SAFETY MANAGEMENT SYSTEM AND EMPLOYEE PERFORMANCE IN TEXTILE MANUFACTURING COMPANIES IN SELECTED COUNTIES IN KENYA

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Safety Management System and Employee Performance in Textile Manufacturing Companies in Selected Counties in Kenya

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DECLARATION

This thesis is my original work and has not been presented for a degree in any other university.

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This thesis has been submitted for examination with our approval as University Supervisors.

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DEDICATION

To my beloved wife, Beatrice Omutere and my sons Ethan Subbo, and Darrell Omutere, thank you for the endless support you gave me during the writing of this thesis. To my parents, Prof. Margaret Nyanchoka Keraka and Prof. Wilfred Keraka Subbo, thank you for being there for me throughout my research with your tremendous support and believing in me and to my siblings Phoebe, Jean and Yvonne who have always supported me.

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LIST OF ABBREVIATIONS AND ACRONYMS

ACTIF	African Cotton & Textile Industries Federation
AGOA	African Growth and Opportunity Act
BLS	Bureau of Labor Statistics
CPWR	Center to Protect Workers' Right
EAC	East African Community
EANPC	The European Productivity Network
EPZ	Export Processing Zone
EPZA	Export Promotion Zone Authority
FAA	Federal Aviation Administration
GOK	Government of Kenya
HR	Human Resource
HRM	Human Resource Management
ICDC	International and Commercial Development Corporation
ILO	International Labour Organization
IRIN	Integrated Regional Information Networks
ISO	International Organization of Standards
KAM	Kenya Association of Manufacturers
KARI	Kenya Agricultural Research Institute
KICOMI	Kisumu Cotton Mills
KIPPRA	Kenya Institute of Public Policy Research and Analysis
NEMA	National Environment Management Authority
OSH	Occupation Safety and Health
OSHA	Occupation Safety Health Act
RIVATEX	Rift Valley Textiles
RMG	Ready Made Garments
SPS	Safety Performance Solution
SSA	Sub Saharan Africa
WHO	World Health Organization
WTO	World Trade Organization

OPERATIONAL DEFINITION OF TERMINOLOGIES

Absenteeism	Unscheduled employee absence from the workplace. (Anderson, 2005).
Compliance	It is behavior that can affect the performance of safety record in an organization. It is the employees' adherence to the rules, regulation and procedures set by their organization, even when not monitored by their employer (Podsakoff, MacKenzie, Paine &Bachrach, 2000)
Employee Performance	It refers to individual's work achievement after exerting required effort on the job which is measured through doing meaningful work (Jena & Pradhan, 2017).
Management Commitment	It implies the direct participation by the highest level of management (top management) in all specific and critically important aspects such as safety, quality, environment, security, etc., or programmes of an organisation. (Gupta, J. N., Sharma, S. K., & Rashid, M. A., 2009).
Motivation	It is a psychological force that determine the prediction of a person's behavior, a person's level of effort, and a person's level of persistence in the face of obstacles (Jone, George & Hill, 2000)
Occupational Safety	It is an area concerned with the safety, health and welfare of people engaged in work or employment. The goals of occupational safety and health programs include fostering a safe and healthy work environment. (Fanning & Fred, 2003)
Performance management	It is a process which contributes to the effective management of individuals and teams in order to achieve high levels of organizational performance (Armstrong & Baron, 2004)
Productivity	An expression of how efficiently and effectively goods and services are being produced (EANPC, 2005)

Safety	Control of recognized hazards to attain an acceptable level of risk. Safety is a factor that goes beyond the control of hazards alone, it is the process of avoiding and preventing accidents (Bokinni, 2006)
Safety Communication	It refers to a process of exchanging information about safety related issues between two or more people in the workplace (Siu, O., D.R. Phillips & T. Leung, (2004).
Safety Policy	It is a written statement by an employer stating the company's commitment for the protection of the health and safety of employees and to the public. (Honkasalo, 2000).
Textile	Woven or knitted fabric made from yarn. Yarn is produced by spinning raw fibres of wool, flax, cotton, hemp, or other materials to produce long strands. (McIntyre & Daniels,1995)
Textile Industry	It is a sector primarily concerned with the design, production and distribution of yarn, cloth and clothing. (McIntyre & Daniels,1995)
Workplace safety standards	It describes policies, procedures and practices relating to safety in the workplace (Törner & Pousette, 2009).
Worker Participation	A variety of processes and structures which enable, and at times encourage, employees to directly and indirectly contribute to and influence decision – making in the firm and in the wider society (González, 2009)

ABSTRACT

The purpose of this study was to determine how work safety compliance relates to employee performance in textile manufacturing companies in Kenya. The specific objectives of the study included: to determine the relationship of worker's knowledge of safety standards in textile manufacturing companies in Kenya, to establish the influence of safety promotional policies in textile manufacturing companies in Kenya, to determine the effect of workers participation in implementation of safety standards in textile manufacturing companies in Kenya, to establish how communication influence employee performance in textile manufacturing companies in Kenya and to determine the moderating effect of management commitment on work safety compliance and employee performance in textile manufacturing companies in Kenya. The theories that anchored the study include: Heinrich domino theory, Human factor theory, behavioral based Safety theory, system theory and social exchange theory. The target population included all the textile manufacturing companies in the export processing zone which are 22 under Export processing zone program. This study sampled 400 respondents. This study adopted a descriptive cross sectional research design. Data was collected using questionnaire and key informant's interviews. Data was revised, coded for computerized data entry. Data analysis included descriptive analysis and inferential analysis which was done by use of statistical package for social Sciences, Version 22. Inferential data analysis was carried out by the use of multiple regression analysis to determine the significance and a magnitude of each of the four independent variables and moderating variable in respect to employee performance in textile industries in Kenya. Hypothesis testing was carried out using t-test and multiple regression analysis. Inferential statistical analysis showed that there was a correlation between worker's knowledge of safety standards, safety promotional policies, worker participation and safety communication, and employee performance. Management commitment was found to moderate the relationship between work safety compliance and employee performance in textile manufacturing companies in Kenya. The study concluded that workers knowledge of safety standards, workers participation in implementation of safety standards, safety communication and management commitment if properly utilized contributes to improved employee performance in textile manufacturing companies in Kenya. The study recommends that textile manufacturing companies should conduct periodic safety training and awareness of safety standards among their employees. The study also recommends that well-structured policies should be formulated and enforced to ensure compliance among their employees. It also recommended that workers should be involved in decision making of safety standards so they can own those policies.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Employee performance is defined as whether a person executes his/her job duties and responsibilities according to recommended standards. Many companies assess their employee's performance on an annual or quarterly basis in order to define certain areas that need improvement. Performance is therefore, a critical factor in organizational success. There is increasing evidence that providing a healthy and safe working environment has the potential to increase labour productivity. Most businesses implement health and safety measures to keep compensation costs down (Massey & Perry, 2006; Dorman, 2000; Quinlan, Mayhew & Bohle, 2001).

There is evidence that occupational injuries and illnesses impact on productivity losses (Lamm, Massey & Perry, 2006). Research findings support the existence of an important link between a good working environment and the performance of a company. Thus, the quality of a good working environment has a strong influence on productivity and profitability (De Greef & Van den Broek, 2004). Employee performance management is key in improving employee work performance. A study by Guest, Michie, Conway, and Sheehan, (2003) provides a useful theoretical model that suggests possible links between a series of managerial inputs and performance outputs. The inputs are business strategy, Human Resource (HR) strategy and HR practices. The HR practices include induction, job design, recruitment and selection, appraisal, reward, training and development, financial flexibility, harmonization, communication and job security. The outputs are effective HR outcomes, quality of goods and services, productivity and financial performance. Evaluating the effectiveness of these HR activities allows an assessment of how well they are working in practice.

The more HR practices are used, and the more effective they are, the better organizational performance is likely to be. HR effectiveness appears to demonstrate the link between HRM and business performance (Guest, et al., 2003). Several studies have shown that there is a relationship between a better working environment and labor productivity (Ahmed, 2007). This has been arrived at using evidence from Bangladesh, where the ready-made garment (RMG) sector has played significant role in the socioeconomic development. The total contribution of RMG to exports is more than 76% of the total export earnings. In 1984, the number of garments sold was 587 tonnes; in 1998 the number stood at 2650 and now the number is 3300. In spite of these positive aspects, there have been at least 83 fire related incidents and 246 deaths since 1990 in the country.

Workplace safety is therefore a critical consideration for workers and the organizations that employ them. For organizations, workplace accidents and injuries impact financial and talent resources, which in turn, deteriorate competitive advantage. In calculating occupational injuries in 175 countries worldwide, Hamalainen, Jukka , and Kaija, (2006) estimated that 264 million workplace injuries occurred in 1998, with more than 700, 000 workers a day suffering from the workplace injury causing absence of three days or more. Managing risks in an integrated way with the organization's operations has become increasingly important in recent years in order to prevent accidents and the firm's productivity, economic and financial results.

To mitigate potential risks to employee and organizational safety, it is important to evaluate and identify the cause of workplace accidents and injuries. In general, there are three causes of workplace accidents: failure of equipment and machinery, failure of a process or procedure and human error. It is widely accepted that 80% - 96% of all occupational accidents are caused by human error. Although the employer is responsible for the safety of his workers, the participation of workers is indispensable. One type of behavior that can have an effect on safety performance is safety compliance and adherence to organizational rules, regulation and procedures

1.1.1 Employee Performance

Employee job performance can be defined as as the achievement of specific tasks measured against predetermined or identified standards of accuracy, completeness, cost and speed. Employee performance can be manifested in improvement in production, easiness in using the new technology and motivating workers (Afshan, Sobia, Kamran & Nasir, 2012). In order to utilize HR fully and augment organizational success, effective employee performance management system is imperative for a business organization. The performance-driven objective is expected to be aligned with the organizational policies so that the entire process moves away from being event-driven to become more strategic and a people-centric perspective (Jena, & Pradhan, 2014; London, 2003; Mone & London, 2009).

In organizational research, job performance is viewed as feelings and characteristics concerned with their work (Guest, 2002). Managers and owners think that capable workers are essential for successful business (Eskildsen & Nussler, 2000). There is a direct relationship between employee performance and employee attitude. Haider and Riaz, (2010) and Malik, Yamamoto, Souras, Malik and Sauerborn, (2010) suggested that it is possible to predict performance of employees by giving the behavioral importance to employee when they are at work.

Job performance characteristics contain numerous aspects of the job like salary, uniqueness of job, working environment and management of political issues (Coomber & Louise, 2007). Morrison (1997) argued that highly satisfied employees can demonstrate a high level of performance and attitude as well as the attitude of managers and leaders. Committed employees, generate high level of performance (Poon, 2004). Many researchers identify that job attitudes and working morale are the key sources for enhancing performance of employees (Miliman, 2002). Organizations that motivate their employees have higher levels of performance than the less motivating organizations. In a

study conducted by Gopang, Nebhwani, Khatri and Marri, (2017) in small and medium sized industries in Pakistan, a moderate positive correlation was found among Occupational Health and Safety Management (OHSMs) and performance of Small and Medium Enterprises (SMEs). This implies that OHSMs were not properly carried out which influenced the performance of SMEs (Goetzel & Ozminskowski, 2008). This is mainly because many employers associate poor health with reduced employee performance, safety and morale. The organizational cost of workers in poor health and those with behavioral risk factors include high medical, disability and workers' compensation expenses; elevated absenteeism and employee turnover and decreased productivity at work.

Every organization has been established with certain objectives to attain. These objectives can be attained by utilizing resources like people, machines, material and money. The most important resource out of all the resources is manpower. Human resource plays an important role in performing tasks for accomplishing organizational goals. Human resources are the intellectual property of the firm as they prove to be a good source of competitive advantage (Houger, 2006). In order to succeed, organizations have to obtain and utilize human resources effectively. This will impact on the total production, sales, profit, progress and market position of the company in the market. Employee performance is the major dilemma of organizations in the current environment. Employee's good performance is very essential for the effectiveness of an organization. Employees are the basic source of profit and competitive advantage. Therefore, organizational activities involved in enhancing their employee performance have the motive of organizational performance enhancement (Khan, Dongping & Ghauri, 2014).

According to Gallup (2006) highly motivated and engaged employees take in general fewer sick days up to 37% less. Additionally, absent employees are less productive and high absence rates throughout an organization is a key indicator of lower organizational performance. Bansal, (2005) viewed that 360 degree feedback is another indicator to

measure employee performance. Feedback comes from many sources that include: subordinates, customers and managers and it provides a more balanced evaluation which is usually more acceptable as fair and objective. This feedback often represents an accurate and multi perspective view of an employee performance, skill level and point of improvement. Companies are striving to improve production. In the process, employees are overlooking safety procedures whilst attempting to reach performance targets (Moller, 2003; Probst & Brubaker, 2001). Because of performance pressure and time constraints, many workers engage in unsafe behaviors. They include short cuts that compromise safety compliance and can cause accidents.

1.1.2 Safety Management System

A safety management system provides a systematic way to identify hazards and control risks while maintaining assurance that these risk controls are effective (Spring, 2009). As with all management systems, a safety management system provides for goal setting, planning, and measuring performance. A safety management system is woven into the fabric of an organization. It becomes part of the culture; the way people do their jobs (Evans, Andy & John Parker, 2008). The safety management system is composed of five components which include: knowledge of safety standard, Safety Promotional policies, Workers' Participation, Safety Communication and Management commitment. Management commitment is manifested when it carries out the following: development of safety policy, safety risk assessment, safety assurance and safety promotion.

The safety policy establishes a senior management's commitment to continually improve safety; defines the methods, processes, and organizational structure needed to meet safety goals. Safety risk assessment involves determining the need for, and adequacy of new risk controls based on the assessment of acceptable risk. Safety assurance evaluates the continued effectiveness of implementing risk control strategies; supports the identification of new hazards. Safety promotion includes: training, communication, and

other actions to create a positive safety culture within all levels of the workforce (FAA, 2014).

Safety knowledge that aids firms in strategic product and market development achieves differentiation and competitive advantage. Many firms view the acquisition of new knowledge as a route to competitive advantage. However, few firms fully realize the benefits of this highly valued knowledge (Hansen, Nohria, & Tierney, 1999). Knowledge of appropriate safe work procedures and safety rules is essential. Employees are expected to follow established safety rules and maintain their work areas free of hazards by correcting unsafe conditions or reporting them to supervisors. Safety professionals can assist in conducting product related accident investigation. They can also evaluate product safety related training programs and offer comments on the company's product safety programs.

One of the most effective ways to improve a safety culture and prevent injuries is to optimize safety-related communication throughout an organization (Williams, 2003). It is unfortunate employees are reluctant to warn co-workers when they observe risky behaviors, especially considering that most injuries have a behavioral component (along with system factors; Geller, 2001, 2005, 2008). Ironically, people underestimate others' willingness to receive safety feedback. In fact, 74 percent of respondents (from the SPS Safety Culture Survey) confirm they welcome peer observations for the purposes of receiving safety-related feedback. Yet, only 28 percent believe other employees feel the same way. Employees will be more open to safety-related feedback if coworkers do a better job of providing and receiving it. In addition to cautioning coworkers operating at-risk, it is important to praise employees who regularly do their jobs safely. This builds a more open, positive safety culture and increases the likelihood these work practices will be performed safely in the future. However, most employees say they almost never receive one-on-one praise or appreciation for their safety-related behaviors (Williams, 2002).

Safety Compliance is a behavior that affects the performance of safety record in an organization. It is the employees' adherence to the rules, regulations and procedures set by their organization, even when not monitored by their employer (Podsakoff, MacKenzie, Paine & Bachrach, 2000). Neal and Griffin (2006) emphasize the role of safety compliance, which involves employees "adhering to safety procedures and carrying out work in safe manner". Safety is the state in which the risk of harm by accident to persons or of property damaged is reduced to and maintained at or below an acceptable level through a continuous process of hazard identification and risk management. Workplace safety is emerging as one of the key risks management and regulatory compliance focus areas among many global companies. This is evident from a study conducted by Mearns, Giorgi, Whetton, Pabon, Hulme, and Lal, (2003) who found that accidents at the individual level and also workplace level are significantly associated with non-compliance or safety violations. Safety at workplace is key in improving worker productivity in an organization. Hence there is a remarkable interaction between health and safety at work on one hand and productivity on the other hand. According to the EU Community strategy 2007-2012 on health and safety at work, improving quality and productivity at work states can play a role in improving productivity.

This is due to the fact that the lack of effective protection to ensure health and safety at work can result in absenteeism in the wake of workplace accidents (ILO, 2006). Neal and Griffin (2006) emphasize the role of safety compliance, which involves employees "adhering to safety procedures and carrying out work in safe manner". The enormous economic costs of problems associated with health and safety at work inhibits increased productivity and affects the competitiveness of a business. Health and safety at work is one of the major key factors in improving productivity. Human capital is a prerequisite for a future-oriented development. This is why companies increasingly need qualified, motivated and efficient workers who are able and willing to contribute actively to technical and organizational innovations. According to Lamm, Massey, and Perry, (2006) healthy workers working in healthy working conditions are thus an important precondition

for the enterprise to work smoothly and productively. Much research has for this reason been occupied with investigating the impact of the individual, organizational and environmental factors on the level of safety compliance in diverse work content and industries (Seo, 2005).

1.1.3 Management Commitment

Every company has an obligation to ensure as much as possible the safety of its employees. Employee perceptions of management commitment to safety are known to influence important safety-related outcomes by Michael, Evans, Jansen, and Haight, (2005). Management's commitment to safety can manifest itself in many different ways. Management should be involved in the formulation, communication and enforcement of its safety program. All levels of management should always be visible demonstrating their commitment to safety (Auman & Haden, 2015). Management can develop and implement safe work policies and procedures, consult with workers about safety, train workers about safe work procedures, ensure equipment purchased are safe, develop an incident and injury reporting procedures and act upon the incident and injury reports and lastly have a worker's compensation insurance policy and return to work program. Management commitment is effective when a manager develops a successful safety culture in his/her business by leading from the top, where his/her actions and attitudes send a message to his/her workers that he/she is serious about safety. From this commitment, effective partnerships are formed with his/her workers to achieve safer workplaces (Michael, Evans, Jansen, & Haight, 2005).

Management can show its commitment to safety by making sure all necessary resources are readily available and are safe. The costs resulting from injuries and equipment damage, combined with the associated financial loss resulting from schedule disruptions, insurance hikes, and workers compensation, impact the profitability of any construction operation. This cost can be minimized or avoided through safety efforts by management

(Abudayyeh, Fredericks, Butt, & Shaar, 2006). Equipment which are safe provided to employees should be at least at a quality equal to that of any other equipment on the site and even better, if possible. Management should establish programs and place responsibilities on employees to care for their safety equipment. But when safety equipment wears out or is unavoidably damaged or destroyed one must step up to the plate immediately and repair or replace it.

Traditionally, the most frequent method for managing occupational safety has been by taking a control-oriented approach to human resources (Barling & Hutchinson, 2000), one that assumes workers are motivated to exert only as much effort as is necessary for task completion. As such, it is management's responsibility to use its legitimate authority to control employee behaviour (Barling & Hutchinson, 2000).

1.1.4 Textile Industry in Kenya

The garment and textile industry in Kenya dates from the colonial period. As early as 1954, the industry had a total of 74 enterprises employing 2,477 workers (Kinyanjui, Lugulu & McCormic, 2004). Growth of textile industry after independence saw the local availability of fibers such as cotton, wool and sisal while synthetic fibers (nylon, polyester, acrylics) jute and linen as well as dyes, chemicals and resins were imported (Maiyo & Imo, 2012). The garment industry was one of the most important manufacturing activities in Kenya; it thrived mainly due to the protection offered to firms under the import substitution strategy and heavy government investment through its parastatal - Industrial and Commercial Development Corporation (ICDC). The hurdles that the textile industry faces in Kenya may change for the better with the government having embarked on initiatives to revive the sector which collapsed in the 1980s, mainly due to the increasing import of used clothes popularly known as *mitumba*.

The garment sector has performed relatively well under the African Growth and Opportunity Act (AGOA) provision. In the last 12 years, the garment sector in Kenya has

been principally driven by exports to the US under the AGOA initiative. According to ACTIF, (2010) there were over 170 large scale garment manufacturing units operating in Kenya outside the Export Processing Zone (EPZ). In the EPZ there are 22 large companies. The garment sector still remains as the dominant sector within the EPZs accounting for 29% of all EPZ enterprises, 78% of total EPZ local employment, 56% of all EPZ exports, 52% of total EPZ sales and 30% of all EPZ private investments. As of December 2011, Kenya among other Sub Saharan Africa (SSA) countries was ranked as the leading exporter into US market under AGOA with a market share of 31.6% and export value of US$ 261 Million.

The Ministry of Industrialization and Enterprise Development planned to set up a Textile City at the Export Processing Zone (EPZ) in Athi River through investments from at least 100 textile firms. The plan was expected to create over 200,000 new jobs by December, 2018. This has yet to be materialized as plans are still underway. The Textile City is part of the Kenyan Government's recent National Industrialization Roadmap, which aims at increasing the country's Gross Domestic Product (GDP) by KSHs. 350-520 billion per year over the next 16 years.

At the proposed textile city, land would be leased to foreign companies for investing in cotton ginning, yarn spinning, production of fabrics and home textiles, and garment and apparel accessories manufacturing. The government was also a significant shareholder in textile firms such as KICOMI (Kisumu), Rivertex (Eldoret), Kenya Textile Mills (Thika) and Mountex (Nanyuki). Privately owned garment firms such as Yuken, Thika Cloth Mills, United Textile Mills, Sun flag, Spinners and Raymond evolved and thrived in the import substitution era. Production stagnated from mid-80 and fell sharply after liberalization in the early 1990's.

A policy was constituted by the government in the early 2000's which encouraged export promotion creating schemes such as Export Processing Zones (EPZ's), Manufacturing

under Bond (MUB) and Export Compensation Schemes. Markets were liberalized through the abolition of quantity restriction and lowering of tariffs to enable exportation of their products (Ikiara & Ndirangu, 2004). Even with the abundance of comparative advantages, Kenya textile manufacturers face a number of competitive disadvantages compared to firms in competitor countries, many of which relate to the cost of doing business. Some of the key factors that have been identified as contributing to the lack of competitiveness in the manufacturing sector and by extension, to the specific sub sectors such as the textile and apparels in Kenya include: poor infrastructural conditions and high input costs; low productivity levels; inefficient flow of goods and services and unfavorable business environment (The Manufacturers, 2013).

In Kenya, prior to the enactment of the Occupational Safety Health Act, (2007), matters of OSH were covered under the Factories and Other Places of Work, Act (1972), Chapter 514 of the laws of Kenya. This chapter has since June 2008 been replaced by the OSH Act (2007). The OSH Act is an Act of Parliament that provides for the safety, health and welfare of workers and all persons lawfully present at workplaces. ISO-9000 certification, whose quality standard requirement lay a lot of emphasis on compliance with occupational safety and health regulations, has become a prerequisite for acceptance of products in most markets. In view of the above, there is need for organizations to ensure compliance with OSH at their workplaces as a basic human right and a strategic human relations management issue cannot be over-emphasized. A safe workplace reduces occurrence of work related accidents, diseases and insurance claims resulting in higher productivity levels and low production costs. In Kenya, lack of awareness of the OSH Act of 2007 undermines the safety and health of workers. This has partly contributed to the weak safety culture in the workplace and non-compliance with international safety and health standards that is ISO 9000:2015 (Republic of Kenya, 2015).

1.2 Statement of the Problem

Kenya's textile sector plays a key role in anchoring the country's deeper movement into middle income status and serving as a source of gainful employment for its fast growing young population (ACTIF, 2013). Kenya has 21 large textile firms which operate in the EPZ, employing an average of 1800 people per company (KNBS, 2015). The existing mills operate using out-dated technology and suffer from low level skilled labour and low productivity (Olweny-CODA, & Karuiki, 2013). In addition, the textile manufacturing industry is affected by a common set of core business challenges. These challenges include the need to keep employees safe and healthy, perform diligent incident management, achieve regulatory compliance, and a need for supply chain traceability and visibility.

Most of the organizations are spending a lot of time and money on health and safety of their employees, yet occupational accidents which may result into absenteeism and financial costs have continued to increase especially among the manufacturing firms. A study conducted by Kemei, Kaluli and Kabubo, (2013) has shown that in Kenya the prevalence of occupational accidents in manufacturing industries is 9% annually. In addition Kenya experiences 64 per 100,000 occupational related fatalities compared to UK that has 0.44 per 100,000 fatalities in manufacturing industries.

Most manufacturing firms experience strenuous use of resources. According to Robbins, Coulter and Langton(2007), since 2002, health costs have risen at an average of 15% a year and were expected to double by the year 2020 from $2.2 trillion spent in 2007. In addition, the time lost and the financial implications accrued due to the occupational accidents add to the operational cost of the manufacturing firms (Fang, Zhao, & Zhang, 2016). As the Kenyan Association of Manufacturers reports, over 40.9% of the industrial accidents happen in manufacturing industry in Kenya

Given the highly competitive nature of the industry, manufacturers need to reduce and mitigate operational risks and drive performance improvements in order to reduce costs

and improve the quality of their products. The costs associated with compliance with health and safety legislation are cited as a major barrier to compliance, particularly if the benefits are not realized (Wright, Michael; Lancaster, Rebecca; Jacobsen Maher, Catherine; Talwalkar, Medha; &Woolmington, Tony, 1999). It is possible that the management and employees may not have complied with the OSHA standards. The government of Kenya has made enormous effort to improve the safety conditions of workers in textile industries to improve on productivity of the workers by reinforcing OSHA standards (Republic of Kenya, 2007). However studies have shown that an estimated 36,000 people toil under harsh conditions in Kenya's Export Processing Zones (EPZs), according to Kenyan NGOs (IRIN, 2004). This has impacted negatively on the performance of the workers because they absent themselves from work due to injuries and occupational related illnesses (IRIN, 2004).

This is evident from a study conducted by Chemengich, Margaret, VarunVaid, Hesbon, & Fred, (2013) that showed that textile industries have been under-performing. It is possible that such under-performance is associated with poor working conditions such as non-compliance of safety standards which include lack of workers knowledge, lack of safety promotional policies, lack of safety communication, lack of workers' participation to safety standards and lack of management commitment (Chemengich, *et al.,* 2013). Several studies have been carried out in Kenya regarding the textile industry. Omolo (2006) examined the textile and clothing industry in Kenya: the future of the textile and clothing industry in Sub Saharan Africa. Rael, Mairo and Beatrice (2012) analyzed the performance and challenges of the Kenyan textile industry in a liberalized economy. However, none of these studies carried out has analyzed safety compliance on employee performance in textile industry. This study, therefore investigated the relationship between work safety compliance and employee performance in textile manufacturing companies in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study is to determine the moderating effect of management commitment on the relationship between safety management system and performance in textile manufacturing companies in selected counties in Kenya.

1.3.2 Specific Objectives

The specific objectives of the study included the following:

1. To determine the relationship between workers' knowledge of safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya
2. To examine the relationship between safety promotional policies and employee's performance in textile manufacturing companies in selected counties in Kenya.
3. To determine the relationship between worker participation in the implementation of safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya.
4. To establish the relationship between safety communication and employee's performance in textile manufacturing companies in selected counties in Kenya.
5. To establish the moderating effect of management commitment on the relationship between safety management system and employee performance in textile manufacturing companies in selected counties in Kenya.

1.4 Research Hypotheses

The hypotheses of the study included the following:

H_{o1}: There is no relationship between workers' knowledge of safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya.

H_{o2}: There is no relationship between safety promotional policies and employee's performance in textile manufacturing companies in selected counties in Kenya.

H_{o3}: There is no relationship between worker participation in implementing safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya

H_{o4}: There is no relationship between safety communication and employee's performance in textile manufacturing companies in selected counties in Kenya

H_{o5}: Management Commitment has no moderating effect on the relationship between safety management system and employee performance in textile manufacturing companies in selected counties in Kenya.

1.5 Significance of the Study

Today, the major concern of corporations is to implement strategies that may enhance employees' job performance in order to get the desired results from them. This is becoming more challenging and difficult due to the competitive nature of corporate environment.This study makes a significant contribution to the theory, policies and management practices of keeping safety standards in the industry and thus in turn increase the performance of employees. It is important for industries to have safety compliance in their workplace to ensure that injuries are minimized and productivity is increased. Workplace safety needs to remain a vital concern for organizational researchers and practitioners. In this regard, the study is beneficial to several stakeholders who include:

Government of Kenya, researchers and scholars, HRM practitioners, management and employees of textile industries.

1.5.1 Management and Employees of Textile Industries

The management may use the findings of this study to improve their safety standards within the industry, thereby avoiding arising criminal charges and build positive public image of their industry to the customers and potential investors. The employees of the manufacturing industry would avoid injuries in their workplace and be more productive since they feel that they are well compensated for their efforts and that they are safe within the business' reach. It is important that internal compliance is adhered to, since it ensures that employees are satisfied and that all complaints or issues are monitored and addressed properly before they grow and affect the entire corporation.

1.5.2 Government of Kenya

The government of Kenya may use the findings of this study to make policies and regulation of safety standards that the textile industry should comply with. The policy makers may utilize the knowledge gained from this study in assisting the companies on safety issues by designing relevant policies governing the industry players. The Government of Kenya may use the findings of this study to encourage investors in this industry to invest more especially in the export processing zone textile companies.

1.5.3 Researchers and Scholars

At theory level, this study may be used as a reference material for future studies in the same field and points out areas of further study. The study also contributes new knowledge to approaches that can be used to improve safety standards in textile manufacturing companies. Such approaches include training workers on safety standards and improving on safety communication.

1.5.4 HRM Practitioners

The HRM practitioners may use the findings of this study to develop policies and programs to address the problems of safety issues so that they do not affect work performance. They shall also use the findings of the study to recommend safety standards that should adhere to in the textile manufacturing companies.

1.6 Scope of the Study

The study covered the textile manufacturing companies in export processing zone in Machakos County and Nairobi County. It targeted the employees and management of the textile manufacturing industries. There are 18 textile companies in Machakos and Nairobi County in the export processing zone. Machakos and Nairobi counties were chosen because of their largest number of textile companies in Kenya. A sample was however used in the study. The time scope for collecting the data was six months. The study looked at the variables that determined safety management system which included: workers knowledge of safety standards, safety promotional policies, management commitment, and workers' participation in implementation of safety standards, safety communication and management commitment

1.7 Delimitations of the Study

The delimitations of the study included the following. This study focused on textile manufacturing companies and not any other companies. This delimitation was mitigated by other future studies that shall focus on the other manufacturing industries. Apart from that the other delimitation was the study looked at employees of the textile companies and those who are directly involved in textile production. This delimitation was mitigated through other future studies that shall focus on employees of other manufacturing companies and those that are involved in other departments. The researcher faced time

limit when conducting interviews on the respondents since interviews were conducted during lunch break because of tight schedules of textile workers.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter covers a broad review of literature related to the issues and variables under study. The review also has theory development, closed areas where research exists and uncovered areas where research is needed. This chapter presents a review of theoretical perspectives and empirical literature. Theoretical frameworks utilized safety theories. Some of the safety theories include Heinrich's Domino theory, Human Factor Theory, Social Exchange Theory, Behavioral Based Safety Theory and System Theory. Empirical literature was generated based on specific objectives. Finally the chapter identified knowledge gaps that the study seeked to address. The study also came up with conceptual framework and hypothesis of the study.

2.2 Theoretical Review

A theory is an integrated set of concepts formed into propositions that explains particular conditions or events in the world around us. Accident prevention is the most basic of all safety paradigms. If safety management is effective, then there should be an absence of accidents. Therefore, understanding how accidents occur is fundamental to establish intervention to prevent accidents. Accident models affect the way people think about safety how they identify and analyse risk factors and how they measure performance. Many models are based on an idea of causality. Accidents are thus the result of technical failure, human errors or organizational problems. Theoretical perspectives of safety of workers were based on Heinrich's Domino theory, Human Factor Theory, Social Exchange theory, Behavioural Based Safety and System Theory.

2.2.1 Heinrich's Domino Theory

Heinrich was the pioneer in the accident causation theories. He described the accidents causation theory, man and machine relationship, frequency and severity relation, unsafe acts reasons, management role in accident prevention, costs of accidents and the impact of safety on efficiency (Philip, Montgomery & O'Reilly, 2001). The Heinrich's domino theory is comprised of five standing dominos which will fall one after the other if the first domino (ancestry and social environment) falls. The accident can be prevented only if the chain of sequence is disturbed, for example the unsafe act/condition can be eliminated in order to prevent the accidents and associated injuries. Heinrich efforts on accident causation theory can be summed up into two points, people (human) who are the main reasons of accidents and management which has the responsibility of preventing the accidents (having the power and authority) (Jhamb & Jhamb, 2003).

According to Taylor, Easter and Hegney, (2004) Heinrich established the 'Domino theory' which is based on five sequential factors as following: The first domino was ancestry and social environment; Ancestry and social environment are the process of acquiring knowledge of customs and skills in the workplace. Lack of skills and knowledge of performing tasks, inappropriate social and environmental conditions will lead to fault of person. Heinrich explained that undesirable personality traits such as stubbornness and recklessness can be passed along through inheritance or developed from people social environment that contribute to the fault of person. The second domino is the fault of person (carelessness); Faults of person or carelessness are negative features of a person personality although these unwanted characteristics might be acquired. The result of carelessness is unsafe act/conditions. The third domino is unsafe act and/or mechanical or physical condition; Unsafe acts/conditions include the errors and technical failures which cause the accident. Some of the unsafe acts and conditions included: insufficient light, absence of rail guards, unguarded point of operation, removal of safeguards and

mechanical or physical hazards, horseplay, starting machinery without warning, standing under suspended load (Katsakiori,

Sakellaropoulos, & Manatakis, 2009). Heinrich felt that unsafe acts and unsafe conditions were the central factor in preventing accidents and easiest causation factor to remedy a process which he likened to lifting one of the dominoes out of the line. The fourth domino is accident; Accidents are caused by unsafe acts/conditions and subsequently lead to injuries. Lastly, the fifth domino was injury; Injuries are the consequences of the accidents for example broken bones and cuts

According to Heinrich by preventing the first domino from falling, then the other series of events shall not happen. Therefore, accidents and injuries should not occur in the workplace. Heinrich felt that persons responsible at a company for loss control should be interested in all five factors, but be primarily concerned with accidents and proximate cause of those accidents. According to Heinrich all incidents directly relate to unsafe conditions and acts which he defines as unsafe performance of persons such as standing under suspended loads and mechanical or physical hazards such as unguarded gears and insufficient lights.

According to Fang, Choudhry and Hinze, (2006) a worker might perform unsafe acts regardless of the condition of the work (Safe or unsafe condition). In these situations workers might continue the work in unsafe condition or performing the task without safety standards consideration; working without protective equipment's or working when lacking enough sleep. Heinrich defined four reasons why people committed unsafe acts such as improper attitude, lack of knowledge or skills, physically instability and improper mechanical or physical environment. He subdivided these categories into direct and underlying causes for example a worker who commits an unsafe act may do so because he or she was not convinced that the appropriate preventative measure was necessary and because of inadequate supervision. This combination of multiple causes, he said created a

systematic chain of events leading to an accident. Heinrich specified that a truly safety conscious manager may make sure his foremen and workers do as they were told and exercised his prerogative and obtain compliance. Heinrich's remedy for such non-compliance was strict supervision, remedial training and discipline. Heinrich's theory had two central points: injuries were caused by the action of preceding factors and removal of the central factor (unsafe act/hazardous condition) negates the action of the preceding factors and, in so doing, prevented accidents and injuries.

Although Heinrich's Domino theory was one of the most understandable and the clearest theories defining accident processes, it suffered some weakness which affected its application. As a result of the weaknesses, the theory was revised because of emphasizing blame much on individuals and not considering the fault from management and organization and the belief about a single cause where there may be more than one (Rad, 2013). The choice of this theory is that employees having knowledge of removing or preventing the first domino from falling may enhance safety and in turn improve their performance in their workplace. The above theory informed the first research objective: To determine the relationship between workers' knowledge of safety standards on employee's textile manufacturing industries in Kenya.

2.2.2 Human Factor Theory

Human factors refer to environmental, organizational and job factors, human and individual characteristics which influence behavior at work in a way that can affect health and safety. A simple way to view human factors is to think about three aspects: the job, the individual and the organization and how they impact on people's health and safety-related behavior. Basically, such models state that whenever human beings are overloaded due to a mismatch between the capacity of the individual and the external demand made upon him, the individual more becomes susceptible to accident. Among various Human Factors Models the study shall look at Ferrel's Human Error Theory

Russell Ferrell, Professor of Human Factors at the University of Arizona is the proponent of the theory. According to this theory accident causation is attributed to a chain of events ultimately caused by human error. Human error is in turn caused by one of the three situations: overload, inappropriate response and inappropriate activities (Reason, 1990). He believed that the human errors are the main causes of accidents occurrence and they are caused by the following factors (Abdelhamid & Everett, 2000). Overload is a factor that reflects the incompatibility between the load and the capability of the human. A person's capacity was the product of such factors as his or her ability, training, and state of mind, fatigue, stress and physical condition. The load a person was carrying consisted of tasks for which he/she was responsible and added burden resulted from environmental factors such as noise, heat, internal factors such as persona problems, emotional stress, anxiety and situational factors e.g. level of risk, unclear instructions. The result of this mismatch is anxiety, pressure, fatigue and emotions that can be intensified by physical environment such as dust, light, noise and fumes where the person is working.

Incorrect response by the person is caused by the incompatible situation where he/she is working in (Taylor, Easter & Hegney, 2004). The manner in which an individual responded to a given situation can cause or prevent an accident. In addition, to inappropriate response this component included work station incompatibility. The incompatibility of a person's work station depended on size, force, reach and similar factors can lead to accidents and injuries. Improper activity; the person perform the activity improperly either due to lack of knowledge of appropriate way of performing the activity, or intentionally take the risk. Inappropriate activities can occur when a person undertook a task, but did not know how to do it or a person misjudged the degree of risks involved in a given task and attempts to carry out the job on the basis of that misjudgement. Such inappropriate activities may led to accidents and injuries (Jha, 2011). The emphasis in this model is an overload and incompatibility only which is central points in most human factor models.

The choice of this theory is that management should have policies that would minimize human error which attributed to accident causation in the organization. Organizations that had safety promotional policies would greatly reduce accidents mainly caused by human error since employee would observe safety when doing their work at their workplace (Jhamb & Jhamb, 2003). It was therefore crucial for every organization to have proper and efficient policies to eliminate or reduce overload, inappropriate response and inappropriate activities which are as a result of human error. Therefore, the above theory informed the second research objective: To establish the influence of safety promotional policies on employee performance in textile manufacturing companies in Kenya.

2.2.3 Behavioral Based Safety Theory

According to Cooper (2011) Behavior based safety is a process that creates a safety partnership between management and employees that continually focuses people's attention and actions on theirs and others daily safety behavior. Behavior based safety (BBS) focused on what people do, analyzed why they do it and then applied a research supported intervention strategy to improve what people do (Geller, 2004). In a safety management system based upon the hierarchy of hazard control, BBS may be applied to internalize hazard avoidance strategies or administrative control but should not be used in preference to the implementation of reasonable practicable safety measures further up the hierarchy.

The systems of integration of safety into planning and design can identify general health and safety hazards which are related to different construction activities prior to commencement of activities in planning and design phase. (Carter & Smith, 2006) A behavior-based safety approach promotes interventions that are people-focused and often incorporate one-to-one or group observations of employees performing routine work tasks, setting goals carefully and giving timely feedback on safety-related behavior, coaching and mentoring. The initiatives have a proactive focus, encouraging individuals

and their work groups consider the potential for incident involvement, (accidents) and to assess their own behavior as safe or unsafe always, no matter what. BBS stems from the field of organizational behavior analysis. The focus in both organizational behavior analysis and the BBS was behavior. The overarching theme in behavior analysis and BBS was that behavior was maintained by what occurred after its (consequences). “BBS is about everyone’s behaviour, not just the frontline” (Agnew & Ashworth, 2012)

According to Geller, Perdue and French, (2004) there are seven principles of behavior-based safety: intervention that is focused on employee behavior; identification of external factors that will help understand and improve employee behavior; direct behavior with activators or events antecedent to desired behavior; focus on positive consequences from the desired behavior as a way to motivate employees; application of the scientific method to improve attempt at behavioral intervention, integration of information rather than to limit possibilities and planned interventions with the feelings and attitudes of the individual employee in mind. The choice of this theory is that if employees applied the seven principles of behavior based safety then they will be able to comply with work safety and in turn improve their overall performance.

An innovative practical application of behavior based safety theory to the field of occupational safety will encourage positive reinforcement in the form of incentives and rewards used to promote the desired (safe) behavior and discourage undesirable (unsafe) behavior. Proponents of this theory used the “ABC” model to summarize understanding human behavior and developing intervention when behavior is undesirable (unsafe). A stands for activators or an antecedent event that precede behavior B and C refer to consequences following behavior or produced by it. Therefore, the above theory informed the third objective: To determine the effect of worker participation in the implementation of safety standards on employee performance in textile manufacturing companies in Kenya.

2.2.4 System Theory

The systems theory of accident causation views any situation in which an accident might occur as a system with three components: person (host), machine (agency), and environment. System accident models examined the idea that systems failures, rather than just human failure, were a major contributor to accidents (Hollnagel & Goteman, 2004). Hollnagel and Goteman, (2004) began to address some of these issues and recognized that events do not happen in isolation of the systemic environment in which they occur. Under normal circumstances, chances of an accident are low. Rather than looking at the environment as being full of hazards and people prone to errors, system safety assumes harmony (steady state) exists between individuals and work environment.

In a systems theory approach to modeling, systems are considered as comprising interacting components which maintain equilibrium through feedback loops of information and control. A system is not regarded as a static design, but as a dynamic process that is continually adapting to achieve its objectives and react to changes in itself and its environment. The system design should enforce constraints on its behaviour for safe operation, and must adapt to dynamic changes to maintain safety. Accidents are treated as the result of flawed processes involving interactions among people, social and organizational structures, engineering activities, and physical and software system components (Leveson, 2004). The model takes a systems view of accidents it. It focused on how the characteristics of the production system generate hazardous situations and shape the work behaviors, and analyzes the conditions that trigger the release of the hazards. Rasmussen adopts a system oriented approach based on a hierarchical socio-technical framework for the modelling of the contextual factors involved in organizational, management and operational structures that create the preconditions of accidents The model was based on descriptive rather than prescriptive models of work behaviors it takes into account the actual production behaviors, as opposed to the normative behaviors and procedures that workers "should" follow. Some of the system

defects included: improper assignment of responsibility, improper climate of motivation, inadequate training and education, inadequate equipment and supplies, improper procedures for the selection and assignment of personnel and improper allocation of funds. (Rasmussen & Svedung, 2000)

The choice of this theory was that accidents may not be caused by employees alone, but through a system failure as a whole. Proper safety communication can enable harmony between employees and their work environment, thereby reducing accidents and injuries in the workplace. Proper systems will also enhance employee performance as they will produce quality products efficiently and effectively. The above theory led to the fourth objective of the study: To establish how safety communication influences employee performance in textile manufacturing companies in Kenya.

2.2.5 Social Exchange Theory

According to Homan (1961) social exchange theory posits that human relationships are formed by the use of subjective cost benefit analysis and comparison of alternatives. Homan's work emphasized the individual behaviour of actors in interactions with one another. Homan summarizes the system in three propositions: success, stimulus and deprivation-satiation (Emerson, 1976). Success proposition is when one finds that they are rewarded for their actions; they tend to repeat the action. Stimulus proposition entailed that when more often a particular stimulus had resulted in a reward in the past; the more likely it is a person would respond to it. The deprivation-satiation proposition was where more often in the recent past a person has received particular reward, the less valuable any further unit of that reward becomes.

Social exchange theory is one of the prominent paradigms used to explain the processes linking organizational treatment of employees to their job performance. This is particularly relevant to show the link between perceived organizational treatment and police deviance in New York, United States of America. Consistent with previous social

exchange research, the findings generally support the idea that fairness is related to self-protective behaviors, but largely to the extent that it enhances the social exchange in terms of increasing perceptions of organizational support and reducing perceptions of organizational indifference, which both directly affect an officer's use of self-protective behaviors, and are a type of police deviance (Helfers, Reynolds, & Maskály, 2019). The primary aim of this theory was to explain fundamental processes of social behaviour (influence, conformity, status, leadership and justice) from the ground up. Cost was viewed primarily in terms of alternative activities or opportunities forgone by the actors involved. Reinforcement principles were derived from the kind of behaviourism. Behaviour is a function of payoffs, whether payoffs are provided by the non-human environment or by other humans. Homan's explained social behaviour and the forms of social organization produced by social interaction by showing how A's behaviour reinforced B's behaviour and how B's behaviour in contingent fashion reinforced A's behaviour in return.

Homan's was criticized for two reasons, it was too reductionist and in analyzing the sub institutional level of social behavior, it underplayed the significance of institutional forces as well as social processes and structures that emerge out of social interaction, a major focus of the work of Blau and Emerson. The application of the social exchange theory to organizations has been supported in previous studies. For example, the perceptions of organizational support for, and investment in, management create an obligation among employees in providing treatment favorable to the organization in return (DeJoy, Schaffer, Wilson, Vandenberg, & Butts, 2004). In other words, employees respond accordingly to how they perceive treatment they get from their organization (Mearns, Giorgi, Whetton, Pabon, Hulme & Lal, 2010). According to this theory, employees who work in a company with positive safety climate are more likely to perceive organizational commitment to support for safety as beneficial to their wellbeing. They are also more likely to reciprocate by engaging in safer behaviors, thereby reducing the occurrences of accidents and injuries (Hofmann, Burke, & Zohar, 2017). In addition to the greater motivation to perform more

safely at work, a positive safety climate is also expected to lead to other benefits beyond traditional safety outcomes, such as greater job satisfaction and organizational commitment (Cropanzano & Mitchell, 2005).The above theory informed the fifth research objective: to determine how management commitment to safety influences employee performance in textile manufacturing companies in Kenya.

2.3 Conceptual Framework

According to Jabareen, (2009) a conceptual framework is a set of interrelated constructs. From the literature reviewed in this study, the independent variables were investigated and attempts made to establish whether workers' knowledge on safety standards, safety promotional policies, workers participation, safety communication and feedback was being moderated by management commitment would have an effect on employee performance at textile companies in Kenya. The study conceptualized a framework that was derived from theoretical review of variables shown in figure 2.1.

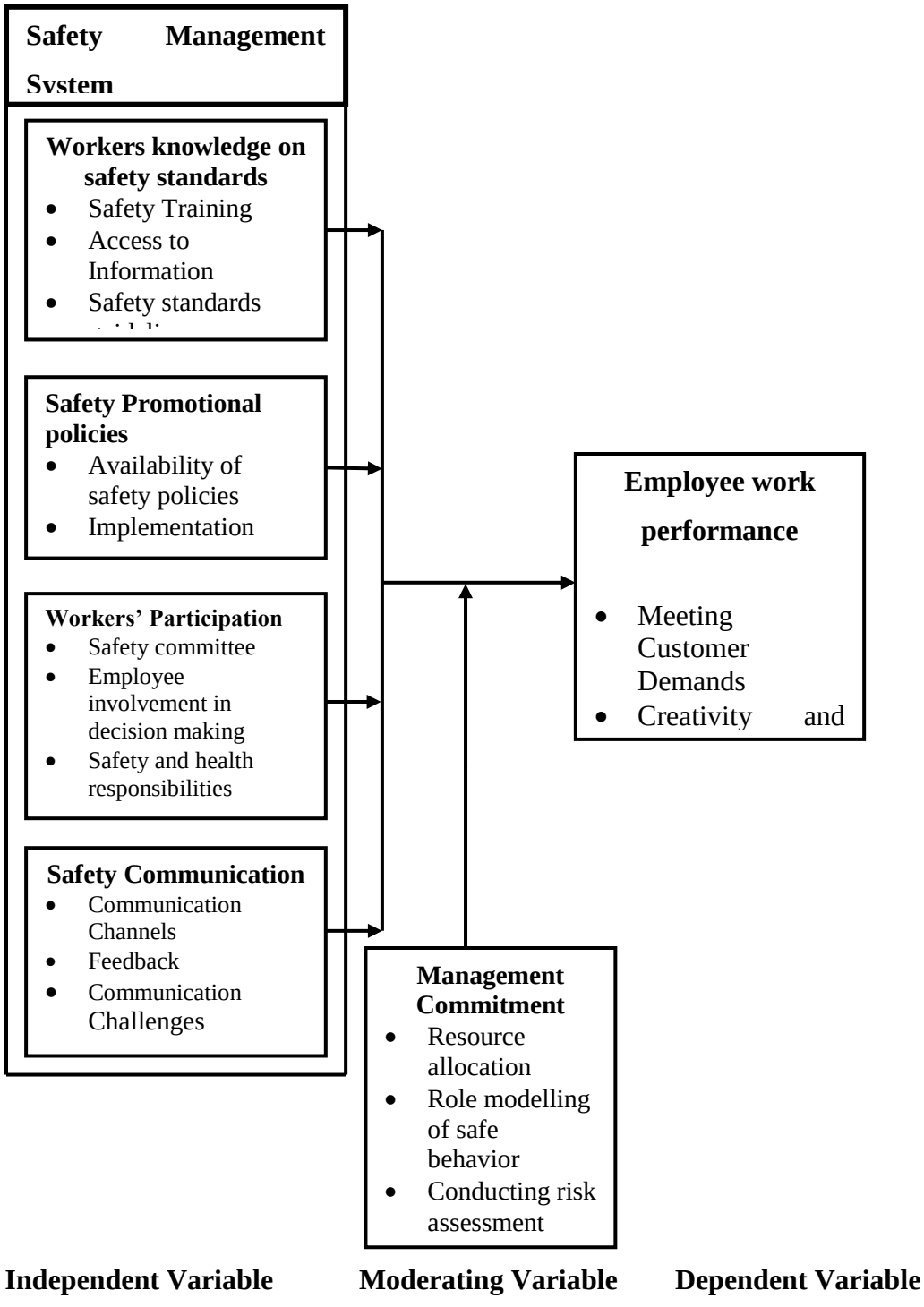

Figure 2.1: Conceptual Framework

2.3.1 Workers' Knowledge of Safety Standards

It was expected that workers who had knowledge on the importance of safety standards and the consequences of non-compliance would comply with recommended safety standards and therefore improve their performance. Workers who had knowledge of the consequences of non-compliance were likely to avoid practices that exposed them to injuries. Workers were found to have limited knowledge of occupational health and safety in textile firm at Karachi, Pakistan where services were not standardized while influence of buyers in the form of international business regulations and legislations were thought to be the enabling factors for enforcing health and safety standards (Hussain, Kadir, Nafees, Karmaliani, & Jamali, 2019).

Knowledge is more than information, since it involves an awareness or understanding gained through experience, familiarity or learning. (Bust, Finneran, Hartley & Gibb, 2014). Workers should have knowledge on accident prevention and safety promotion, safety compliance, accident and emergency response, personal protective equipment, safety practices, equipment and machinery, chemical and hazardous materials safety, workplace hazards and employee involvement. According to Vitharana, De Silva and De Silva, (2015) argue that awareness on possible risk factors and knowledge on how to reduce these risk factors among workers and contractors will enhance site safety. Safety knowledge therefore, encompasses awareness of occupational health and safety risks, including an evaluation of occupational health and safety programmes in an organization (Akinwale & Olusanya, 2016). Knowledge of the proper condition of machines, eradication of ergonomic problem faced by workers, dust problems, poor lighting, ventilation and awareness of protective equipment may enhance compliance to safety standards. Therefore, by avoiding unsafe practices; workers were likely to perform better than those who did not have. Hence, there was a likelihood of having a relationship between work safety compliance and employee performance.

2.3.2 Safety Promotional Policies

In this study, it was expected that companies had safety promotional policies such as, promoting a positive safety culture, management involvement, personnel competency and training, and communication. To reduce the risk of injury and promote job safety, many organizations have attempted to establish safety policies. (Huang, Chen, Krauss, & Rogers, 2004). Employees in companies that had safety promotional policies were likely to observe work safety procedures and perform better compared to their counterparts. Safety promotion policies set the tone that predisposed both individual and organizational behavior and fills in the blank spaces in the organization's policies, procedures and processes, providing a sense of purpose to safety efforts.

Through safety promotion an organization adopted a culture that goes beyond merely avoiding accidents or reducing the number of incidents, although these are likely to be the most apparent measures of success. It was more to do the right thing at the right time in response to normal and emergency situations (FAA, 2014). Safety promotion supports safety culture, communication, dissemination of lessons learnt and enables the continuous improvement process. The level of safety and health awareness or consciousness between employers and workers is a critical factor in securing safe and healthy workplaces. Thus creating and promoting a safety culture as a corporate culture is important in enhancing work performance.

2.3.3 Workers' Participation

In this study, it was anticipated that companies encouraged workers' participation in decision making. This was evidenced from an existence of safety committees, representatives of the employees in various committees and employees being assigned some roles in the improvement of safety conditions. This therefore, meant that workers should be consulted upon when major decisions that affected their safety are made. Employers must consult workers and their representatives as part of the process. Managers

did not have the solutions to all health and safety problems. Worker participation is important in all aspects of workplace changes which are developed to assess work-related risks and reduced work-related injury and work-related health problems (Crawford, 2019).

Workers and their representatives had the detailed knowledge and experience of how the job was done and how it affected them. For this reason, workplaces in which workers actively contributed to health and safety often had a lower occupational risk level and accident rates. A workplace culture that discourages worker participation in safety policy shall have less empowered workforce and hence they will have low performance as opposed to workplace culture that encourages worker participation (Yanar, Kosny & Smith, 2018). Worker participation in health and safety was a simple two way process where employers and their workers/workers' representatives; talk to one another, listen to each other's concern, look for and share views and information, discuss issues in good time and trust and respect each other. Workers must be informed, instructed, trained and consulted on health and safety. Full participation goes beyond consultation thereby workers and their representatives are also involved in making decisions. It was therefore expected that workers participation would enhance their performance since they would own the processes that promote safety

2.3.4 Safety Communication

One of the ways of maintaining a safe and healthy workplace was by communication and feedback of safety programs and procedure to workers. (Kim & Park, 2019) Workplace communication was very important to companies because it allowed companies to be productive and operate effectively. Employees could experience an increase in morale, productivity and commitment if they were able to communicate up and down the communication chain in an organization. Communications plays a central role in promoting the health and wellbeing of workers. Although much literature has shown the positive benefits of safety communication in the workplace, research has yet to explore

the nature of these communication practices (Newnam & Goode, 2019). Effective communication mechanisms were critical to engage employees in safety activities and to gain cooperation and support to maintain a positive safety culture. These mechanisms needed to complement the practical and technical safety strategies. Employees with effective communication skills were more likely to provide corrective feedback for risky behaviours as well as rewarding feedback for safe behaviours.

Safety communication may focus on the following areas including policies and procedures, performance statistics, hazard and incident reports, workplace inductions, risk assessments, and training. Effective communication mechanisms were critical to engage staff in safety activities, to gain cooperation and support, and to maintain a positive safety culture. Communication and consultation at work was integral to achieving a safe work environment by giving and receiving information about hazards and risk controls, influencing attitudes and behaviors, and building commitment and ownership.

In this study, it was expected that companies use appropriate communication strategies to motivate the workers to improve their performance. It was expected that if effective communication of safety standards was promoted, feedback on the improvement of safety standards was given to workers and this would in turn contribute to employee engagement on safety issues which ultimately led to improved performance.

2.3.5 Employee Work Performance

In the modern business World, employees (human resources) are considered as the most critical elements of an organization that steers performance to success. Their productivity and work performance is therefore a matter of concern to every organization. Mohamed, Al-Dmour and Ra'ed (2019) define employee work performance as the ability of an employee to feel motivated and committed towards meeting the organizational goals by serving the customers to their satisfaction, being responsible to the assigned duties as well as adhering to the set rules and regulations at the workplace. According to Rentao and Cao

(2019), employee performance is characterized with enhanced creativity and innovation towards solving the daily work problems and ensuring that the organizational goals come before the personal goals. Rentao and Cao however, contend that employee work performance is highly moderated by the organizational leadership such that for them to fully commit their skills and energy to the organizational goals, they ought to be motivated, engaged and trained adequately.

Durrab, Khaliq, Qasim, Aamir, and Shahzad (2019) defined employee performance as the ability of workers to meet the set goals by their employers and committing their intellectual capacity to the organization. This is to mean that for an employee to be rendered performing, he or she ought to meet the targets and standards set by the management. To this end, textile manufacturing companies have the first duty to set the balance score-card or performance ratings where employees are rated based on their productivity. Mauya (2015) highlights employee work performance as a key aspect of determining the overall organizational performance especially in cases where the contracts are based on meeting the outlined targets.

2.3.6 Management Commitment

The commitment exhibited by management can impact a variety of areas including employee attitudes. According to Stewart (2001) management commitment to safety was one of the drivers of employee performance. Management commitment had been shown to affect employee behaviors. According to Peterson, (2004) Management commitment and support were the basic factors of ensuring that safety policies are taken seriously by everyone within the industry. It is the leadership emphasis and action that demonstrates to employees, which policies were important and which were not. Top managers should be the ones responsible in giving structure and facilitating the setup of health and safety culture.

According to Petersen, (2004) “A good leader makes it clear what will and will not work in the organization’s safety efforts”. The general framework for safety at work is guided by the management, having a clear definition of the respective roles of all staff and giving instructions what activities are required to comply with the safety responsibility. In this study it was expected that there will be a relationship between management commitment and employee performance. If the management is committed to workplace safety, then there will be allocation of resources and training of workers on safety issues. In addition, managers shall provide safety budgets, staffing, and facilities for meetings, monitor and periodically evaluate safety programs, formulate safety policies, and managers personally conduct safety audits and inspections.

2.4 Empirical Review

This section presented empirical literature based on study variables. The study variables included the following: worker’s knowledge of safety standards (safety training), safety promotional policies, worker’s participation in the implementation of safety standards, the role of management commitment on safety standards and communication of safety standards.

2.4.1 Workers’ Knowledge of Safety Standards

A study done by Song, He and Li (2011) found that despite implementing the safety strategies in workplaces, occupational accidents have been increasing and their consequences can be unpleasant. Safety training classes help establish a safety culture in which employees themselves help promote proper safety procedures while on the job.

According to Okafoagu, Oche, Awosan, Abdulmulmuni, Gana, Ango, and Raji, (2017) who conducted a study in Sokoto, Nigeria on Textile Dye workers, respondents good knowledge and positive attitude is not adequate in improving the safety standards since their lack of observance of safety practices brings to fore the need for direct safety

instruction and training. Insufficient knowledge on how to manage the risks may make the textile dye workers become vulnerable to occupational health hazards.

Training involves behavioral modeling, a substantial amount of practice, and dialogue is generally more effective than other methods of safety and health training. An understanding of how best to implement worker safety and health training is a critical concern since it is an ongoing effort to prepare emergency responders and professionals in related areas to do their jobs safely and effectively (Rudman et al., 2003). The need to gain a better understanding of the effectiveness of safety and health training is also apparent in a broader context given that millions of injuries and illnesses are reported annually in workplaces,(Bureau of Labor Statistics, 2001) and health and safety training is globally recognized as means of reducing the costs associated with such events (Overman, 2005). Indeed, researchers from different fields, including business, psychology, engineering, and public health, have long recognized the need for comprehensive, systematic evaluations of safety and health training to address these types of critical public- and private-sector concerns (Burke, Bradley & Bowers, 2003).

2.4.2 Safety Promotional Policies and Employee Performance

A study done by Burke et al., (2011) found that development of safety culture or climates is an effective tool that promote safe working and reduce accidents. Safety Promotion supports safety culture, communication; dissemination of lessons learned and enables the continuous improvement process. Through safety promotion an organization adopts a culture that goes beyond merely avoiding accidents or reducing the number of incidents, although these are likely to be the most apparent measures of success. This study therefore would like to establish if there is a relationship between safety promotional policies and employee performance

According to ILO, (2004) safety culture of an organization is the product of individual and group values, attitudes, perceptions, competencies and patterns of behaviour that

determine style and commitment to and proficiency of an organization's health and safety management. A national preventative safety culture is one which the right to a safe and healthy working environment is respected at all levels, where governments, employers and workers actively participate in securing a safe and healthy working environment through a system of defined rights, responsibilities and duties and where principles of prevention are accorded the highest priority.

2.4.3 Workers' participation and Employee Performance

Neal and Griffin, (2006) conducted a study where they found out that organizations attempting to improve safety should focus on the changing the work environment to motivate employees to actively participate in safety activities, rather than simply blaming and punishing individuals who fail to comply with standard work procedures.

According to Marchington and Wilkinson, (2005) workers participation can be in form of direct participation and indirect participation. Direct participation can potentially touch all workers directly in relation to their tasks, work organization and working conditions. Direct participation appears to have an impact on organizational performance in three basic ways: First, employees can offer suggestions leading to more efficient processes or better product quality. In doing so employees can contribute to higher labour productivity and process innovation. Second, direct participation influences employee attitudes which in turn support employee behaviour that is beneficial to organizational performance, for example, reduced turnover and absenteeism, improved productivity and product quality. Third, direct participation has a prominent position as part of the HR policies and practices.

According to Cox, Zagelmeyer, and Marchington, (2006) more emphasis needs to be placed on the perception of direct participation. Indirect participation is where employees are involved through their representatives, usually elected from the wider group. Indirect participation includes: unions, partnerships, work councils and other forms of

consultation. Where the influence of the individual employee ends, indirect participation comes in. Indirect participation means representative participation in legally recognized labour unions. Through collective bargaining power, unions have a much stronger position in influencing company policy at a tactical level. Research into the importance of representative participation clearly points to a positive relation of participation and favorable working conditions (Busck, Knudsen, & Lind, 2010). This is not surprising, given the fact that labor unions are established to give employees certain collective influence on their work environment.

2.4.4 Safety Communication and Employee Performance

A study done by Williams (2003) found that one of the most effective ways to improve a safety culture and prevent injuries is to optimize safety-related communication throughout an organization. Unfortunately, employees often fail to "speak up" when they observe risky behaviors even when they know they should. The Safety Culture Survey administered to hundreds of organizations by Safety Performance Solutions Inc. (SPS) indicates 90 percent of respondents believe employees should caution others when they are operating at-risk.

Geller , (2001) found that giving safety related feedback will create interpersonal conflict and they often do not feel competent giving safety feedback or they do not want insult coworkers who have more experience. Employees will be more open to safety-related feedback if coworkers do a better job of providing and receiving it. Employee's at all organizational levels are well served to provide frequent, genuine praise for safe work practices .

Effective safety communication is not just communicating rules and policies; it is about creating a culture of safety to prevent accidents and ill health. Effective communication is an integral part of achieving an injury-free workplace. Most injuries are due, in part, to risky behaviors, yet employees often are reluctant to provide safety-related feedback to

coworkers. Communication needs to change employee beliefs, perceptions and behaviors by convincing them that it is worth the extra effort to work safely. General safety communication can be in the form of notices, warning signs, posters, memo, non-verbal communication, for example, gestures, hand signals, manager visiting the workplace. Other general safety communication include: communication of actions taken after accidents, audits and risk assessments, responsibilities in job descriptions.

2.4.5 The Effect of Management Commitment

Zacharatos, Barling and Iverson (2005) conducted a research into the relationship between high performance work systems and occupational safety and found that this relationship is mediated by trust in management and perceived safety climate and should no longer be assumed to be 'the primary prerogative of individual workers'. Everyone agrees that a safe workplace is important. However, workplace safety is not possible without employer's responsibility for safety.

To demonstrate commitment to safety, management must ensure each employee is clear about their health and safety responsibilities. Workers are the greatest assets of organizations when establishing an effective safety management plan. Management can involve them when dealing with health and safety issues that affect them. From this commitment, effective partnerships are formed with employees to achieve safer workplace. Salehi and Veitch, 2020 conducted a study on measuring and analyzing adaptive capacity at management levels of resilient systems and found that senior managers are capable of identifying the problems associated with staff and trying to solve them. They encourage the staff to report safety problem hence reduce accidents. Top managers play a central role in improving the performance of firms. They are responsible for controlling and conducting the entire organization and setting long-term and comprehensive plans.

Management should be involved in the formulation, communication and enforcement of its safety program. All levels of management should always be visibly demonstrating their commitment to safety. Safety is relevant to many organizational policies and procedures. Therefore, incorporating and integrating appropriate safety language into applicable policies and procedures, organizational members will trust that the company really value safety and more importantly value their employees. Although written safety policies and procedures are necessary, it is critical that management make available sufficient resources for effective implementation and maintenance of safety related activities. (CPWR, 2014)

2.5 Critique of the Existing Literature

According to Gherardi, (2018) safety is a collective doing which means it is a responsibility of everyone to participate in maintaining safety. However, for everyone to participate there should be adequate knowledge on safety issues. This study has not given details of how safety knowledge will reduce or eliminate accidents/injuries and improve employee performance in their organizations.

HSE (2000) conducted a study on performance where they investigated successful health and safety management where they emphasized the need for measuring performance in order to maintain and improve the health and safety operation of a company. However, the study focused on management performance and not an employee performance to improve health and safety operation of their company.

Lee and Harrison (2000) conducted a study on worker participation and found that team briefing which include discussion of safety were correlated with positive attitudes towards safety by staff. However, they did not take into account how worker's participation to safety influenced employee performance in their organization. This study endeavors to fill this gap.

Griffin and Neal (2000) in a study amongst Australian manufacturing companies identified how managers view safety in the workplace as a key factor to the safety climate within an organization. However, they did not take into account how safety promotional policies influenced employee performance in their organization. This study therefore endeavors to fill this gap.

Grosch, and Murphy, (2008) also found that management commitment to safety was one of three safety climate dimensions (along with job hindrances and feedback/training) that were positively associated with nurse's compliance with universal precautions. However, they did not look at how management commitment as a moderating variable influenced safety management system variable that is workers knowledge of safety standards, safety promotional policies, workers participation and safety communication to employee performance in their organization. This study therefore, endeavors to fill this gap.

Sawacha et al., (1999) tried to identify factors which influence safety on construction sites. However, none of these studies focused on how management commitment to safety will influence employee performance. This study therefore will fill the gaps left by the above studies.

2.6 Research Gaps

Some of the gaps in existing literature that this study would like to fill include the fact that there is inadequate information on the factors that contribute to compliance to work safety standards particularly in textile manufacturing industries. The role of knowledge, safety promotional policies, safety communication, workers' participation in safety standards and management commitment on safety compliance is not clearly documented. This study, therefore would like to address these gaps so as to increase employee productivity in textile industries. In addition reviewed literature show that despite implementing the safety strategies in workplaces, occupational accidents and incidents have been increasing.

This call for a study to determine compliance levels and how compliance impact on work performance

2.7 Summary of Literature Review

Table 2.1 shows a summary of empirical studies done on work safety compliance and employee performance in textile manufacturing companies around the world. It also shows the methodology used, findings and gaps in knowledge addressed in this study.

Table 2.1: Summary of Knowledge Gaps

Study (Author)	Focus	Methodology	Findings	Knowledge Gap	Focus of current study
Burke et al., (2011)	Safety Culture	Meta-Analysis	A good safety culture is an effective tool used to promote safe working environment	There is a conceptual gap showing how safety culture will enhance safety compliance in the workplace and how safety culture will increase employee performance	The study looked at how safety promotional policies influenced employee performance in textile manufacturing companies in selected counties in Kenya
Federal Aviation Administration, (2014)	Safety promotional policies	Exploratory study	Safety promotion includes: training, communication and other actions to create positive culture within all levels of workforce.	There is no link made on impact of safety promotional activities on employee performance	Study looked at effect of safety promotional policies on employee performance in textile manufacturing companies in Kenya
Gherardi, (2018)	A practice based approach to safety as an emergent competence	Ethnographic research design and participant observation	By adopting a practice based approach to inquire how work is accomplished we can study how safe working practices can be kept and maintained at the workplace	There is insufficient link made between workers knowledge of safety standards and employee performance	Study looked at how workers knowledge of safety standards influenced employee performance in textile manufacturing companies in Kenya

Guest, (2000)	Employee performance	Quantitative research design	Employee performance affects employee satisfaction and yield. Job performance is viewed as feelings and characteristics concerned with their work	To what extent does employee satisfaction affect employee performance	The study looks at the relationship between employee performance and work safety compliance variables in textile manufacturing companies in Kenya
Okafoagu, Oche, Awosan, Abdulmulmuni, Gana, Ango, & Raji, (2017)	Determinants of knowledge and safety practices of occupational hazards of textile dye workers in Sokoto, Nigeria: a descriptive analytic study.	Quantitative and qualitative research methods	Study aimed to assess the knowledge, attitude and safety practices and its determinants among textile dye workers in Sokoto metropolis, Nigeria	The study focused on workers knowledge of safety standards but did not relate it with how it would influence employee performance in the textile companies	Study looked at the relationship between workers knowledge of safety standards and employee performance in textile companies in selected counties in Kenya

Song, He and Li, (2011)	Status and future tasks of coal mining safety in China	Semi-analytical model	Insufficient knowledge of safety standards might cause occupational health hazards.	Lack of empirical knowledge that address how having adequate knowledge of safety standards will contribute to safety compliance and in turn improve employee performance	Looks at how workers knowledge of safety standards contributed to safety compliance and in turn employee performance
Vecchio-Sadus& Griffiths, (2004)	Marketing strategy for enhancing safety culture	Qualitative techniques and Case studies	Safety communication influence people's attitude and behaviors. It builds ownership and commitment	There is no link of impact of safety communication on employee performance	Study looked at relationship between safety communication and employee performance
Walters and Frick, (2000)	Workers' participation	Qualitative analysis	Representative and direct consultation could be seen as different forms of participation occurring along same continuum which is being determined by variety of influences operating within establishment which include managerial attitudes	There is insufficient link between workers' participation and employee performance	Test how workers' participation in implementation of safety policies significantly influenced employee performance

Zacharatos, Barling, & Iverson, (2005)	High-performance work systems and occupational safety.	Desk review and Content analysis	Trust in management and perceived safety climate were found to mediate the relationship between an High Performance Work System and safety performance measured in terms of personal-safety orientation (i.e., safety knowledge, safety motivation, safety compliance, and safety initiative) and safety incidents (i.e., injuries requiring first aid and near misses)	There is insufficient link between safety management system moderating employee performance in textile companies	Study looked at how management commitment moderated the relationship between safety management system and employee performance in textile manufacturing companies in selected counties in Kenya

In summary, there are several factors that affect safety compliance among employees, safety training, management commitment, safety promotional policies, worker participation and communication and feedback. Management's commitment to safety will create a positive impact to the industry as they will be involved in formulation, communication and enforcement of its safety program. The organization must also have safety promotional policies to enable continuous safety improvement and thus adopt a culture where safety compliance is prioritized within the industry. Through worker participation, the employees will be involved in making informed and appropriate decisions about their safety in their work environment and finally through effective communication the employees will have adequate information about safety in terms of the hazards and risks involved and how to prevent and maintain safety within the industry.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter was structured as follows: research philosophy, research design, study population, target population and sampling technique. It also has a section on how data were collected and analyzed. Pilot testing was done to ensure reliability and validity of the study.

3.2 Research Philosophy

A research philosophy is a belief about the way in which data about a phenomenon should be gathered, analyzed and used. According to Saunders, Lewis and Thornhill (2007), research philosophy relate to the development of knowledge and the nature of that knowledge. The research philosophy reflected the author's important assumptions that are based on the research strategy. Generally, research philosophy has many branches related to a wide range of disciplines which include: positivism, realism, interpretivism and pragmatism.

The study focused on positivism as it tried to uncover the one truth about how things are. Positivists believe that reality is stable and can be observed and described from an objective viewpoint, that is, without interfering with the phenomena being studied. Positivism is a quantitative method which follows a scientific approach to research. It is objective, generalizable, replicable, rigorous and testable for validity. The method also uses mathematical models to predict as well as to test hypothese. However, it fails to capture feelings, experiences and the uniqueness of the individual. This study used positivist perspective because it was based on the theoretical framework and hypothesis. It used hypothesis and statistical model to test the hypothesis (Awino, Muturia, & Oeba, 2013).

3.3 Research Design

Research design is the arrangement of conditions for the collection and analysis of data in a manner that aims at combining relevance of the research purpose with economy in procedure (Kothari & Garg, 2014). The study used descriptive cross sectional study design. The descriptive cross sectional design involves making observations of a population or sample of the study at one point in time (Babbie, 2015).

Cross-sectional studies provide a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time. This design was chosen because it gave accurate measurements of population, characteristics and attributes. The design is useful in identifying characteristics of an observed phenomenon or exploring possible correlations among two or more phenomenon (Leedy & Ormrod, 2001).

3.4 Target Population

The target population of the study consisted of employees of textile manufacturing companies Athi River (Export Processing Zone) and Nairobi (Industrial area). The unit of analysis was the textile manufacturing companies and unit of observations was the employees. The selected employees were lower and upper level workers of textile sector because they face more safety related problems at workplace. According to EPZA 2014-2019 strategic plan, the total number of Kenyan employees in the EPZ program employment (2008-2013) were 39961. However, employment by sector of local jobs for garment manufacturing companies was 82.41% which translate to 32,932 employees. The total firms in the EPZ program are 85 whereby the garment manufacturing firms were 25.88% which are 22 firms countrywide (ACTIF, 2013). There are 18 licensed EPZ firms in Athi River and Nairobi. The study randomly sampled 30% of the total number of licensed firms which was 5 firms. The firms sampled included the following: Global Apparel Kenya EPZ Ltd, Royal Garments Epz Ltd, United Aryan EPZ Ltd, Ashton Apparel EPZ Ltd and Alltex EPZ Ltd. The study also randomly sampled 400 from a total of 2744 employees as shown in the table 3.1.

Table3. 1: Sampling of Respondents

Location	Industries sampled	Total number of employees	Sampled employees
Athi River	1	625	91
	1	545	80
	1	550	80
Nairobi	1	507	74
	1	517	75
Total	5	2744	400

3.5 Sampling Frame

A sampling frame facilitates formation of a sampling unit that refers to one member of the set of entities being studied which is the material source of the random variable (Bailey, 2008; Klaus & Oscar, 2008). The sampling frame consisted of 2744 employees and 22 textile manufacturing companies. The sample size for this study was calculated using the formula for definite population as proposed by Kothari, (2004). A sample of 400 employees was selected from the study population. This was expected to be representative of the total population.

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

Where

n = desired sample size

N= Population

e = margin of error at 5% (standard value of 0.05)

$$n = \frac{2744}{1 + 2744(0.05)^2} = 400$$

The study focused on employees who are in licensed EPZ firms in Nairobi and Athi River.

3.6 Sampling Design

There are two main sampling designs used in sampling namely probability and non-probability sampling (Onwuegbuzie, Johnson, & Collins, 2009). In probability sampling, the population members have an equal chance of inclusion in the sample. With this in mind, the study utilized probability sampling and cluster sampling was used because of the heterogeneous nature of sampled textile manufacturing firms. Cluster random sampling was used whereby the companies were divided into clusters and 5 clusters were sampled out of a total of 18 clusters. Individual respondents were sampled using systematic random sampling technique using a sampling interval of 7. The first respondent was sampled using simple random sampling then the rest were sampled using the interval of 7. Key informants were purposively sampled. Key informants mainly constituted the manager and sections heads as they were considered to be more knowledgeable on safety issues in their organizations.

3.7 Data Collection Instruments

The study used both primary and secondary data sources. Primary data were collected using questionnaires and interviews that consisted of both structured and unstructured questions. Structured questionnaire was used to obtain data such as demographic characteristics of the study population. Unstructured questionnaire was used to obtain data on the employee's perception about safety standards. The study also used secondary data that was obtained from existing literature, books, journals and the internet. A checklist consisting of targeted areas was used to collect relevant information from existing literature.

Data was collected through administration of questionnaires, key informant interviews (the proprietors or in charge of each industry), direct observation and photography. The tools were developed and organized according to research objectives. The

questionnaire (Appendix II) was a useful tool in helping to achieve the main objective of the study. A total of 400 questionnaires were administered by the researcher to the sampled employees in the textile industries.

The questionnaires consisted of six sections; section A sought information regarding socio-economic and demographic characteristics, section B sought general information on safety compliance, section C sought information on worker's knowledge on safety standards, section D focused on safety promotional policies, section E focused on workers' participation, section F sought information on safety communication, section G information on management commitment and finally section H sought information on employee performance in the textile manufacturing companies.

3.8 Data Collection Procedure

According to Kothari (2011), when deciding on a data collection procedure, one needs to safeguard against bias and unreliability of the procedure used. The study utilized both qualitative and quantitative research techniques. Structured questionnaire and key informant guide were used to collect qualitative and quantitative data. There were four research assistants who were employed to help with collection of data. They were trained in the various techniques of data collection and in particular how to establish rapport with respondents. In addition, an introductory letter from the University was provided to the respondents.

Key informant interviews provided necessary information about the relationship between safety compliance and employee performance in sampled textile industries. Key informants were the managers and supervisors of apparel sections. Key informants were 30 managers and supervisors of sections. Purposive sampling was used to select the key informants for this study. The questionnaires were administered face to face with the respondents. This ensured that questions were clarified and unclear answers followed up. Note taking was done during key informant interviews.

Direct observation of the respondents' behaviour, reactions and feelings towards particular issues sought by the study provided qualitative data. The researcher also used photography to capture visual data in the field as evidence of situation of safety compliance in the textile manufacturing companies.

3.9 Pilot Testing

The main instruments chosen for data collection in this study were standard and tested for validity and reliability. Their validity and reliability was well established and documented in literature. It was essential that the instruments be carefully designed and tested before use in the study. Pilot testing procedures helped to ascertain that the instrument for collecting data was free from any pitfalls and mistakes that would have surfaced in the main data collection process. Pilot testing helped to refine the questionnaire so that respondents had no problem in answering the questions and there was no problem in recording of data and to test the questionnaire credibility. It constituted one percent of sample size (Aiyabei, 2013). The instruments were modified based on the results of the pretest.

3.9.1 Reliability of Research Instruments

Reliability is the degree to which an assessment tool produces stable and consistent results. This is the extent to which other researchers are able to perform exactly the same experiment, under the same conditions and generate the same results. Reliability is a necessary ingredient for determining the overall validity of a scientific experiment and enhancing strength of the results.

In this study reliability was assessed using Cronbach's Alpha. Cronbach's Alpha is defined as

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum_{i=1}^{K} P_i Q_i}{\sigma_X^2}\right)$$

Where σ^2x is the variance of the observed total test scores, and σ^2yi the variance of component *i* for the current sample of persons. If the items are scored 0 and 1, the formula is

$$\alpha = \frac{K}{K-1}\left(1 - \frac{\sum_{i=1}^{K} \sigma_{Y_i}^2}{\sigma_X^2}\right)$$

Where Pi is the proportion scoring 1 on item *i*, and Qi = 1- Pi.

Brown, (2002) suggest that Cronbach's Alpha is one of most commonly reported reliability estimates in the language of testing literature. This was demonstrated through counter checking the filled questionnaires on a daily basis in order to identify and correct any error that might have occurred which enhanced accuracy and consistence of the tool. The Cronbach's Alpha reliability test was conducted and obtained a value of 0.78 implying that the research instruments used in this study were reliable.

3.9.2 Validity of Research Instruments

Validity refers to how well a test measures what it is purported to measure. As a process, validation involves collecting and analyzing data to assess the accuracy of an instrument. There are numerous statistical tests and measures to assess the validity of quantitative instruments which generally involves pilot testing. Internal and external validity should be ensured by the researchers (Creswell, 2009).

Validity of the research instruments was tested through consulting with other experts to refine the measures and to ensure that you are covering all aspects, correlate the measure with other known measures and correlate the measure with some external standard criterion that your measure should predict, such as conversion rates, sales, recommendation rates, or actual usage by employees. To ensure validity, the questionnaire was tested, issues which were not clear were clarified, all questions were thoroughly scrutinized by technical persons and those which were not necessary were

deleted. Those questions that needed to be rephrased were edited accordingly before the study commenced. Content validity was ensured through thorough proof reading and peer review of the tool before it was subjected to the respondents. Continuous supervision from the supervisors added value to the validity of the tool.

3.10 Data Analysis and Presentation

After collecting data from the field, the completed questionnaire was edited, coded and tabulated before further processing of data. Editing involved checking the raw data in each question. Specifically the questionnaire was scrutinized for accuracy and completeness of answers recorded. Coding involved assigning numerical value to each question. Numerical codes were considered appropriate because they were quick and easy to input in computer. This was followed by data entry using Statistical Package of Social Sciences (SPSS) version 22. After this data was cleaned of any errors to ensure reliability of results and analysis was done. Descriptive statistics such as frequencies and percentages was used to summarize the data. Data was presented using charts, graphs and frequency distribution tables.

3.10.1 Data Analysis

To measure knowledge levels of individual respondents, a series of eight dichotomous true/false questions was asked as in appendix 2. Each respondent who answered a question right was deemed knowledgeable and was awarded a score of one and zero otherwise. Other descriptive statistics include: frequency percentage, standard deviation. The study conducted several statistical tests which include: Pearson correlation model and regression model. Pearson correlation was used to measure the strength of a linear association between two variables.

The study conducted diagnostic tests such as normality test, Skewness and Kurtosis, Kolmogorov-Smirnov and Shapiro-Wilk test. In this study Normality test was conducted statistically using Shapiro Wilks Test. Normality test was used to determine if a data set was well modeled by a normal distribution and to compute how likely it

is for a random variable underlying the data set to be normally distributed. It measured goodness of fit of a normal model to the data. Skewness measured symmetry or lack of symmetry of data. A distribution, or data set, is symmetric if it looks the same to the left and right of the center point. Kurtosis measured whether the data are heavy-tailed or light-tailed relative to a normal distribution. That is, data sets with high kurtosis tend to have heavy tails. Data sets with low kurtosis tend to have light tails, or lack of outliers. A uniform distribution would be the extreme case. Kolmogorov-Smirnov was used to compare a sample with a reference probability distribution (one-sample K–S test), or to compare two samples (two-sample K–S test).

The Kolmogorov–Smirnov statistic quantifies a distance between the empirical distribution function of the sample and the cumulative distribution function of the reference distribution, or between the empirical distribution functions of two samples. In this study two sample K-S test was used since it is sensitive to differences in both location and shape of the empirical cumulative distribution functions of the two samples. Shapiro Wilk test for normality was used to detect all departure from normality. The test rejects the hypothesis of normality when the p value is less than or equal to 0.05. Failing the normality test allows the researcher to state with 95% confidence the data does not fit the normal distribution while passing the normality test only allows the researcher to state no significant departure from normality was found.

Null hypothesis was tested using the following multi regression analysis: $Y= a + \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \varepsilon.$ The researcher also used t test for hypothesis testing for population mean of textile employees. The significance level of 0.05 was used because it is the level mostly used in business and social research (Babbie, 2010; Creswell, 2011). This represents that the results are at 95% confidence level and this is what was applied in this study. The p – value obtained was interpreted based on the alpha level or level of significance. The study rejected the null hypothesis if the p-value was less than or equal to 0.05. When the p-value was greater than α, the study did not reject the null hypothesis. The following test was applied in conducting t – test:

Ho: $\beta k = 0$, Hi: $\beta k = \neq 0$ where k = 1, 2, 3, 4, 5 1= workers knowledge on safety standards, 2 = safety promotional policies, 3 = workers participation, 4 = safety communication, 5 = management commitment. Descriptive statistical analysis was used to reveal the distribution of tendencies in the sample data. Frequency analysis was used to reveal tendencies in variable's distribution.

Table 3.2 Hypothesis Testing Summary

H_0	Hypothesis description	Regression Model Equation	Test conducted
H_{01}	There is no relationship between workers' knowledge of safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya.	$Y= \beta o + \beta_1X_1+ \beta_2X_2 + \beta_3X_3 + \beta_4X_4 +\varepsilon$	β_1 Workers Knowledge $p<0.05$
H_{02}	There is no relationship between safety promotional policies and employee performance in textile manufacturing companies in selected counties in Kenya.	$Y= \beta o + \beta_1X_1+ \beta_2X_2 + \beta_3X_3 + \beta_4X_4 +\varepsilon$	β_2 Safety promotional policies $p<0.05$
H_{03}	Worker participation in implementing safety standards does not affect employee performance in textile manufacturing companies in selected counties in Kenya.	$Y= \beta o + \beta_1X_1+ \beta_2X_2 + \beta_3X_3 + \beta_4X_4 +\varepsilon$	β_3 Worker participation $p<0.05$
H_{04}	Safety Communication does not have significant influence on employee performance in textile manufacturing companies in selected counties in Kenya	$Y= \beta o + \beta_1X_1+ \beta_2X_2 + \beta_3X_3 + \beta_4X_4 +\varepsilon$	β_4 Safety communication $p<0.05$
H_{05}	Management Commitment has no significant moderating effect on the relationship between work safety compliance and employee performance in textile manufacturing companies in selected counties in Kenya	$Y=\beta o+\beta_1X_1*Z + \beta_2X_2*Z+ \beta_3X_3*Z + \beta_4X_4*Z +\varepsilon$	Change in regression coefficient Change in adjusted R^2

To test for Hypothesis five (H5) on the moderating effect of management commitment on safety management system and employee performance Baron and Kenny (1986) four step procedure was used. The first step involved a simple regression with the independent variable, safety management system predicting the dependent variable, employee performance of textile workers to satisfy the first condition of moderation. In the second step the independent variable (safety management system) is regressed

on the moderating variable (management commitment) while in the third step a simple regression with the moderating variable (management commitment) predicting the dependent variable (employee performance). The last step involves a multiple regression with both the independent variable (safety management system) and moderating variable (management commitment) predicting the dependent variable (employee performance). The moderation effect is proved if the interaction term explains a statistically significant amount of variance in the dependent variable. The Pearson correlation coefficient was computed and finally multiple regression analysis was used to access the nature of relationship between various variables as hypothesized in the study.

3.10.2 Overall Independent Variable Regression model

In order to establish the combined influence of the independent variables on the dependent variable, a linear model was used. Therefore the model for this study will be consolidated as:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

……Equation (i)

3.10.3 Moderating Variable Regression Model

The moderating variable in this study will be management commitment. Aguinis and Gottfredson, (2010) argue that estimating interaction effects using moderated multiple regression usually consists of creating an Ordinary Least Squares (OLS) model and a Moderated Multiple Regression (MMR) model equations involving scores for a continuous predictor variable Y, scores for a predictor variable X, and scores for a second predictor variable Z hypothesized to be a moderator. To determine the presence of moderating effect, the OLS model will be then compared with the MMR model. Equation (ii) shows the Ordinary Least Squares (OLS) regression equation model predicting Y scores from the first-order effects of X and Z observed scores.

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z + \varepsilon}$$ …… Equation (ii)

Equation (iii), the Moderated Multiple Regression (MMR) model is formed by creating a new set of scores for the two predictors (i.e. X, Z), and including it as a third term in the equation, which yields the following model:

$$\mathbf{Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 Z + \beta_5 X_1 * Z + \beta_6 X_1 * Z + \beta_7 X_1 * Z + \beta_8 X_4 * Z + \varepsilon}$$ ……. Equation (iii)

3.10.4 Data Presentation

Data was presented using charts, graphs and frequency distribution tables. The charts presented diagrammatic representation of the findings, especially findings in section A, socioeconomic and demographic characteristics. The graphs and frequency distribution tables presented findings on the independent variables in this study which include: worker's knowledge of safety standards, safety promotional policies, worker participation, safety communication and management commitment.

3.11 Operationalization of the Variables

The variables under the study are operationalized as shown in Table 3.4.

Table 3.3: Operationalization of Variables

Objective	Variable	Type of the Variable	Indicators
To determine the relationship between workers' knowledge of safety standards and employee's performance in textile manufacturing companies in selected counties in Kenya	Workers knowledge on safety standards	Independent	• Safety Training • Access to Information • Safety standards guidelines
To examine the relationship between safety promotional policies and employee's performance in textile manufacturing companies in selected counties in Kenya.	Safety Promotional policies	Independent	• Availability of safety policies • Implementation • Monitoring & Evaluation
To determine how worker participation in the implementation of safety standards affect employee performance in textile manufacturing companies in selected counties in Kenya	Workers' Participation	Independent	• Safety committee • Employee involvement in decision making • Safety and health responsibilities
To establish how safety communication influences employees' performance in textile manufacturing companies in selected counties in Kenya	Safety Communication	Independent	• Communication Channels • Feedback • Communication Challenges
To establish the moderating effect of management commitment on the relationship between work safety compliance and employee performance in textile manufacturing	Management Commitment	Moderating	• Resource allocation • Role modelling of safe behavior

companies in selected counties in Kenya	• Conducting risk assessment

3.12 Ethical Considerations

To achieve the set objectives, the study observed key ethical considerations. First, the respondents were informed on the importance of the study and the intended use of the data that they provided. An introduction letter was obtained from Jomo Kenyatta University of Agriculture and Technology (JKUAT) to introduce the researcher to the respondent and justify the need for the study. The respondents were assured of confidentiality and that the information provided would solely be used on academic purpose and no any other use. An informed consent was applied where the respondents were free to withdraw their participation from the study anytime they felt to.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSION

4.1 Introduction

This chapter presents the research findings on the relationship between work safety compliance and employee performance in the textile companies in Kenya. This chapter also presents the analysis and presentation of findings obtained from the respondents in accordance with the objectives of the study. The chapter also has a discussion of the findings in accordance with the objectives of the study.

4.2 Reliability Test Results

Reliability shows the measure of the degree to which the research instrument yields consistent results or data after repeated results (Creswell, 2011). Table 4.1 shows the reliability test which produced an overall Cronbach Alpha correlation coefficient of above 0.7 for all variables.

Table 4. 1: Reliability Test Results

Variable	Cronbach's Alpha
Workers Knowledge	0.850
Safety Promotional Policies	0.868
Worker's Participation	0.757
Safety Communication	0.742
Management Commitment	0.821
Overall α score	0.808

The correlation coefficient showed that all the variables had a Cronbach's coefficient of more than 0.7 hence the instrument deemed reliable. Specifically, for workers knowledge is 0.756, safety promotional policies is 0.784, worker's participation in the implementation of safety standards 0.775, safety communication 0.732 and management commitment 0.763. According to Mugenda and Mugenda (2003), a Cronbach's alpha of more than 0.750 shows a well-framed research instrument that is can adequately collect the required data for the study. The pilot study results showed a strong internal consistency of the study variables and hence the instrument was adopted for the study. This is shown in the table 4.1.

4.3 Response Rate

The study targeted a total of 400 respondents who constituted employees of the textile companies in the export processing zone, Athi River Kenya and Nairobi area. Out of these, 395 respondents were available to be interviewed hence the response rate of the study was 98.8%. According to Mugenda (2003), a response of 50% is adequate for analysis and reporting. Therefore, this response of 98.8% was considered sufficient for making reference and drawing conclusion from the research data (table 4.2).

Table 4. 2: Response Rate

Population	Sampled	Responded	Response Rate
2744	400	395	98.8%

4.4 Demographic characteristics of Respondents

The demographic characteristics obtained from individual respondents and their background was examined in this segment. The results were presented according to the demographics of the respondents interviewed. Demographic characteristics covered in this study included: job cadre, section of work, age, gender, level of education and marital status (Table 4.3).

Table 4. 3: Demographic characteristics of Respondents

Description	Frequency	Percentage (%)
Job Cadre		
Production manager	35	9.0%
Tailoring spinners	185	46.8%
Garment technician	104	26.2%
Others	71	18.0%
Section of Work		
Sample section	28	7.1%
Cutting section	54	13.7%
Sewing section	163	41.3%
Finishing section	57	14.4%
Store section	40	10.0%
Maintenance section	35	9.0%
None committal	18	4.5%
Gender		
Male	203	51.3%
Female	192	48.7%
Highest level of Education		
None (No formal education)	5	1.3%
Primary	70	17.7%
Secondary	253	64.0%
University/College	67	17.0%
Marital Status		
Single	148	37.5%
Married	200	50.6%
Separated/divorced	32	8.1%
Widowed	12	3.0%
None committal	3	0.8%

A total of 395 respondents in the textile companies participated in this study. Out of this number, 46.8% were in the job cadre of tailoring spinners, 26.2% were garment technicians, 9% were production managers and 18% were from other job cadres in the industry. The respondents were from different sections of the textile manufacturing process. The sections included: sewing section (41.3%), finishing section (14.4%), cutting section (13.7%), store section (10%) and maintenance section (9%). Majority of the respondents were male (51.3%) while 48.7% were females.

According to the findings, sampled respondents had an average age of 30 years with a standard deviation of 7.738. The minimum age was 18 years while the maximum was 56 years. Most of the respondents, 64% had secondary level of education as their highest level of education, 17% of the respondents had University/college education, 17.7% had primary education while 1.3% of the respondents had no formal education. The result showed that half of the respondents (50.6%) were married, 37.5% were singles, and 8.1% were separated while 3% were widowed. The demographic data of the respondents shows a good diversity which implies that the views on the research questions were free from bias, for example, a single gender, one age-group or other personalities that may determine the perceptions of an individual.

4.5 General Information on Employees Compliance to Safety Standards

The general information on employees' compliance to safety standards showed that 79.8% of the respondents were compliant with the safety standards while 20.3% were not compliant. This section of the questionnaire sought answers for the following: safety standards observed by the employees at the manufacturing industries, reasons for non-compliance to safety standards, constraints of improving safety standards and organization actions to improve safety standards. This is illustrated in table 4.4.

Table 4. 4: Safety Standards Observed at Textile Companies

Safety Standards			
Dimensions	Frequency (N = 395)	Percent	Rank (1-most observed)
Appropriate use of fire extinguishers	208	52.7%	1
Correct work procedure	50	12.7%	2
Proper water disposals	48	12.1%	3
Others	10	2.5%	4
Not observed	79	20%	
Total	395	100	
Reasons for non-compliance	Frequency (N=144)	Percentage	Rank (1-most observed)
Ignorance of safety standards	87	60.4%	1
To save time in work completion	31	21.5%	2
Work peer pressure to not Comply Regulations	22	15.3%	3
Others	4	2.8%	4
Total	144	100%	
Constraints to improving safety standards	Frequency (N=186)	Percentage	Rank (1-most observed)
Time factor	53	13.25%	1
Ignorance	34	8.5%	2
Lack of funds	31	7.75%	3
Illiteracy	26	6.50%	4
Work load	15	3.75%	5
Lack of equipment	9	2.25%	6
Work peer pressure	8	2.00%	7
Work overload	5	1.25%	8
High cost of safety products	5	1.25%	8
Total	186	100%	

Safety standards observed by employees mainly included appropriate use of fire extinguishers (52.7%) and correct work procedure (12.7%). Employees who do not comply to the safety standards mainly did so because of ignorance of safety standards (60.4%), to save time in completion of work (21.5%), work peer pressure (15.3%) and other reasons (2.8%) (Table 4.2). Constrains to improving safety standards in the manufacturing industries reported include; time limit, ignorance, lack of funds, lack of education, work load, lack of equipment, work peer pressure, work overload, high cost

of safety products. To improve safety standards in the organization the following was advocated for; implementation of safety measures, formation of safety policies, alert employees when there is fire by use of alarms, allow training of workers on safety standards. In addition, the organization should show appropriate use of fire extinguishers by the employees, avail equipment, avail funds, carry out on job training to employees and create safety training programs. The organization should also improve correct work procedures and communicates safety culture in the organization

Results from the key informant interviews with some of the employees showed that management provides training on safety through various programs such as health and certified trainings under OSHA programs. The safety trainings included: first aid and health inspection for fitness to work. However, some companies had not provided training on safety issues.

4.6 Descriptive Statistics

In this section a description has been given to show if workers knowledge, safety promotional policies, workers participation and safety communication had an influence on employee performance. This was done using a five point Likert scale.

4.6.1 Workers Knowledge on Safety Standards

Workers knowledge on safety standards was established by testing their views on a five point Likert scale comprising of ten items. The Likert scale ranges from 1 – 5 (1-strongly agree, 2-agree, 3-not sure, 4-disagree, 5-strongly disagree). Analysis of the responses received was tested using Cronbach's alpha reliability of the items. This gave a Cronbach's alpha value of 85% (r = 0.85). A good proportion of the workers (29.6%) strongly agreed while 40.5% agreed that they had knowledge of safety standard, having a mean response of 2.22 with a standard deviation of 1.13.

Table 4. 5: Workers Knowledge on Safety Standards in the Textile Companies

Items	SA	A	N	D	SD	Mean	Std.Dev.
The employees in our organization have the appropriate Knowledge of safety standards	29.6%	40.5%	8.9%	19.0%	2.0%	2.22	1.13
The employees understand the challenges relating to health and safety at work	17.2%	43.3%	10.4%	26.8%	2.3%	2.52	1.13
Every employee abides to health and safety rules in our organization	19%	37.0%	9.6%	31.4%	3.3%	2.63	1.20
The workers are able to easily notice problems relating to employees' safety	16.5%	32.4%	16.5%	32.2%	2.4%	2.71	1.17
The company has upheld safety of employees as a key area of focus	23.6%	34.0%	8.6%	133.0%	0.8%	2.52	1.21
Whether there is anything that can be done to improve safety in the company	19.0%	38.0%	8.6%	32.4%	2.0%	2.60	1.19
Whether knowledge of safety standards improve employee performance	29.1%	39.0%	5.0%	25.6%	1.3%	2.30	1.19
Aggregate Score						2.5	1.17

These workers were of the opinion that knowledge of safety standards improves employee performance. This is explained by mean response of 2.30 with a standard deviation of 1.19. This was strongly agreed by 29.1% and agreed by 39.0% of the

workers (Table 4.5). This means that a good number of respondents agreed that having knowledge of safety standard can significantly improve employee performance. This agrees with the findings of Chinniah (2015) that states that with sufficient knowledge of safety standards, workers can prevent serious and fatal accidents from occurring when handling moving parts of machinery in a factory. Similarly the findings were in line with Okoye, Ezeokonkwo and Ezeokoli (2016) who found out that there was positive relationship which suggested that health and safety knowledge and compliance to health and safety rules were related.

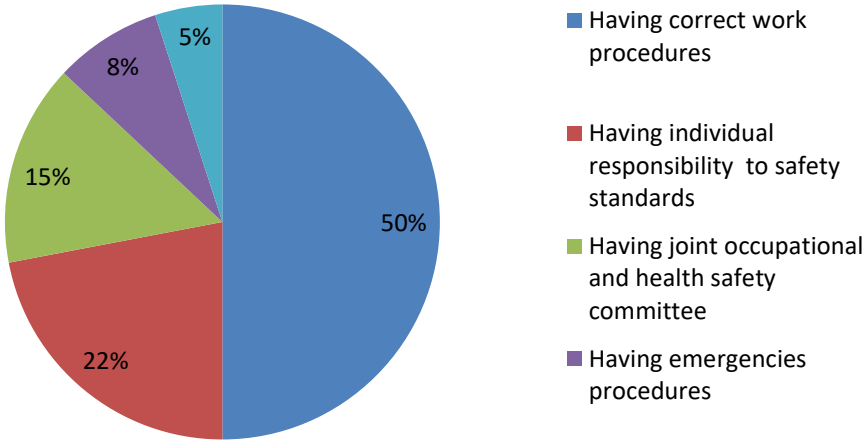

Figure 4.1: Workers Opinion on the Meaning of Safety Standards

Results in figure 4.1 shows that half of the workers (50%), understood safety standards as "Having correct work procedures" while 22% of the workers understood it as "Having individual responsibility to safety standards".

To the best of their knowledge on the safety standards, a substantive number of workers (35%) were aware of safety standards such as wearing protective clothing e.g. helmets, overalls and gloves. About 27% knew the safety of using fire extinguisher in case there is fire, 20% of the workers knew safety standards of providing medical

examinations and training and finally 18% of the workers knew other safety standards. This is illustrated in Figure 4.2.

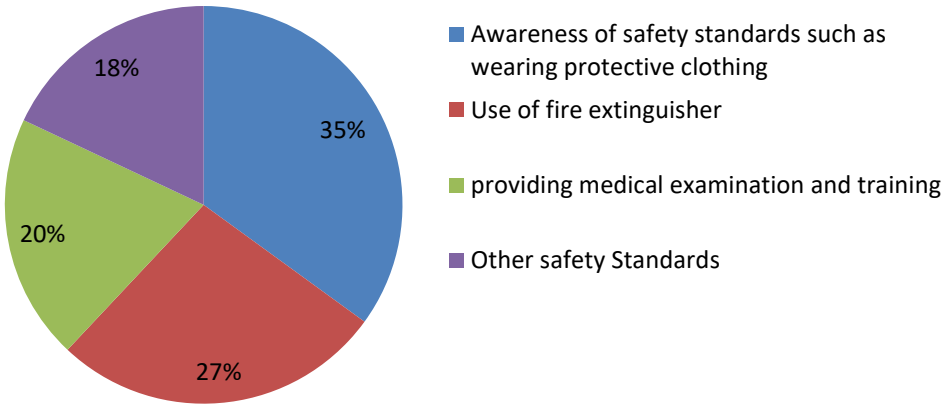

Figure 4.2: Safety Standards Known by the Workers in the Textile Companies

According to key informant interviews of some employees in the textile companies, workers in the textile companies had knowledge on safety regulation since they are trained regularly. The knowledge of safety among workers was high, although they kept witnessing safety related accidents occasionally. Generally a high percentage had acquired knowledge on work safety since it is a company policy to put work safety first. The company had put a lot of measures in place to address future standards although a good number of the employees were not very keen to implement them. The level of knowledge by the workers on the floor shops was generally good, and they had a leader of each group as far as environment and safety was concerned. Nearly all employed workers were trained on work safety and they also participated in safety drills for example fire drills. However, not all the staffs got trained since some of them were casuals who worked on daily basis and were not aware of any safety regulations but on the contrary, all the permanent staff were aware.

Some of the challenges relating to health and safety at work that the workers were facing included: insufficient protective clothing for example gloves, eye protection goggles, hard hats. This was a challenge to 59.0% of the workers. It was also reported by 41.3% of the respondents that there was insufficient fire hazard equipment installed.

Lack of proper waste disposal was experienced by 32.0% of the workers. This has been demonstrated in table 4.6.

Table 4. 6: Challenges Workers Have Relating to Health and Safety at Work

Challenge	Frequency	Percent	Rank (1-most common)
Insufficient protective clothing: gloves, eye protection goggles, hard hats	236	59.0	1
Insufficient fire hazard equipment installed	165	41.3	2
Lack of proper waste disposal	128	32.0	3
Insufficient heat and lighting	57	14.3	4
Others	5	1.3	5

Among the health challenges experienced by the workers include: respiratory illness for example byssinosis, bronchitis and bronchial asthma. About 46.5% of the workers had respiratory illness, 41.5% had work related injuries, 6.5% experienced noise causing hearing problems while 5.5% had other challenges. This is demonstrated in Figure 4.3. This meant that almost half of the workers had health challenges related to safety issues in the workplace.

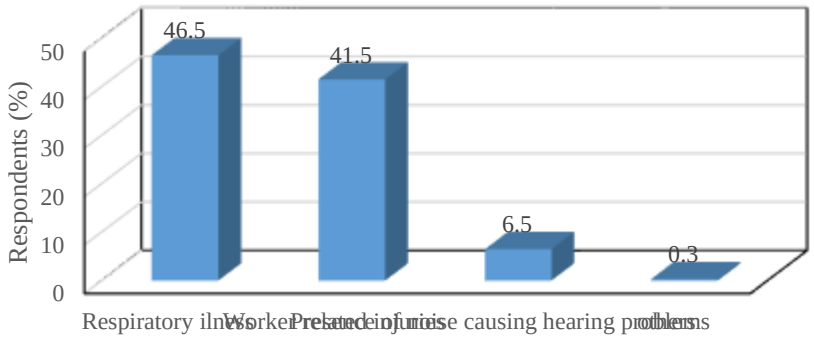

Figure 4.3: Challenges Relating to Employee Safety

Results from the key informant interviews show that the key challenges facing the textile industries include: lack of skills experienced by changing from manual to automatic operations (Table 4.6), high turnover particularly for female employees who are replaced when they went for maternity leave. There was also the challenge of achieving targets. Most of the time the targets were not achieved because the factory employees could go on a go slow when their condition of work was not favorable. Another challenge reported was absenteeism. The culture of absenteeism was due to lack of self-belonging, for example, during end month when the employees got their salary, they absentee themselves. Financial management was also reported as a challenge whereby some employees took loans which exceeded their basic salary. They went against the one-third rule which affected their work performance.

Another challenge reported was injuries at work. A substantial number of workers reported that some workers were involved in accidental injuries because of fatigue given that leave was hardly given to them and more so they worked for long hours. The other challenge reported was that employees were not medically insured. This made it difficult to get treatment for their injuries. Most of the injuries were associated with long standing positions, needle pricks and noise of the sewing machines. To address these challenges, the respondents stated that the employers should initiate training of the newly recruited employees. The employers should come up with a policy that covers all the health and safety principles to enlighten the workers on safety requirements. They should engage relievers/helpers so that when one employee proceeds to leave, the other stays to sustain production. They should also have qualified industrial engineers who are working hand in hand with supervisors and shop stewards to set an achievable target so as to avoid unnecessary complaints from employees.

Employers need to improve on the level of supervisory and middle level management trainings in order to positively impact on the general workmanship in the factory. If they strictly follow the rules regarding the use of safety measures, for example, ensuring that needle guards are in place at all times during operations, there will be

minimal or less accidents taking place. There should be opportunities for closer intervention between management and employees in order to bridge communication gap that could be existing between the two parties, this may be realized through training programs to highlight and address the gaps.

The challenges are addressed basically by training workers about the stated activities and what precaution they are supposed to take while at work to ensure safety. Display of work station activity guidelines should be done at all times and post caution signs for possible danger. They should set realistic deadlines that are within acceptable good practice for such tasks. Targets should be measurable and realistic. The employers need to motivate the staff by increasing their salary, reduce the number of working hours and give leave to workers.

These findings meant that there are still a number of challenges relating to employee safety that the textile workers face which include: achieving targets, injuries at work, insufficient training, absenteeism that need to be addressed to ensure workplace safety is observed and which will in turn improve employee performance. This finding is similar to Idoro, (2008) who found that safety learning should not only be considered as an acquisition of knowledge through instructions and training in classrooms or other formal settings rather safety should be considered as the final outcome of a dynamic and collective construction process. In this case, a safe workplace is the result of constant engineering of diverse elements, such as knowledge and skills, equipment, and social interactions, which are integral to the work practices of various project stakeholders.

4.6.2 Safety Promotional Policies

Organizations safety promotional policies were established by testing the respondent's views on a five point Likert scale for seven items. The Likert scale ranges from 1 – 5 (1- strongly agrees, 2-agree, 3-not sure, 4-disagree, 5-strongly disagree). Analysis of the responses received was tested using Cronbach's alpha reliability of the items. This gave a Cronbach's alpha value of 86.8% (r = 0.868). Most of the workers were aware

of the safety promotional policies in the industry with a mean response of 2.29 and a standard deviation of 1.10. This was strongly agreed by 24.5% of the workers and agreed by 43.3%. The workers had received safety training in the company as agreed by 39.5% and strongly agreed by 21.5%, giving a mean response of 2.49 with a standard deviation of 1.19. This was illustrated in table 4.7.

Table 4. 7: Safety Promotional Policies

Items	SA	A	N	D	SD	Mean	Std. Dev.
There are clear and well stipulated safety policies in our company	24.3%	43.1%	10.9%	20.2%	1.5%	2.29	1.10
The safety policies in our company are effectively implemented	18.7%	37.5%	16.5%	24.8%	2.5%	2.53	1.15
Workers adequately comply with safety policies in our company	17.2%	34.7%	11.9%	32.9%	3.3%	2.69	1.21
There are effective mechanisms in our company to enforce safety policies	16.7%	38.5%	17.0%	25.3%	2.5%	2.56	1.13
Our company upholds safety culture among the employees and other stakeholders	16.2%	37.2%	14.2%	30.9%	1.5%	2.63	1.14
The management has taken key measures to ensure safety culture is maintained in our company	17.0%	39.0%	12.1%	29.1%	2.8%	2.60	1.17
The workers in our company are adequately trained on safety measures	21.5%	39.5%	8.9%	27.8%	2.3%	2.49	1.19
Aggregate Score						2.54	1.16

As an organization, to promote safety culture, a substantive proportion (42.5%) of the workers stated that their organization had developed safety policies. They had created safety training programmes as noted by 30.4% of the workers and ensured that workers adhere to safety regulations (14.7%). This was demonstrated in table 4.8.

Table 4. 8: Actions Taken by the Management to Promote Safety Culture

Action	Frequency	Percent	Ranks(1-mostnoted action)
Developing safety policies	168	42.5	1
Creating safety training programs	120	30.4	2
Ensuring that workers adhere to safety regulations	58	14.7	3
Others	49	12.4	4
Total	395	100	

According to some key informants some of the safety policies their companies used to improve productivity included: the employees were required to wear personal protective equipment such as gloves, hard hats, reflector jackets at all times. There were designated walk pathways that the employees were supposed to use coming in and out of the companies buildings. There were sign post of some of the requirements they are supposed to follow in case of emergencies put at strategic areas for example when entering the building. There was also a safety handbook that each of the employees was issued with at the beginning of their employment that had safety instructions that they had to follow during working hours to ensure that their safety is maintained at all times. Therefore, all of these policies listed help to improve productivity in both the short and long run as there was lesser absenteeism at their workplace.

A study conducted by Ahmad, Sitar and Naas (2017) under-scored the importance of safety policy in any work environment. Such policies relate to employment in hazardous processes and welfare of employees. Therefore, as far as safety promotional policies were concerned, most of the workers were aware of existence of safety policies in their companies.

4.6.3 Worker Participation

Workers participation in the implementation of safety standards was established by testing the respondents' views on a five point Likert scale for four items. Likert scale used was in a range of 1 – 5 (1- strongly agree, 2-agree, 3-not sure, 4-disagree, 5-strongly disagree). The reliability of the responses received was tested using Cronbach's alpha of the items. This gave a Cronbach's alpha value of 75.7% (r = 0.757). In this industry, workers participation in safety committees had a mean response 2.30 with a standard deviation of 1.11. This was strongly agreed by 23.8% and agreed by 44% of the respondents.

Table 4. 9: Workers Participation in the Implementation of Safety Standards

Items	SA	A	N	D	SD	Mean	Std Dev
Safety committee in your organization	94 (23.8%)	174 (44%)	41 (10.4%)	80 (20.3%)	6 (1.5%)	2.30	1.11
Employees involved in designing safety programs	72 (18.2%)	122 (30.9%)	60 (15.2%)	128 (32.4%)	13 (3.3%)	2.71	1.21
Presence of safety and health responsibilities	68 (17.2%)	146 (37.0%)	43 (10.9%)	133 (33.7%)	5 (1.2%)	2.62	1.17
Does workers participation in safety issues affect employee performance	50 (12.7%)	146 (37.0%)	55 (14%)	124 (31.3%)	20 (5%)	2.79	1.19
Aggregate Score						2.61	1.17

SA-strongly agree, A-Agree, N-Not sure, D-disagree, SD-strongly disagree

The study established the role of the respondents in the safety committee. Among the sampled workers, 53.5% were members of the committee, 9.0% were chairmen, and 7.0% were secretaries in their committees whereas 8.5% had other roles. This was shown in figure 4.4 below.

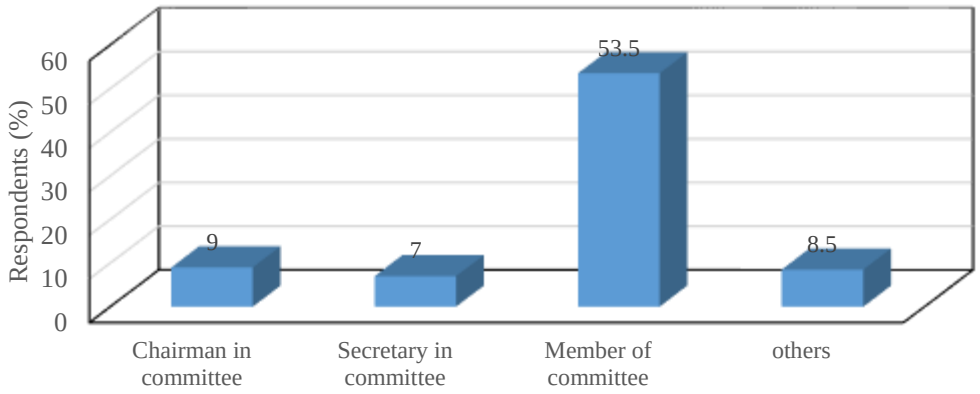

Figure 4.4: Roles Held by Respondents in the Safety Committee

In the organizations, 71.8% of the workers stated that they were involved in designing safety programmes while the rest 28.2% were not involved. Those who were involved in designing safety programmes were involved in programmes such as; planning production, environmental health and safety, quality management and other programmes. A substantive proportion, (39%) were involved in production of planning programmes whereas 38.4% were involved in environmental, health and safety programmes. This was shown in table 4.10

Table 4. 10: Safety Programmes Employees were Involved in Textile Companies

Safety programmes	Frequency	Percent
Production of planning programmes	154	39.0
Environmental , health and safety programs	152	38.4
Quality management	37	9.4
Others	7	1.8
Not involved in any programmes	45	11.4
Total	395	100

According to the key informant interviews with some employees, it was noted that the worker participation affected work safety in the institutions since the more the workers participate in safety issues, the less premium workers' pay to insurance. This was done by training workers and ensuring safety was observed. In the company, there are full-fledged compliance departments which handled all safety issues with members of various departments. Worker participation in work safety was at a very high rate because this affected them directly as the immediate people who are in the production process. Study results indicated that 90% of worker's participation affected work safety. This was on a higher scale due to cases of non-compliance that are reported from time to time.

Workers were frequently trained in- house about safety. They were also trained by accredited consultants who ensured structured regulatory recruitment under Kenya laws on safety were observed. Once trained, they participated in fire drills and this had helped the workers reduce chances of accidents. Fire drills ensured that they were prepared for any emergencies. Most of the respondents strongly agreed that workers participation in safety issues affect employee performance. This supports findings by Al-header (2013) who found that safety participation is conceived as an activity that can help in developing an environment that stimulates high safety standards such as voluntarily joining safety training programs and helping coworkers with safety-related issues.

4.6.4 Safety communication

Safety communication of the workers was established by testing the respondents' views on a five point Likert scale for four items. Likert scale used was in a range of 1 – 5 (1- strongly agree, 2-agree, 3-not sure, 4-disagree, 5-strongly disagree). Using Cronbach's alpha coefficient, a reliability of responses on the items was obtained. This gave a Cronbach's alpha value of 74.2% (r = 0.742).

A sizeable number of workers, 36% strongly agreed while 30.4% agreed that safety communications can improve employee performance. This recorded a mean response

of 2.17 with a standard deviation of 1.20. In this industry, a total of 58% accepted that the employees were trained on safety communication. This was reflected by a mean response of 2.42 with a standard deviation of 1.16. This was shown in table 4.11.

Table 4. 11: Safety Communication to Workers in the Textile Companies

Items	SA	A	N	D	SD	Mean	StdDev
Is there communication of safety at work?	87 (22%)	162 (41.0%)	30 (7.8%)	110 (27.5%)	6 (1.5%)	2.43	1.17
Is there an effective communication mechanism	70 (17.7%)	115 (29.1%)	68 (17.2%)	133 (33.7%)	9 (2.3%)	2.72	1.19
Employees trained on safety communication	90 (22.7%)	140 (35.4%)	63 (16%)	96 (24.4%)	6 (1.5%)	2.42	1.16
Can safety communications be improve employee performance	142 (36%)	120 (30.4%)	38 (9.6%)	92 (23.2%)	3 (0.8%)	2.17	1.20
Aggregate Score						2.44	1.18

SA-strongly agree, A-Agree, N-Not sure, D-disagree, SD-strongly disagree

The word safety standards to a majority of the workers, 63.3%, referred to maintaining safety regulations within the industry. To 21.3% of the respondents it meant prevention of accidents and injuries within the industry; whereas to 10.6% of the respondents, it was protecting yourself and other employees against workplace illnesses. This was illustrated in table 4.12.

Table 4. 12: Respondents Understanding of Safety Standards

Understanding safety standards	Frequency	Percent
Maintaining safety regulations within the industry	250	63.3
Prevention of accidents and injuries within the industry	84	21.3

Protecting yourself and other employees against workplace illnesses	42	10.6
Others	3	0.8
No idea	16	4.0

To communicate safety standards to workers, the most preferred mechanism was through notices and memos on notice boards. Other mechanisms used were through staff meetings and through announcements, E-Mails, letters. This was demonstrated in table 4.13.

Table 4. 13: Mechanism Used to Communicate Safety Standards to Workers

Mechanism communicating safety standards	**Frequency**	**Percent**
Through notices and memos on notice boards	284	71.0
Through announcements	41	10.3
Through staff meetings	34	8.5
Others	8	2.0
No idea	15	3.8

A majority of the workers strongly agreed that safety communications can improve employee performance. This is in agreement with study findings by Balasundaram et al., (2017) who in a study carried out in Ethiopia found that safety communication can affect workers efficiency and quality of work. In case of emergency, forms of communication used to alert workers in the organizations included; telephone, oral speech, written statements, E mail and others. Most of the workers, 38.8% noted that they were communicated to through telephone services, 29% of the workers stated that

they were communicated to through oral speech that is word of mouth. This was shown in table 4.14.

Table 4. 14: Forms of Communication Used to Alert Workers in Case of an Emergency

Forms of communication	Frequency	Percent	Ranks (1-most used)
Telephone	153	38.7	1
Oral speech	114	28.9	2
Others	71	18.0	3
Written statement	42	10.6	4
E mail	15	3.8	5
Total	**395**	**100**	

According to key informant interviews of some of the employees in the Export Processing Zone, safety communication was key in improving employee performance. Safety communications aided in ensuring safety standards were properly kept through assigning supervisors responsibilities to train workers on safety issues. Safety communication went along way to ensuring that employees met their basic routine to keep safety standards and also ensured factory standards were kept. Employees were aware of the importance of safety in their work thereby reducing the rate of accidents in the factories. Communication helped to reduce the time spent to replace equipment. To improve on safety communication, it was important that safety guidelines were displayed in areas prone to accidents. This ensured that all workers were aware of what was required of them, and what they ought to do in case of emergencies.

4.6.5 Management Commitment

The moderating variable of the study was management commitment. Views of the workers on management commitment were established on a five point Likert scale for six items. Likert scale in a range of 1 – 5 (1- strongly agree, 2-agree, 3-not sure, 4-disagree, 5-strongly disagree). Using Cronbach's alpha coefficient, a reliability of the

responses on the items was obtained. This gave a Cronbach's alpha value of 82.1% (r = 0.821). A majority of the respondents, 20.8% and 49.5% (strongly agreed and agreed respectively) that management was carrying out activities to promote safety in the industry. This recorded a mean response of 2.28 with a standard deviation of 1.03. This was demonstrated in table 4.15.

Table 4. 15: Management Commitment in the Textile Companies

Items	SA	A	N	D	SD	Mean	StdDev
Management carrying out activities to promote safety	82 (20.8%)	196 (49.6%)	39 (9.9%)	76 (19.2%)	2 (0.5%)	2.28	1.03
Availability of safety policy formulation	68 (17.2%)	153 (38.7%)	60 (15.2%)	110 (27.8%)	4 (1.0%)	2.55	1.12
Resources and equipment are available to protect employees	76 (19.2%)	140 (35.4%)	65 (16.5%)	111 (28.1%)	3 (0.8%)	2.54	1.12
Management role model of safe behavior	60 (15.2%)	145 (36.7%)	82 (20.8%)	105 (26.5%)	3 (0.8%)	2.59	1.08
Availability of safety targets	54 (13.7%)	143 (36.2%)	75 (19%)	116 (29.3%)	7 (1.8%)	2.68	1.11
Management commitment to safety affect employee performance	76 (19.2%)	146 (37%)	35 (8.9%)	123 (31.1%)	15 (3.8%)	2.61	1.23
Aggregate Score						2.5	1.12

SA-strongly agree, A-Agree, N-Not sure, D-disagree, SD-strongly disagree

According to key informant interviews of some employees in textile industries, the management in their company had a commitment to improving safety standards. This was done through shared commitment agreement with various buyers to observe recommended safety standards. The companies were also regularly audited and the

report was sent to the buyers to decide whether to buy from them. Management had a very high regard when it came to safety issues and employees always endeavored to keep the standards at the top. Management values safety at a rate of 99.9%.The companies had a compliance department, which had a sole responsibility of making sure that health and safety standards were observed and the respective policies implemented effectively.

This study found that management commitment was associated with promotion of safety in the industry. This finding is similar to that of Hofmann, *et al.*, (2017) who found that local management was important in ensuring safety at work by making "micro-decisions" in the day -to-day operations in deciding how to implement safety policies and procedures as well as how to prioritize safety when there are competing goals. Study results indicated that management was carrying out activities to promote safety in the industry. This finding also supports study findings by Marzlan (2013) who found that management support may influence the safety attitude and safety culture of members in their team, which also helped to determine the safety performance of the team. The study found that nearly all employed workers were trained on safety and work, participated in safety drills. Some key informants observed that training was a key component in ensuring that safety procedures were observed in the industry, this finding agreed with what Hoffman, Burke & Zohar (2017) found that safety training was an important part of occupational health and safety (OHS) programs that contributes to fulfilling the organizational safety goals

4.6.6 Employee Performance

To have a better employee performance, a significant proportion of the workers, 41.3% agreed whereas 27.3% strongly agreed that safety was a factor that can increase workers level of performance. This produced a mean response of 2.31 with a standard deviation of 1.17. The respondents 38% and 14.4% agreed and strongly agreed respectively that organizational targets were usually achievable giving a mean response 2.69 with a standard deviation of 1.16. This was illustrated in table 4.16.

Table 4. 16: Employee Performance in the Industry

Items	SA	A	N	D	SD	Mean	StdDev
Safety can increase your level of performance	108 (27.3%)	163 (41.3%)	19 (4.8%)	100 (25.3%)	5 (1.3%)	2.31	1.17
Able to accomplish set targets	57 (14.4%)	150 (38%)	53 (13.4%)	122 (30.9%)	13 (3.3%)	2.69	1.16
Employees in this company are productive	72 (18.2%)	140 (35.4%)	45 (11.4%)	132 (33.5%)	6 (1.5%)	2.63	1.17
Able to adopt innovative ways of improving productivity	75 (19%)	160 (40.5%)	28 (7.1%)	122 (30.9%)	10 (2.5%)	2.57	1.19
Able to accomplish client's demand on time	55 (14%)	153 (38.6%)	63 (16%)	114 (28.9%)	10 (2.5%)	2.66	1.13
Aggregate Score						2.58	1.16

SA-strongly agree, A-Agree, N-Not sure, D-disagree, SD-strongly disagree

Organizational targets were usually achievable as indicated by 73% of the respondents. However, 22.5% of the workers felt that the organizational targets were not usually achieved. This was mainly because of work overload, absenteeism from work, injuries or sick off as shown in table 4.17.

Table 4. 17: Reasons for Failure to Achieve Organizational Targets

Reasons	**Frequency (n = 92)**	**Percent**	**Ranks(1-main reason)**
Work overload	34	37.0	1
Absentee from work	29	31.5	2
Injuries	13	14.1	3
Sick off	13	14.1	3
Others	3	3.3	4

According to key informant interview with some employees in textile companies in the Epz stated those employee performance in the companies was average. Others asserted that they may perform highly if safety was observed. Generally, the performance was good except for the day to day challenges which employees were always coping with. Safety policies were included during the employee's performance appraisal forms and new employee's recruitment forms. There is the legal requirement in OSHA 2017 on training employees on carrying out drills. The management should ensure that the staff is trained regularly on first aid and safety by a reputable company; fire drills to be conducted regularly and fire detectors to be put in place. This will ensure that staff is conversant and understand all the safety issues and will be able to counter any emergencies.

The key informants were also asked to explain how **s**afety compliance affected employee performance. First, it may lead to occupational disease or injuries which may lead to absenteeism. Second, since the company introduced a close check on their safety standards of equipment and machines they had witnessed a drop in work safety related accidents which in turn had seen factory efficiency grow tremendously. Third, safety compliance if well maintained had a very high rate of effectiveness on achieving production efficiency since it reduced time wasted while taking time nursing injuries sustained time to time and also saved the company from having non-productive workers who would otherwise would be on and off duty while nursing injuries got as a result of unsafe working conditions. It was also reported that non-compliance had a negative effect whenever it is experienced.

This was because the outcome was always low productivity. Occurrences of injuries also meant that the well-being of an employee was affected by effects of injuries sustained. Regarding safety policies the key informants indicated that use of (PPE) production protective equipment, for instance, gloves, masks; headgears can help to improve productivity.

In addition employees should follow signs, training of evacuations when there is fire, fire safety instructions and that machines should have guards. Training programs need

to be put in place and create awareness among the workers so that the company can achieve a result of 100% compliance with regard to maintenance of safety standards. Besides the existing policies, much emphasis needed to be put on other production equipment by ensuring all machines were in good working conditions and guarded appropriately. There should be more training programs to raise awareness among workers so that the company reduces the levels of ignorance on such issues. Safety information and communication play a great role in improving the safety of the workers in the factories; rules on safety are safely placed in strategic areas for workers and all other stake holders. There should be a policy on disposal of sharp needles, guidelines on lifting heavy loads and the occupational health and safety policies.

4.7 Diagnostic Tests

Several diagnostic tests were performed in this study which include: Multicollinearity test and normality test

4.7.1 Test of Multi-collinearity

According to William *et al.* (2013), multi-collinearity refers to the presence of correlations between the predictor variables. In severe cases of perfect correlations between predictor variables, multi-collinearity can imply that a unique least squares solution to a regression analysis cannot be computed. Multi-collinearity inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors (Belsley *et al*., 2008). The rule of the thumb is that if the VIF value lies between 1-10 then there is no multi-collinearity and if the VIF value is <1 or > 10, there is multi-collinearity. Preliminary results in table 4.18 indicate that there was no multi-collinearity between the independent variables and the dependent variable as the VIF values lies between 1 and 10. This was supported by the fact that the Pearson correlation coefficient for all the variables was less than 0.8 (Table 4.18).

Table 4. 18: Multi-Collinearity Test

Variable	Tolerance	VIF
Workers Knowledge	.752	1.330
Safety Promotion Policies	.703	1.422
Workers' Participation	.652	1.533
Safety Communication	.784	1.275
Management Commitment	.707	1.413

4.7.2 Normality Test Results

In order to estimate how well the data could be distributed, the study adopted the measure of Skewness and Kurtosis. Skewness according to (Bono, Arnau, Alarcón, & Blanca, 2020) measures the data deviation in distribution from symmetry and Kurtosis measures the peakness of the distribution. The values of Skewness and Kurtosis should be zero in normal distribution (Creswell, 2011). This is demonstrated in table 4.19 which shows that the data was normally distributed since the values are less than zero

Table 4. 19: Skewness and Kurtosis Test for Normality

	Employee Performance	Workers knowledge	Safety promotional policies	Workers participation	Safety communication	Management commitment
Mean	12.7677	17.1875	17.5383	10.3643	9.4860	15.0787
Std. Error of Mean	.22622	.30752	.31218	.18393	.18334	.25386
Skewness	-.029	-.196	-.078	-.041	.073	-.199
Std. Error of Skewness	.123	.122	.123	.124	.123	.123
Kurtosis	-.828	-.933	-.859	-.776	-.835	-.818
Std. Error of Kurtosis	.245	.243	.246	.247	.246	.245

Histograms are used to give an instant image of distribution of data. The study adopted the use of a histogram to test the normality of the dependent variable. In a nutshell and as shown on Figure 4.5 the data for the dependent variable was normally distributed

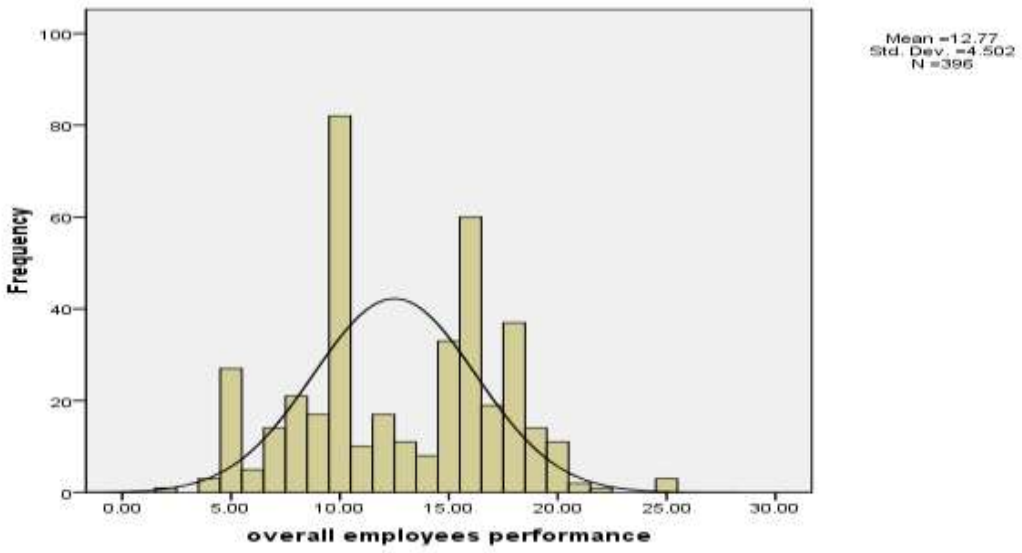

Figure 4.5: Histogram of Employee Performance

The study also adopted Kolmogorov- Smirnov and Shapiro Wilk test to test the normality of all the variables. The results of the two test showed that the p- values were greater than 0.05 an indication that the data was normally distributed as shown on the table 4.20. This therefore means that the entire data set used in this study was normally distributed.

Table 4. 20: Kolmogorov-Smirnov and Shapiro-Wilk

Variables	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Workers knowledge	.096	395	.01*	.986	395	.010
Safety policy	.096	395	.01*	.986	395	.010
Workers participation	.096	395	.01*	.986	395	.010
Safety communication	.096	395	.01*	.986	395	.010
Management commitment	.096	395	.01*	.986	395	.010

*. This is a lower bound of the true significance.

4.7.3 Normality Test using Kolmogorov-Smirnov of Workers Knowledge of Safety Standards

Normality test result for the workers knowledge data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.055, D-: 0.891D: 0.091, P value of < 0.01. This was illustrated in figure 4.6. This implies that statistical tests to test hypothesis were accurate since the response did not deviate so much from the normal

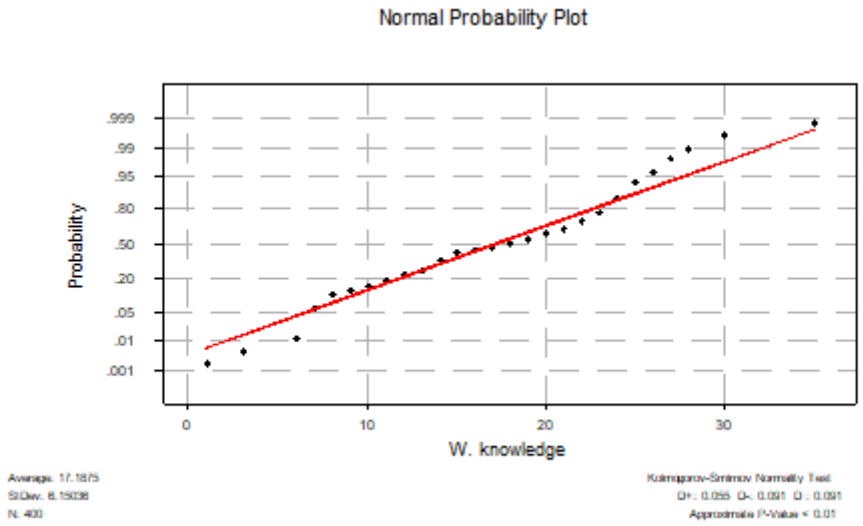

Figure 4.6: Normality Test for Workers Knowledge

4.7.4 Normality Test using Kolmogorov-Smirnov of Safety Policy

Normality test result for the safety policy data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.885, D-: 0.094, D: 0.094, P value of < 0.01. This was demonstrated in figure 4.7. This implied that statistical tests to test hypothesis were accurate since the response did not deviate so much from the normal

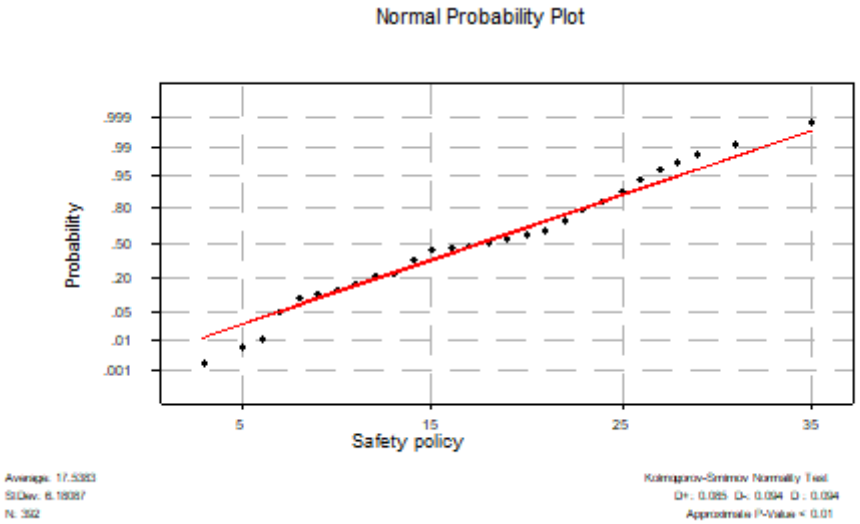

Figure 4.7: Normality Test for Safety Policy

4.7.5 Normality Test using Kolmogorov-Smirnov of Worker Participation

Normality test result for the Workers participation data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.076, D-: 0.054, D: 0.076, P value of < 0.01. This was illustrated in figure 4.8.

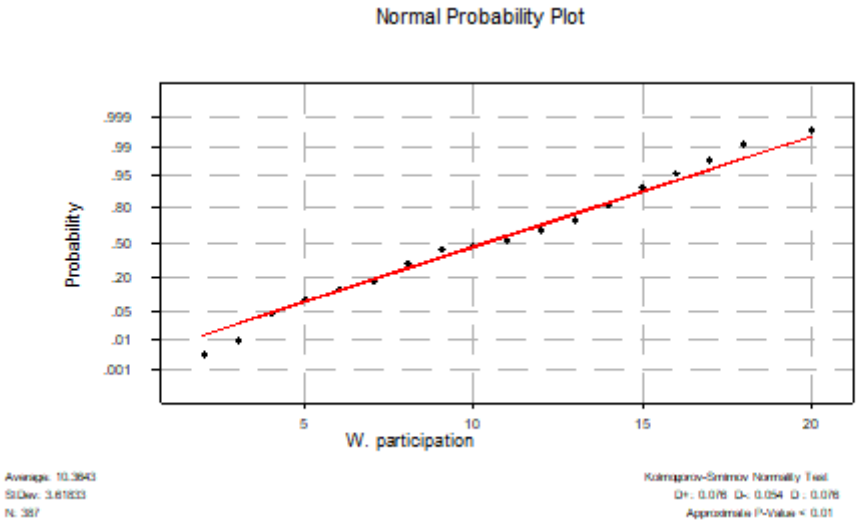

Figure 4.8: Normality Test for Workers Participation

4.7.6 Normality Test using Kolmogorov-Smirnov of Safety Communication

Normality test result for the Safety communication data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.047, D-: 0.047, D: 0.047, P value = 0.41. This was shown in figure 4.9. This implied that statistical tests to test hypothesis were accurate since the response did not deviate so much from the normal

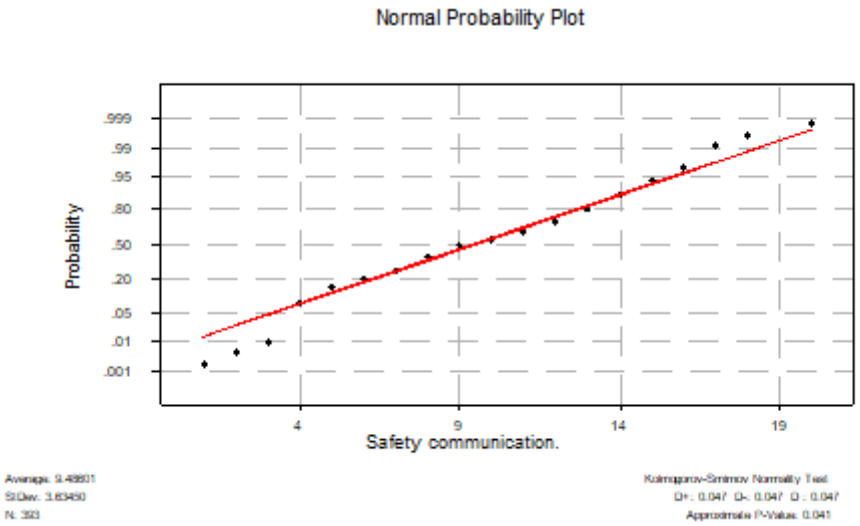

Figure 4.9: Normality Test for Safety Communication

4.7.7 Normality Test using Kolmogorov-Smirnov of Management Commitment

Normality test result for the Management commitment data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.085, D-: 0.095, D: 0.0956, P value of < 0.01. This was demonstrated in figure 4.10. This implied that statistical tests to test hypothesis were accurate since the response did not deviate so much from the normal

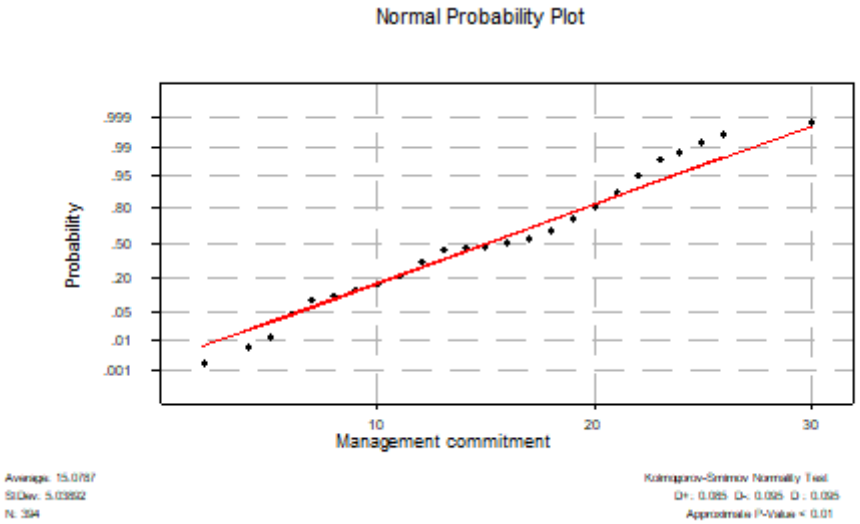

Figure 4.10: Normality Test for Management Commitment

4.7.8 Normality Test using Kolmogorov-Smirnov of Employee Performance

Normality test result for the Employee performance data showed that the data had a normal distribution with a Kolmogorov -Smirnov Normality test result of D+: 0.096, D-: 0.104, D: 0.104, P value of < 0.01. This was illustrated in Figure 4.11. This implied that statistical tests to test hypothesis were accurate since the response did not deviate so much from the normal

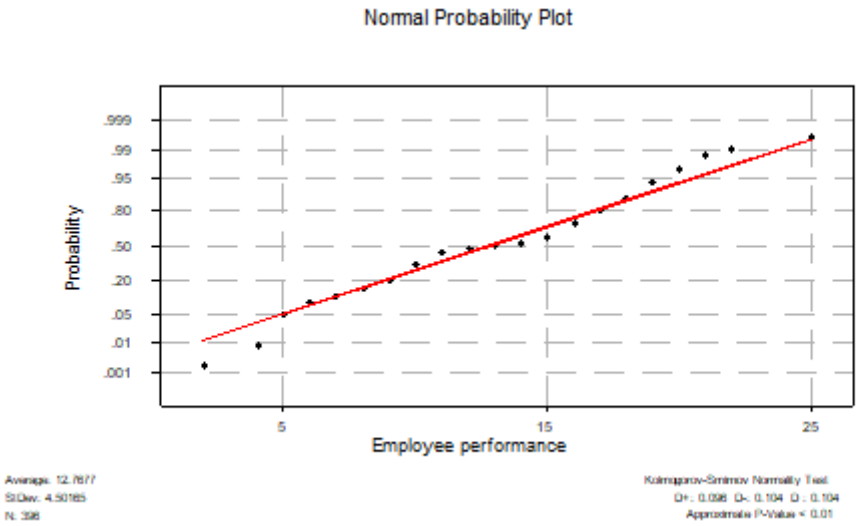

Figure 4.11: Normality Test for Employee Performance

4.8 Inferential Analysis

According to Kothari (2004) inferential analysis employs probability theory to infer the properties of a population from the analysis of the properties of the sample drawn from it. The scores were computed from inferential statistics to determine the relationship and the effect of work safety compliance (independent variable) and employee performance in textile companies (Dependent variable) in Kenya. This was attained using correlation analysis and Multiple regression analysis.

4.8.1 Correlation Analysis

Cooper and Schindler (2011) explain that the strength of the relationship which is shown by correlation coefficient ranges from a negative one to a positive one. A positive coefficient indicates that the relationship between the independent variable and dependent variable is positive and perfectly linear. A correlation coefficient of 1 means that for every positive increase in one variable, there is a positive increase of a fixed proportion in the other. If the coefficient is a negative one, it indicates that there exist perfect negative linear relations. A correlation coefficient of -1 means that in

every positive increase in one variable, there is a negative decrease of a fixed proportion in the other. When the coefficient value is zero it means that for every increase, there is no positive or negative increase. The two are just not related.

This means that the dependent and the independent variable are linearly independent. In order to have a stronger positive linear relationship between dependent and independent variable, the correlation coefficient should be closer to positive and when we have a stronger negative linear relationship between dependent and independent variable, the correlation coefficient should be closer to negative.

This study used Pearson Correlation Coefficient to determine the degree of relationship between work safety compliance (Independent variable) and employee performance (dependent variable). This study found that there exists a relationship between the independent variable (workers knowledge of safety standards, safety promotional policies, workers participation, and safety communication) and dependent variable (employee performance).

In objective one as stated above, the establishment of the relationship between workers' knowledge of safety standards and employee performance was carried out using Pearson moment correlation. The findings showed that, there was a significant positive relationship ($r = 0.823$, $P = 0.0001$), (Table 4.25) High level of knowledge of the workers on safety standards resulted into better performance of the employees in an organization. On the contrary, lack of knowledge of the workers' safety led to poor performance of the employees. This finding agrees with that of Song, He and Li (2011) who found that increasing awareness on safety issues among employees enable them to comply with safety standards.

The establishment of the relationship between safety promotional policies and employee performance was carried out using Pearson moment correlation. The findings showed that, there was a significant positive relationship ($r = 0.791$, $P = 0.0001$). Better safety promotional policies in the organization resulted into better performance of the employees in an organization. On the contrary, low levels of safety

promotional policies lead to poor performance of the employees. This finding is similar to that of Burke *et al*., (2011) who found that formulation of work safety policies help in improving conditions of work which in turn boost employees performance.

The relationship between workers' participation in the implementation of safety standards and employee performance was carried out using Pearson moment correlation. The results showed that, there was a significant positive relationship (r = 0.719, P = 0.0001) (Table 4.21) When the workers participate more on the implementation of safety standards in an organization there was better performance of the employees in an organization. These results agree with what Neal and Griffin, (2005) found that workers participation is important in improving employee performance. In order to establish the relationship between safety communication and employee performance, Pearson moment correlation was carried out. The result showed that, there was a significant positive relationship (r = 0.739, P = 0.0001). Frequent communication of safety to employees resulted into better performance of the employees in an organization. This finding is similar to that of Williams (2003) who found that one of the most effective ways to improve a safety culture and prevent injuries is to optimize safety-related communication

The relationship between management commitment and employee performance was carried out using Pearson moment correlation. The result showed that, there was a significant positive relationship (r = 0.827, P = 0.0001). When the management shows commitment to employee in an organization there was better performance of the employees in an organization. This result agrees with that of CPWR, (2014) who found that management commitment is important in work performance as it avails sufficient resources for effective implementation and maintenance of safety related activities.

Table 4. 21: Correlation Analysis Results

		Employee Performance	Workers Knowledge	Promotional Policies	Worker Participation	Safety Communication	Management Commitment
Employee Performance	Pearson Correlation	1	.816**	.781**	.701**	.732**	.816**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	395	395	395	395	395	395
Workers Knowledge	Pearson Correlation	.816**	1	.795**	.705**	.747**	.765**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	395	395	395	395	395	395
Promotional Policies	Pearson Correlation	.781**	.795**	1	.742**	.763**	.823**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	395	395	395	395	395	395
Worker Participation	Pearson Correlation	.701**	.705**	.742**	1	.721**	.792**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	395	395	395	395	395	395
Safety Communication	Pearson Correlation	.732**	.747**	.763**	.721**	1	.792**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	395	395	395	395	395	395
Management Commitment	Pearson Correlation	.816**	.765**	.823**	.792**	.792**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	395	395	395	395	395	395

**. Correlation is significant at the 0.01 level (2-tailed).

4.8.2 Multiple Regression Analysis

Multiple regression statistics was employed to determine whether the relationship existed between the composite construct of safety management practices and criterion construct of employee's performance. Furthermore, via multiple regression statistics the null hypotheses formulated for direct relationships were tested using the contextualized regression model in this study. The regression equation was contextualized in this study as:

$Y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \varepsilon.$

Where Y= Employee Performance

β_0 = Constant

X_1= Workers Knowledge

X_2 = Safety Promotional Policies

X_3= Worker Participation

X_4 = Safety Communication

Table 4.22: Multiple Regression Results for Direct Relationship

Predictor	Coef	SE Coef	t	p
Constant	1.065	0.394	2.70	0.007
W. knowl	0.322	0.037	8.82	0.001
Safety p	0.173	0.038	4.56	0.001
W. parti	0.150	0.055	2.71	0.007
Safety c	0.167	0.058	2.88	0.004

R = .855 R-Sq = .731 R-Sq (adj) = .728, F = 268.203, p = 0.000

Source: Survey Data (2020)

As indicated in Table 4.22, the regression parameters showed that the coefficient of correlation (R) was .855 which indicated that a strong relationship existed between safety management practices and employee's performance in textile manufacturing companies in Kenya. The coefficient of determination (R^2 = .731) also indicated that the composite construct of safety management practices explained 73.1% variations in the dependent variable (Employee's performance), while the remaining 26.9% accounted for other variables not addressed in this study that could explain employee's performance. The F-value as also shown in Table 4.22 indicated a fit between the regression model and the data collected in this study. Therefore, employee's performance was regressed against safety management practices and the regression model is written as:

Employee's performance = 1.065 + 0.322 Worker knowledge + 0.173 Safety promotional policy + 0.150 Worker Participation + 0.167 Safety communication.

4.9 Test of Hypotheses of the Study

4.9.1 Testing of Hypothesis One

The first objective sought by this study was to determine the relationship between workers' knowledge of safety standards and employees' performance in textile manufacturing companies in selected counties in Kenya. A corresponding hypothesis (H_{01}) was formulated that there is no relationship between workers' knowledge of safety standards and employees' performance in textile manufacturing companies in selected counties in Kenya. As presented in Table 4.22, workers' knowledge of safety standards was statistically significant at $\beta = 0.322$, $t = 8.82$; $p = 0.001$, and therefore at 0.05 level of significance, workers' knowledge of safety standards has a positive relationship with employees' performance of textile manufacturing companies in Kenya. The regression parameters also indicated that one unit increase in workers' knowledge of safety standards yielded 0.322 increases in employees' performance. This study thus concluded that there is a statistically significant relationship between workers' knowledge of safety standards and employees' performance of textile manufacturing companies in Kenya. The regression model on workers knowledge on safety versus performance of the workers in textile companies in Kenya.

The results of positive relationship between workers' knowledge of safety standards and employees' performance were in consonance with the findings in previous studies that documented positive evidence of significant effect of safety management practices on performance outcomes (Vinodkumer & Bhasi, 2010; Cheng, Kelly, & Ryan, 2015). Furthermore, the findings of this study were in agreement with the theoretical reasoning provided by social exchange theory that relationship between employee and employer is hinged on the norms of reciprocity, and therefore this study concluded that workers that perceived that their organizations are conscious of their safety in workplace would reciprocate in terms of values quantifiable in forms of performance.

4.9.2 Testing Hypothesis Two

The second objective sought by this study was to examine the relationship between safety promotional policy and employee's performance in textile manufacturing companies in Kenya. The corresponding hypothesis stated that there is no relationship between safety promotional policies and employee's performance in textile manufacturing companies in Kenya. As indicated in Table 4.22, the regression parameters of the data analysed showed that safety promotional policy was statistically significant at $\beta = 0.173$, $t = 4.56$, $p = 0.001$. These parameters indicated that at 0.05 level of significance, safety promotional policy has a positive and significant relationship with employee's performance in textile manufacturing companies in Kenya. The interpretation of the results thus means that a unit increase in safety promotional policy resulted to 0.173 increase in employee's performance in textile manufacturing companies in Kenya.

The findings of the positive relationship between safety promotional policy and employee's performance were in agreement with the findings in previous studies that adherence to safety promotional policy enhanced performance at employee level within an organization (Dwomoh, Owusu, & Addo, 2013; Mashi, Al Subramaniam, & Johari, 2017). The results of this study supports the tenets of theoretical paradigms of system theory, behavioural based safety theory, and human factor theory that emphasised on building human resource as valuable asset so as to reinforce desired positive attitudinal and behavioural outcomes that would in turn enhance performance.

4.9.3 Testing Hypothesis Three

The third objective sought by this study was to determine how worker participation in the implementation of safety standards affects employee performance in textile manufacturing companies in Kenya. The formulated corresponding hypothesis stated that worker participation in the implementation of safety standards does not have affect employee performance in textiles manufacturing companies in Kenya. As presented in Table 4.22, the regression parameters from the data analysed ($\beta = 0.150$, $t = 2.71$, $p =$

0.007) showed that at 0.05 level of significance, the alternate hypothesis of relationship between worker participation in implementation of safety standards and employee performance was statistically significant and therefore the null hypothesis of no significant effect was not accepted. The results also indicated that, given other variables of interest held constant; a unit increase in worker participation yielded 0.150 increase in employee performance.

As remarked in the literature that worker participation in occupational, health and safety programmes yields better outcomes that unilateral management innitiatives (Gunningham, 2008), the findings of this study therefore support and in agreement in with evidence of positive and significant effect of worker participation on various organizational outcomes (Aksorn & Hadikusumo, 2008; Wachter & Yorio, 2014; Akpan, 2011).

4.9.4 Testing Hypothesis Four

The fourth objective sought by this study was to establish the relationship between safety communication and employee's performance in textile manufacturing companies in Kenya. The corresponding hypothesis formulated was that there is no relationship between safety communication and employee's performance in textile manufacturing companies in Kenya. As indicated in Table 4.22, the regression parameters showed that safety communication was statistically significant, and at $\beta = 0.167$, $t = 2.88$, and $p = 0.004$, the hypothesis of no relationship between safety communication and employee's performance was not accepted and this thus indicated that the relationship between safety communication and employee's performance was significant. The results also indicated that when other variables of interest remained constant, a unit increase in safety communication resulted to 0.167 increase in employee's performance.

4.9.5 Testing the Moderating Effect of Management Commitment

This study also sought to establish the moderating effect of management commitment on the relationship between safety management practices and employee performance in textile manufacturing companies in Kenya. The corresponding hypothesis was stated that management commitment has no significant effect on the relationship between safety management practices and employee's performance in textile manufacturing companies in Kenya was sought in the study. The hypothesis was tested using hierarchical regression method and the interpretation of the results was done using two-variable steps proposed by MacKinnon, Lockwood, Hoffman, West, and Sheet (2002). The results of the moderation test are presented in Tables 4.23, 4.24, and 4.25 respectively. The moderated multiple regression model involved first running regression analysis between safety management system aspects and employee performance in the textile manufacturing companies; secondly the safety management system aspects with the moderator included as a variable and finally running regression with the moderator to observe the interaction effect between management commitment and safety management system aspects.

Table 4.37 provide a model summary indicating an R^2 value of 0.868 for the relationship between safety management system aspects (safety communication, workers participation, safety policies and workers knowledge) and employee performance implying that 86.8% of the variations in employee performance could be attributed to safety management system aspects. When management commitment was included as a variable the R^2 value increased to 0.929 implying that 92.9% of the variations in employee performance could be attributed to management commitment and safety management system respectively. Further when management commitment moderated the relationship between safety management system aspects and employee performance, the study realized an R^2 value of 0.932 which indicated that 93.2 percent of variations in employee performance could be attributed to safety management system aspects when moderated by management commitment.

The ANOVA test was performed to determine the significance of the models. The significant values for the first, second and the moderated model were all 0.000 which was $p < 0.05$ confidence level indicating that the models were statistically significant as shown by F-values, F_1=647.841, F_2=1030.329, F_3=597.157. This implies that the models were reliable and could be used for statistical inference. The F-values also indicated that the regression models fitted the data. The regression model before the moderation effect is computed as follows:

Employee's engagement = -4.481 + 2.328 Workers Knowledge + 1.171 Safety Policies + 1.028 Worker Participation + 0.467 Safety Communication + 2.759 Management Commitment

The estimated regression before the moderation effect revealed that all the latent variables of safety management practices were significant (workers knowledge: β = 2.382, t = 8.190, p = .000, safety policies: β = 1.171, t = 8.129, p = .000, workers participation: β = 1.028, t = 6.959, p = .000, safety communication: β = 0.467, t = 3.416, p = .000), and the regression parameters for the moderating variable were also significant (management commitment: β = 2.759, t = 18.426, p = .000). These results indicate that both the composite construct of safety management practices and management commitment jointly predicted employee's performance in textile manufacturing companies in Kenya, and particularly management commitment also functioned as an explanatory variable. The aforementioned regression parameters explained the important first step in determining the conditions necessary for satisfying mediation effect.

Table 4. 23: Model Summary of Management Commitment

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932[a]	.868	.866	1.36528
2	.964[b]	.929	.928	1.00188
3	.966[c]	.932	.931	.98269

a. Predictors: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies

b. Predictors: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies, Management Commitment

c. Predictors: (Constant), Safety-Communication, Workers-Participation, Workers-Knowledge, Safety-Policies, Management-Commitment, Communication*Interaction, Safety-Policies*Interaction, Workers-Participation*Interaction, Workers-Knowledge*Interaction

Table 4.24: ANOVA for Management Commitment

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4830.268	4	1207.567	647.841	.000[b]
	Residual	736.275	395	1.864		
	Total	5566.543	399			
2	Regression	5171.058	5	1034.212	1030.329	.000[c]
	Residual	395.485	394	1.004		
	Total	5566.543	399			
3	Regression	5189.930	9	576.659	597.157	.000[d]
	Residual	376.613	390	.966		
	Total	5566.543	399			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies

c. Predictors: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies, Management Commitment

d. Predictors: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies, Management Commitment, Communication*Interaction, Safety-Policies*Interaction, Workers-Participation*Interaction, Workers-Knowledge*Interaction.

Table 4. 25: Regression Coefficients for Management Commitment

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-5.996	.430		-13.952	.000
	Workers Knowledge	3.493	.378	.277	9.251	.000
	Safety Policies	1.827	.190	.296	9.608	.000
	Workers Participation	1.987	.188	.293	10.544	.000
	Safety Communication	1.302	.176	.202	7.411	.000
2	(Constant)	-4.481	.326		-13.752	.000
	Workers Knowledge	2.328	.284	.185	8.190	.000
	Safety Policies	1.171	.144	.190	8.129	.000
	Workers Participation	1.028	.148	.152	6.959	.000
	Safety Communication	.467	.137	.072	3.416	.001
	Management Commitment	2.759	.150	.477	18.426	.000
3	(Constant)	-8.095	1.166		-6.944	.000
	Workers Knowledge	5.562	1.043	.442	5.333	.000
	Safety Policies	1.837	.492	.298	3.737	.000
	Workers Participation	.213	.546	.031	.390	.697
	Safety Communication	-.520	.499	-.081	-1.043	.298
	Management Commitment	4.475	.528	.774	8.471	.000
	Workers Knowledge Interaction	-1.484	.461	-.688	-3.220	.001
	Safety Policies Interaction	-.318	.218	-.237	-1.457	.014
	Participation Interaction	.382	.227	.263	1.682	.041
	Communication Interaction	.447	.212	.295	2.108	.036

a. Dependent Variable: Employee Performance

b. Predictors in the Model: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies
c. Predictors in the Model: (Constant), Safety Communication, Workers Participation, Workers Knowledge, Safety Policies, Management Commitment

In the results of the hierarchical regression, using the second step in the two-variable model as explained by MacKinnon, *et al*. (2002), the latent variables measuring safety management practices and management commitment with its interactive term were regressed on employee's performance as the dependent variable to determine the interactional effect. As presented in Table 4.23, the coefficient of determination of the moderating variable before the interactive term was significant (R^2 = .929), and also the coefficient of determination of the interactive term was significant (R^2 = .932). These results indicated that both the moderating variable and the interactive term significantly explained the variations in the dependent variables (employee's performance). The change or the difference in the values of the coefficient of determination of both the moderating and the interactive term shows that the interactive term moderated the relationship between the independent variable (safety management practices) and the dependent variable (employee's performance). The F-values of both the interactive term and the moderating variable were also significant (management commitment (F- value = 1030.329, p = .000, interactive term = 591.157, p = .000), and these results indicated that the regression models fitted the data for this study. The regression model is now computed as follows:

Employee's Performance = - 8.095 + 5.562 Workers Knowledge + 1.837 Safety Policies + .213 Worker Participation - .520 Safety Communication + 4.475 Management Commitment -1.484 Workers Knowledge*management Commitment - .318 Safety Policies*Management Commitment +.382 Workers Participation*Management Commitment + .447safety Communication*Management Commitment

As presented in 4.25, the composite construct safety management practices in the regression model was statistically significant (workers knowledge: β = .5.562, t = 5.333, p = .000, safety policies: β = 1.837, t = 3.737, p = .000, worker participation: β

= .213, t = .390, p = .697, safety communication: β = - .520, t = -1.043, p = .298), management commitment was also significant (β = 4.475, t = 8.471, p = .000), and the interactive term was also statistically significant (worker knowledge*management commitment: β = - 1.484, t = -3.220, p = .001, safety policies*management commitment: β = - .318, t = -1.457, p = .014, workers participation*management commitment: β = .382, t = 1.682, p = .041, safety communication*management commitment: β = .447, t = 2.108, p = .036). The aforementioned results, following the steps proposed by MacKinnon, *et al*. (2002) are explained in Table 4.40:

Table 4.26: Summary and Decision Criteria for Management Commitment

Constructs	Before moderation		After moderation		Implication of change and conclusion
	Coefficient	P-value	Coefficient	p-value	
Safety Management System	Workers knowledge β = 2.328	.000	Workers knowledge: β = 5.562	.000	
	Safety policy β = 1.171	.000	Safety policy: β = 1.837	.000	
	Worker participation β = 1.028	.000	Worker participation: β = .213	.000	
	Safety communication β = .467	.001	Safety communication: β = -.520	.697	
				.298	
Management Commitment	Management commitment β = 2.759	.000	Management commitment: β = 4.475	.000	**There is a moderation effect**
Interactive term	-	-	Workers knowledge*Management commitment: β = - 1.484	.001	
			Safety policy*Management commitment: β = -.318	.014	
			Worker participation *Management commitment: β = .382	.041	
			Safety communication*Management commitment: β = .447	.036	

Note: β is statistically significant at 0.05 level of confidence.

The decision criteria, following the two-variable steps proposed by MacKinnon, *et al*. (2002), states that if the coefficient of the moderating variable before the moderation

is statistically significant and the coefficient of the interactive term is not statistically significant, then the moderating variable functions as an explanatory variable and moderation effect does not exist. On the other hand, if the coefficients of both the moderating variable and its interactive term are statistically significant, then there is a moderation effect. Therefore, as depicted in Table 4.40, the coefficient of the moderating variable before moderation was statistically significant (β = 2.759, p = .000) and the coefficient of interactive terms were also significant (Wk: β = - 1.484, p = .001, Sp: β = -.318, p .014, Wp: β = .382, p = .041, and Sc: β = .447, p = .036), therefore there is a moderation effect. The results of the moderation effect showed significant effect and therefore the hypothesis of no significant effect of management commitment on the relationship between safety management system and employee's performance is not accepted. Therefore, the relationship between safety management system and employee's performance was moderated by management commitment.

4.10 Revised Conceptual Framework

The study revised the conceptual framework presented in Figure 2.1 to incorporate the new knowledge gained as reflect the ranking based on the strongest variables to the lowest ones. From the findings workers knowledge was found to have the greatest influence on employee performance in textile manufacturing companies while safety communication was found to have the least influence on employee performance of textile manufacturing firms in Kenya. Figure (4.12) shows the revised conceptual framework based on the variables' levels of significance.

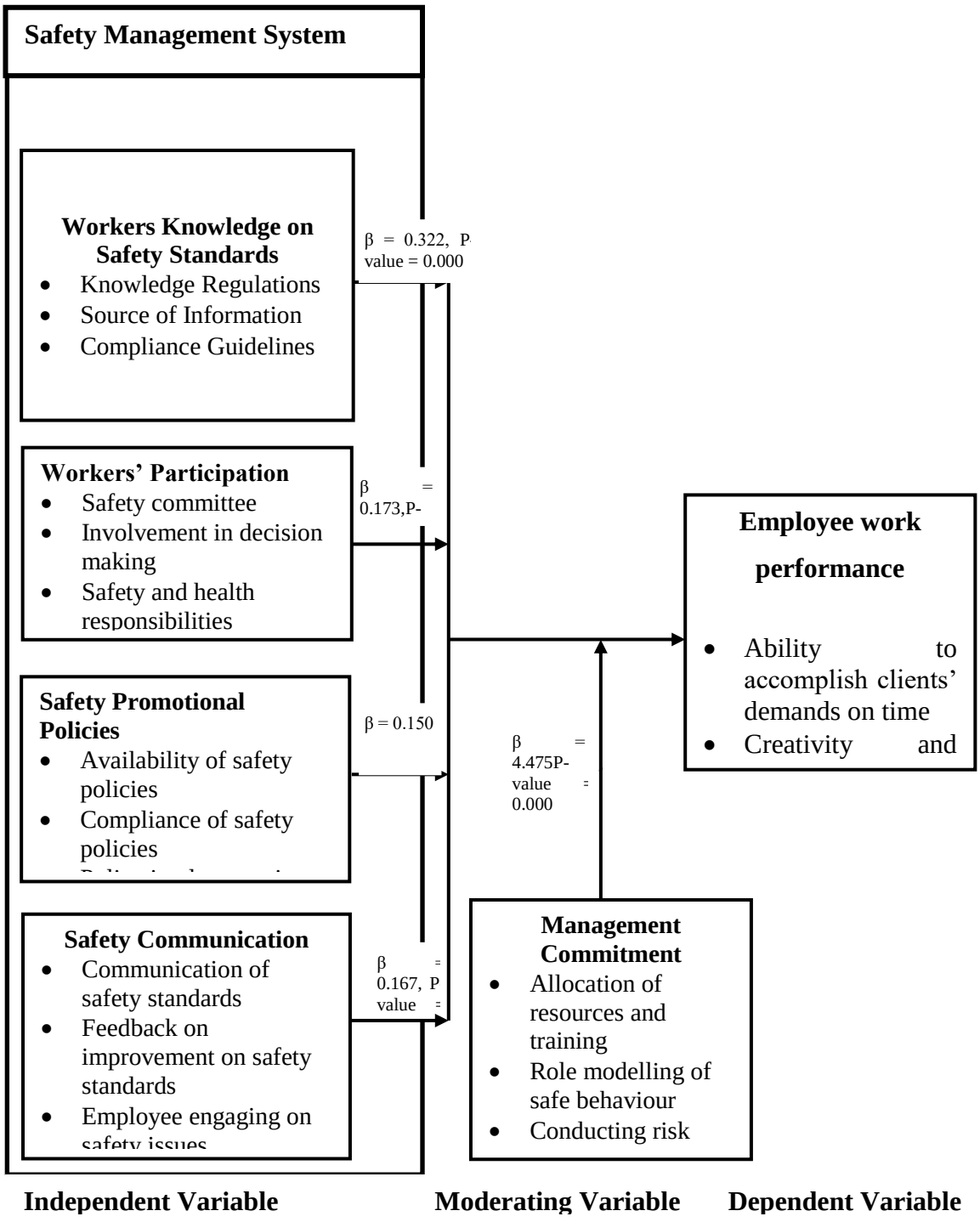

Figure 4.12: Revised Conceptual Framework

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter contains a summary of the study findings according to the specific objectives. This is followed by conclusion and recommendation of the study. It will also look at suggestions for further research.

5.2 Summary of Major Findings

The findings of this study are based on the following specific objectives: to determine the relationship between workers' knowledge of safety standards and employee's performance in textile manufacturing companies in Kenya; to determine the relationship between safety promotional policies and employee's performance in textile manufacturing companies in Kenya; to determine how worker participation in the implementation of safety standards affect employee performance in textile manufacturing companies in Kenya; to establish how safety communication influences employees' performance in textile manufacturing companies in Kenya; and finally to determine the moderating effect of management commitment on the relationship between work safety compliance and employee performance in textile manufacturing companies in Kenya.

The study adopted a cross sectional descriptive research design. This research design was beneficial to the study as it provided a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time which was important in getting answers from the research objectives and hypothesis. The study population was a sample of the textile companies in the export processing zone in Athi River and Industrial area in Nairobi.

5.2.1 Workers' Knowledge and Employee Work Performance

It was established that a majority of textile workers in the export processing zone had prior knowledge of a number of safety standards in their companies. It was also noted is that there was a positive relationship between workers knowledge of safety standards and employee performance of textile companies in Kenya. Almost half of the respondents indicated that they had knowledge of various safety standards in their companies. Some of the safety standards that they knew included: wearing of protective clothing such as gloves, helmets, and overalls. In addition the employees had knowledge on the use of fire extinguishers, proper waste disposals, proper equipment handling etc. The employees were also able correctly define safety standards. They defined safety standards as having individual responsibilities to safety standards, adhering to health and safety rules and having joint occupational health and safety committees.

The employees outlined some challenges related to health and safety at work. This included; insufficient protective clothing, insufficient fire hazards equipment installed and lack of proper waste disposal. Finally the study found that having high level of knowledge of the workers on safety standards resulted into better performance of the employees in an organization. On the contrary, lack of knowledge of the workers' safety led to poor performance of the employees. The inferential analysis results revealed that workers' knowledge had a relationship with employee work performance. It was also established that the management commitment had a significant moderating effect on the relationship between workers' knowledge and employee work performance.

5.2.2 Safety Promotional Policies and Employee Work Performance

The study found that most of the workers were aware of the safety promotional policies. They also received safety training in their companies. The study revealed that there was a positive relationship between safety promotional policies and employee

performance of textile companies in Kenya. Slightly below half of the respondents revealed that safety policies are available in their companies.

A sizeable number of textile workers established there is presence of safety culture in their company while some of the workers indicated that there is available mechanism of enforcing safety policies. Therefore better safety promotional policies in organization resulted into better performance of employees. On the other hand, low levels of safety promotional policies would lead to poor performance of employees.

Management commitment was found to be a key factor determining how safety promotional policies contributed to employee work performance. The inferential analysis results on the other hand revealed that indeed safety promotional policies had a significant and positive influence on the employee work performance. The results further showed that management commitment had a significant moderating effect on the relationship between safety promotional policies and employee work performance. This means that when the organizational management comes up with policies of work safety and sets the role model by adhering to these policies, the employees are also empowered to adhere to the latter.

5.2.3 Workers Participation and Employee Performance

The descriptive analysis revealed that workers participation in implementation of safety standards enhanced employee performance in textile manufacturing companies in Kenya. The main method by which employees participated in decision making was by taking part in safety committees that they were entrusted with both the creation of safety standards and implementation of the standards. The respondents also indicated involvement in safety and health responsibilities and participation in safety issues affect employee performance. It was also noted that the more workers participate in safety issues, the less premium workers paid to insurance companies.

The management commitment was found to have a significant moderating effect on the relationship between worker participation and employee work performance. This

implies that when the management is more committed to involving the employees in decision making, the adherence to safety policies increases thus enhancing employee work performance.

5.2.4 Safety Communication and Employee Work Performance

The study found that majority of workers agreed that effective safety communication can improve employee performance. There was a positive relationship between safety communication and employee performance in textile manufacturing companies in Kenya. Most of the employees indicated that there is an effective communication mechanism and that they are trained on safety communication. The most preferred mechanism was through notices and memos on notice boards. Other mechanisms used were through staff announcements, emails and letters. Frequent communication of safety to employees resulted into better performance of employees in their organizations.

The forms of communication used to alert workers in case of emergency included telephone, oral speech, and written statements. Out of these forms, the most commonly used was telephone. Safety communication goes a long way to ensure that employees meet their basic routine to keep safety standards and also ensure factory standards are kept at all-time high. The results further showed that the management commitment had had a significant moderating effect on the relationship between safety communication and employee work performance. It was established that when the management provide adequate safety information, the workers will know what is required of them thus reducing the number of accidents which is a key aspect towards enhancing employee performance.

5.3 Conclusion

In conclusion, the study made a number of observations concerning safety management system and employee performance in textile companies in selected counties in Kenya. Besides confirming what the theory and literature say, the study

also generated additional insights on the relationship between safety management system and employee performance

The study concludes that there was a significant relationship between workers knowledge of safety standards and employee performance. This therefore supports debates in literature that the knowledge and understanding of safety standards will occasion better performance outcomes at various organizational levels. The study also concludes that there was a positive relationship between safety promotional policies and employee performance. It was observed that the presence of safety promotional policies cultivated safety culture which in turn improved employee performance. This study also concludes that there is a relationship between workers participation in implementation of safety standards and employee performance. It was observed that the more workers participate in implementation of safety standards, the better they perform in their work. Also it was concluded that there is a positive relationship between safety communication and employee performance. This evident from the fact that when there is communication of safety standards to employees, they are more aware of safety standards and their performance is enhanced. This supports knowledge in literature that the efficiency of safety communication remains a function employee performance at various organizational levels. With regard to management commitment the study concludes that there was a moderating effect of management commitment on the relationship between safety management system and employee performance. This implies that extension of commitment and support of management will endear positive attitude and behavior towards adhering to safety standards which will in turn generate performance outcomes at various organizational levels.

5.4 Recommendations of the Study

5.4.1 Workers Knowledge of Safety Standards

The study made several recommendations, on knowledge of safety standards; the study recommends that there should be periodic safety training and awareness of safety standards from employees in the textile manufacturing companies in Kenya. This will

ensure that employees know the safety standards they are supposed to adhere to. The knowledge of safety standards should not only apply for the textile manufacturing companies but to all manufacturing companies so that employee performance can improve as well as organizational performance.

5.4.2 Safety Promotional Policies

With regard to safety promotional policies, the study recommends that textile companies should have well-structured policies and have a mechanism to enforce these policies so that employees can be able to comply and ensure work safety is adhered to. Proper safety promotional policies will cultivate good safety culture which is very crucial to attainment of organizational goals and objectives.

5.4.3 Workers Participation

On worker's participation in implementation of safety standards, the study recommends that workers should be involved in decision making of safety standards so that they can own those policies. This will make it easier for them to comply with the set safety standards since they participated in making them. They are able to see the importance of complying with the safety standards hence less resistance in adherence of them. This will in turn improve their performance and organizational performance as a whole.

5.4.4 Safety Communication

On safety communication, the study recommends that there should be efficient safety communication from the top management to subordinate staff. Safety regulations and instructions should be well displayed in strategic areas where employees work so as to prevent injuries and accidents in the textile companies. With less injuries and accidents there will be low absenteeism and low turnover thus employee performance will be enhanced. The textile companies will also realize higher output and profits from the sale of their products.

5.4.5 Management Commitment

Finally, the study recommends that on management commitment, there should be positive management commitment. They should act as role models to their employees therefore employees look up to them to show them the right directions to follow. If they act contrary to the safety policies they have established, this will send a wrong message to their employees thus they will not adhere to them. They should strive to make sure to be seen that they support the safety policies set. This will in turn make employees comply with safety standards provided and eventually improve their performance.

5.5 Suggestion for further research

While the findings of this study offer useful comprehension regarding the relationship between work safety compliance and employee performance in textile manufacturing companies in Kenya, it also exposed gaps in knowledge which can be addressed in future studies. The study did not focus on other manufacturing industries therefore the results obtained were specifically for the textile companies. However, the study recommends further research on work safety compliance and employee performance on other manufacturing industries.

REFERENCES

Abdelhamid, T. S., & Everett, J. G. (2000). Identifying root causes of construction accidents. *Journal of construction engineering and management*, *126*(1), 52-60.

Abudayyeh, O., Fredericks, T. K., Butt, S. E., & Shaar, A. (2006). An investigation of management's commitment to construction safety. *International Journal of Project Management*, *24*(2), 167-174.

Abuhashesh, M., Al-Dmour, R., & Masa'deh, R. (2019). Factors that affect employees job satisfaction and performance to increase customers' satisfactions. *Journal of Human Resources Management Research*, *2019*, 1-23.

African Cotton Textile Industries Federation (ACTIF).(2013). *Impact of Agoa the Textile and Apparel Industry of Kenya*.

Agnew, J., & Ashworth, C. (2012). Behavior-based safety: Setting the record straight. *Aubrey Daniels International Inc*, 1-6.

Ahmad, I., Sattar, A., & Nawaz, A. (2016). Occupational health and safety in industries in developing world. *Gomal Journal of Medical Sciences*, *14*(4).

Ahmed, J. U. (2007). Research issues in case study method: debates and comments. *AIUB Journal of Business and Economics*, *6*(2), 1-14.

Akinwale A.A. and Olusanya O.A., (2016) "Implications of occupational health and safety intelligence in Nigeria," *Journal of Global Health Care Systems*, 6(1), pp.1-13, www.jhgcs.info

Aksorn, T., & Hadikusumo, B. (2008). Critical success factors influencing safety program performance in Thai construction projects. *Safety Science*, 46(4), 709-727.

Al-Haadir, S., Panuwatwanich, K., & Stewart, R. A. (2013, May). Empirical analysis of the impacts of safety motivation and safety climate on safety behaviour. In *Proceedings of the 19th CIB World Building Congress: Construction and Society, Queensland University of Technology, Brisbane, Australia* (pp. 5-9).

Anderson, T., (2005) "Employers Lax on Absence Management. *"Employee Benefit News*.

Armstrong, M., & Baron, A. (2005). *Managing performance: performance management in action*. CIPD publishing.

Armstrong, M. (2006). *A handbook of human resource management practice*. Kogan Page Publishers.

Artaria R. &Settimi L. (2002).Proceedings of the seminar organized by ISPESL, within the 2nd Congress.

Asfaw, A. M., Argaw, M. D., & Bayissa, L. (2015). The impact of training and development on employee performance and effectiveness: A case study of District Five Administration Office, Bole Sub-City, Addis Ababa, Ethiopia. *Journal of Human Resource and Sustainability Studies*, *3*(04), 188.

Awino, Z. B., Muturia, J. M., & Oeba, L. K. (2012). Strategic planning, planning outcomes and organizational performance–an empirical study of Commercial Banks in Kenya. *DBA Africa Management Review*, *2*(3), 134-149.

Babbie, E. R. (2020). *The practice of social research*. Cengage learning.

Bakri, A., Zin, R. M., Misnan, M. S., & Mohammed, A. H. (2006, September). Occupational safety and health (OSH) management systems: towards development of safety and health culture. In *Proceedings of the 6th Asia-Pacific Structural Engineering and Construction Conference (APSEC 2006)* (pp. 5-6).

Balasundaram, K., Adugna, A., Kumar, A., Kumar, M. S., & Dawa, E. (2017). Improvement of ergonomic factors in a textile industry: a case study. *J. Recent Res. Eng. Technol*, *4*(5), 01-06.

Barling, J., & Zacharatos, A. (1999, August). High performance safety systems: Ten management practices for creating safe organizations. In *Parker SK, Griffin MA.(Chairs), Manag-ing safety at work: Beyond blaming the individual. Chicago, IL.: Symposium con-ducted at the Academy of Management Conference*.

Barling, J., & Hutchinson, I. (2000). Commitment vs. control-based safety practices, safety reputation, and perceived safety climate. *Canadian Journal of Administrative Sciences/Revue Canadienne Des Sciences De L'administration*, *17*(1), 76-84.

Barling, J., Loughlin, C., & Kelloway, E. K. (2002). Development and test of a model linking safety-specific transformational leadership and occupational safety. *Journal of applied psychology*, *87*(3), 488.

Biggs, H. C., Sheahan, V. L., & Dingsdag, D. P. (2005). A study of construction site safety culture and implications for safe and responsive workplaces. *The Australian Journal of Rehabilitation Counselling*, *11*(1), 1-8.

Blair, E., & Geller, E. S. (2000). Becoming world class in hse management. *Occupational Health & Safety*, *69*(9), 61-61.

Bono, R., Arnau, J., Alarcón, R., & Blanca, M. J. (2020). Bias, precision, and accuracy of skewness and kurtosis estimators for frequently used continuous distributions. *Symmetry*, *12*(1), 19.

Bottomley, B. (1999). *Occupational health & safety management systems: strategic issues report*. National Occupational Health and Safety Commission.

Brown, J. D. (2002). The Cronbach alpha reliability estimate. *JALT Testing & Evaluation SIG Newsletter*, *6*(1).

Brown, M., & Heywood, J. S. (2005). Performance appraisal systems: determinants and change. *British journal of industrial relations*, *43*(4), 659-679.

Bureau of Labor Statistics (2002) Workplace Injuries and Illnesses in 2001.*USDL publication*02-687.Washington, DC: US Dept. of Labour.

Burke, M. J., Bradley, J., & Bowers, H. N. (2003). Health and safety training programs. *The Human Resources Program Evaluation Handbook. Thousand Oaks, Calif: Sage Publications*, 429-446.

Burke, M. J., Salvador, R. O., Smith-Crowe, K., Chan-Serafin, S., Smith, A., & Sonesh, S. (2011). The dread factor: how hazards and safety training influence learning and performance. *Journal of Applied Psychology*, *96*(1), 46.

Burke, M. J., Sarpy, S. A., Tesluk, P. E., & Smith-crowe, K. R. I. S. T. I. N. (2002). General safety performance: A test of a grounded theoretical model. *Personnel Psychology*, *55*(2), 429-457.

Busck, O., Knudsen, H., & Lind, J. (2010). The transformation of employee participation: Consequences for the work environment. *Economic and Industrial Democracy*, *31*(3), 285-305.

Bust, P., Finneran, A., Hartley, R., & Gibb, A. (2014). Health and safety knowledge in complex networked organisations: Training the chain. *Proceeding of CIB W099 Achieving Sustainable Construction Health and Safety, Lund, Sweden, 50, 61*.

Carter, G., & Smith, S. D. (2006). Safety hazard identification on construction projects. *Journal of construction engineering and management*, *132*(2), 197-205.

Chemengich, M., Varun, V., Hesbon, O., & Fred, G. K. (2013). Policy Research on the Kenyan Textile Industry: Findings and Recommendations. *African Cotton & Textile Industries Federation, http://agoa. info/images/documents/5264/ACTIF% 20Report% 20on% 20Policy% 20Research% 20on*, *20*.

Chinniah, Y. (2015). Analysis and prevention of serious and fatal accidents related to moving parts of machinery. *Safety science*, *75*, 163-173.

Christian, M. S., Bradley, J. C., Wallace, J. C., & Burke, M. J. (2009). Workplace safety: a meta-analysis of the roles of person and situation factors. *Journal of applied psychology*, *94*(5), 1103.

Coakes, S. J., Steed, L. G., Coakes, S. J., & Steed, L. G. (2003). Multiple response and multiple dichotomy analysis. *SPSS: analysis without anguish: Version 11.0 for Windows*, 215-224.

Coomber, B., & Barriball, K. L. (2007). Impact of job satisfaction components on intent to leave and turnover for hospital-based nurses: a review of the research literature. *International journal of nursing studies*, *44*(2), 297-314.

Cooper, D. R., & Schindler, P. S. (2011). Qualitative research. *Business research methods*, *4*(1), 160-182.

Cox, A., Zagelmeyer, S., & Marchington, M. (2006). Embedding employee involvement and participation at work. *Human Resource Management Journal*, *16*(3), 250-267.

CPWR, (2014) Demonstrating Management Commitment: The Center for Construction Research and Training, *Safety Culture/Climate in Construction Workshop*

Crawford, J. (2019). Employment and the Workplace Supporting Healthy Aging. In *Healthy Aging* (pp. 349-354). Springer, Cham.

Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.

Creswell, J. W. (2011). Controversies in mixed methods research. *The Sage handbook of qualitative research*, *4*, 269-284.

Cropanzano, R., & Mitchell, M. S. (2005). Social exchange theory: An interdisciplinary review. *Journal of management*, *31*(6), 874-900.

Demographic, K. (2014). Health Survey 2014: key indicators. *Kenya National Bureau of Statistics (KNBS) and ICF Macro*, *8*, 166-206.

DeJoy, D. M., Wilson, M. G., Vandenberg, R. J., McGrath-Higgins, A. L., & Griffin-Blake, C. S. (2010). Assessing the impact of healthy work organization intervention. *Journal of Occupational and Organizational Psychology*, *83*(1), 139-165.

DeJoy, D. M., Schaffer, B. S., Wilson, M. G., Vandenberg, R. J., & Butts, M. M. (2004). Creating safer workplaces: assessing the determinants and role of safety climate. *Journal of safety research*, *35*(1), 81-90.

EANPC, (2005) The High Road to Wealth, 2005.

Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P. D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of applied psychology*, *86*(1), 42.

Emerson, R. M. (1976). Social exchange theory. *Annual review of sociology*, *2*(1), 335-362.

Eskildsen, J. K., & Nussler, M. L. (2000). The managerial drivers of employee satisfaction and loyalty. *Total Quality Management*, *11*(4-6), 581-588.

Evans, A., & Parker, J. (2008). Beyond safety management systems. *Aero Safety*.

Fang, D., Choudhry, R. M., & Hinze, J. W. (Eds.). (2006). *Proceedings of CIB W99 International Conference on Global Unity for Safety & Health in Construction: 28-30 June 2006, Beijing, China*. Tsinghua University Press.

Fang, D., Zhao, C., & Zhang, M. (2016). A cognitive model of construction workers' unsafe behaviors. *Journal of Construction Engineering and Management*, *142*(9), 04016039.

Fanning, F. (2003). *Basic safety administration: A handbook for the new safety specialist*. American Society of Safety Engineers.

Federal Aviation Administration, (2014), Safety Management System, 800 Independence Avenue, SW Washington, DC 20591

Fox, N. S., Brennan, J. S., & Chasen, S. T. (2008). Clinical estimation of fetal weight and the Hawthorne effect. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, *141*(2), 111-114.

Gallup, L. (2006). Gallup study: engaged employees inspire company innovation: national survey finds that passionate workers are most likely to drive organisations forward. *The Gallup Management Journal*.

Gardner, J.W. (1998). Can change management be successfully implemented at a gold mine to improve safety and productivity? Unpublished master's dissertation, University of Cape Town, Cape Town, South Africa.

Geller, E. S., Perdue, S. R., & French, A. (2004). Behavior-based safety coaching: 10 guidelines for successful application. *Professional Safety*, *49*(7), 42.

Geller, E. S. (2005).People-Based Safety: The Source. Virginia Beach, VA: *Coastal Training Technologies Corp*.

Geller, E. S. (2008). Leading People-Based Safety: Enriching your Culture. Virginia Beach, VA: *Coastal Training Technologies Corp*.

Geller, E. S. (2016). *The psychology of safety handbook*. CRC press.

Gereffi, G., & Memedovic, O. (2003). *The global apparel value chain: What prospects for upgrading by developing countries* (pp. 2009-12). Vienna: United Nations Industrial Development Organization.

Gereffi, G., & Frederick, S. (2010). *The global apparel value chain, trade and the crisis: challenges and opportunities for developing countries*. The World Bank.

Gherardi, S. (2018). A practice-based approach to safety as an emergent competence. In *Beyond Safety Training* (pp. 11-21). Springer, Cham.

Gitau, J. M., Mwikali, J. M., Bett, K. W., & Njau, Z. G. (2004). Noise induced hearing loss among textile industry workers in Eldoret, Kenya.

Goetzel, R. Z., & Ozminkowski, R. J. (2008). The health and cost benefits of work site health-promotion programs. *Annu. Rev. Public Health*, *29*, 303-323.

González Menéndez, M. C. (2009). Workers' Involvement at the Workplace and Job Quality in Europe. *REC-WP Working Papers on the Reconciliation of Work and Welfare in Europe*, (08-2009).

Gopang, M. A., Nebhwani, M., Khatri, A., & Marri, H. B. (2017). An assessment of occupational health and safety measures and performance of SMEs: An empirical investigation. *Safety science*, *93*, 127-133.

Greef, M. D., Broek, K., Jongkind, R., Kenny, L., Shechtman, O., & Kuhn, K. (2004). *Quality of the working environment and productivity: Research findings and case studies*. European Agency for Safety and Health at Work.

Grosch, J. W., & Murphy, L. R. (2008). Management commitment to safety: Associations with safety, quality of work life, and occupation. In *Presentation at the Society for Industrial and Organizational Psychology Conference, San Francisco, CA.*

Guerrero, L. K., Andersen, P. A., & Afifi, W. A. (2017). *Close encounters: Communication in relationships*. Sage Publications.

Guest, D. (2002). Human resource management, corporate performance and employee wellbeing: Building the worker into HRM. *The journal of industrial relations*, *44*(3), 335-358.

Guest, D. E., Michie, J., Conway, N., & Sheehan, M. (2003). Human resource management and corporate performance in the UK. *British journal of industrial relations*, *41*(2), 291-314

Gulhana B.N., Ilhanb M., Civil E.F. (2012) Occupational accidents and affecting factors of metal industry in a factory in Ankara.*Turk J Public Health*. 10:76–83.

Gupta, J. N., Sharma, S. K., & Rashid, M. A. (2009). *Handbook of research on enterprise systems*. Information Science Reference.

Hafez, N. A., Hasan, M. H., Al-Azab, R. M., & Seliem, S. R. (1998). Health profile of textile workers in an Egyptian textile factory. *African Newsletter on Occupational Health and Safety*, *8*, 19-22.

Hämäläinen, P., Takala, J., & Saarela, K. L. (2006). Global estimates of occupational accidents. *Safety science*, *44*(2), 137-156.

Hansen, M. T., Nohria, N., & Tierney, T. (1999). What's your strategy for managing knowledge. *The knowledge management yearbook 2000–2001*, *77*(2), 106-116.

Helfers, R. C., Reynolds, P. D., & Maskály, J. (2019). Applying social exchange theory to police deviance: Exploring self-protective behaviors among police officers. *Criminal justice review*, *44*(2), 183-203.

Hilyer, Barbara; Veasey, Alan; Oldfield, Kenneth; Craft-McCormick, Lisa (2000) Effective Safety and Health Training, CRC Press ISBN 1-56670-396-4

Hofmann, D. A., Burke, M. J., & Zohar, D. (2017). 100 years of occupational safety research: From basic protections and work analysis to a multilevel view of workplace safety and risk. *Journal of applied psychology*, *102*(3), 375.

Hollnagel, E., & Goteman, O. (2004). The functional resonance accident model. *Proceedings of cognitive system engineering in process plant, 2004*, 155-161.

Homans, G. C. (1961). *Social behavior: Its elementary forms*. New York: Harcourt, Brace & World.

Honkasalo, A. (2000). Occupational health and safety and environmental management systems. *Environmental Science & Policy*, *3*(1), 39-45

Houger, V.P., (2006) "Trends of employee's performance: collaborative efforts between manager and employees". *Journal of Performance Improvement*, 45(5), 26-31

Huang, Y. H., Chen, P. Y., Krauss, A. D., & Rogers, D. A. (2004). Quality of the execution of corporate safety policies and employee safety outcomes: assessing the moderating role of supervisor safety support and the mediating

role of employee safety control. *Journal of Business and Psychology*, *18*(4), 483-506.

Hussain, N., Kadir, M. M., Nafees, A. A., Karmaliani, R., & Jamali, T. (2019). Needs assessment regarding occupational health and safety interventions among textile workers: A qualitative case study in Karachi, Pakistan. *JPMA. The Journal of the Pakistan Medical Association*, *69*(1), 87.

Hussain, S. D., Khaliq, A., Nisar, Q. A., Kamboh, A. Z., & Ali, S. (2019). The Impact of Employees' Recognition, Rewards and Job Stress on Job Performance: Mediating Role of Perceived Organization Support. *SEISENSE Journal of Management*, *2*(2), 69-82.

Idoro, G. I. (2008). Health and safety management efforts as correlates of performance in the Nigerian construction industry. *Journal of Civil Engineering and Management*, *14*(4), 277-285.

Ikiara, M. and Ndirangu, L. (2004) Prospects for Kenya clothing exports under AGOA. In Clothing and Footwear in Africa. African Institute of South Africa.

International Labor Organization (ILO), (2004) Promotional framework for occupational safety and health, *International Labor Conference, 93rd Session*, Geneva, Switzerland

International Labor Organization (ILO). (2006). Occupational Safety and Health: Synergies Between Security and Productivity. Accessed from http: //www.ilo.org/public/English/standards/relm/gb/docs/gb295/pdf/esp-3.pdf

Institute of Economic Affairs, (2006) Policy Brief: Trade policy reforms and poverty in the cotton sub-sector: challenges and policy issues, *Trade Information Programme Publishers*

IRIN (2004). Focus on working conditions in EPZ companies http://www.irinnews.org/report/48975/kenya-focus-working-conditions-epz

Jabareen, Y. (2009). Building a conceptual framework: philosophy, definitions, and procedure. *International journal of qualitative methods*, *8*(4), 49-62

Jena, L.K., Pradhan, R.K. (2014). Deliverables towards HR Sustainability: A conceptual Review. *European Journal of Business Management*, 6(23), 95–102.

Jha, K. N., (2011) "Construction Project Management: theory and practice". Dorling Kindersley (India) Pvt. Ltd., Licensees of Pearson education in south Asia.

Jhamb. L. C. and Jhamb, S., (2003) "Safety and Services Management", Second Edition. NIRALI PRAKASHAN.

Jones R, George M & Charles W., (2000).Contemporary management. (2nd ed.)*McGraw Hill Higher Education. Boston, USA*. ISBN 978007246312

Kemei, R. K., Kaluli, J. W., & Kabubo, C. K. (2016). Assessment of Occupational Safety and Health in Construction Sites in Nairobi County, Kenya.

Katsakiori, P., Sakellaropoulos, G., & Manatakis, E. (2009). Towards an evaluation of accident investigation methods in terms of their alignment with accident causation models. *Safety Science*, *47*(7), 1007-1015.

Katsoulakos, T., & Katsoulacos, Y. (2007). Integrating corporate responsibility principles and stakeholder approaches into mainstream strategy: A stakeholder-oriented and integrative strategic management framework. *Corporate Governance*, *7*(4), 355-369..

Khan, I., Dongping, H., & Ghauri, T. A. (2014). Impact of Attitude on Employees Performance: A Study of Textile Industry in Punjab, Pakistan. *World Applied Sciences Journal*, *30*, 191-197.

Kim, H. J., & Park, D. J. (2019). The Effect Relationship among Safety Communication, Safety Silence Motives and Silence Behaviour for Workers in Natural Gas Workplace. *Journal of the Korean Institute of Gas*, *23*(2), 35-44.

Kinyanjui, M., Lugulu, P. and McCormic, D. (2004) Clothing and Footwear in Kenya: Policy and Research Concerns. In Clothing and Footwear in Africa. African Institute of South Africa

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Kothari, C.R. (2011). Research Methodology; Methods and Techniques. New Delhi. *New Age International Publishers*

Kothari, C. R., & Garg, G. (2014). Research methodology methods and techniques (3rded.). New Delhi: New Age International (P) Ltd..

Kotzé, C. G. P. (2005). *Occupational stress, organisational commitment and ill health of employees at a University of Technology* (Doctoral dissertation, North-West University).

Lamm, F., Massey, C., & Perry, M. (2006). Is there a link between workplace health and safety and firm performance and productivity?. *New Zealand Journal of Employment Relations*, *32*(1), 75.

Lee, T., & Harrison, K. (2000). Assessing safety culture in nuclear power stations. *Safety science*, *34*(1-3), 61-97.

Leedy, P. D., & Ormrod, J. E. (2005). Practical research: planning and design. International edition.

Leveson, N. (2004). A new accident model for engineering safer systems. *Safety science*, *42*(4), 237-270.

London, M. (2003). *Job feedback: Giving, seeking and using feedback for performance improvement* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum.

Maiyo, R. C., & Imo, B. E. (2012). The Kenyan Textile Industry in a liberalized economy: An analysis of performance and challenges. *Journal of emerging trends in Economics and management sciences*, *3*(1), 111-115.

Malik, A. A., Yamamoto, S. S., Souares, A., Malik, Z., & Sauerborn, R. (2010). Motivational determinants among physicians in Lahore, Pakistan. *BMC health services research*, *10*(1), 201.

Malik, N., Maan, A. A., Pasha, T. S., Akhtar, S., & Ali, T. (2010). Role of hazard control measures in occupational health and safety in the textile industry of Pakistan. *Pak J Agri Sci*, *47*(1), 72-76.

Marchington, M., & Wilkinson, A. (2005). Direct participation and involvement. *Managing human resources: personnel management in transition*, 398-423.

Marzlan, O. (2013). *Middle-management support and safety training from towards employees safety behavior in the manufacturing environment* (Doctoral dissertation, Universiti Utara Malaysia).

Masia, U., & Pienaar, J. (2011). Unravelling safety compliance in the mining industry: examining the role of work stress, job insecurity, satisfaction and commitment as antecedents. *SA Journal of Industrial Psychology*, *37*(1), 01-10.

Mauya, E. N. (2015). The Importance Of Setting Performance Targets On Service Delivery In Performance Contracting At The Ministry Of Tourism, Kenya. *Global Journal of Human Resource Management, 3*(5); 1-8.

McIntyre, J. E., & Daniels, P. N. (1995). *Textile terms and definitions*.

Mearns, L.O., Giorgi, F., Whetton, P., Pabon, D., Hulme, M. and Lal, M. (2003) Guidelines for use of climate scenarios developed from Regional Climate Model experiments. *Data Distribution Centre of the Intergovernmental Panel on Climate Change*.

Michael, J. H., Evans, D. D., Jansen, K. J., & Haight, J. M. (2005). Management commitment to safety as organizational support: Relationships with non-safety outcomes in wood manufacturing employees. *Journal of safety research*, *36*(2), 171-179.

Miliman A, (2002) Hourly employee retention in the attraction industry: Research from small and medium sized facilities in Orlando, Florida, *Journal of Retail and Leisure Property* 2:40-51

Mitchell, T.R.; Daniels, D. (2003)Motivation. Handbook of Psychology, Vol. 12.*Industrial Organizational Psychology*, ed. W.C. Borman, D.R. Ilgen, R.J. Klimoski, pp. 225–54. New York: Wiley.

Möller, G. P. (2003). *The implementation and evaluation of a behaviour based safety intervention at Sishen Iron Ore Mine* (Doctoral dissertation, North-West University).

Mone, E. M., London, M., & Mone, E. M. (2018). *Employee engagement through effective performance management: A practical guide for managers*. Routledge.

Morrison K.A. (1997), How franchise job satisfaction and personality affects their performance, organizational commitment, franchisor relation and intention to remain, *Journal of Small Business Management* 35:39-67

Neal, A., & Griffin, M. A. (2006).A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. *Journal of applied psychology*, *91*(4), 946.

Newnam, S., & Goode, N. (2019). Communication in the workplace: Defining the conversations of supervisors. *Journal of Safety Research*, *70*, 19-23.

Okafoagu, N. C., Oche, M., Awosan, K. J., Abdulmulmuni, H. B., Gana, G. J., Ango, J. T., & Raji, I. (2017). Determinants of knowledge and safety practices of occupational hazards of textile dye workers in Sokoto, Nigeria: a descriptive analytic study. *Journal of public health in Africa*, *8*(1).

Okoye, P. U., Ezeokonkwo, J. U., & Ezeokoli, F. O. (2016). Building construction workers' health and safety knowledge and compliance on site. *Journal of Safety Engineering*, *5*(1), 17-26.

Olweny-CODA, H., & Karuiki, F. G. (2013). Policy Research on The Kenyan Textile Industry.

Onwuegbuzie, A. J., Johnson, R. B., & Collins, K. M. (2009). Call for mixed analysis: A philosophical framework for combining qualitative and quantitative approaches. *International journal of multiple research approaches*, *3*(2), 114-139.

Overman S. (2005) Safety program can cut SME insurance costs. Irelandhttp://www.shrm.org/global/news_published/CMS_011278.asp.

Padmini, D., & Venmathi, A. (2012). Unsafe work environment in garment industries, Tirupur, India. *J Environ Res Dev*, *7*, 569-575.

Parker, S. K., Axtell, C. M., & Turner, N. (2001).Designing a safer workplace: Importance of job autonomy, communication quality, and supportive supervisors. *Journal of Occupational Health Psychology*, 6(3), 211-228. doi:

Peterson, D. K. (2004). The relationship between perceptions of corporate citizenship and organizational commitment. *Business & society*, *43*(3), 296-319.

Philip E. Hagan, P. E., Montgomery, J. F., O'Reilly, J. T., (2001) "Accident prevention manual for business & industry administration & programs", 12th Edition. Occupational Safety And Health Series, *The National Safety Council Press*, Itasca, Illinois.

Podsakoff, P. M., MacKenzie, S. B., Paine, J. B., &Bachrach, D. G. (2000). Organizational citizenship behaviors: A critical review of the theoretical and empirical literature and suggestions for future research. *Journal of management*, *26*(3), 513-563.

Poon J.M (2004) Career commitment and career success: moderating role of emotion perception, *Career Development International* 9: 374-390

Pradhan, R. K., & Jena, L. K. (2017). Employee performance at workplace: Conceptual model and empirical validation. *Business Perspectives and Research*, *5*(1), 69-85.

Probst, T.M., & Brubaker, T.L. (2001). The effects of job insecurity on employee safety outcomes: Cross-sectional and longitudinal explorations. *Journal of occupational Health Psychology*, *6*(2), 139–159

Quinlan, M., Mayhew, C., &Bohle, P. (2001). The global expansion of precarious employment, work disorganization, and consequences for occupational health: a review of recent research. *International journal of health services*, *31*(2), 335-414.

Rad, K. G. (2013). Application of domino theory to justify and prevent accident occurance in construction sites. *IOSR journal of mechanical and civil engineering (IOSR-JMCE)*, *6*(2), 72-76.

Rasmussen, J. & Svedung. I. (2000): *Proactive Risk Management in a Dynamic Society*. Karlstad, Sweden, Swedish Rescue Services Agency.

Reason, J. (1990). *Human error*. Cambridge university press.

Rentao, M., & Cao, Y. (2019). High-Performance Work System, Work Well-Being, and Employee Creativity: Cross-Level Moderating Role of Transformational Leadership. *International Journal of Environment Research and Public Health, 16* (1640); 1-24.

Republic of Kenya (2007): The Occupational Safety and Health Act, 2007

Republic of Kenya (2015): Kenya National Industrialization Policy Framework. industrialization.eac.int/index

Riaz, A., & Haider, M. H. (2010). Role of transformational and transactional leadership on job satisfaction and career satisfaction. *Business and Economic horizons*, *1*(1), 29-38.

Ridgway, K., Clegg, C. W., Williams, D. J., Hourd, P., Robinson, M., Bolton, L.& Baldwin, J. (2013). The factory of the future. *Government Office for Science, Evidence Paper, 29*.

Robbins, S. P., DeCenzo, D. A., & Coulter, M. (2001). Fundamentals of management. *Upper Sandle River, New Jersey: USA*.

Rudman WB, Clarke RA, Metzl JF. (2003) Emergency Responders: Drastically Underfunded, Dangerously Unprepared. *Council on Foreign Relations*. New York, NY:

Salehi, V., & Veitch, B. (2020). Measuring and analyzing adaptive capacity at management levels of resilient systems. *Journal of Loss Prevention in the Process Industries*, *63*, 104001.

Saunders, M. L., & Lewis, P. (2009). P. & thornhill, a.(2009). *Research methods for business students*, *4*.

Sawacha, E., Naoum, S., & Fong, D. (1999). Factors affecting safety performance on construction sites. *International journal of project management*, *17*(5), 309-315.

Seo, D. C. (2005). An explicative model of unsafe work behavior. *Safety science*, *43*(3), 187-211.

Siu, O. L., Phillips, D. R., & Leung, T. W. (2004). Safety climate and safety performance among construction workers in Hong Kong: The role of psychological strains as mediators. *Accident Analysis & Prevention*, *36*(3), 359-366.

Smallwood, J.J., & Haupt, T. C. (2007). Impact of South African construction regulations on construction health and safety: Architects 'Perceptions. *Journal of Engineering, Design and Technology,* Vol 5(1).

Song L., He X., Li C. (2011) *Longitudinal relationship between economic development and occupational accidents in China.* Accid Anal Prev. 43:82–86

Spector, P. E. (1997). *Job satisfaction: Application, assessment, causes, and consequences* (Vol. 3). Sage publications.

Stewart, J. (2001) The Turnaround in Safety at the Kenora Pulp and Paper Mill Professional Safety- *The Journal of the American Society of Safety Engineers*, 46, 34-45

Taylor, G., Easter, K. and Hegney, R., (2004) "Enhancing Occupational Safety and Health". Elsevier Butterworth-Heinemann

Törner, M., & Pousette, A. (2009). Safety in construction–a comprehensive description of the characteristics of high safety standards in construction work, from the combined perspective of supervisors and experienced workers. *Journal of Safety Research*, *40*(6), 399-409.

Vecchio-Sadus, A.M., Griffiths S., (2004) Successful marketing strategies for enhancing safety culture. *Safety Science*, 42, 601-619.

Vitharana V.H.P, De Silva G.H.M.J.S. and De Silva S., (2015) "Health hazards, risk and safety practices in construction sites – *A review study," Engineer, The Institution of Engineers*, Sri Lanka, Xlviii (03), pp.35-44.

Walters D and Frick K, (2000) "Workers participation and the management of occupational health and safety: reinforcing or conflicting strategies? *Systematic Occupational Health and Safety Management. Perspective on an International Development*, Pergamon, Oxford.

Williams, J. H. (2003). "People-Based Safety: Ten Key Factors to Improve Employees' Attitudes." *Professional Safety* (2), 32-36.

Wright, Michael; Lancaster, Rebecca; Jacobsen Maher, Catherine; Talwalkar, Medha; &Woolmington, Tony. (1999) Evaluation of the Good Health is Good Business Campaign. *HSE Contract Research Report* 272 / 2000. HSE Books, Sudbury

Yanar, B., Kosny, A., & Smith, P. (2018). Occupational health and safety vulnerability of recent immigrants and refugees. *International journal of environmental research and public health*, *15*(9), 2004

Zacharatos, A., Barling, J., & Iverson, R. D. (2005). High-performance work systems and occupational safety. *Journal of applied psychology*, *90*(1), 77.

APPENDICES

Appendix I: Introduction letter

Collins Nyantari Keraka,
P.O. Box 65611- 00100,
Nairobi
21st November, 2017

RE: TO WHOM IT MAY BE CONCERNED

I am a PHD HRM student at the Jomo Kenyatta University of Agriculture and Technology. I am conducting a study on the effect of safety compliance on employee's performance in textile manufacturing industries, Machakos County, Kenya. I have selected your institution for the purpose of the study. The study is for academics and will be treated as confidential. The information obtained will only be used for the purpose of the study. Please do not indicate your name anywhere on this questionnaire.

I do hereby humbly request for your assistance in obtaining the necessary data.

Yours Faithfully,

Collins N. Keraka

Appendix II: Questionnaire

Instruction: Please (√) where necessary and explain where applicable

SECTION A: SOCIO-ECONOMIC AND DEMOGRAPHIC CHARACTERISTICS

1. What is your gender?

   ☐ Male ☐ Female

2. What is your age (years)? ☐

3. What is your marital status?

   ☐ Single ☐ Married ☐ Separated/divorced ☐ Widowed

4. What is the level of your education?

   ☐ None ☐ Primary ☐ Secondary ☐ University/College

5. What is your job cadre?

   ☐ Production Manager ☐ Tailoring Spinn ☐ Garment technician

   ☐ Other Specify …….

6. Which section of the textile manufacturing process do you work?

   ☐ Sample section ☐ Cutting section ☐ sewing section

   ☐ Finishing section ☐ Store section ☐ Maintenance section

SECTION B: GENERAL INFORMATION ON COMPLIANCE TO SAFETY STANDARDS

7. Do the employees at your workplace comply with the safety standard?

a) Yes ☐

b) No ☐

8. If yes, which safety standards are observed at your manufacturing industry?
   a) Appropriate use of fire extinguishers
   b) Proper waste disposals
   c) Correct work procedures
   d) Others Specify ……..
9. If no, why do most of the employees not comply?
   a) Ignorance of safety standards
   b) To save time in completion of work
   c) Work peer pressure to not to comply with safety rules and regulation
   d) Others Specify ……..
10. What are the constraints to improving safety standards?
11. What is the organization doing to improve safety standards?

SECTION C: WORKER'S KNOWLEDGE ON SAFETY STANDARDS (Please (√) where necessary and explain where applicable)

No	Question	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
12	The employees in our organization have the appropriate knowledge of safety standards					
13	The employees understands the challenges relating to health					

	and safety at work					
14	Every employee abides to health and safety rules in our organization					
15	The workers are able to easily notice problems relating to employees' safety					
16	The company has upheld safety of employees as a key area of focus					
17	The employees actively and frequently give their views on what ought to be done to enhance their safety at work					
18	The employees' knowledge on safety has significantly enhanced employees'					

	performance in our organization					

19. What do you understand by safety standards at work?
    a) Having individual responsibility to safety standard
    b) Having joint occupational health and safety committee
    c) Adhering to health and safety rules
    d) Correct work procedures
    e) Having emergency procedures
    f) Reporting and investigating accidents/incidents
    g) Workplace inspections

    h) Employee orientation to safety standards

    h) Others specify ----------

20. List the safety standards that you know?
    a) Wearing protective clothing e.g. helmets, overalls, gloves etc.
    b) Using fire extinguishers in case there is fire
    c) Provide medical examinations and training
    d) Proper waste disposal
    e) Proper heat and lighting in place
    f) Others specify ----------
21. What are the challenges that you have relating to health and safety at work?
    a) Insufficient protective clothing e.g. gloves, eye protection goggles, hard hats etc.
    b) Insufficient fire hazard equipment installed
    c) Lack of proper waste disposal
    d) Insufficient heat and lighting
    e) Others Specify …….
22. Which among these challenges relate to employee safety?

a) Respiratory illnesses e.g. byssinosis, bronchitis and bronchial asthma
b) Worker related injuries
c) Presence of noise causing hearing problems
d) Others Specify ……

SECTION D: SAFETY PROMOTIONAL POLICIES (Please (√) where necessary and explain where applicable)

30. What forms of communication are used to alert workers in case of an emergency?

No	Question	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
23	There are clear and well stipulated safety policies in our company					
24	The safety policies in our company are effectively implemented					
25	Workers adequately comply with safety policies in our company					
26	There are effective mechanisms in our company to enforce safety policies					
27	Our company upholds safety culture among the employees and other stakeholders					
28	The management has taken key measures to ensure safety culture is maintained in our company					
29	The workers in our company are adequately trained on safety measures					

a) Telephone

b) E mail

c) Written statements e.g. letters

d) Oral speech e.g. word of mouth

e) Others Specify ……

31. What actions has management undertaken to promote safety culture?

a) Developing safety policies

b) Creating safety training programs

c) Ensuring that workers adhere to safety regulations

d) Others Specify ……

SECTION E: WORKERS' PARTICIPATION (Please (√) where necessary and explain where applicable)

No	Questions	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
32	Safety committee in your organization					
33	Employees involved in designing safety programs					
34	Presence of safety and health responsibilities					
35	Does workers' participation in safety issues affect employee performance					

36. What is your role in the committee?

a) Chairman of committee

b) Secretary of committee

c) Member of committee

d) Other Specify …….

37. Are employees involved in designing safety programs in your organization?

a) Yes

b) No

38. Which programs are employees involved in?

a) Production planning program

b) Environmental, health and safety programs

c) Quality management program

d) Other Specify ……..

SECTION F: SAFETY COMMUNICATION (Please (√) where necessary and explain where applicable)

No	Questions	Strongly Agree	Agree	Not Sure	Disagree	Strongly Disagree
39	Is there communication of safety at work					
40	Is there an effective communication mechanism					
41	Employees trained on safety communication					
42	Can safety communication improve employee performance					

43. What do you understand by safety standards?

a) Maintaining safety regulations within the industry

b) Prevention of accidents and injuries within the industry

c) Protecting yourself and other employees against workplace illnesses

d) Other Specify ……

44. Explain the mechanisms used to communicate safety standards to workers?

a) Through notices and memos on notice boards

b) Through staff meetings

c) Through emails, letters etc.

d) Through announcements

e) Other Specify ……

SECTION G: MANAGEMENT COMMITMENT (Please (√) where necessary and explain where applicable)

No	**Questions**	**Strongly Agree**	**Agree**	**Not Sure**	**Disagree**	**Strongly Disagree**
45	Management carrying out activities to promote safety					
46	Availability of safety policy formulation					
47	Resources and equipment's are available to protect employees					
48	Management role model of safe behavior					
49	Availability of safety targets					

50	Management commitment to safety affect employee performance					

51. What resources and equipment's are available to protect employees?

_____

52. Has risk assessment been conducted when the organization want to expand its factory?

a) Yes

b) No

53. If yes, what safety aspects were assessed when the risk assessment was done?

a) Installation of fire extinguishers

b) Installation of air conditioners

c) Waste disposal procedure

d) Others specify ----------

54. To what extent has risk assessment been conducted when the organization wants to expand its factory? _____

55. What potential risks are communicated to the employees in this industry?

_____

SECTION H: EMPLOYEE PERFORMANCE (Please (√) where necessary and explain where applicable)

No	Question	Strongly Agree	Agree	Not sure	Disagree	Strongly disagree

56	Safety is a factor that can increase your level of performance					
57	Organizational targets usually achievable					
58	Employees in this company are productive					
59	Room for improvement to boost performance					
60	Employees perform above the set target by management					

61. Are organizational targets usually achievable?

a) Yes
b) No

62. If no give reasons

a) Absentee from work

b) Injuries

c) Sick off

d) Work overload

e) Other specify ----------

Appendix III: Key Informant Interview Guide

Key informant interviews will be done with textile employees who will help interviewer to know more about work safety compliance, management commitment and employee performance in textile manufacturing companies.

Name of interviewee: …….

Organization: ……..

Position Held: …….

Time interview started: ……..…… Time ended: ……....

Name of Interviewer: …….. Sign ……..

INTERVIEW QUESTIONS

1. What are the challenges of the textile employees in this institution?
2. In your own opinion what can your employer do to address these challenges?
3. To what extent does the worker participation affect work safety in this institution?
4. In your opinion to what extent does management in your company have commitment to safety?
5. Do workers in your company have knowledge on safety regulation?
6. How does safety compliance affect employee performance in your company?
7. In your opinion which safety policies should your company adopt to improve productivity?
8. How will safety communication help in ensuring safety standards are properly kept?
9. Does management provide training on safety in your company?
10. In your opinion how will you rate employee performance in your company?

Appendix IV: List of Textile Manufacturing Companies in Athi River and Nairobi

Serial No	Name of Industry	Location
1	Alltex EPZ Ltd	Athi River
2	Appex Apparel EPZ Ltd	Nairobi
3	Ashton Apparel EPZ Ltd	Nairobi
4	Baraka Apparel EPZ Ltd	Nairobi
5	Global Apparel Kenya EPZ Ltd	Athi River
6	JAR Kenya EPZ Ltd	Nairobi
7	Mirage Fashion Wear EPZ Ltd	Athi River
8	MRC Nairobi EPZ Ltd	Athi River
9	Protex EPZ Ltd	Athi River
10	Rising Sun	Athi River
11	Rolex Garments EPZ Ltd	Athi River
12	Sahara Stitch EPZ Ltd	Nairobi
13	United Aryan EPZ Ltd	Nairobi
14	UpanWasana EPZ Ltd	Nairobi
15	Tailor made Jeans wear EPZ Ltd	Athi River
16	Suman Shakti EPZ Ltd	Nairobi
17	Rupa Cotton Mills EPZ Ltd	Athi River
18	Royal Garments EPZ Ltd	Athi River