customer demands and promote safety and health practices of the employer. When 'this' vital resource is lacking, it becomes difficult to attain the desired OSH system by any organization.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter shows steps that were followed in execution of the study. The research project employed descriptive study design whose steps included defining scope of study, target population, sample design, the sampling procedure, data collection instruments and data analysis techniques that were employed in the study.

3.2 Research Design

The researcher employed a descriptive research design. Descriptive research design is a process of collecting data in order to test the hypotheses or answers to research questions concerning the current status of the subjects in a study. It determines and reports the way things are and describes such things as possible in terms of behaviours, values and characteristics.

Kerlinger, (1964) also suggests that descriptive research design is typified by the collection of data from a population, or some sample drawn from it to assess the relative incidence, distribution and interrelationships of naturally occurring phenomena. Survey research is the most commonly used descriptive method in educational and social science research. It gathers data at a particular point in time with the intention of describing the nature of existing conditions, identifying the standards against which existing conditions can be compared and to determine the relationship that exist between specific events. Such surveys are concerned with gathering of facts and figures rather than manipulating of variables.

Surveys are useful in describing the characteristics of a large population. No other method of observation can provide this general capability and the standardized questions make measurement more precise by enforcing uniform definitions upon the participants. This standardization ensures that similar data can be collected from groups then interpreted comparatively. Consequently, very large samples are feasible, making the results statistically significant even when analyzing multiple variables and high reliability

is easy to obtain by presenting all subjects with a standardized stimulus and thus observer subjectivity is greatly eliminated (Orodho, 2005).

Therefore, study design was an attempt by the researcher to collect data from members of a target population in order to determine the correct status of that population (KTDA employees) with respect to one or more variables. It was therefore be a self-report study, which required the collection of quantifiable information from the sample.

3.3 Target Population

Brinker, (1988) defines target population as a large population from which the sample population is selected. The target population of this study was all KTDA Ltd Seconded staff in respective managed factories and their staff in the west of Rift from all sections/departments. The recommended total number of employees per factory is 156 for each of the 27 2-line processing factories located in the west of Rift. However, a few stations have not followed the guideline as detailed in figure 3.1.

The focus of the study was Kericho, Bureti and Bomet districts due to lack of sufficient time and money being the chief resource constraints. Furthermore, the researcher focused on all the 6 members of management & the 150 factory employees (Production, Field services, ICT and Accounts) in each of the twelve (12) KTDA managed factories within the study area. Therefore, the population size was as follows:-

Table 3.1- Population Size

Factory name	District	No. of Mgt staff	No. of factory staff.
Tegat	Kericho	6	150
Toror	„	6	140
Momul	„	6	149
Litein	Bureti	6	152
Chelal	„	6	143

Kapkatet	„	6	150
Kapset	„	6	155
Rorok	„	6	150
Mogogosiek	Bomet	6	157
Kobel	„	6	150
Kapkoros	„	6	161
Tirgaga	„	6	143
		Total = 72	Total = 1800

(Source: Company Records, 2011)

Therefore, a target population size of 1872 employees (management & factory staff) was identified from all the twelve (12) KTDA managed factories for the study.

3.4 Sample Design

A sample size of 192 was drawn from a target population of 1872 hence the sample size in each of the 12 KTDA managed factory was 15.6, equivalent to 16 respondents. The researcher considered this sample size fairly adequate and representative for this study. The 16 respondents were equally drawn from each of the 12 factories.

Therefore, for the purpose of the study and even distribution of the respondents, the researcher applied a stratified random sampling method to choose 4 HODs (managers), 4 subordinate staff at supervisory level and 8 staff from other workers in each of the 12 factories. Furthermore, the researcher applied purposive random sampling to ensure that the sample size was evenly drawn from all the four (4) departments in each of the KTDA managed factories. Mugenda et al (2003) observed that purposive sampling is a sampling technique that allows the researcher to use cases/elements that have the required

information in respect to the objectives of the study. Therefore, subjects are handpicked because they are informative or possess the required characteristics.

The sample design was as follows:-

Table 3.2-Sample Size

Factory name	No. of HOD	NO. of Supervisors	Other workers	Sample size
Tegat	4	4	8	16
Toror	4	4	8	16
Momul	4	4	8	16
Litein	4	4	8	16
Chelal	4	4	8	16
Kapkatet	4	4	8	16
Kapset	4	4	8	16
Rorok	4	4	8	16
Mogogosiek	4	4	8	16
Kobel	4	4	8	16
Kapkoros	4	4	8	16
Tirgaga	4	4	8	16
	48	48	96	Total =192

(Source: Researcher, 2011)

The researcher used drop and pick method to administer the questionnaires to the respondents to fill as appropriately instructed. The results were then used by the researcher to make statistical inferences to target population and to generalize the

findings to real life situation on the status of safety and health at KTDA Managed Factories.

3.5 Data Collection Procedure/ Instruments

The primary data from all target respondents was collected by use of well designed questionnaires. The study employed the use of structured and unstructured questionnaires as a means of data collection. The researcher designed the questions, their wording and sequence. The respondents filled the questionnaires and returned them to the researcher for the purpose the study.

Mugenda, et al (2003), says that in social science research, the most commonly used research instruments are questionnaires, interview schedules, observational forms and standardized tests. Questionnaires provide the researcher with a relatively easy accumulation of data. According to Kothari (2004), questionnaires give a relatively objective data which is relatively easy to analyze.

Therefore, the questionnaires were sent to the respondents by hand delivery and ensured that they are well distributed according to the population size. The respondents were also requested to complete the questionnaires and hand them over to their heads of their departments where the researcher was to collect them from. Information collected from the respondents was strictly kept confidential and only used for the purpose of the study.

Secondary data was also collected by checking information from KTDA Ltd Head Office library located Nairobi and/or the Tea Factory Company records such as employee appraisal records, training programs among others. In addition, trade journals and internal magazine/newsletters were reviewed to gain relevant information pertaining KTDA Ltd Managed Factories under study on their safety and health practices.

3.6 Data Analysis

Data analysis was based on the research questions designed at the beginning of the study. Before data analysis was done, the questionnaires/responses were fully edited, coded, tabulated and processed by means of a computer for completeness and consistency. Data was presented by use of descriptive statistics that included frequency tables, percentages, graphs and pie charts for clarity and ease of understanding. Data analysis was also computed by use of measures of central tendency, such as means, mode and standard deviations to bring out further understanding & clarity of the research study.

Qualitative data was analyzed by thematic analysis i.e. an analysis of the main themes as found in the study followed by contents within the themes presented (content analysis). The result of the study was compared with the literature review in order to establish the industry status on safety and health practices and how it affects the tea sector of manufacturing companies'. Conclusion and inferences were drawn about the industry status on safety and health practices and how it affects the tea manufacturing sector. Information was also interpreted and presented according to the research questions and stated objectives of the study.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter presents an analysis of the findings of the research. The results of this research were presented using several descriptive statistics/ analysis e.g. frequency tables, pie charts, percentages and graphs of the different responses for the questions asked in the questionnaire to enable the researcher achieve the objectives of the study.

Descriptive statistics summarizes the data and describes it using measures of central tendency e.g. the mean, median mode and frequency. Inferential statistics enables the researcher to infer the sample to the whole population. The results of the data analysis were interpreted carefully and accurately as possible so as to give valid and reliable results of the whole research study i.e. the real life situation at KTDA Managed Factories.

The answered questionnaires were scored and processed by the computer using Statistical Package for the Social Sciences (SPSS). Below is a brief review of how KTDA Ltd Managed Factories have been implementing the factors under study on safety and health practices in their place of work.

4.1.1 Response Rate

The study targeted a sample size of 192 respondents but only 143 respondents answered the questionnaires thus comprising a 74 % response while the remaining 49 respondents comprising 26 % did not answer. This is as depicted in the table below:-

Table 4.1 Response Rate

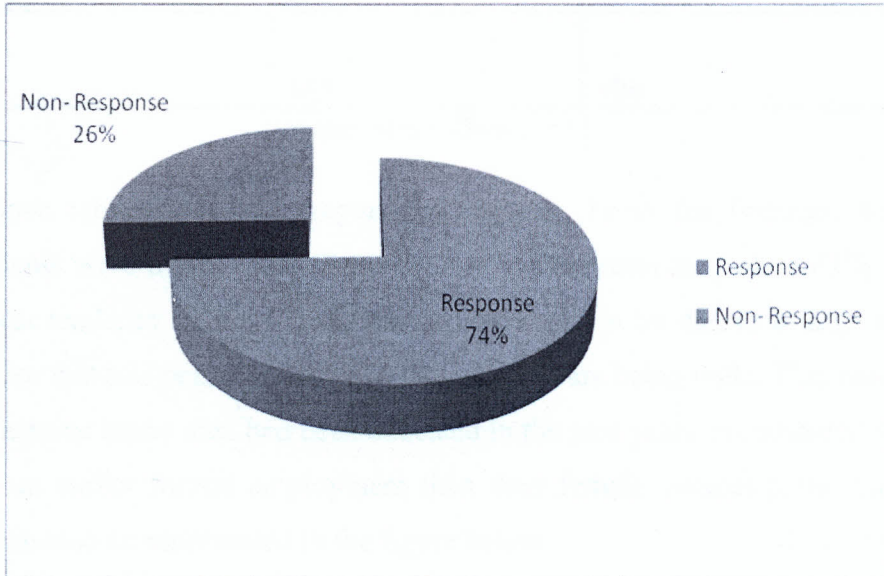
Status	Frequency	Percentage (%)
Response	143	74
Non-response	49	26

Total	192	100
--------------	------------	------------

Source: Study Data (2011)

The above information can also be depicted as in the chart below:

Figure 4.1 Response Rate



Source: Research Data (2011)

4.2 General Information of the respondents

This section deals with the demographic information of the respondents who constituted the management and the Factory employees. The respondents were profiled using three different criteria that included their gender, the duration which they had been working in their respective factory companies and highest academic education level.

4.2.1 Gender Distribution of the Respondents

Only the questionnaires from the 143 respondents who filled in their questionnaires were analyzed. The table below represents the gender of the respondents.

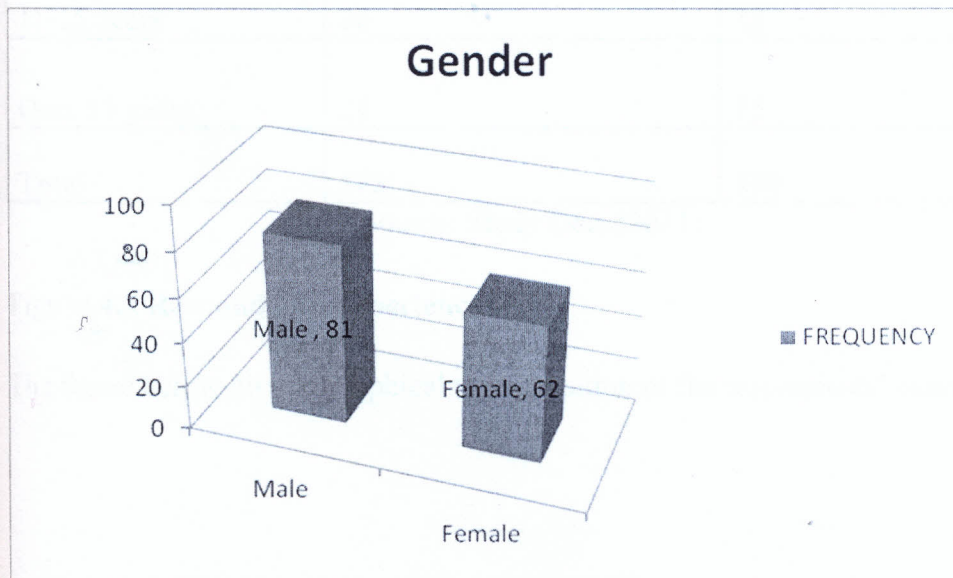
Table 4.2 Gender Distribution of the Respondents

Gender	Frequency	Percentage (%)
Male	81	57
Female	62	43
Total	143	100

Source: Study Data (2011)

The above table shows the respondents' gender. From the findings, majority of the respondents were males as indicated by 57% of the response, while 43% were females. The great tendency of male respondents was noted to be due to a large number of the workforce that had been employed in the earlier years being male. This may be attributed to the fact that many men had been educated in the past years as compared to women thus ending up earlier formal employment than their female counter-parts. The information above can also be represented in the figure below:

Figure 4.2 Gender Distribution of the Respondents



Source: Study Data (2011)

4.2.2 Years in service/Experience

The respondents were requested by the researcher to indicate how long they have worked in the tea industry. The data in Table 4.2.2 indicates that majority of the respondents as shown by 36% of the respondents had been in the tea industry for 0-5years, 31% had been in the industry for 6-10 years, 18% for 11-15 years and 15% for over 15 years. The findings indicated that most respondents were relatively young in the organization. This implies that the organization is able to attract young talents and is still able to retain a considerable part of its workforce (31%) who have worked for the organization for over 11years.This also implies that the respondents were able to answer the questions appropriately given their varied experiences.

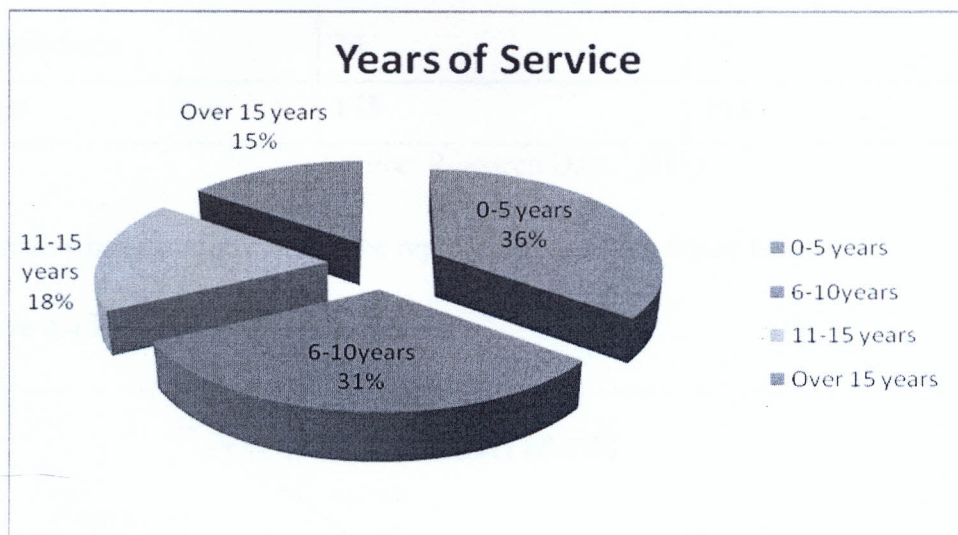
Table 4.3 Respondents' Experience

Experience	Frequency	Percentage (%)
0-5 years	51	36
6-10years	45	31
11-15 years	26	18
Over 15 years	21	15
Total	143	100

Source: Study Data (2011)

Figure 4.3 Respondents Experience

The figure below gives a graphical representation of the respondents' experience.



Source: Study Data (2011)

4.2.3 Respondents' level of education

The respondents were requested by the researcher to state their highest education levels. From the findings, the researcher found out that majority of the respondents had College education as shown by 39%. 37% of the respondents had University degrees while 24% of the respondents had Postgraduate education. The findings showed that majority of the respondents are learned thus would be able to understand and answer the questionnaires. This also implies that the organization has a talented pool of staff that is able to undertake their tasks well. The levels of education would enable relevant information to be obtained from the respondents due to clarity and understanding of the organization health and safety standards/practices that have been put in place.

Table 4.4 Highest Education level

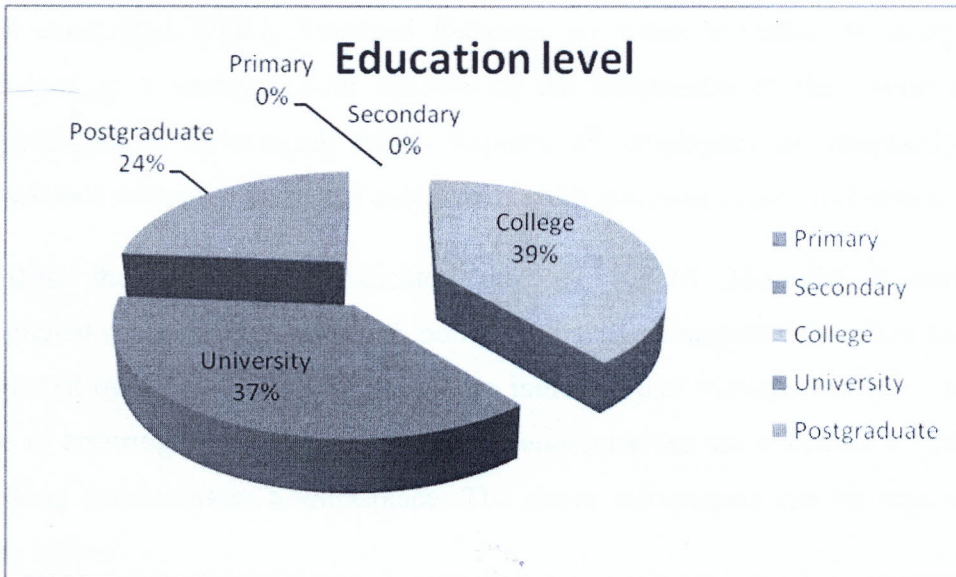
Education Level	Frequency	Percentage (%)
Primary	0	0
Secondary	0	0
College	56	39
University	53	37

Postgraduate	34	24
Total	143	100

Source: Research Data (2011)

The above information can also be represented as in the figure below:

Figure 4.4 Level of Education



Source: Research Data (2011)

This general information was very important to the researcher as it helped to know how well the respondents were versed on the factors that affect the safety and health practices within the tea sector in Kenya which mainly depended on their level of education and duration the respondents had served in the tea industry. This would thus be a great contributing factor with regard to the answers that would be expected from the respondents.

4.3 Safety and Health Practices

4.3.1 Safety and Health Policy

The data in Table 4.3.1 represents the findings on whether there' was the existence of a health and safety policy in the organization. All (100%) of the respondents indicated the existence of a health and safety policy. This was attributed to the awareness campaign by the firm of ensuring the policy is displayed on the staff notice-boards. This also shows how committed KTDA Managed Factories are when it comes to safety and health practices as a strategic asset because of the uniqueness of the nature of work the organization is undertaking which requires all employees to adequately familiarize themselves with their tasks and safety and health practices in the work-place.

Further, the respondents indicated that all KTDA Managed Factories have a functional/active safety and health policy, and active committee members that have been instituted by the factories. The study also indicated that management has taken a leading role in ensuring respective functionalities and activities are executed to promote safety working conditions in a work-place. The above information can be represented in the table below:-

Table 4.5 Safety and health policy

Response	Frequency	Percentage (%)
Yes	143	100
No	0	0
Total	143	100

Source: Study Data (2011)

The above information can also be represented as shown in the figure below:-

Figure 4.5 Safety and health policy



Source: Study Data (2011)

4.3.2 Frequency of safety and health checks

The data in Table 4.3.2 represents the findings on the frequency with which the company conducts its safety and health checks. Majority of the respondents (90%) indicated that the safety and health checks are done half yearly while (10 %) indicated the same being done whenever the need arises. The findings indicate commitment by the organization to provide a conducive working environment for the employees. The above information is as represented in the table below:-

Table 4.6 Frequency of safety and health checks

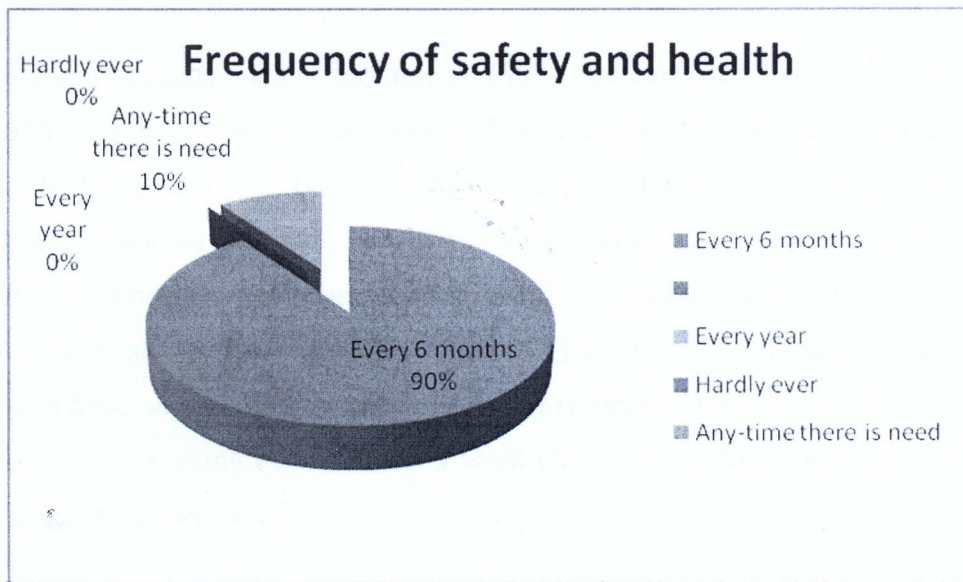
Response	Frequency	Percentage (%)
Every 6 months	129	90
Every year	0	0
Hardly ever	0	0
Any-time there is	14	10

need		
Total	143	100

Source: Study Data (2011)

Further from the table above, it shows that the organization undertakes safety and health audits/checks for her employees after six months (90%). Nevertheless the respondents added that the factories do not have a permanent planned audit program for her safety & health audits but can undertake the audit any time there is need possibly an occurrence that is not anticipated. It can be deduced from the above findings that necessity is the only alarm for this kind of audit (10%). The above information can also be represented as shown in the figure below:-

Figure 4.6 Frequency of safety and health checks



Source: Study Data (2011)

4.3.3 Effectiveness of safety and health policies and committees

The following table represents the response on whether the safety and health policies and committees that have been initiated by KTDA Managed Factories.

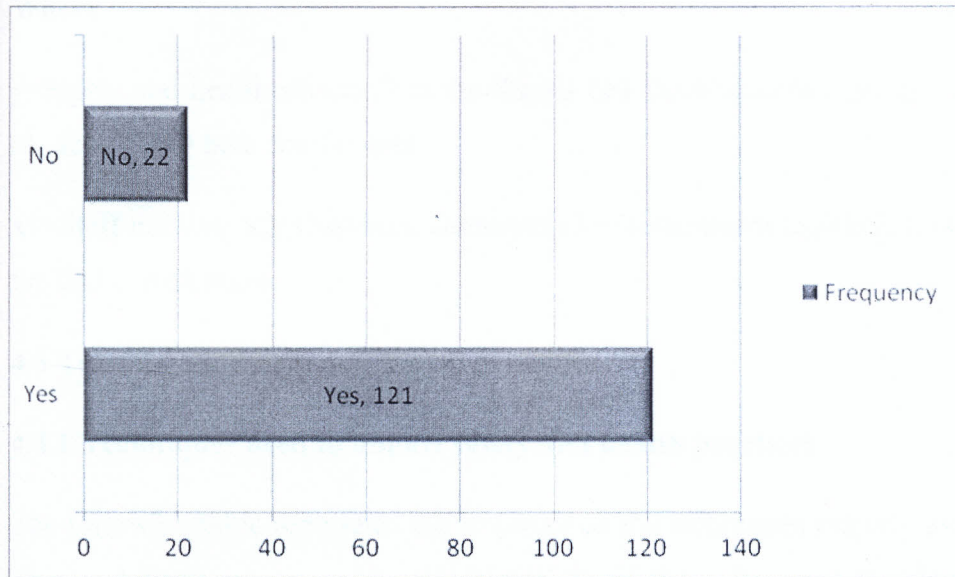
Table 4.7 Effectiveness of safety and health policies and committees

Response	Frequency	Percentage (%)
Yes	121	85
No	22	15
Total	143	100

Source: Study Data (2011)

From the study majority of the respondents (85%) indicated that the health and safety policies and the committees in place were effective while 15% indicated that they were not fully effective. The high response indicating the effectiveness of the policies and committees in place was attributed to the functional/active safety and health policy, and follow up by committee members on any health and safety issues in the respective factories. The above findings affirm that KTDA Managed factories led by the management have taken a leading role in ensuring respective functionalities are executed to promote safety working conditions in a work-place. The information above can also be represented as shown below:-

Figure 4.7 Effectiveness of safety and health policies and committees



Study Data (2011)

4.3.4 Suggestions to improve on health and safety practices at the organization

The respondents were requested by the researcher to suggest what other ways/techniques that can be employed by the organization to improve its safety and health practices in respective employee work-place. They suggested continuous training of staff, regular site inspections by committee members, team spirit and active participation of staff on health and safety issues. Others suggested that safety and health issues for KTDA Managed factories should be decentralized to Regional level (7) by locating one safety officer at each Regional to oversee the managed factories within the respective area of operation(s). At the time of carrying out the study, safety and health officer sits at the Head-office located in Nairobi to oversee safety and health practices for all the 64 managed factories.

Regression Analysis Model

Regression analysis was applied to determine the importance of the each of the four variables with respect to the level of quality and safety in the tea manufacturing industry. The regression model was as follows:-

$$y = \alpha + a_1x_1 + a_2x_2 + a_3x_3 + a_4x_4$$

Where

y=Safety and health standards at the Kenya Tea Development Agency, α =constant term, a_1, a_2, a_3, a_4 = beta coefficients

x_1 =Staff training, x_2 =Customer Demands, x_3 = Government legislation, x_4 = Requirements for ISO certification

4.4 Training on Safety and health practices

4.4.1 Techniques used to impart safety and health practices

The following table represents the response on the techniques majorly used at the KTDA Managed Factories to transmit information on the safety and health practices to her employees.

Table 4.8 Training and safety and health message transmission

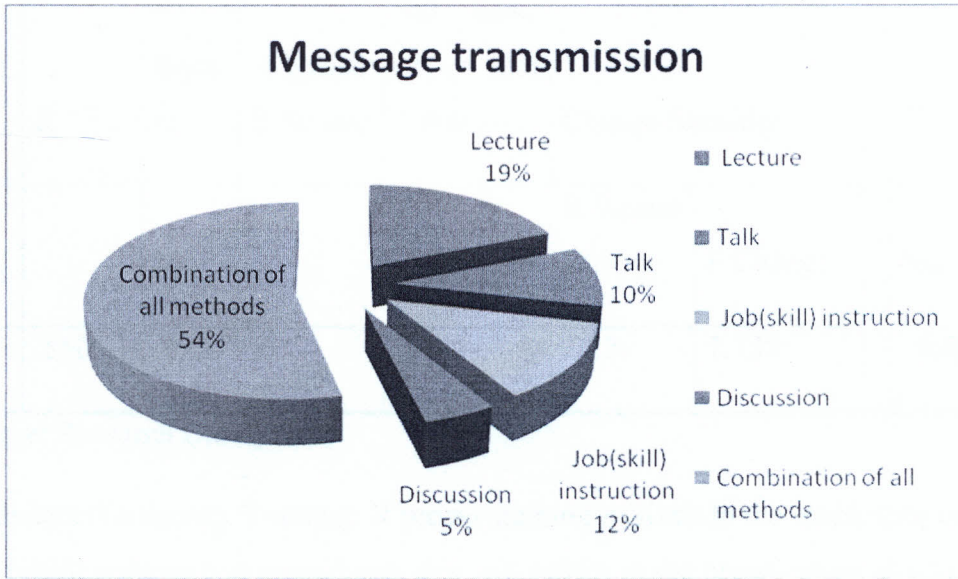
Response	Frequency	Percentage (%)
Lecture	27	19
Talk	14	10
Job(skill) instruction	18	12
Discussion	7	5
Combination of all methods	77	54
Total	143	100

Source: Research Data (2011)

Majority of the respondents as shown by 54% of the respondents pointed out the use of a combination of all i.e. lectures, talks, job skill instructions and discussion in their factories to pass the safety and health information, 19% stated the use of lecturers and 12% stated the use of job instructions. Another 10% of the respondents indicated the use of talks and only 5% of the respondents indicated the use of discussions as a method of

passing information to employees on safety and health practices. The findings indicate that a wide variety of ways are used to impart the safety and health message/information to employees thus will reach a majority of the intended recipients. The information can also be represented as in the figure below:

Figure 4.8 Training on safety and health message transmission



Source: Study Data (2011)

4.4.2 Effect of training on safety and health practices

Table 4.9 Model Summary of Training

Regression analysis was conducted to determine the effect of training on safety and health practices at the organization.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
1	.850(a)	.722	.629	.9629	.722	7.785	.068

Source: Research Data (2011)

Predictors (Constant): Training: If proper training is given to the employees on the safety and health policies and procedures, this will reflect in the organization as employees will understand them well and thus apply them properly. Therefore cases of accidents due to non compliance to safety and health policies will go down.

The coefficient of correlation (R) equals 0.850, which shows that there exists a strong positive correlation between the training and the safety and health practices of KTDA managed factories. This shows that training affects the safety and health practices significantly.

The coefficient of determination (R square) equals 0.722. This shows that 72.2% of the total variation in training can be explained, leaving only 21.8% unexplained.

4.4.3 Improving on training for safety and health practices

The respondents were requested to suggest what can be done with regards to training to improve the safety and health standards in the organization. They suggested continuous and refresher training on the importance of safety and health practices in work-place,

designing of a customized safety and health curriculum for the factory employees. Others suggested that for a meaningful training on safety and health practices, management and safety committee members should take a leading

4.5 Customer Demands on safety and health practices

4.5.1 Frequency of customer safety and health visits for site inspections

The following table represents the response on whether customers visit respective factories to check/inspect on matters of safety and health practices in the work-place.

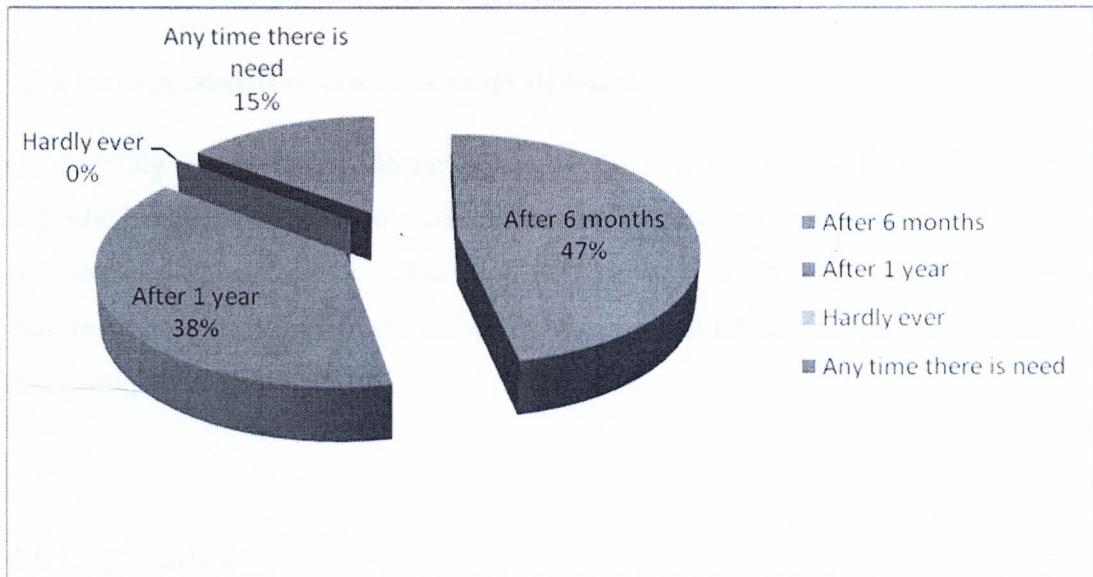
Table 4.10 Frequency of customer safety and health visits for site inspections

Response	Frequency	Percentage (%)
After 6 months	67	47
After 1 year	55	38
Hardly ever	0	0
Any time there is need	21	15
Total	143	100

Source: Study Data (2011)

From the study, majority of the respondents as shown by 47% indicated that the safety and health site visits/inspections are conducted by customers half yearly, 38% of the respondents indicated that the checks are conducted yearly while 15% indicated that the frequency of the checks is on a need basis. The high response indicates that sufficient checks/inspections are conducted to ensure that safety and health standards/practices at KTDA Managed Factories are maintained and constantly reviewed. The above information can be represented as shown below:-

Figure 4.9 Frequency of customer on safety and health site inspections for factories



Source: Study Data (2011)

Table 4.11 Model summary of Customer demands

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
2	.700(b)	.490	.320	1.3041	.490	2.880	.188

Source: Research Data (2011)

Predictors (Constant): Customer Demands-Ensuring that customer demands are met is critical to the success of any organization. Therefore the issues that customers highlight should be taken seriously and implemented in any customer serving organization.

The coefficient of correlation (R) equals 0.7, which shows that there exists a moderate positive correlation between customer demands and safety and health practices within the organization.

The coefficient of determination (R square) equals 0.490. This shows that 49% of the total variation in the customer demands used can be explained, leaving only 51% unexplained.

4.5.2 Improvements to meet customer demands

On meeting of customer demands on safety and health practices, the respondents suggested continuous interview with customers to determine their tastes and preferences, continuous market research and fast implementation of any suggestions made by customers in order to retain the existing customer and attract the out-side market besides promoting good public image.

4.6 Legislation

4.6.1 Violations on Legislations (Safety and health practices).

The data in the table below represents the respondents' answers to whether their respective factories had ever been convicted of violating any safety and health regulations by enforcing agencies

Table 4.12 Violations on legislations

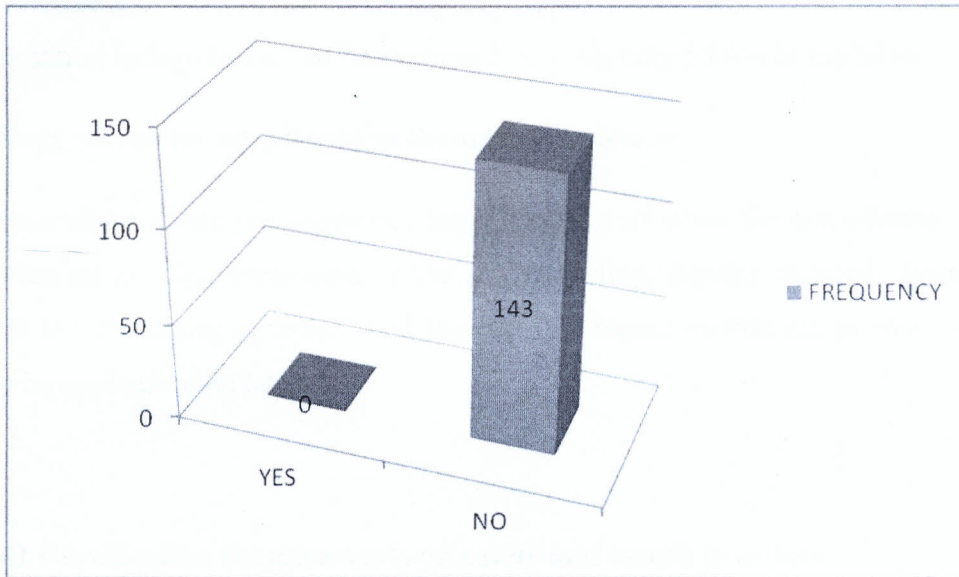
Response	Frequency	Percentage (%)
YES	0	0
NO	143	100
Total	143	100

Source: Research Data (2011)

All the respondents (100%) indicated that their respective factories had never been convicted for any violations against her employees. The positive response was attributed to the proper measures put by the management to ensure that the factories have all the

required safety and health procedures in place .The information can also be represented as in the chart below:-

Figure 4.10 Violations on legislations



Source: Study Data (2011)

Table 4.13 Model framework of Legislation

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
3	.683(c)	.466	.288	1.3338	.466	2.621	.204

Source: Research Data (2011)

Predictors (Constant): Legislation-The laws set aside by the government and other regulatory bodies control the working of the organization, including the manufacturing tea sector. Compliance with the legislation (OSHA, 2007) is a requirement for all organizations and non-compliance attracts punitive fines.

The coefficient of correlation (R) equals 0.683, which shows that there exists a moderate positive correlation between legislation and safety and health practices at the KTDA managed factories.

The coefficient of determination (R square) equals 0.466. This shows that 46.6% of the total variation in legislation can be explained, leaving only 53.4% unexplained.

4.6.2 Suggestions on compliance to the set legislation

The respondents made the following suggestions to improve the compliance to the set legislation as creating awareness of the set legislation, regular planned inspection by relevant law enforcing agencies and the punitive measures that are in place should be strictly be applied to the latter.

4.7 ISO Certification Requirements on safety and health practices

Table 4.14 Model summary for ISO certification

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics		
					R Square Change	F Change	Sig. F Change
4	.531(d)	.282	.043	1.5466	.282	1.181	.357

Source: Research Data (2011)

Predictors (Constant): ISO Certification-Regular certification of KTDA Ltd teas as demanded by the international standard organisation (ISO) and the tea manufacturing sector. Therefore retaining the ISO certification(s) is important to the running of the KTDA Managed Factories as it is linked to the improved safety and health practices of the work-place.

The coefficient of correlation (R) equals 0.531, which shows that there exists a positive correlation between the ISO certification and the safety and health practices in the organization.

The coefficient of determination (R square) equals 0.282. This shows that 28.2% of the total variation in ISO certification can be explained, leaving 69.8% unexplained.

4.7.2 Suggestions on other ISO certification to be adopted to improve safety and health standards.

The respondents made the following suggestions on other ISO certifications that could be adopted by KTDA Managed Factories to include ISO 14000 and ISO 18000. ISO 14000 emphasizes the need for a good environment management system in our place of work while ISO 18000 aims at promoting good occupational safety and health practices in all work-places. Other respondents suggested that continuous creating awareness to staff on the importance of the relevant ISO certifications is key to enhancing favourable safety and health policies/practices in any manufacturing tea sector.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This is the final chapter of this research project. This chapter presents the summary of the findings, conclusions made from summarized results, recommendations of the study and areas that require further research. The broad objective of the study was to investigate the factors that affect safety and health practices of manufacturing firms within the tea sector in Kenya. The study was a descriptive survey design based on the following specific objectives:-

The first objective was to determine if staff training has an effect on industrial safety and health practices in KTDA Managed Factories. Secondly was to determine the effect of customer demands on industrial safety and health practices in KTDA Managed Factories e.g. on their frequency to site audits/inspection. Thirdly was to establish whether legislation has an effect on safety and health practices in KTDA Managed Factories e.g. on conviction caused by violation of the health and safety Act. Finally, was to determine how requirements on ISO certification influences the safety and health practices in KTDA Managed Factories.

Data was analyzed according to the objectives of the study. Data was collected from the respondents and subjected to analysis by use of descriptive statistics and frequency tables.

5.2 Answers to Research Questions

The findings were as follows:-

5.2.1 Health and Safety practices

This was the dependent variable of the study and the researcher's findings showed that KTDA Managed Factories are committed to good safety and health practices to her employees in their respective work-places. This was evidenced by a 100% response on the presence of a safety and health policy, frequency of safety and health audits and the

employee desire for a continuous need for improved health and safety standards in their work-place. We can therefore say that favourable safety and health practice in all work-places is a necessary business/service strategic asset both to local and global organizations.

5.2.2 Staff Training on Health and Safety practices

Research question 1 sought to find out whether staff training has an effect on industrial safety and health practices in KTDA Managed Factories. The results of the regression analysis revealed a coefficient of correlation (R) equals 0.850, which shows that there exists a strong positive correlation between staff training and industrial safety and health practices in KTDA managed factories.

5.2.3 Customer Demands on Health and Safety practices

Research question 2 sought to find out the effect of customer demands on industrial safety and health practices in KTDA Managed Factories. The coefficient of correlation (R) equals 0.7, which shows that there exists a high positive correlation between customer demands and safety and health practices within the organization. This shows that customer demands affect the safety and health practices at the factories significantly.

5.2.4 Legislation on Health and Safety practices

Research question 3: The research also sought to find out whether legislation has an effect on safety and health practices in KTDA Managed Factories. The coefficient of correlation (R) equals 0.683, which shows that there exists a moderate positive correlation between legislation and safety and health practices at the KTDA managed factories. This indicates that the legislation affects safety and health practices in KTDA Managed Factories. The study found out that 100% of all respondents have never been convicted for any violations against her employees. This positive response was attributed to proper measures put by the management to ensure that KTDA Managed Factories comply with this statutory requirement (OSHA, 2007) i.e. good occupational safety and health practices in all work-places.

5.2.5 ISO Certification Requirement(s) on Health and Safety practices

This was research question 4: The study sought to find out how requirement on ISO certification influences the safety and health practices in KTDA Managed Factories. The coefficient of correlation (R) equals 0.531, which shows that there exists a moderate positive correlation between the ISO certification and the safety and health practices in the organization. This indicates that ISO certification requirements affect the safety and health practices in KTDA Managed Factories. The study also found out that all the 64 KTDA Managed Factories, the 12 under study included have been certified of ISO 9001:2008 (TQM) and ISO 22000:2005 (Food safety) and has greatly improved its safety and health practices of the respective factories. This was indicated 100% response of the 143 respondents. This shows that the management and factory employees fully understand the underlining principles of these ISO standards and the importance it impacts on safety and health practices in their operations.

5.3 Conclusions

From the research findings, it is evident that the safety and health practices of manufacturing firms within the tea sector in Kenya is affected by the variables put forward in the literature review. This has been reflected by the response as depicted above. These are further explained below.

5.3.1 Staff Training

The study concludes that staff training affects industrial safety and health practices in KTDA Managed Factories. The results of the regression analysis revealed a coefficient of correlation (R) equals 0.850, which shows that there exists a strong positive correlation between staff training and industrial safety and health practices in KTDA managed factories. The respondents affirmed that if employees are well trained on the safety and health guidelines/practices of respective work-places, this will contribute a great deal to the promotion of the same in the entire organization(s).

5.3.2 Customer Demands

On Customer demands, the results of the regression analysis revealed a coefficient of correlation (R) equals 0.7, which shows that there exists a moderate positive correlation between customer demands and safety and health practices within the organization. From the results it was concluded that customer demands affects the safety and health practices within the organization.

5.3.3 Legislation

On Legislation, the results of the regression analysis revealed a coefficient of correlation (R) equals 0.683, which shows that there exists a moderate positive correlation between legislation and safety and health practices at the KTDA managed factories. It was concluded that compliance to the set legislation affects the safety and health practices at the KTDA managed factories.

5.3.4 ISO Certification Requirement(s)

Finally, on ISO certification, the results of the regression analysis revealed a coefficient of correlation (R) equals 0.531, which shows that there exists a positive correlation between the ISO certification and the safety and health practices in the organization. Thus it was finally concluded that requirements of the ISO certification also affects the safety and health practices at the KTDA managed factories.

5.4 Recommendations

Based on the findings of the study, the following recommendations were made.

5.4.1 Staff Training on Safety and Health practices

The respondents were requested to suggest what can be done with regards to training to improve the safety and health standards in KTDA Managed Factories. They suggested continuous and refresher trainings on the importance of safety and health practices in all work-places besides designing a customized and relevant training curriculum the factory employees. They further suggested that qualified and competent safety and health officers

should be located at the seven (7) Regional offices as opposed to being stationed at Nairobi head office.

5.4.2 Customer Demands on Safety and Health practices

On meeting of customer demands, the respondents suggested that continuous interview of the customers or target market to determine their dynamic tastes and preferences, and fast implementation of any suggestion(s) made by the customers are key to any service organizations in an effort to keep the business afloat and competitive in a rivalry environment.

5.4.3 Legislation on Safety and Health practices

The respondents made the following suggestions that could improve on the compliance of this objective as awareness creating of the set legislation(s), regular planned inspections by relevant law enforcing agencies and adherence to the set punitive measures should be practiced/applied without undue compromise.

5.4.4 ISO Certification Requirements on Safety and Health practices

The respondents made the following suggestions that could improve on safety and health practices of KTDA Managed Factories as pursuance/adoption of ISO 14000 (Environment Management System) and ISO 18000(Occupational Safety and Health). Others suggested that continuous awareness and training of employees on the importance of the certificated and these new standards, and the linkage it has on safety and health practices is key in the manufacturing tea sector.

5.5 Suggestion for further Research

The study only focused on the tea factories managed by KTDA. Further research should be done on tea factories managed by other companies covering a similar problem but use of different technique(s) of study. This will widen the scope of information collected on the topic of the study. Other segments of the economy should also be included in further studies.

REFERENCES

- Ali, H., Abdullah, N.A. and Subramaniam, C. (2009), **Management practice in safety Culture and its influence on workplace injury, an industrial study in Malaysia** *Disaster Prevention and Management*, Vol. 18, No. 5, pp. 470-477.
- Allan Rushton et al (2000), **Logistics and Distribution Management**, British library, London.
- Alli, B. O. (2001), **Fundamental principles of occupational health and safety**. Geneva, International labor organization.
- Armstrong and Kotler P. (2001), **Principles of Marketing**, (6th ed), Irwin press, UK.
- Barry S.L. et al (2005), **Occupational and Environmental health, recognizing and preventing disease and injury** (5th ed), Philadelphia, USA.
- Bett. J.K. (2005), **A study of effect of economic liberalization on strategic change management**. Unpublished MBA project, Moi University, Kenya.
- Blanchard, C. (2009), **Iraq: Oil and Gas Legislation, Revenue Sharing, and U.S. Policy**’.
- British Standard Institution (2007), **OHSA 18001, Occupational Health and Safety Management systems**, specification, BSI, London.
- Burnes B. (1999), **Managing Change. A strategic approach to organization dynamics**. (3th ed) London, Pitman publishers.
- Chune F.M. N.(1998), **Change in the Kenya Business Environment. Their influence on corporate behaviour of food manufacturing firms in Nairobi**. Unpublished MBA Project, University of Nairobi.
- Cole G. A. (1996), **Management Theory and Practice** (4th) Letts education, London.
- Cole G.A (2002), **Management Theory and Practice** (5th ed) Letts education, London.
- Cooper J. (1988), **Logistics and distribution planning**, British Library, London
- Dessler G. (1991), **Personnel/Human resource management** (5th) Practice Hall, London.
- DOHSS. (2010), **Annual newsletter reports**, unpublished, NBI, Kenya.

- Enshassi, A., Choudhry, R. M., Mayer, P.E. and Shoman, Y. (2008), “**Safety Performance of Subcontractors in the Palestinian Construction Industry**”, *Journal of Construction in Developing Countries*, 13, 1, 51-62.
- Finnish Institute (1991), **Occupational Health and Safety**, African newsletter printers, Finland.
- G.O.K. (2007), **Occupational Safety and Health Act**, Government printers, Nbi, Kenya
- ILO Encyclopedia (1998), **Occupational Health & Safety** (4th ed), Geneva.
- International Register of Certificated Auditors, IRCA/2245, **Certification criteria for ISO 9000:2008 series Auditors/ Lead Auditors Training course**, IRCA, London
- ISO 9000(2005), **Quality Management Systems – Fundamental and Vocabulary**, ISO Copyright office, Switzerland.
- ISO 22000 (2005), **Food Safety Management Systems**, ISO copyright office, Switzerland.
- Jeyanatnam J. (1992), **Occupational Health in developing countries**, Oxford University press, UK.
- Jiang, L., Yu, G., Li, Y. and F, Li, (2010), “**Perceived colleagues’ safety knowledge/behavior and safety performance: Safety climate as a moderator in a multilevel study**” *Accident Analysis and Prevention*. vol.42, pp. 1468-1476,
- Johnson, G. & Scholes, K (2002), **Exploring Corporate Strategy**, Text and cases, Pearson Education, Singapore.
- Mearns, K. and Yule, S. (2009), “**the role of national culture in determining safety Performance: Challenges for the global oil and gas industry**”, *Safety Perspective from management feedback complexity*,” *presidia Earth and Planetary Science*, vol. 1, pp. 1673-1677.
- Mugenda O. & Mugenda A, (2003), **Research Methods, Quantative and Qualitative Approaches**, Acts Press, Nairobi, Kenya.
- Pigors, Myers, Malm (1996), **Management of Human Resource** (3th ed).
- Saleemi N. A (1997), **Personnel Management Simplified**, N.A Saleemi publishers, India
 University of Texas (2008) **Environmental Health and Safety. Heat stress in work place**, University press, USA.

Sherry, P. (1992), “**Peer Involvement and Behavioral Safety.**”

Strauss and Sayles (1998),**Personnel, The Human Problem of Management** (5th)Practice Hall, London.

Subramaniam, C. (2004), “**Human factors influencing fire safety measures,**” disaster Prevention and Management, vol.13, pp.110–116.

Tharaldsen, J., Mearns, K., and Knudsen, K. (2010), “**Perspectives on safety: The impact of group membership, work factors and trust on safety performance** in UK and Norwegian drilling company employees,” Safety Science.vol.48, pp.1062-1072.

Thomson, A & Strickland, A, (2001),**Strategic Management: Concepts and cases,** New York, McGraw-Hill.

Zedalis, R. J. (2009), **The Legal Dimensions of Oil and Gas in Iraq: Current Reality and Future Prospects,** Cambridge University Press in the United States of America.

www.ktdateas.com.

www.teaboard.or.ke.

Appendix I

QUESTIONNAIRE FOR KTDA LTD & MANAGED TEA FACTORY STAFF

INTRODUCTION

I am a student at Kenyatta University (KU) undertaking MBA course in Strategic Management. I am carrying out a survey to investigate the **factors that affect Safety and Health practices of manufacturing firms within the Tea sector in Kenya**, case study of KTDA Ltd managed Factories, West of Rift. I request that you complete attached questionnaire and return it to me. Thank you in advance for your assistance.

Appendix II

QUESTIONNAIRE FOR KTDA LTD & MANAGED TEA FACTORY STAFF

SECTION A

INTRODUCTION

The objective of this questionnaire is to enable the researcher gather relevant information that is necessary to investigate the factors that affect safety and health practices within the tea sector in Kenya.

Information collected shall **strictly be kept confidential** and used only for academic purpose.

Kindly, read and answer the following question honestly & appropriately

Name(optional).....Date.....

Factory Co.....

Sex.....

Dept.....

Designation.....

Academic level.....

D.O.A.....

Years in service.....

SECTION B

Safety and Health practices.

1. Is there safety and health policy at your factory? (Tick appropriate box)

Yes

No

2. Is there safety and health committee at your factory? (Tick appropriate box)

Yes

No

3. If the answer is yes for no. 1 and no.2 above, are they effective in the management of safety and health system at your factory? (Tick appropriate box)

Yes

No

4. How often are safety and health inspections/audits done at your factory? (Tick appropriate box)

Every 6 months

Any time there is need

Every year

Hardly ever

5. Which type of safety and health audits carried out at your factory? (Where 1 represents least used and 5 represents most used)

	Least used					most used
	1	2	3	4	5	
Internal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
External	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Internal and External	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

6. What would you suggest to improve safety and health practices at your factory?
.....

7. Who among the following are involved in the implementation of safety and health practices at your factory? (Tick appropriate box)

Top management

Middle management

All employees

Safety & Health committee

Others (specify)

8. Has any accident/injuries/ occupational diseases or deaths been reported in relation to safety and health practices at your factory? (Tick appropriate box)

Yes

No

9.If the answer in 8 above is yes, how has been the trend in the last 3 yrs? (Tick appropriate box)

Increasing

Decreasing

Increasing and decreasing

10. Do you think the implementation of favourable safety and health practices at you factory been of any benefit?

Yes

No

11.If the answer in 10 above is yes, please list the benefits?

To employee

1.....

2.....

3.....

To organization

1.....

2.....

3.....

SECTION C

Training on Safety and Health practices.

12. Do you think training at your factory led to favourable safety and health practices?

(Tick appropriate box)

Yes

No

13. If yes, to what extent? (Tick appropriate box)

Very great

Great

Fair

Low

Very low

14. In your own opinion, what technique is mostly used to impart safety and health practices to employees at your factory? (Tick appropriate box)

Lecture

Talk

Job (skill) instruction

Discussion

All above

15. Suggest what can be done on training at your factory to improve on employee awareness on safety & health practices

.....

.....

SECTION D

Customer demands on Safety and Health practices

16. Does customer demands at your factory have an impact on safety and health practices? (Tick appropriate box)

Yes

No

17. In your own opinion and in the scale of 1-5, what extent does customer demands affect safety & health practices at your KTDA managed factory? (Tick appropriate box)

Very great extent (5)

Great extent (4)

Affects moderately or sometimes affects or sometimes doesn't (3)

To a low extent (2)

To a very low extent (1)

18. How often do customers visit your factory for safety and health site inspections/audits? (Tick appropriate box)

After 6 months Any time there is need

After one yr

Hardly ever

19. Suggest what can be done on customer demands at your factory to improve on safety & health practices

.....

SECTION E

Legislation on Safety and Health practices.

20. Has your factory been convicted of violating safety & health Act against her employees by law enforcing agencies? (Tick appropriate box)

Yes

No

21. If the answer above (18) is NO, suggest what has led to the out-come.
.....

22. If the answer in 18 above is YES, what would you suggest that could be implemented by law enforcing agencies to improve safety & health practices at your factory.
.....

23. In your own opinion and in the scale of 1-5, what extent does legislation affect safety & health practices at your KTDA managed factory? (Tick appropriate box)

Very great extent (5)

Great extent (4)

Affects moderately or sometimes affects or sometimes doesn't (3)

To a low extent (2)

To a very low extent (1)

SECTION F

ISO certification on Safety and Health practices.

24. Has your factory been certified for ISO 9001:2008 & ISO 22000:2005?

(Tick appropriate box)

Yes

No

25. Do you think ISO certifications in (18) above at your factory led to favourable safety and health practices? (Tick appropriate box)

Yes

No

26. If the answer above is yes, suggest other ISO standards that could be adopted by your factory to improve safety and health practices in the work place

.....
.....

27. In your own opinion and in the scale of 1-5, what extent does ISO requirements affect safety & health practices at your KTDA managed factory? (Tick appropriate box)

Very great extent (5)

Great extent (4)

Affects moderately or sometimes affects or sometimes doesn't (3)

To a low extent (2)

To a very low extent (1)

Thank you very much for taking your time to complete this questionnaire.

KENYATTA UNIVERSITY LIBRARY