FACTORS AFFECTING IMPLEMENTATION OF HEALTH AND SAFETY PRACTICES IN WORK PLACE: A CASE STUDY OF TEMEKE MUNICIPALITY

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A DESSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN HUMAN RESOURCES MANAGEMENT OF THE OPEN UNIVERSITY OF TANZANIA

2017

CERTIFICATION

I the undersigned, certify that I have read and hereby recommend for the acceptance by the Open University of Tanzania a dissertation titled **"Factors Affecting Implementation of Health and Safety Practices in Workplace: A Case Study of Temeke Municipality"** in partial fulfillment of the requirements for the award of Masters Degree In Human Resources Management (MHRM) of the Open University Of Tanzania.

…….

DR. RAPHAEL GWAHULA

(Supervisor)

……..

DATE

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DECLARATION

I, **Petro Senso** certify that this dissertation is my own original work, and that it has not been submitted for a similar degree in any other University.

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Signature

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Date

DEDICATION

This Dissertation is especially dedicated to my father Mr. Samson Birore, my mother Theresia (Matinde), my brothers, Marwa, Chacha, Danny and Sam; and my sisters Eliza, Salo and Esther for their hearty encouragement. You are all the hidden treasures!!!

ACKNOWLEDGEMENTS

I thank the almighty God, the Creator of heavens and earth. Frankly speaking, He is the one who has been with me from the very beginning of this work, enlivening me and carrying me through all challenges and obstacles. Indeed, He is worthy of all praise and glory!!

My sincere thanks and undying gratitude are all extended to my supervisor Dr. Raphael Gwahula and Mr. James Kalanje the coordinator, who tirelessly have been there for me, supporting me through and through to ensure the survival of my academic dream. Your thoughtfulness and professionalism in revising this work are all hailed as useful tips for making this dissertation a success. In you I have found a true academic guidance and mentorship, an incomparable benevolence to be treasured incessantly.

My indebtedness also goes to my family, relatives and comrades who determinedly boosted up my academic aspiration. I hope that your benevolent support and silent prayers be awarded abundantly. I am grateful for the assistance and support of Dr. Charles M. S. Birore from Norfolk State University and for constructive ideas from Samuel S. Birore, Nyaisawa C. Birore, and Daniel S. Birore. Your ideas and support have made this report possible as it stands today. I truly thank all of you.

I thank all staff members at Temeke municipality for their cooperation; Mr. Laurence Makoa, the HR officer, thank you for your guidance and support through different departments to collect data. Your persistent endeavor benefited me tremendously. To all my lecturers, I thank you for your hearty guidance. To me you are cherished heroes without whom this work would be impossible. To all those who have joined their hands in pushing forward this work, I absolutely thank you very much indeed.

ABSTRACT

Sadly, unsafe workplace still remains a potential threat to the health of workers. Work–induced accidents, hazards and illnesses may result in workers' incapacities or even deaths. The purpose of this study was to investigate factors affecting the health and safety practices (HSPs) in workplace at Temeke Municipality, Tanzania. A case study approach to inquiry using cross-sectional survey was used to collect data. The purposive sample of 168 potential participants was selected from a population of 312 employees. The data were collected by using a self-administered, semi-structured questionnaire. Data processing included data cleaning and ascertaining assumptions of selected statistical tests. Data analysis involved descriptive statistics, bivariate correlation and regression, ANOVA and multiple regression. The Pearson correlation revealed strong positive relationships between HSPs and all three predictor variables; leadership, employee involvement and employee training. The regression model indicated that 58.3% of the variance in HSPs was explained by leadership, 52.2% by employee involvement and 71.1% by employee training. The overall multiple regression combining all three predictor variables revealed that 76.4% of the variance in HSPs was explained by such variables. From the findings, it was concluded that improved organizational leadership, increased employee involvement in the HSPs and enhanced employee training on HS precautions at workplace, all have potential for improved employees' health and safety and organizational productivity and efficiency. The study's findings have three implications. This study will be of usefulness especially to HR managers of the municipal councils, to both experienced and inexperienced researchers, government and academic institutions for further evaluation and improvement of HSPs at workplace.

Keywords: Implementation, HSPs, leadership, employee involvement, employee training

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LIST OF ABBREVIATIONS

ACC	Accident Compensation Corporation
CSA	Canadian Standards Association
DMI	Disaster Management Institute.
HS	Health and Safety
HRM	Human Resource Management
HRMs	Human Resource Managers
HSE	Health and Safety Executive
HSG	Health and Safety Guide
HSM	Health and Safety Management
HSPs	Health and Safety Practices
ILO	International Labour Organization
ISI	Institute for Scientific Information
MoLE	Ministry of Labour and Employment
NAOT	National Audit Office of Tanzania Report
OHS	Occupational Health and Safety
OH	Occupational Health
OHSP	Occupational Health and Safety Programmes
OSH	Occupational Safety and Health
OSHM	Occupational Safety and Health Management
PPE	Personal Protective Equipment
SMEs	Small-and Medium-Sized Enterprises
WHS	Workplace Health and Safety

CHAPTER ONE

1.0 INTRODUCTION

To begin with, this part introduces the background of the study along with the statement of the research problem. Covering both general and specific objectives, and the research questions; nevertheless, it also expounds the significance/relevance of the research, scope, limitations and delimitations and closes with the general organization of the dissertation.

1.1 Background to the Study

Evelyn Kortum, WHO (2014), once said this; "It is unethical and short-sighted business practice to compromise the health of workers for the wealth of enterprises." Being healthy is the greatest wealth and gift. You can give everything to gain health, but to give or sacrifice your health to gain everything is not only dangerous but also something irrational.

Goggling the phrase "healthy and safety practices", the results will incredibly astound you. About 226,000,000 results! Agreeably, it's a hot topic. Regardless of thousands of views and interpretations of what the phrase means, this study helps in unraveling facts and make a sense amongst such a lot of information. It provides some guidance to all managers, employers and workers who wish to have a sustained safe workplace. As Dr. Neira M, (WHO) put it; 'the wealth of business depends on the health of workers'.

A great portion of an employee's life is spent in the workplace. The circumstances surrounding workplace inevitably will often have an impact on workers' health. The WHO (1994) estimates that 58% of the world's population spend one-third of their adult

life at work. Work can have an irrefutable impact on individuals, their families and society, as it is a source of income and material outputs which supply for the necessities of life. However, studies suggest that work can also be seriously detrimental to employees' HS (e.g. Cox, Griffiths & Rial-Gonzalez, 2000; da Costa & Vieira, 2010; Leka & Jain, 2010; WHO, 2010). Thus in pursuing the goal of health, as defined below, it is vital to uphold standards and practice level so as to shield workers' health and safety and block possible negative impact resulting from unfavourable working conditions. (Leka & Andreou, 2012)

The World Health Organization (WHO, 2006) define health as; "a state of being complete physically, mentally and socially and not merely an absence of illness or infirmity". The question is: how can managers unmistakably ensure that their workers are 'completely' healthy physically, mentally and socially in workplace? As per Datey-Baah and Amponsah-Tawiah (2012), one of the key challenges to the occupational health profession in the 21st century is protecting workers' HS in a global economy characterized by a fierce competition to reduce production costs and a marked decline in the development and implementation of governmental workplace regulations. The current global change touches almost all people around the world and in all aspects of life, above all the work life. Progress in generating OHS to the industrializing countries has been painfully slow. In the poorest countries, there has been no progress at all. The number of poor has increased in absolute terms for the past decade in almost all regions of the world. The majority of occupational illnesses are occurring almost exclusively in the developing countries. It is generally agreed that if the current rate of industrial growth of these countries keeps on, then the number of occupational injuries and disease cases may well double by the year 2025.

In modern world, declares Gatchel and Kishino (2012), there has been a long history of attempts to deal with health issues associated with the workplace. In fact, after the start of the industrial revolution, the financial issues of compensation for negligent accidental injuries in the workplace became significant. This study underscores the influence of leadership, employee involvement and employee training in implementing HS practices at workplace.

HS practices are concerned with protecting employees and other people affected by what the company produces and does. Safety practices serve to prevent accidents and so reducing the subsequent loss and damage to people and their property. They relate more to systems of work than the working environment; HS practices are concerned with protection of workers against hazards (Armstrong, 2012). Economically, morally, and legally, occupational HS practices have become an important issue. For some companies addressing safety, health, and environmental issues may mean more than good business practice (Friend & Kohn, 2007). Investing in HS can far raise workers' commitment and performance; hence here is a call for managers to consider HS as an investment rather than a cost. (Dyck, 2013)

Objectively, this study is intended to assess in depth the literature related to the factors affecting implementation of HS practices in workplace in Tanzania. In light of the aforementioned issues, it will contribute to the improvement of OHS of workers by examining the influence of leadership, the role played by employee involvement as well as the effects of training upon implementing HS practices at workplaces. In the end, this research comes up with a flexible yet evidence-based framework of factors which contribute to HS excellence; nonetheless, a framework for workplace HS practices to be enforced collaboratively by employers, workers and stakeholders, all seizing the

opportunity regardless of the enterprise size or sector, the degree of development of the country, the regulatory or cultural background in the country. Recent reports detailing the devastating effects of unsafe workplace have created not only public interest and concern, but also a swift need to counteract those effects. There will be no better time than now to start implementing HS practices, however, if you change nothing, nothing else will change.

1.2 Occupational Health and Safety Practices in Tanzania

According to Datey-Baah and Amponsah-Tawiah (pp. 89, 2012), OSH is broadly defined by WHO as a field that aims at promoting and monitoring the highest level of physical, mental and social wellbeing of employees in all occupations, protecting employees from workplace hazards and risks that are inimical to health, placing and ensuring that employees work in an environment that resonate with both their physical and mental needs. Thus, OSH is focused on adapting work to life. The contrasting line of argument may be that life has to be adapted to work; however, doing so may lead to both poor physical and psychological health – a situation found in many of the advanced economies during and after the industrial revolution.

In Tanzania, the Occupational Safety and Health Authority (OSHA) which is backed by the OHS Act, 2003, is mandated to ensure appropriate HS standards of employees among businesses operating in Tanzania (Datey-Baah & Amponsah-Tawiah, pp.93, 2012) The OSHA's services cover all workplaces as defined by the OHS Act of 2003 and other subsidiary legislations. Accordingly, it serves to protect people at work against hazards to HS related to their activities at workplace (The United Republic of Tanzania, The

OHS Act, 2003*)*. OHS Act applies to all firms in the private and public sector, local government services and public authorities. (ILO, 2004)

According to Mbilinyi, (OSHA's Newsletter April, 2016), the number of registered workplaces until 2012, were about 3,000 and recent statistics indicates that over 10,000 workplaces have been registered across Tanzania Mainland. The number of workplaces inspections carried out by the Agency rose from 59,476 in a period between 2001 and 2005 to 89,552 workplaces in a period between 2006 and 2011 thus increasing the Agency's own revenue collections. The increase in the number of inspectors, though not enough, shows a significant step that has been taken in promoting OSH in Tanzania.

Datey-Baah and Amponsah-Tawiah (2012) observed that, in spite of the progresses achieved by OSHA in Tanzania, it is not without challenges. The authority's mandate is largely hampered by financial and human resources. The budgetary amount is woefully inadequate and cannot support the activities of the authority throughout the country. This implies that, most workers in Tanzania may have to continue working in unsafe conditions due to the inability of the OSHA to widen their inspections or operations. In Tanzania, Ngowi (2013) found that the concept of workplace health promotion is still ambiguous since most of the working population does not have secure jobs and work in informal workplaces that are not regulated. In such cases, worker health promotion as opposed to workplace health promotion is important, and prioritizing the informal sector in public health, particularly health promotion, is necessary. It is common knowledge that healthy, safe workers produce more than those who are ailing (Ngowi, 2013)

1.3 Statement of the Research Problem

"Safety is, without doubt, the most crucial investment we can make. And the question is

not what it costs us, but what it saves''. Robert E McKee (Hughes & Ferrett, 2016, p.60) Every 15 seconds**,** one worker dies from a work-related accident or disease and 153 workers incur work-related accident **(**ILO, 1996-2016a) As per ILO report (2011), in 2008, 2.02 million deaths were caused by work-induced diseases and 321,000 deaths from work-related accidents, equating to more than 6,300 work-induced deaths per day (ILO, 2011) In 2003 and 2004, the accidents reported in Tanzania mainland as per MoLE, (NAOT, 2013) were 1,692 and 1,889 respectively and a total amount of TZS 668.5 million were used to compensate occupational accident victims. These figures are not only large but disturbing too; for so revealing a call for urgent action to create, maintain and implement OHS programmes which will sustain healthy and safe workplaces. Sadly, such devastating figures sometimes go unnoticed. No wonder only severe work-induced injuries or illness are usually jotted down to the exclusion of so called minor un-compensable injuries (Matiko & Naidoo, 2011). As a result, this has failed to capture the real picture, leading to an underestimation of the severity of the OHS problems - thus the actual trends and rates of work-induced illnesses, fatalities and injuries remain obscure.

''Safety doesn't happen by chance''- Author Unknown (Rothmore & Boucaut, 2015). Dar es Salaam region has more than 4 million people and about 2 million are working in various sectors (National Bureau of Statistics - NBS, 2014). Such great number of workers alerts us as to pay rapt attention to HS of workers in all workplace. Several studies conducted in Tanzania revealed that workers have high levels of exposure to multiple health hazards, use of PPE is poor, high level of self-reported OH problems, poor participation in improving OHS, lack of management commitment and unawareness among employees towards OHS (Kikwasi1 & Smallwood, 2016; Mwombeki, 2005;

Manyele, Ngonyani & Eliakimu, 2008; Renatus, 2015) In a countless number, workers incur work-induced diseases like sore throat, cough, shortness of breath and accidents leading to backache, muscle tear (soft tissue trauma), and twisted ankle. (Mwaisaka, 2013)

This study therefore sought to establish the determinants of implementing HS practices in workplace. Objectively, the final goal was just to get to know the degree with which leadership, employee involvement and training influences implementation of HS practices. In light of this, the organization will be able to prioritize the formulation and implementation of OHS programmes in a way that can help individuals understand how to control, reduce and prevent considerably work-induced fatalities, illnesses, accidents and injuries in workplace, in Tanzania, Temeke Municipality in particular.

1.4 Research Objectives

1.4.1 General Research Objective

With some depth, this study intended to identify and assess credible factors affecting the implementation of HS practices in workplaces in Temeke municipality.

1.4.2 Specific Research Objectives

a) To determine the degree to which leadership influences/affects the implementation of health and safety practices in workplace in Temeke municipality.
b) To unearth the extent to which employees' involvement influences/affects the implementation of health and safety practices in workplace in Temeke municipality.

c) To ascertain whether training of workers wholly influences/affects the implementation of health and safety practices in workplaces in Temeke municipality.

1.5 Research Questions

1.5.1 General Research Question

What are the factors affecting the implementation of health and safety practices in workplace in Temeke municipality?

1.5.2 Specific Research Questions

1. To what degree does leadership influence the implementation of health and safety practices in workplace in Temeke municipality?
1. To what degree does employees' involvement influence the implementation of health and safety practices in workplace in Temeke municipality?
2. To what degree does workers' training influence the implementation of health and safety practices in workplace in Temeke municipality?

1.6 Relevance of the Study

The study can contribute to better understanding of HS practices and afterwards promotes and sustains the OHS. In the long run, both employers, managers, employees, stakeholders and all people who may be involved in working, may not only grasp the continuing benefits of implementing HS practices, but also understand in a new light how to protect themselves against work-induced illnesses, accidents, injuries and hazards. Implementing HS practices in an excellent manner will raise employees' morale and commitment resulting to an increased efficiency, effectiveness and productivity. The study made an effort towards addressing the pressing HS needs of employers and

workers, society, government and the world at large, and thus be a data base for furtherance and improvement of OHS practices in workplaces.

1.7 Scope of the Study

The scope of OHS is too wide covering such disciplines as occupational medicine, occupational hygiene, environmental hygiene, occupational psychology, HRM, engineering, ergonomics and others. Nevertheless, this study concentrated at OHS within the scope of HRM discipline. In spite of the fact that there are countless numbers of other factors that influence implementation of OHS, this study is focused itself to leadership, employee involvement and training. This is because these factors are human factors and so being core in ensuring successful implementation of OHS practices. Being conducted in Temeke Municipality (DSM) - Tanzania, the study assiduously examined the role played by employees' involvement, employees' training and the influence of leadership in implementing and maintaining workplace HS practices.

1.8 Limitations and Delimitations of the Study

Possibly, a number of limitations posed a challenge on conducting a research at its best. Confidentiality of information hindered the respondents from giving the needed information. Hence a researcher assured them that, the information given is to be used for academic purposes and strictly not otherwise. Uncooperativeness spirit shown by some respondents having varied reasons, either they don't care, being busy or whatsoever. To overcome this, a researcher prepared a timetable that coped with their situation and be easy for them to participate/follow. Ensured an effective means of follow-up was sustained so as to win their cooperativeness in both aspects. Lastly, financial constraint was an unavoidable issue. To meet an enormous number of respondents needed not only

ample time, but also money to visit them wherever they were and whenever available. Absence of enough funds thus affected a researcher in his pursuance of interviewing all required respondents involved in data collection. Thus, to reduce the costs, a researcher came up with a plan to reduce the number of days he used to collect data from the respondents by increasing the number of participants being met for each day.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1. Overview

This chapter portrays in detail a literature about the study, thereby giving a theoretical evaluation, critical reviews, and empirical analysis. Research gaps altogether were identified, theoretical framework elaborated. Broadly, the review expounded the research idea, been focused on the factors affecting the implementation of HS practices in Temeke, particularly leadership, employee involvement and employee training. For the sake of gaining a clearer view on this, an exploration into the related literature was both a must and foundational.

2.2 Conceptual Definitions

2.2.1 Implementation

Is the action taken to put a plan , an idea, decision, procedure or program into action or the act of starting to use something.(Online Cambridge Business English Dictionary, 2016)

2.2.2 Health Practice

According to Workplace Health, Safety and Compensation Commission of Newfoundland and Labrador (WHSCC-NL, 2015), a health practice is a set of guidelines to help workers perform a task that may not require a step-by-step procedure.

2.2.3 Safe Work Practices

Safe work practices usually are written methods depicting how to do a task or job with minimal risk to people, equipment, materials, environment, and processes (Infrastructure

Health & Safety Association - IHSA, 2017)

2.2.4 Occupational Illness

As per ILO, Protocol to the OHS Convention (2002), "Occupational disease" covers any disease contracted as a result of an exposure to risk factors arising from work activity. May be acute or could develop after many years of exposure, e.g. asbestosis, cancer. (WHSCC-NL, 2015)

2.2.5 Hazard

A hazard is the ability of a substance, person, activity or process to cause harm. Hazards can be, say, chemicals, electricity and working from a ladder. (Hughes & Ferrett, 2011)

2.2.6 Risk

A risk is the possibility of a substance, activity or process to cause harm. (Hughes & Ferrett, 2011) or "risk" means the probability that injury of or damage to person, property or environment will occur; (The United Republic of Tanzania, the OHS Act, 2003).

2.2.7 Workplace

"Workplace" means any premises or place where a person performs work in the course of his employment (The United Republic of Tanzania, the OHS Act, 2003)

2.2.8 Leadership

Leadership means inspiring people to do their best to achieve a desired result. (Armstrong & Taylor, 2014)

2.2.9 Employee Involvement

The direct participation of staff to help an organization fulfill its mission and meet its objectives by applying their own ideas, expertise and efforts towards solving problems

and making decisions (Bullock , 2013)

2.2.10 Employee Training

Is a learning experience; involving changing skills, knowledge, attitudes, or behavior and so changing what employees know, how they work, or their attitudes toward their jobs, co-workers, managers, and the organization. (DeCenzo, Robbins & Verhulst, 2016)

2.3 Theoretical Literature Analysis and Review

2.3.1 Health and Safety Practices

Logically, safety and health is meaningful and gainful, conversely, illness, injuries and accidents are not only wasteful but also greatly painful. HS practices cover all guidelines, programs as well as actions collaboratively and intentionally developed so as to maintain a safe and healthy workplace. As Hughes and Ferrett (2011) found, health involves protection of the bodies and minds of people from illness resulting from the materials, processes or procedures used in the workplace. WHO reported that occupational disease has become by far the most prevalent danger faced today by people at their work and recent research has shown that more than an estimated 317 million workers were injured in accidents at work that resulted in absences from work of four days or more (Datey-Baah & Amponsah-Tawiah, 2012)

As such, to restrict such overwhelming results, a number of policies and approaches must be established and implemented by various stakeholders at all levels - internationally, nationally, region-ally or at a sectoral and enterprise level to promote OSH. It is suggested that so as to effectively address worker well-being and productivity, the traditional focus of OSH must be expanded to include an understanding and assessment of those factors that lead to healthy, happy, and productive working lives. According to

Beus, Payne, Bergman and Arthur (2010), in order for health promotion to be meaningful and ensure the health and safety of workers, it has to focus on both individual behaviour and work organization and design.

2.3.2 The Usefulness of a Sustained Healthy and Safe Workplace

"No one should have to sacrifice their life for their livelihood, because a nation built on the dignity of work must provide safe working conditions for its people." Secretary of Labor Thomas E. Perez.

Simply put, health is crucial as it enables a person to labour and earn an income that relieves poverty hence accelerating the achievement of the Millennium Development Goals - MDGs. (Datey-Baah & Amponsah-Tawiah, 2012) The Accident Compensation Corporation (ACC) of New Zealand (2006) infers that, a safe and healthy workplace is one of the keys to business success. By establishing good health and safety practices in the workplace, a business is likely to have more motivated and efficient employees, lower absenteeism rates, fewer business disruptions and reductions in the costs of sick pay and temporary replacement staff. This will help to reduce the sometimes serious impacts of injury and illness on employees, families and the wider community – and improve the business's reputation both in the business world and as an employer of choice. Mearns and Hope (2005) fairly suggest that, a safe and health work environment can reduce operating costs and improve organizational effectiveness.

Health and Wellness should be approached as an investment rather than a cost (Dyck, 2013). There is a need for health and safety awareness everywhere, even in occupations which many would consider very low hazard, such as the health services and hotels (Hughes & Ferret, 2011). Friend and Kohn (2007) found that, the costs associated with

work-induced accidents, injuries or illnesses number in the billions of dollars. The shocking numbers of people involved in these accidents are a real concern. Behind the figures are real people—mothers, fathers, sisters, brothers, spouses, sons, or daughters. They are people like you whose lives may never be the same again. That's why; it is morally very significant to protect those people against such tragedies by attempting to address the safety and health concerns faced by them and so ensure workplace free of accidents, hazards and work-induced illnesses.

2.3.3 Contributions to Accident Prevention

Accident prevention is the most fundamental of all safety management practices. Hence, understanding how accidents occur is crucial to establishing means to thwart their occurrence. Actually accidents are complex events, rarely the result of a single failure, and that complexity has made comprehending how accidents occur challenging since the dawn of the industrial revolution (Toft, Dell, & Klockner, 2012). The study was guided by two theories which are relevant to effective factors for implementing health and safety practices. These are Heinrich's 'Domino Theory' and multiple causation theory.

2.3.3.1 Heinrich's Safety Theory (Heinrich's 'Domino Theory')

As per Stranks (2008), an accident is an unplanned and uncontrolled event which has led to or could have caused injury to persons, damage to plant or other loss. Different theories have attempted to explain the causes of accidents. Some focus on how employees and their action or inaction per se causes accidents. Others stick on management's roles in preventing conditions leading to accidents. Theories are not facts; they are tools predicting relationships that may exist in the future. (Friend & Kohn, 2007)

Herbert W. Heinrich, an early pioneer of accident prevention and industrial safety developed a safety theory suggesting that, unsafe acts of people are the cause of a high percentage of accidents – that people cause far more accidents than unsafe conditions do. Simply put, the accident which causes the injury is caused directly by the unsafe act of a person; but removing a key factor (such as an unsafe condition or an unsafe act) prevents an accident. What he said, however, made sense to people in the field of safety, and his ideas were accepted. They were accepted so completely that even today we work largely within his framework. ((Disaster Management Institute of Bhopal - DMI, 2010; Taylor, Easter & Hegney, 2004). This theory is quite clear; it is also quite practical and pragmatic as an approach to loss control. Simply stated, it says, 'if you are to prevent loss, remove the unsafe act or the unsafe condition'. Heinrich's theory of accident causation also included the necessity for having properly educated and trained personnel within the workforce. (Taylor, et al, 2004)

Albeit, Heinrich's Domino theory was one of the most understandable and the clearest theories defining accident processes, it was suffering some weakness affected its application. Its weaknesses include emphasizing blame on individuals not considering the fault from management and organization, and the belief about a single cause where there may be more than one (Sabet, Aadal, Moazen jamshid, & Rad, 2013) Accidents may result into lives' loss, harms to both people and properties. Terrible results, as per this theory are possibly due to the errors of people, their unsafe acts, and unsafe conditions. In which case, this theory is used as a unique tool by which the causes of accidents in workplace can be highlighted and thus save both, people's lives and their properties. It is a noteworthy inference that, basing on the simplicity of domino theory

the authorities are capable of defining how to establish a remedial tool to prevent accidents in workplace in the broader context of Tanzanian environments.

2.3.3.2 Multiple Causation Theory

According to Raouf (1998), multiple causation theory is an extension of the domino theory. It states that an accident has many contributory factors, combinations of causes and sub-causes giving rise to accidents. It also maintains that the contributory factors can be either behavioural - including factors relating to the worker, say, wrong attitude, inadequate knowledge, skills or physical and mental condition or environmental - involving improper guarding of other hazardous work elements and degradation of equipment through use and unsafe procedures.

Today, declares Taylor et al (2004), we know that behind every accident there lie many contributing factors, causes, and sub-causes. According to this theory, these factors combine together in random fashion, causing accidents. Raouf, (1998) reviews that, the major contribution of this theory is to underscore the fact that seldom, if ever, is an accident the product of a single cause or act. The current thinking is that there is no single model or theory that is correct but rather that parts of all these models are relevant to particular workforces and industries. (Taylor et al, 2004)

From the aforementioned theory, no accident is the result of a single factor, cause or act, but a combination of many contributory factors. To prevent accidents and sustain a workplace free of injuries and hazards you ought to identify ‘factors’ which cause accidents. The implication of this philosophy is not only to identify what factors or acts can cause accidents, but also to unravel the mystery of preventing them from occurring by creating viable HSPs. A combination of factors cause accidents, conversely, a

combination of factors are needed to counteract them. It is as such deduced that, a core of committed leadership, the influence of management with a combination of training of employees and their involvement in HS practices/programs might be a powerful tool in tackling "failures or errors" generally causing accidents, and so addressing these "failures or errors" before they have the chance to bring terrible harms in workplace.

2.3.4 Hazard and Risk Identification and Assessment

As per ILO (2011), a hazard is the basic property or potential of a product, process or situation to cause harm, adverse health effects on someone or damage to something. It may be from a chemical, working on a ladder, electricity, a compressed gas cylinder, a fire source or more simply a slippery floor. Risk is the likelihood or possibility that a person will be injured or suffers adverse health effects if exposed to a hazard or that property will be damaged or lost. The connection between hazard and risk is exposure, being immediate or long term, illustratively:

Figure 2.1: The Relationship between Hazard, Risk and Exposure. Source: Friend & Kohn, 2007.

An efficient system for OHS begins by detecting, evaluating and checking of workplace hazards (Pretorius (2013). Hazard identification and assessment means taking a careful look at what could harm workers and setting priorities for preventing or controlling exposure of workers to the identified hazards. (OHS Practices: A Guide for Printers; June, 2012)

However, Ngowi, (African Newsletter, 2013), found that, workers in Tanzania view hazards as part of life and at times take no precautions to prevent harm. Among the small-scale Tanzanite miners in Tanzania, deaths from work occur so regularly that people believe that deaths are necessary for these precious stones to be found, that it is the cost that the earth demands for giving them up. This fatalism may be rejected as the result of illiteracy or misconception. These workers show a mentality of despair with regard to HS hazards. The majority trust their government to protect them through regulations and information sharing, regarding, for example, hazardous chemicals. But when a government or employer decides not to invest in necessary measures such as health promotion to protect its workers, the cost is transferred to those workers, who pay with their health, injuries, and sometimes their lives. Enhanced awareness was noted along with noteworthy drop in hazardous practices when farmers were trained on self vigilance and monitoring of pesticide exposure. (ibid)

2.3.4.1 Eliminating and Controlling Hazards

Albert Einstein once asserted that, ‘‘Imagination is more powerful than Knowledge. Despite all the knowledge we might have of business and human needs, unless we can imagine a better workplace, how can we design one?’’ (Jackson & Suomi, 2004, p. 37.) To create a better workplace, “hazards” must be checked by all means. Our motto should be; without hazards, we are more than conquerors!!

Health Hazard Control involves restricting hazards from creating undesirable health effects, say noise, chemical exposures, radiation, or biological hazards. (Friend & Kohn, 2007) Whenever possible, hazards should be eliminated. If this is not possible, they must be controlled. Control involves lessening the hazard to degrees that do not pose a risk to

worker health and safety. Here are different ways to control workers' exposures to hazards: Engineering controls; Administrative controls; Personal Protective Equipment (PPE) or combination of Engineering, Administrative & PPE. (OHS Practices. A Guide for Printers; June, 2012)

By eradicating health hazards from the source, the OHS professional removes the contaminant from the workplace environment and this eventually prevents employee exposure (Friend & Kohn, 2007) Controlling risks by isolating them or segregating people and the hazard is an effective control strategy and used in many instances (Hughes & Ferret, 2011) Vigilantly, try to eliminate the hazard completely by isolating the hazard: for example, use sound proof barriers to reduce noise levels, use an enclosed spray booth for spray painting, and use remote control systems to operate machinery. Use forklifts to move heavy loads, place guards around moving parts of machinery. (OHS Practices: A Guide for Printers; June, 2012)

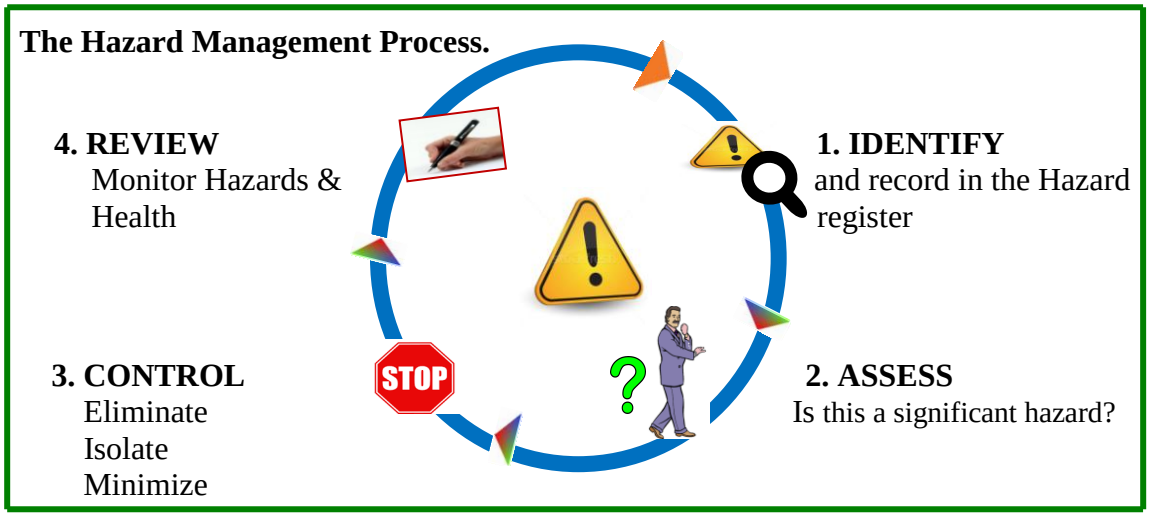


Figure 2. 2: **The Hazard Management Process.** Source: ACC-New-Zealand (2006)

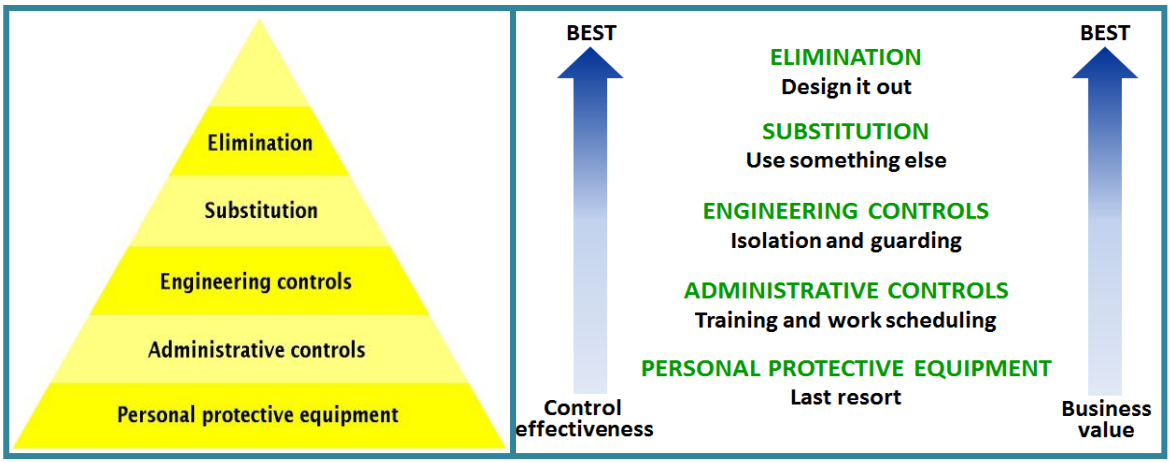


Figure 2. 3: Hierarchy of hazard control. Source: Wikipedia.

In both images of the hierarchy of hazard control above, the most effective means is at the top, and the least effective at the bottom.

2.3.4.2 Approaches to Health and Safety Promotion in Organizations

"All too often lives are wrecked unnecessarily because of poor working conditions and inadequate safety systems… Let me encourage everyone to join ...in promoting safety and health at work. It is not only sound economic policy, it is a basic human right". Kofi Annan, Former Secretary-General of the United Nations.

Allegedly, (Ontario Ministry of Labour, 2013) some approaches and tools for promoting HS in Organizations include; establishing Legislation and Regulations for OHS in workplaces, delivering education and training services and often provide advisory services, introducing programs and motivators and heightening awareness. Making more people aware of their OHS rights and responsibilities is essential to preparing workplace parties to adopt OHS practices and to respond to many OHS issues and hazards. (Ontario Ministry of Labour, 2013) Probably, the best indication of this concern for health and

safety is shown by the status given to health and safety and the amount of resources (money, time and people) allocated to health and safety (Hughes & Ferrett, 2011)

As per IOSH–Institution of Occupational Safety and Health–UK, (2015), HSM should absolutely comprise of the interactions between the working environment, equipment, systems and procedures, and the people in the organization. An organization's attitudes and values concerning safe working are crucial factors that influence its approach to work and eventually its health and safety enactment. Providing safe equipments or systems per se is not enough unless the culture encourages healthy and safe working. Turner, Pidgeon, Blockley and Toft (1989) opine that, a poor HS culture promotes an atmosphere where there is no conformity to safe working practices, and so hindering the effective action by the organization to solve health and safety problems.

2.4 Empirical Analysis of Relevant Studies

2.4.1 General Empirical Studies

Knegtering (2002) pointed out that major industrial accidents, such as those that occurredin Bhopal-India; Seveso-Italy and Three Mile Island-Piper Alfa, are vivid reminders of the destruction that can occur due to inadequate safety measures. Huge losses of human life, immense environmental pollution, and large capital costs were involved. Sadly, tremendously serious accidents still occur today. Probably, the most remarkable latest accident concerns the tragedy of the blaze at the garment factories in Pakistani cities of Karachi and Lahore in September, 2012. The fires are considered to be the most deadly and worst industrial factory fires in Pakistan's history, killing about 300 people and seriously injuring more than 600. (ur-Rehman, Walsh & Masood, Sept. 12, 2012)

Several studies have been conducted all over the world in attempt to address OSH issues, yet their number has not been sufficient to advocate the significance of effective implementation of OHS practices. Earlier studies on OSH cover several issues like workers' perception on OSHA, occupational health problems, employee training, effects of OSH on productivity and the effect of leadership on OHS.

Studies on factors affecting the implementation of OHS management systems include Chen, Wu, Chuang, & Ma (2009); Poon, Leung and Fung (2000) and Podgórski (2006). Chen et al., (2009) explored crucial performance indicators for implementing OHS management systems in the printed circuit board (PCB) industry in Taiwan. The findings of the survey revealed that top management's commitment and support were instrumental to the enforcement of OHS management systems. Poon, et al., (2000) investigated factors affecting the setting up and application of a Safety Management System (SMS). From the questionnaire survey results, it indicates that among other factors, management commitment, staff participation, OHS training plus well set objectives were identified as instrumental to implementation of OHS management systems. However, Podgórski (2006) evaluated motivational factors for decisions to introduce OHS management systems. After having interviewed four groups of professionals who participated in the decision-making process related to implementing OSH management system, the results indicated that economic incentives, promoted training packages on OSH management, and improved involvement in OSH activities were instrumental factors to implementation of OSH management systems in enterprises in Poland.

Studies on leadership effect on OHS were done by Lievens and Vlerick (2014); Clarke

and Ward (2006); Clarke (2013) and Grill, Pousette, Nielsen, Grytnes and Törner (2017). Gill et al., examined safety leadership to assess the influence of different leadership styles on safety climate, safety behavior, and accidents in the Swedish and Danish construction industry. The random sample of 811 construction-workers from 85 sites answered given questionnaire. It was concluded that leadership behaviors influences safety outcomes in Sweden and Denmark; thus applying less laissez-faire leadership and more transformational, active transactional, participative and rule-oriented leadership appears to be an efficient way for construction site managers to improve OHS in the industry. Both Clarke (2013) and Clarke and Ward (2006) investigate the effect of leader influence tactics on employee safety participation. Studies show that leadership styles have varied influence on safety observance and participation – so, training and development plans should make explicit ties between leader behaviours and their positive influence on employee behaviour. Thus, leaders may well promote safety participation using a combination of influence tactics, based on logical arguments, involvement in decision making, and creating enthusiasm for safety.

The study on employee involvement by Podgórski (2005) aimed at identifying motivational factors basic for OSH Management Systems in Enterprises, Poland. He noted that the number of enterprises implementing OSH MS was insufficient. However, the survey conducted in 40 enterprises with OSH MS in place revealed that the level of involvement of workers and the workers' representatives was minimal, leading to poor implementation of OSHMS. Walters and Nichols' case study (2006) investigated the effectiveness of worker representation and consultation on OHS in the UK. The results show that joint arrangements in which workers are represented and consulted on their HS make for better safety outcomes and that there is a relation between management

consultation on general issues and those of health and safety.

Other studies cover employee training whereas a study by Burke, Sarpy, Smith-Crowe, Chan-Serafin, Salvador, and Islam (2006), sought to establish the relative efficacy of various means of worker safety and health training so as to enhance safety knowledge and performance and reducing negative outcomes (accidents, illnesses, and injuries). Ninety-five quasi-experimental studies (n=20991) were included in the analysis and the results showed that active participation of workers proved greater knowledge acquisition, and reductions were seen in accidents, illnesses, and injuries. Sar, (2009) examined the influence of the employee training on the OHS in accommodation sector. He aimed at highlighting the accountability of HR Departments in protecting employees' physical, psychological and social health in accommodation sector. The data were collected using a conversation technique, and the final results conclude that employee trainings have a very positive effect on the OHS. Vinodkumar and Bhasi (2010), assessed safety management practices and safety behavior in India and identified safety training as the most crucial safety management practice that predicts safety knowledge, safety motivation, safety compliance and safety participation.

A study by Silaparasetti, Rao and Khan (2017) on Impact of OHS Factors on Workers' Behavior was conducted to examine factors affecting construction workers' behavior in different construction projects of Oman. Through random sampling, 252 construction workers from various projects were selected and the questionnaire for data collection. The study concluded that, management commitment plays a vital part in sustaining a hazard free workplace in building construction projects and OHS policies, health care, communication, education and training and workers' behaviuor both showed a direct

effect on HS results.

2.4.2. Studies in African Countries

Amponsah-Tawiah, Ntow and Mensah (2016) examined OHS Management and Turnover Intention in the Ghanaian Mining Sector. With a cross-sectional survey strategy they collected data quantitatively from the 255 mine workers. The findings showed that the commitment of safety leadership and safety facilities determine OHS management and turnover intention. It was therefore concluded that safety leadership is vital in the implementation of OHS and in reducing turnover intention in organizations. Milner, Greyling, Goetzel, Da Silva, Kolbe-Alexander, Patel, Nossel, and Beckowski, (2013) examine the link between leadership support, workplace health promotion and employee wellbeing in South Africa. The model of leadership support for workplace health promotion (WHP) and employee wellbeing outcomes was tested using employer and employee data gathered from 71 South African organizations. Leaders' support for WHP was identified as crucial as far as they also provide health promotion facilities to their employees.

A study analyzing employee participation in OHS activities in a cement manufacturing organisation in South Africa was done by Brijlall, (2015). He aimed at exploring employee participation as an integral part of the management of OHS within organizations. He also assessed the types of participation in OHS activities used by the management. The findings identified participative approaches as contributory in improving the decision making processes associated with OHS management processes. From a case at one University of Technology in South Africa, Kok, Lebusa and Joubert (2014) evaluated the employee involvement in decision-making. Kok, et al posited that

employee involvement encourages the modern style of participatory management, increases satisfaction, raises employee productivity and lowers the employee compensation rates. More than anything, people should be healthy and safe to perform their jobs securely. Without a healthy and safe workplace, there is no job satisfaction whatsoever!

In their case study Rotich and Kwasira (2015) used descriptive research design to examine effective factors in the implementation of OHS programs in tea firms in Kenya. Determined to identify strategies that could ensure effective implementation of OSH programs, they found that there existed a strong relationship between employee training on OHS matters and effective implementation of OHS programs. It is thus widely held that, the training of employees on OHS systems should consider both the indoors and outdoors workplace conditions. Mashia, Subramaniama and Joharia (2016) surveyed nurses from Abuja secondary health facilities, Nigeria, aiming to assess the effect of safety training and workers involvement on healthcare workers safety behaviors. The results indicated that safety training and workers involvement definitely relates to safety compliance and safety participation. As such, in order to realize an ideal safe hospital environment, hospital management should train employees on safety precautions and involve them in the safety activities so as to improve hospital safety.

With her cross-sectional survey design, Ndegwa (2015) conducted a study with a sample of 259 industries in Kenya. Data were quantitatively and qualitatively collected via self administered semi structured questionnaire. She found industries faced challenges in implementing OSH programmes like; lack of cooperation from employees, difficulties in interpreting OSH statutory requirements, lack of management commitment and so on. However, the study found that improved management support, employee training, legal

framework and employee participation resulted in enhanced implementation of OSH programmes. Surveying a HSM in small-and medium-sized enterprises (SMEs) in Ghanaian context, Kheni, Gibb and Dainty (2010), posited that, low literacy levels of workers, managers' ignorance of OHS responsibilities and ineffective OHS administration are basic factors hindering the capacity of construction SMEs to manage OHS effectively.

Investigating factors determining the implementation of HS in Supermarkets in Kenya, Gaceri (2015), used a descriptive census design. The general retail merchandise was used as target population, while the study sample was HR Department Staff in supermarkets with more than 10 outlets. He eventually established that leadership, employee training and employee participation influenced the implementation of HS measures in supermarkets in Kenya. He further opined that, participative approach can bring in improvements on HS as such managers are advised to share HS information with employees in order to consolidate individualized relationships with them.

2.4.3. Empirical Studies in Tanzania.

Focusing on identifying OHS challenges in Construction Sites in Tanzania, Mwombeki (2005) deduced that to make OHS be effective, outdated Labor legislations should be reviewed to meet the current needs and realities in the construction Industry. Law enforcement from the relevant Government Institutions both at central and local level including usability of PPE and HS programs in construction sites should be strengthened. Thus, it is reasoned that, the updated legislation is expected to make provision for a compensation system that encourage stoppage of accidents as opposed to the current

situation where compensation is cheaper than prevention, and as a result most employers do not bother to prevent accidents.

The study done by Mwaisaka, (2013) examined the perceptions of workers on OSHA measures that were employed at the workplace in Mtwara Municipality, Tanzania. - A case study of Wentworth Resources Ltd and OLAM companies. With a sample of 60 respondents, qualitative and quantitative data were collected. The study found that workers had incurred such diseases as sore throat, cough, and others suffered from shortness of breath; accidents resulted to backache, muscle tear (soft tissue trauma), and twisted ankle. Nevertheless, the results showed that most respondents were highly vigilant in securing their safety and health at workplaces. All in all, it is reasoned that to avoid incurring intolerable diseases employers and employees are advised to sustain personal hygienic behaviors among themselves, for so ensuring everyone is properly educated/trained as regards to OHS practices.

Manyele, Ngonyani and Eliakimu (2008), assessed the position of occupational safety among health service providers in hospitals in Tanzania, in order to assess the current status of OHS in Tanzanian hospitals and identify main areas for intervention. Involving a total of 430 HSPs in the study, data was collected through interviews plus a self-administered questionnaire randomly distributed to the health service providers (HSPs) working in 14 district, regional and referral hospitals in Tanzania. Manyele et al, found that, factors attributable to poor HS were lack of training in OHS, lack of qualified personnel for OHS in all hospitals, inadequate exposure to information and poor awareness as regards to HS practices. However, they observed that the OHS was inadequate in most workplaces in Tanzanian hospitals thus raising urgent need for counteracting measures whereas special efforts including training, exposure to

information and creation of awareness, are recommended for improving OHS in hospitals in Tanzania.

Using Focused group discussions (FGD), Rongo, Barten, Msamanga, Heederik and Dolmans (2004), examined occupational exposure and health problems in small-scale industry workers in Dar es Salaam. Participants were examined for exposure to occupational and environmental hazards, the use of PPE and health complaints by interview. Rongo et el. inferred that workers had high degrees of exposure to multiple health hazards; welfare and use of PPE were poor altogether lead to a high level of self-reported occupational health problems. Establishment of HS practices, policies and reliable programs including supportive welfare to workers, correct working devices, instruments or tools, fairly devised compensation schemes, healthy and safe working environments will not only earn an excellent reputation for the organization, but also mark it as a flourishing one in productivity and profit margin.

Kikwasi and Smallwood (2016) used a mixed method design to assess the roles of clients and consultants in improving HS in the construction industry at the tendering and construction stages, and the pre-requisites thereto. On their examination, they studied a population that included architects, engineers, quantity surveyors, and others who were attending a Construction Industry Forum in Dar es Salaam, Tanzania. With a sample of 400 respondents, data was collected via self-administered questionnaires and a literature review. Their results concluded that, the respondents who were more experienced in terms of HS were more involved in HS and contributed more to the improvement of HS than those who were less experienced. Altogether, the paper concluded that many consultants and their clients were not fully participating in HS. In order to sensitize and empower clients and consultants to fulfill their roles ironically, the paper therefore

recommends that current laws and regulations be reviewed and amended to include duties of clients and consultant.

Kamuzora (2006) examined the non-decision making in occupational health policies in developing countries and analyzed how decisions and actions of states and enterprise policymakers have prevented developing countries from adopting significant occupational health policies. To raise the occupational health policy profile in developing countries, henceforth, it is crucial to address the factors killing occupational health. As such, the struggle to improve occupational health requires supported organization and leadership in trade unions, alert workers who are able to control the work process, and generation of unbiased information about occupational health risks (Giuffrida, Iunes & Savedoff, 2002: Loewenson, 2001; Weil, 1991). Kamuzora observes that, this will happen through: raising workers' awareness of the factors hindering measures to protect their health and of the need to empower themselves; empowering trade unions so that they can contribute more in occupational health improvements; making professionals available through training and development; and enabling them to play an active role in the generation of information and knowledge through occupational health monitoring and research.

Table 2.1: Summary of Empirical Analysis of Relevant studies – Literature Reviews

Variables	Country	Methodology	Findings	Author
Leadership	Taiwan	Survey	Top management commitment and support influences implementation of OHS management systems.	Chen et al., (2009)
	Hong Kong	Case study, survey	Management commitment and setting of clear objectives improve implementation of OHS management systems.	Poon, et al (2000)
	Kenya	Descriptive, census	Leadership influences the implementation of HS measures in supermarkets in Kenya	Gaceri (2015)
	Kenya	Cross-sectional survey	Management support resulted in better implementation of OSH programmes.	Ndegwa (2015).
	Tanzania	Descriptive Survey design	A need for updating outdated Labour legislations to cater for the current needs &realities in the construction Industry and provision of PPE	Mwombeki , (2005).
Employee involvement	Poland	Survey, interview	Level of involvement of workers and the workers' representatives determine implementation of OSHMS of enterprises	Podgórski (2005 & 2006)
	South Africa	Surveys	Participative approaches improve the decision making processes associated with OHS management	Brijlall, (2015).
	South Africa	Case study	Employee involvement increases satisfaction, and lowers the employee compensation rates.	Kok, et al., (2014)
	Kenya	Cross-sectional survey	Employee participation enhances implementation of OSH programmes.	Ndegwa (2015)
	Tanzania, Dar es salaam	Using Focused group discussions (FGD)	Workers' high levels of exposure to multiple health hazards, poor use of protective equipment as well as poor welfare altogether leading to a high level of self-reported OH problems.	Rongo, et al., (2004)
	Tanzania, Dar es salaam	Mixed method design	Respondents who were more experienced in terms of HS were more involved in HS and contributed more to the improvement of HS than those who were less experienced.	Kikwasi & Smallwood (2016).
Employee training	India	Survey, Questionnaire. Path analysis.	Identified safety training as the most important safety management practice that predicts safety knowledge and safety participation	Vinodkumar and Bhasi (2010),
	Nigeria	Quantitative research	Safety training and workers involvement positively relates to safety compliance and safety participation	Mashia, et al., (2016)
	Kenya	Case study	There was positive, strong and statistically significant relationship between employee training on OHS programs and effective implementation of OHS programs in Kaisugu Tea Factory	Rotich and Kwasira (2015)
	Kenya	Descriptive, census	Training influences the implementation HS measures in supermarkets in Kenya	Gaceri (2015)
	Tanzania Mtwara	A Case study, qualitative &quantitative methods	Inspite of workers' high level of understanding of the OSHA measures, they still had work-related diseases e.g. sore throat, cough, and shortness of breath; accidents lead to backache, muscle tear (soft tissue trauma), and twisted ankle. Respondents were highly vigilant in securing their safety and health at workplaces.	Mwaisaka (2013).

2.5 Research Gap Identified.

In spite of the fact that the myriad number of studies have been established worldwide relating to Occupational HS, researchers are mainly concerned with addressing one fundamental research question; how can we establish a healthy and safe workplace free of accidents and hazards?

As per reviewed literatures, some studies have tried to examine severe risk factors and emerging issues in OSH realm, (Schulte, 2006) and asserted how to improve counteractive measures, nurture safety-related behaviors like using PPE, how HS management impacts organizations and their staffs, and how safety management practices affect safety behaviors (Ward, Haslam, C & Haslam, R, 2008; Vredenburgh, 2002; Vinodkumar & Bhasi, 2010). Other researchers have focused on the construction sites (Afosah, 2015; Hon & Chan, 2009), the medical world and some in manufacturing industries (Kheni, Gibb & Dainty, 2010; Makori, Nandi, Thuo & Wanyonyi, 2012; Mearns, Whitaker & Flin, 2003; Leana, Ahlbrandt & Murrell,1992; Rongo, Barten, Msamanga, Heederik & Dolmans,2004) attempting to determine the relationship between OHS practices and organizational performance or how a single variable such as training, employees' participation and how other variables affects OHS. (Gaceri, 2015; Jones, Kalmi & Kauhanen, 2010; Kok, Lebusa & Joubert, 2014; Zohar, 2002; Ndegwa, 2015; Rotich & Kwasira, 2015)

It is ought to be noted that, few studies in OHS have been conducted in Tanzania and these studies were more specifically concerned with effects of OHS on performance of firms, workers' perception on OSHA (Mwaisaka, 2013) OHS challenges in construction sites (Kikwasi & Smallwood, 2016; Mwombeki, 2005), the position of occupational

safety among health service providers in hospitals (Manyele, Ngonyani, & Eliakimu, 2008) and how occupational exposure is linked to health problems (Rotich & Kwasira, 2015), HS risk assessment in manufacturing industry (Renatus ,2015) In view of this, the specific effects of the key constituent of OHS practices, namely, leadership, employee involvement and training was either incompletely investigated or some important perspective were overlooked, inter alia, creating gaps that needed to be filled.

There was very few research evidence linked to leadership, employee involvement and employee training to the implementation of HS practices either directly or indirectly in workplace particularly in Tanzania. This study was based on the assumption that the level of implementing HSPs as perceived by both employers as well as employees is either directly or indirectly influenced by leadership, employee involvement or training. Furthermore, this study was distinctive in that it adopted an integrated approach that captured all workplaces in Tanzania especially core tripartite factors in successful implementation of OHS practices, that is, leadership through their support, employees through training and involvement. It was therefore a study with more comprehensiveness and integration that has not been the focus of researchers so far.

In light of the aforementioned issues, this study came in worthwhile to present feasible solutions to how excellently OHS practices can be implemented and so enabling workers to play a key role in the sustenance of a healthy and safe workplace required for sustainable productivity. Indeed, lack of empirical studies on this topic presents a knowledge gap on how leadership, employee involvement and training influence implementation of HS practices. This research study concentrated on the missing gaps in order to provide appropriate recommendations on how HRMs and other stakeholders

should implement health and safety measures in organizations.

Table 2.2: Summary of Knowledge Gaps from the Reviewed Literatures

Author	Focused Study	Location	Gaps identified	Addressed Gaps per this Study
Mwaisaka (2013	Workers' perception on OSHA	Mtwara, Tanzania-OLAM & Wentworth	Examined workers' perception on OSHA & their level of vigilance in securing personal HS in workplace	Examines factors affecting implementation of HS practice in workplace—Temeke Municipality
Kikwasi & Smallwood (2016).	Roles of clients & consultants in improving H&S in the construction industry	Dar es salaam, Tanzania	Stuck to HS in the construction industry only to the exclusion of other workplaces	Covers all workplaces with no exception, assessing factors affecting implementation of HSPs in all workplace altogether.
Rongo, Barten, Msamanga, Heederik & Dolmans (2004)	Occupational exposure and health problems in small-scale industry	Dar es salaam, Tanzania	The study was limited to examining the occupational health problems in small-scale industry workers only.	This study uncovers the influence of leadership, employee involvement &employee training on the implementation of HS practices in all workplace for all workers.
Mwombeki (2005)	OHS challenges in Construction sites	Tanzania	Insists on updating labor legislations, & provision of PPE in construction sites.	As per this study, it insists on the effects of leadership, employee training & employee involvement on HS practices' Implementation in all workplace.
Gaceri, (2015)	Factors affecting the implementation of H&S Programs.	Kenya	Poses both, a geographical gap (Kenya) as well as the contextual gap as it examined supermarkets only.	This study was conducted in Temeke, Dar es salaam-Tanzania, in the context of covering all workplaces.
Ndegwa (2015).	Factors determining implantation of OHS programs	Kenya	Geographical gape, just in Kenyan context	This study wsa conducted in Tanzanian context.
Clarke & Ward (2006); Clarke (2013)	Representation & consultation on health and safety in chemicals; various types of leadership influence on OHS	UK	Representation on HS in chemical industry; Assessed various types of leadership & their influence on OHS	The topic under study attempts to examine in depth the influence of leadership & employee involvement as a whole on HS practices
Clarke (2013)	Employee involvement in decision-making	South Africa	The study intended to evaluated the impact of employee involvement in decision-making	This one seeks to evaluate the impact of employee involvement in implementing HS practices in workplace.
Kheni,	Safety Management	Ghana	Examined HS	This study examines

Gibb & Dainty (2010),	in small & medium sized enterprises		management in small & medium sized Enterprises.	factors affecting implementation of HS practices in all workplace
Zohar, (2002)	Leadership style effects on the level of concern for subordinate safety;	Israel	Looked at the effects of leadership dimensions or style on subordinates	This study determines the effects of leadership as a whole in implementing HSPs in workplace.

2.6. Conceptual and Theoretical Framework

2.6.1 Conceptual Framework

Shields and Rangarajan (2013) define a conceptual framework as "the way ideas are systematized to attain a research project's purpose. In other words, the conceptual framework is the researcher's map in pursuing the investigation that facilitates the identification of the variables required in the research. (Regoniel, 2015) The conceptual framework "sets the stage" for the presentation of the particular research question; a tool for analyzing with quite a few variables and contexts and can therefore unearth the "reality" of something and do this in a way that is easily remembered and convincingly easy to apply. As such, can help in drawing support from the findings of many researchers on why and how a particular phenomenon occurs. (McGaghie, Bordage & Shea, 2001; Regoniel, 2015)

This study with its framework explains the link between the implementation of HS practices and the influence of leadership, employee involvement and employee training. A pictorial presentation of this conceptual framework is illustrated in Figure 2.6 by which the independent variables were leadership, employee involvement and employee training, while the dependent variable was the implementation of OHS practices.

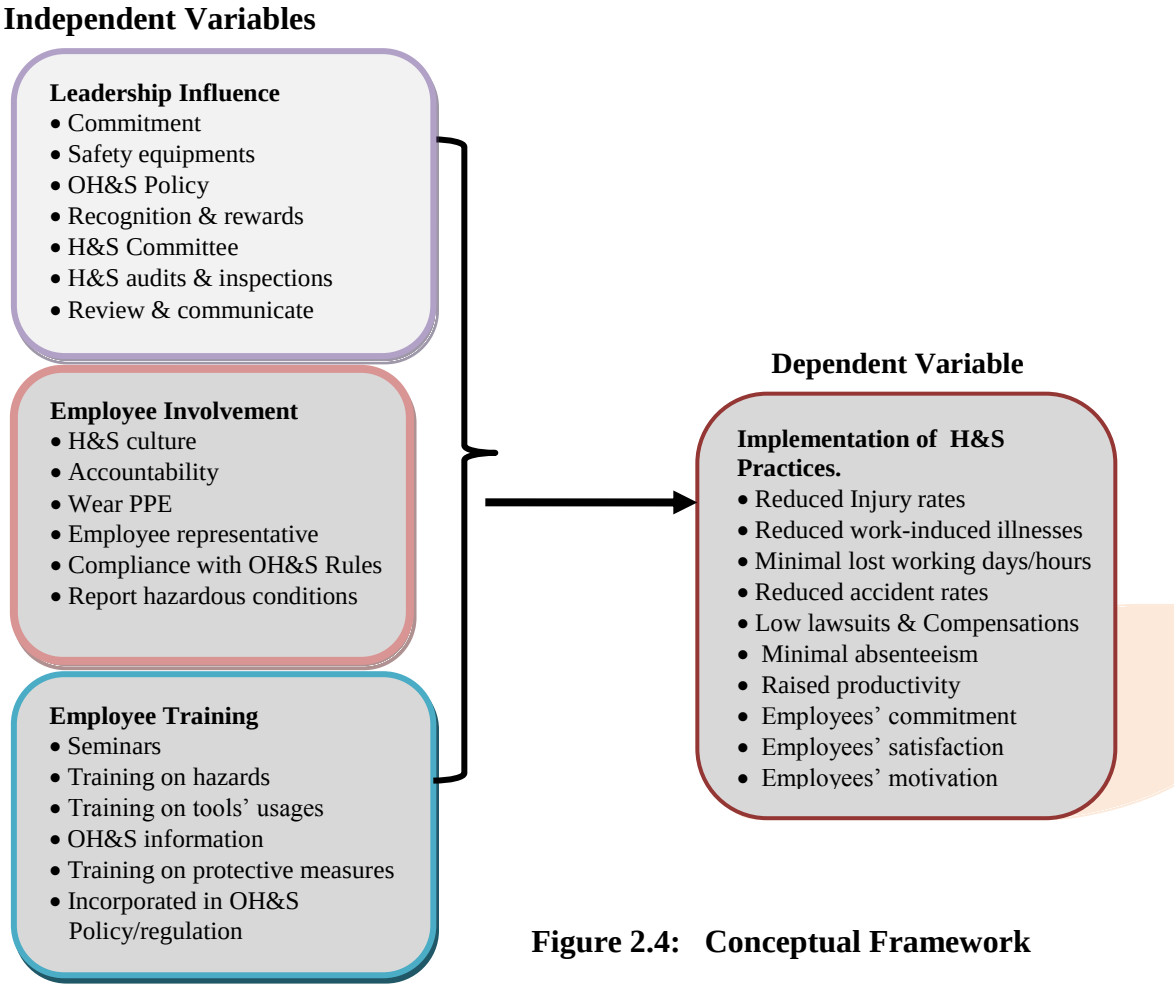


Figure 2.4: Conceptual Framework

2.6.2 Theoretical Framework

2.6.2.1 Leadership

Leadership means, for instance, becoming a role model for the behaviors required for the change (Dessler, 2013) However, safety always starts at the top. Dessler (2013) and Flintrop (2013a) posits that managers are key persons in an enterprise to design and improve the working conditions and thus influence the health of subordinates. They are responsible for deciding on changes in the workplace and work environment. All these facets are instrumental in determining the intensity of HS at work. As exemplified by Braton (2012), most accidents involve an element of failure in control – in other words failure in managerial skill. Hazardous processes, machines or substances to employees'

health and well-being should be identified and modified to abolish or reduce the hazard and risk at root.

It is alleged (EU-OSHA – European Agency for Safety and Health at Work, 2016) that strong, effective and visible leadership is vital to good workplace safety and health. Legally and ethically protect employees from accidents and ill health — it's a sign of a business that is likely to grow and thrive. EU-OSHA infers that, ineffective or non-existent leadership on OSH can result in accidents or even fatalities as well as poor mental and physical health among workers. It can damage a company's reputation. Poor leadership can result to substantial financial costs as a result of, say, sick days, wasted time and compensation payments. Conversely, better OSH leadership prevents accidents and illness; raises productivity and efficiency; improves employee morale; helps the business to win new contracts and attract high-quality employees.

Hughes and Ferrett, (2011) aver that a vague statement that 'everyone is responsible for health and safety' is misleading and fudges the real issues. Everyone is responsible, but management in particular. There is no equality of responsibility under law between those who provide direction and create policy and those who are employed to follow. Principals, or employers in terms of the HS at Work (HSW) Act, have substantially more responsibility than employees (Gomez-Mejia, Balkin, & Cardy, 2012). As Flintrop (2013b), deduces, bad leadership can result to OSH risks that can lead to work accidents. However, it is evidenced that the manager or leadership behaviour is concomitant with sick leave or staff getting ill and employees´ wellbeing. He argues that, the success of OSH management is therefore, based on leaders' behaviour when it comes to developing and transposing visions and strategies on OSH.

Flintrop (2013a) observes that, the traditional view implies that one of the most key OSH tasks for leaders is taking OSH standards into account and assuring that all rules are followed and all regulations are complied with. Chief executive officers and managers are the ones in a company who have to assure that sufficient resources are provided in means of time and money to comply with rules and to conduct the necessary changes. And yet, Flintrop (2013b) argues that Companies showing excellent OSH leadership commitment can be recognised by safer and healthier working conditions, by confident and competent employees in their work, by effective OSH policies in place and followed by all staff and by individuals and teams appreciated and rewarded for their success. Such healthy culture fully strengthened by the management on all levels leads to a nonstop OSH improvement. Leaders who motivate their staff to do well normally see greater results than those who do not at all.

2.6.2.2 Employee Involvement

Bullock, (December, 13, 2013) states that, depending on your background or specialty, you may refer to ‘employee involvement’ as engagement, voice, participation, democracy, etc. No matter what you call it, the concept of employee “voice” has been a topic of consideration for centuries. Even ancient Romans recognized the value of having direct participation in business and state matters. Organizations are still realizing the value of employee involvement in every type and level of work. So what exactly is employee involvement and how can organizations benefit from it? In short, Bullock defines employee involvement as*:* the direct participation of staff to help an organization fulfill its mission and meet its objectives by applying their own ideas, expertise, and efforts towards solving problems and making decisions. From this definition,

participation can include representative participation, direct communication, and upward problem solving.

To consult workers and to encourage their participation is not only required by law but is also a key step for ensuring good communication of OSH matters within the company; it's one of the keys to good OSH leadership (Flintrop, 2013a; EU-OSHA, 2016) OSH management will be more likely to succeed if it encourages the active participation of workers and sets up a dialogue between employees and management (EU-OSHA, 2016) In OHS, employees have a stake in the achievement of the program - safety and health is everyone's responsibility (Safety Works, Maine Department of Labour, 2016). Tirelessly nurture employee involvement to make your program a success. Make people feel accountable and ensure that everyone does his/her part. However, complying with OSHA regulations is reasonably fruitful, especially employers have to identify the regulations that apply in their workplaces and comply with them.

Employee involvement can, hitherto, be expressed in terms of compliance by employees to OSHA regulations, standards and for following all employer safety and health rules and regulations, and for reporting hazardous conditions to the supervisor (Dessler, 2013) A two way communication between employees and managers will facilitate the effective implementation of OSH (Dejoy, Murphy & Gershon, 1995; Lin and Mills, 2001) Dessler (2013) underpins employees as being usually your best source of ideas about what the safety problems are and how to solve them; as such, employee involvement must be developed by including them in identifying safety and health problems; their insight and perspective is a valuable resource and their cooperation is necessary; simply put, their safety and goodwill is crucial to business success (DeCenzo et al., 2016) One study

found that safety activities paid for themselves by a ratio of 10 to 1, just in direct savings of workers compensation expenses over 4 years.

Stranks (2006) asserts that successful management practice should involve employees and their representatives in carrying out risk assessments, deciding on preventive and protective measures and implementing those requirements in the workplace. This may be attained by the use of formal HS committees where they exist, and by the use of teamworking, where employees are involved in deciding on the appropriate preventive and protective measures and written procedures, etc. Additionally, Stranks suggests that there should be an establishment of effective means of communication and consultation in which a positive approach to HS is visible and clear. As such, it is reasoned that, Organizations are often better off not asking for employee ideas and/or feedback than asking and not communicating and acting on results.

2.6.2.3 Employee Training

As per Ngirwa (2005), training is a learning process in which people acquire knowledge, skills, experience, and attitudes needed by them in order to perform their jobs well to achieve their organisation's goals and individual goals. Allegedly, (The Institute for Work & Health, 2010) each year workplaces provide many hours of training for employees, including OHS training. Training is broadly perceived as a key component of occupational hazard control and risk management programs. Gradually, business owners desire to know whether training can meet its goals of reducing injury and illness, and if the cost of training programs can be rationalized. This is vital considering the millions of occupational injuries and illnesses, and thousands of deaths that are allegedly occurring yearly in workplaces throughout the world.

Safety training reduces unsafe acts, especially for new employees (Dessler, 2013). Employees should be instructed on safe practices and procedures, warn them of potential hazards, and work on developing a safety-conscious attitude. OSHA's standards require more than training. Employees must demonstrate that they actually learned what to do. On the other hand, Torrington et al. (2005) argue that safety training needs to be carried out in three settings: at induction, on the job and in refresher courses. However, Dessler asserts that the key aim of safety training is not to meet OSHA training standards. Rather, it is to impart the knowledge and skills required to reduce accidents; just to improve perception of safety and health hazards, to enhance knowledge of the causes of occupational illness and injury and promoting the implementation of effective preventive measures. (Hecker, 1998)

According to DeCenzo, et al (2016), owners and managers ought to be sure that employees understand possible workplace hazards and are trained in how to handle them. An employer should attempt to make training memorable by making it interesting and interactive. Apart from satisfying legal obligations, (Hughes & Ferrett, 2011) several benefits will accrue to the employer by providing sound information and training to employees.

Keep records of all training. Workers will hold safety as a value whenever culture of safety is nurtured; thus they can enthusiastically care about themselves and others. In the end workers will be encouraged to go "beyond the call of duty" to ensure a safe workplace. In either way, support a work environment that fosters trust, creativity, and general well-being and never ever forget to continually improve your system by reviewing your program's strengths and weaknesses. Does it accurately reflect how you

want to establish and manage safety and health? (Safety Works, Maine Department of Labour, 2016)

As per Hecker (1998), education and training cannot solve all OSH issues, and care must be taken that the techniques learned in such programmes are in fact applied appropriately to the identified needs. They are, however, critical components of an effective HS programme when employed in conjunction with engineering and technical solutions. Hacker observes that, cumulative, interactive and continuous learning is essential to prepare our rapidly changing work environments to meet the needs of workers, especially as regards the prevention of debilitating injuries and illnesses. Both, employees and employers need the most up-to-date information available and the skills in order to be able to protect and promote their health and safety.

It is generally accepted that inexperienced workers are involved in accidents at a higher rate than others. HS education should start with employee induction when a worker enters the organization or is transferred to a new job. Induction sessions normally cover such items as explanation of the function of the work unit, organizational relationships, administrative arrangements, miscellaneous policies and rules (Taylor et al 2004) Organizations are duty bound to see to it that the aforementioned OHS training is availed to all workers regardless of their status in the organization. So that the level of compliance with the OHS training is to be allegedly encouraging, the Institute for Work & Health (2010) suggests that, the training should often consist of instruction in safe work practices, proper use of PPE, and emergency procedures and preventive actions.

2.7 Summary of Findings

The health and safety of employees at the workplace cannot be underestimated. Several literatures pertaining to OHS practices have been unearthed and thereby bringing out a wealth of information available from the previous studies. The divulgence of the relevant literatures, identified the research gaps, concepts as well as precepts on OHS have been proposed so far to bridge the knowledge gap in the relevant topic.

Organizations are duty bound to make sure that the aforementioned safety is availed to all workers regardless of their positions in the organization. OHS improvement can only be established through a well coordinated system in which both managers and workers work cooperatively with perfect oneness. As the workplace complexity increases, a need arises for better understanding of the causes and means of preventing accidents, injuries and illnesses. Government officials, academics and management all have vital roles to play in furthering this understanding. The key next step is the effective propagation of this information to workers, supervisors, managers, government inspectors and OHS professionals. (Hecker 1998)

Bad leadership can result to OSH risks that can lead to work accidents; conversely, good leadership has the opposite results. Consulting workers to encourage their participation is an important step for ensuring good communication of OSH matters within the company. A 1981 study of worker safety and health training in the industrial nations begins by quoting the French writer Victor Hugo: “No cause can succeed without first making education its ally” (Heath, 1981). This observation absolutely still applies to OSH in the late twentieth century, and is relevant to organization personnel at all levels. (Hecker, 1998)

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Overview

To this section the researcher delved into research methodology itself being a way to systematically solve the research problem; a science of studying how research is done scientifically. (Kothari, 2004) In line with the foregoing discussions, inter alia, this chapter depicts how and where the actual research took place and the approaches by which field work was conducted. Starting with a research philosophy which underpins the study, it is then followed by expounding research design, survey population and area of the study, sampling design/size, data collection instruments and their sources. This chapter closes by explaining how data was analyzed and presented; giving a summary of techniques/methods used in data processing and analysis, thereby giving out results of the study in reasonable grounds.

3.1.1 Research Philosophy

A research philosophy is all about the way in which data about a phenomenon or a problem ought to be collected, analyzed and used. It is the approach to understand and write the knowledge that is gained by conducting the research (Dissertations Help Service, 2016). Guba (1990, p.17), defines it as "a basic set of beliefs that guide action". Galliers (1992) posits that it further clarifies the process of transforming things believed (opinion) into things known (knowledge): doxa to episteme. Three types of research philosophies are used in research paper; positivism, interpretive and critical (Mackenzie & Knipe, 2006). The main two philosophies used in research are positivism and interpretivism (Thomas, 2010). The positivist studies normally attempt to test theory or

describe an experience through observation and measurement in order to increase the predictive perception of a phenomenon and control forces that surround us (Myers, 1997; O'Leary, 2004, p.5). Positivists and post-positivist research is most commonly aligned with quantitative methods of data collection and analysis. (Creswell, 2014; Mackenzie & Knipe, 2006) For the aim of this research, positivistic philosophy was adopted where concepts were allowed to emerge from field data aligned with the use of quantitative methods of data collection and analysis, use of questionnaires and establishment of feasible relationships that existed among the identified variables. Nevertheless, this research attempted to avoid what may be depicted as methodological monism, the insistence on using a single research method. It is as such deduced that, all methods are valuable especially when used appropriately and managed carefully by considering elements of both the positivist and interpretivist approaches. (Al-Khouri, 2007)

3.2 Research Design/Strategies

Research design focuses on the research question, say the purposes of the study, "what information most appropriately will answer specific research questions, and which strategies are most appropriate for obtaining it" (LeCompte & Preissle with Tesch, 1993, p. 30) Furthermore, (Denzin & Lincoln, 2011) infer that, a research design places the researcher in the observed world and links him or her to specific sites, persons, groups, institutions, and bodies of relevant interpretive material, including documents and archives. It is the heart of any study where the researcher obtains answers to research questions. (Kothari, 2004)

The research design in this study was a descriptive cross-sectional approach to inquiry, combining both qualitative and quantitative forms so that the overall strength of a study

is greater than either qualitative or quantitative research. (Creswell & Plano Clark 2011) As Babbie (2010) observes, the design is useful especially in offering an in depth explanation as to how the independent variables (leadership, employee involvement and employee training) influence the dependent variable (implementation of HS practices) in workplace in Temeke municipality.

According to Vanderstoep and Johnston (2009) the factors/variables are best explored via descriptive research as it describes the attitudes and behaviors observed during the investigation just in a natural, real - life settings; as such, it is naturalistic observation, which involves collecting data where people are ordinarily found. Such a study allows authentic understanding of factors' influence on implementation of HS practices (i.e. leadership, employee's training and employee's involvement) in a particular, real - life context; simply put, portraying an accurate profile of persons, events or situations (Robson, 2002:59) The researchers would not have gained such a realistic assessment of variables' influence if they had not pursued an experimental (investigational) approach to studying this issue.

3.2.1 The Rationale for Picking a Descriptive Case Study

According to Thomas (2010), the case study strategy is chosen as the appropriate method because it offers the ability to describe relationships that exist in reality. Yin (2002) defines the scope of a case study as an empirical inquiry that examines a current phenomenon within its actual-life context, especially when the margins between phenomenon and context are not clearly evident. Yin (2009), citing in Schramm (1971) observed this: the heart of a case study, the innermost inclination of all types of case study, is to attempt to clarify a decision or set of decisions: why they were taken, how

they were implemented, and with what result. (Schramm, 1971, emphasis added).

As per Yin (1994), there are different types of case studies, such as exploratory, descriptive and explanatory, depending on whether they are used to answer what, how and why research questions respectively. In line with the foregoing, the case study followed in this research can be classified as descriptive. The reason behind this is that the research questions are of a 'how and what' type. The objective of such study, argues Beri (2013**)** is to answer the "how and what" of the subject under investigation. Just from this mode, answered questions may present accurate information about the study and so be a mine of information on a problem under probe. As such, the case study of Temeke municipality will be grounded in deep and varied sources of information with intent to "delve" into the "how" leadership, employees' involvement and employee training can influence the implementation of HS practices at workplace.

3.2.2 Limitations of Case Studies

Limitations are potential weaknesses or problems with the study identified by the researcher. (Creswell, 2012) These weaknesses are enumerated one by one, and they often relate to inadequate measures of variables, loss or lack of participants, small sample sizes, errors in measurement, and other factors typically related to data collection and analysis. These limitations, declares Creswell, are useful to other potential researchers who may choose to conduct a similar or replication study. Advancing these limitations provides a useful bridge for recommending future studies. Limitations also help readers judge to what extent the findings can or cannot be generalized to other people and situations (Creswell, 2012).

A case study can be a 'time-consuming' and 'difficult', producing large quantities of

too detailed documentation; the product may be too lengthy, too detailed, or too involved for busy policy makers and practitioners to read and use. Yet, its strengths outweigh its limitations (Reis, 2009). There are also issues of reliability, validity, and generalizability. Hamel (1993, p. 23) found that the case study lack of representativeness due to the subjectivity of the researcher and others involved in the case and its lack of rigor in the collection, construction, and analysis of the empirical materials that give rise to this study. The strength of qualitative approaches defends Shields (2007) is that they account for and include different ideologies, methodologies and most importantly, humans. They neither attempt to eliminate what cannot be disregarded nor simplify what cannot be simplified. Thus, it is just because case study includes paradoxes and acknowledges that there are no simple answers, that it can and should qualify as the gold standard" (p. 12). (Reis, 2009)

Flyvbjerg (2006) suggests several "misunderstandings" about case study research. With this, he then defends by deducing more accurate statement about the issue underlying each misunderstanding. For instance one of these misunderstandings is stated as; ‘’One can't generalize from a single case or on the basis of a single case, so a single case doesn't add to scientific development or is not a scientific method’’ (p.224). However, citing single cases, experiments, and experiences of Galileo, Newton, Einstein, Bohr, Darwin, Marx, and Freud, Flyvbjerg makes the point that both human and natural sciences can be advanced by a single case. He also argues that formal generalizations based on large samples are overrated in their contribution to scientific. In light of aforementioned limitations, throughout this study, measures were undertaken to squarely address and explore the aforementioned case study limitations.

3.2.3. Area of the Research or Survey

The study was carried out in Dar es Salaam city, particularly in Temeke Municipality which is the largest one amongst the rest. The choice for this geographical area was based on the fact that, the municipality draws employees from diverse social, cultural, educational and economic background with varied perceptual orientations. It was therefore presumed that these employees might hold different opinions on how leadership, employee involvement and employee training could influence the implementation of HS practices within the agency and its impact on the sustenance of HS workplace. As such, a researcher was also a native of Temeke municipality and with this it reduced transportation costs and simplified data collection through easy interaction with respondents.

3.2.4 Survey Population

A research population is usually a large pool of individuals or objects that is the key focus of a scientific inquiry. Researchers habitually cannot test every individual in the population as it is too expensive and time-consuming; they rather count on sampling techniques. (Explorable.com Nov 15, 2009). In this light, nonetheless, the target population of this study was comprised of the employees working in Temeke municipality. At Temeke Municipality with its various departments there were about 312 employees making a target population. For the purpose of this study, the target population was comprised of head of departments and staff. Participants met by the researcher in person to complete questionnaires that took few minutes. This created an atmosphere that allowed them to speak freely. The researcher was affiliated with 175 potential participants.

With this approach, the selection of participants, settings or sampling units was criterion based or purposive (Mason, 2002; Patton, 2002) The participants were chosen because they had particular features or characteristics which enabled detailed exploration and perception of the central themes and puzzles which the researcher wished to study. These may be socio-demographic characteristics, or may relate to specific experiences, behaviours, roles, and others. [Ritchie & Lewis (Eds) 2003] As exemplified by Dattalo, (2008) sometimes purposive sampling is used to select typical cases, and sometimes it is used to select atypical cases. Purposive sampling also can be used to select participants based on their willingness to be studied or on their knowledge of a particular topic.

3.3. Sampling Design and Procedures.

According to Kothari (2004) the sample design is a definite plan for obtaining a sample from a given population; the technique or the procedure the researcher would adopt in selecting items for the sample. The respondents chosen should be as representative of the total population as possible in order to generate a miniature cross-section (sample) A sample is the subset of people from the population who will participate in the current study while sampling frame refers to the eligible members of the population (Vanderstoep & Johnston, 2009) Sampling means selecting participants who are best suited for your study, deciding whom to look at or talk with, where, when, about what and why, within the limits of available time and means; more simply put, this identifies what activities, processes,events, times, locations and role partners need to be sampled (Vanderstoep & Johnston, 2009; Thomas, 2010; Saunders et al. 2009)

In light of the aforementioned clarification, the sampling technique adopted in this study was the purposeful sampling. In purposive sampling, observed Ritchie and Lewis (2003),

the chances of selection for each element are unknown but, instead, the characteristics of the population are used as the basis of selection. It is this feature that makes them well suited to small-scale, in-depth studies. To avoid 'skewed' samples as opposed to random samples (Vidovich, 2003), this study used the approach by Goetz and LeCompte (1984) in which generalisability was sought through comparability and translatability. However, there was a sampling frame before the actual selection of the sample; a sampling frame is the list, index, or records from which the sample will be drawn, which might not be totally inclusive of the study population (Dattalo, 2008). For this study the sampling frame was a list of all employees derived from the profile of Temeke municipality.

3.3.1 Sample Selection and Sample Size

According to Creswell (2014), the idea behind qualitative research is to purposefully select participants or sites (or documents or visual material) that will best help the researcher understand the problem and the research question. This does not necessarily suggest random sampling or selection of a large number of participants and sites, as typically found in quantitative research. Most of all, an investigator should avoid biasing his study—or any appearance of bias—by choosing only those sources that confirm his/her own preconceptions (Yin, 2011). However, the question still exists; how big should my sample be? Obviously it is averred that the larger the sample, the better it represents the population under study (Mills & Gay, 2014; Yount, 2006) A simplified formula of Yamane will be used for the derivation and calculation of the required sample size as it is clearly stated in Israel (1992) and Yamane (1967:886).

Here is a formula: $n = \frac{N}{1+N\,(e)^{2}}$

Where; n: is the sample size, N: is the population size, e: is the level of precision, sometimes called sampling error or margin of error. So far, N = 312, e = .05.

$$\therefore n = \frac{312}{1 + 312(.05)^2} \longrightarrow \mathbf{175.2808989 \approx 175\ employee}$$

Yamane's formula gave out a sample size of approximately 175 employees at 95 percent level of confidence (certainty level). This is translated to be 56.08 percent of the total population. Nonetheless, the sample size was appropriate, surpassing the 20% of small population (n< 1000) of the target population recommended by Mills and Gay (2014) In light of the aforementioned suggestions, about 175 eligible participants were purposively selected. So far an accessible sample comprised of participants from different departments and from both, top as well as middle level staff. For so it is reasoned that the choice for participants considered demographics such as seniority, education, age, gender, and other aspects as much as circumstances allowed.

As Cresswell and Plano Clark (2011) observe, individuals were singled out having particular knowledge about or experience related to the issue under study i.e. "Factors Affecting Implementation of HSPs in Workplace – a Temeke Municipality Case". Together with knowledge and experience, also the significance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner were highlighted (Bernard, 2006; Spradley, 2016) Participants were singled out on the supposition that they have knowledge of the phenomenon under study and by virtue of their experience making them information-rich cases or most knowledgeable ones, able to share what they know and/ or have experienced and thus presenting information that is both detailed (depth) and generalizable (breadth). (Palinkas, et al. 2015)

3.3.2 The Rationale for Using a Sampling Technique.

The reason for not using the whole population but rather opt to sampling technique is due to the fact that, sampling provides a valid alternative to a census when it would be impracticable for you to survey the whole population, as such, it is cheaper than studying the whole population while maintaining a high degree of validity. It enables us to lower the costs of the research especially when your budget constraints prevent you from surveying the whole population. Sampling method is a quicker way and save time. (Saunders, Lewis & Thornhill 2007)

3.4. Methods of Data Collection.

In context of this study, primary data were collected afresh and for the first time, and thus happened to be original in character specifically via self-administered semi-structured questionnaires. (Kothari, 2004) A questionnaire is a group or sequence of questions designed to elicit information from an informant or respondent when asked by an interviewer or completed unaided by the respondent. It is widely held that, questionnaires are at the heart of survey research. (McLafferty, 2010; 77-88) However, secondary data were also collected from available documentation and archival records.

The questionnaire adopted in this study had both, open ended and closed ended questions along with the Likert-type scale being used for rating. McLafferty (2010) observed that responses to survey questions are as important as the questions themselves; respondents' 'true' viewpoints should be better represented. The merits claimed on behalf of this method include a situation in which respondents get ample time to give well thought out answers. Also through this means, respondents who are not easily approachable can also be reached conveniently. However, large samples can be made use of and thus the results

can be made more dependable and reliable (Kothari, 2004). In line with the foregoing, also there was limited use of personal unstructured interviews to enable the researcher ask, whenever needed, supplementary questions which would add to the knowledge of the study.

3.4.1 Pilot Testing

Yin (2011) suggests that pilot studies help to test and refine one or more aspects of a final study—for example, its design, fieldwork procedures, data collection instruments, or analysis plans. In this sense, the pilot study provides another opportunity to practice. Observed Creswell (2011) a pilot test of a questionnaire or interview survey is a practice in which a researcher makes changes in an instrument grounded on feedback from a small number of individuals who complete and evaluate the instrument. Here the researcher try out the research techniques and methods which he/she has in mind, see how well they work in practice, and, if necessary, modify his/her plans accordingly. (Blaxter, Hughes & Tight, 2006) The purpose of the pilot test is to refine the questionnaire so that respondents will have no problems in answering the questions and there will be no problems in recording the data. In addition, it will enable you to obtain some assessment of the questions' validity and the likely reliability of the data that will be collected (Saunders et al., 2009) As such, pilot testing that focused on construct validity and reliability of the research instrument was thus thoroughly carried out.

3.4.2 Reliability and Validity of the Research Instrument.

3.4.2.1 Reliability of the Research Instrument

As Anderson (2010) observed, qualitative research is often criticized as biased, small scale, anecdotal, and/or lacking rigor; however, when it is conducted properly it is

unbiased, in depth, valid, reliable, credible and rigorous. In qualitative research, there needs to be a way of assessing the "extent to which claims are supported by convincing evidence."(Murphy, Dingwall, Greatbatch, Parker, & Watson, 1998) Although the terms reliability and validity traditionally have been associated with quantitative research, increasingly they are being seen as key concepts in qualitative research as well. Examining the data for reliability and validity assesses both the objectivity and credibility of the research. Validity relates to the uprightness and realness of the research data, while reliability relates to the reproducibility and steadiness of the data. Valuable and useful research data must be both *reliable* and *valid.*

Reliability is the capability of a research instrument to generate similar results when used repeatedly under similar conditions. (Kumar, 2011); it indicates accuracy and predictability of a research instrument: the higher the reliability, the higher the accuracy. As observe Marczyk, et al. (2005), if the measurement is reliable, then there is less chance that the obtained score is due to random factors and measurement error. Data collection instrument - a questionnaire was tested on some purposive samples to validate its trustworthiness, relevance and effectiveness, for so to make the research more reliable. The piloted questionnaire was subjected to Cronbach's Alpha coefficient formula to examine the reliability of the questionnaire. Moreover, with intent of eliminating and so minimizing errors, the possibility of misinterpretations and omissions of data plus other discrepancies able to meddling in sound judgment, raw data collected from the respondents were scrutinized for believability (validity) and trustworthiness (reliability) through sorting, editing and coding.

3.4.2.2 Validity of the Research Instrument

Mays and Pope (2000) argue that there are no mechanical or "easy" solutions to limit the likelihood that there will be errors in qualitative research. Very occasionally or almost impossible, just to find a 100% valid instrument. This tells why validity is usually measured in terms of degrees. Nonetheless, there are various ways of improving validity, each of which requires the exercise of judgment on the part of a researcher and a reader.

In terms of measurement procedures, therefore, validity is the ability of an instrument to measure what it is designed to measure (Blaxter, Hughes & Tight, 2010; Kumar, 2011); it is how accurately the research findings represent the phenomena they are intended to represent (Anderson, 2010); it is the credibility or believability of the research (UCDAVIS, 2016) This study, adopted constructive validity to validate the believability of the instrument/questionnaire. Corbetta (2003) however, views a constructive validity as an ultimately combination of the two previous types of validity, i.e. content validity and criterion-related validity. Construct validity focuses on identifying correct operational measures for the concepts being studied; (Yin, 2009). As such, with it the researcher considered how the variable in question ought, theoretically, to relate to other variables. (Marczyk, et al., 2005)

To meet the test of construct validity as with this study, an investigator first, outlines variables in terms of specific concepts and relate them to meet the original objectives of the study and then, identify operational measures or instruments that match the concepts preferably by citing published studies that make the same matches as recommends Yin (2009). According to Yin (2009) one of tactics to enhance construct validity when doing case studies, is the use of multiple sources of evidence. In essence, to enhance construct

validity of this study, triangulation (multiple sources of data) – collecting information from a diverse range of individuals and settings, using a variety of methods was used, (questionnaires, interviews and documentation) as recommended by Yin (2009) and Maxwell (1996). Thus, any case study finding or conclusion is likely to be more persuasive and exact as it is based on several different sources of information, following a cooperative mode (Yin, 2009)

As noted earlier, the triangulation strategy reduces the risk of chance associations and of systematic biases or distortions inherent in the use of only one method and allows a better assessment of the generality of the explanations that you develop, as no single method is completely free from all possible validity threats. (Maxwell, 1996; Maxwell, 1998:93-94: Yin, 2009) As noted earlier, a clear hallmark of applied research is the triangulation of methods and measures to compensate for the fallibility of any single method or measure (Bickman & Rog, 1998).

3.5 Variables and Measurement Procedures

In essence, there are two types of data commonly used in social research; qualitative and quantitative. It is alleged that, a good research effort considers the use of both types. Both approaches, in spite of their being distinct, can overlap and rely on the other in such a way as to give out not only meaningful data, but also reliable analysis and results. (Ontario Human Rights Commission-OHRC, 2010)

According to Kumar (2011), measurement is central to any enquiry. In addition to the ideology and philosophy that underpins each mode of enquiry, the most significant difference between qualitative and quantitative research studies is in the types of measurement used in collecting information from the respondents. Further on, Kumar

argues that, qualitative research mostly uses explanatory statements to seek answers to the research questions, whereas in quantitative research these answers are usually sought on one of the measurement scales (nominal, ordinal, interval or ratio). The greater the refinement in the unit of measurement of a variable, the greater the confidence placed in the findings by others, other things being equal. (Kumar, 2011)

In line with this study, the research questions were set with intent to assess the extent to which dependent variable (the implementation of HS practices) can be influenced by the independent variables (leadership, employee involvement and employee training) With measures such as descriptive tests, inferential tests, correlations, linear and multiple regressions, the relationship between independent and dependent variables were thoroughly analyzed. For simple clarification, given below is a summarized data analysis tools as displayed in Table 3.1.

Table 3.1 Data Analysis Tools Scheme/Plan

Research Objective	Independent Variables	Dependent Variable	Descriptive Tools	Inferential Tools
To determine the degree to which Leadership influences the implementation of HS Practices in workplace in Temeke Municipality.	Leadership	Implementation Of HS Practices.	Mean, frequencies percentages, Standard deviation	Correlation coefficient, Simple/multiple linear regression, ANOVA.
To unearth the extent to which employee Involvement influences the implementation of HSPs in workplace in Temeke Municipality.	Employee Involvement	Implementation Of HS Practices.	Mean, frequencies percentages, Standard deviation	Correlation coefficient, Simple/multiple linear regression, ANOVA.
To ascertain whether training of workers wholly influences the implementation of HSPs in workplace in Temeke Municipality.	Employee Training	Implementation Of HS Practices.	Mean, frequencies percentages, Standard deviation	Correlation coefficient, Simple/multiple linear regression, ANOVA.

3.6. Data Processing and Analysis

Aiming at raising curiosity and so giving insight, Kumar (2011) initially approaches the concept of data processing with a series of in-depth questions; how do you discover the answers to your research questions? How do you make sense of the information gatherd? How do you verify or disprove your hypothesis if you had one? How should the information be evaluated to realize the objectives of your study? Data analysis is the process of developing answers to questions through the examination and interpretation of collected data; it means studying the tabulated material in order to find out inherent facts or meanings or it is also the breaking down of existing complex factors into simpler parts and putting the parts together in new arrangements for the purpose of interpretation (Statistics Canada Quality Guidelines, 2015; Singh, (2006).

Descriptive statistics allowed the researcher to describe the data and examined relationships between variables, while inferential statistics allowed the researcher to examine causal relationships (Marczyk et al, 2005) In line with the foregoing, data analysis methods to be employed in this study involved both, quantitative and qualitative procedures. With measures such as descriptive tests, inferential tests, correlations, linear and multiple regressions, the data were thoroughly analyzed. Below is the analysis methods used;

3.6.1 Descriptive Analysis

Quantitatively, data were analyzed using descriptive statistical methods (descriptive analysis), as such, using frequency distribution – unavoidably, the outcomes of the analysis was mean, median, mode, frequency, standard deviation and percentage of frequency. Illustrative bars and Pie charts were conveniently used in expounding the

frequency distribution for easy interpretation of data. The use of tables was also employed in interpreting some information as it was deemed. As Marczyk et al (2005) declare, the descriptive strategies are particularly useful because they help reduce the impact of unwanted bias even when the researcher is not aware that bias is present; as such, this essentially provides information about the overall representativeness of the sample, as well as the information necessary for other researchers to replicate the study, if they so desire.

Qualitatively, data were edited, coded, logged, entered, transformed (as necessary), and organized into a database that not only facilitated accurate and efficient statistical analysis but also organized it into themes and concepts as per objectives of this study. With statistical tables and pie charts this study depicted a graphical representation of factors affecting the implementation of HS practices in Temeke municipality.

3.6.2 Correlations

These are usually expressed in a single number called a correlation coefficient (r). Correlations provide information about the direction of the relationship (either positive or negative) and the intensity of the relationship (–1.0 to +1.0) between two or more variables. Correlation analysis was conducted to determine the direction and intensity/magnitude of the relationship between independent variables. Independent variables were leadership, employee involvement, and employee training. The dependent variable was implementation of HS practices (Marczyk et al (2005).

Correlation test was employed to examine the perception of respondents on factors affecting the implementation of HS practices in workplace. The Pearson Correlation (r) was used to examine relationships between two or more variables, which were measured

on either ratio or interval scales i.e. leadership, employee involvement and employee training against implementation of HS practices as Marczyk et al (2005) recommends. Tests of correlations provided information on whether the correlation is statistically significant. Tests of significance allow us to estimate the likelihood that a relationship between variables in a sample actually exists in the population and is not simply the result of chance (ibid.).

3.6.3 Multiple and Simple Regression

Regression estimates or predicts a value on some dependent variable in relation to the values of one or more independent variables. With simple regression this study attempted to predict the relationship between dependent variable with a single independent variable i.e. a test on the relationship between the implementation of HS practices and a single independent variable-leadership. In multiple regressions, any number of independent variables can be applied to predict the dependent variable. In this study, the regressions tests were used to interpret the data collected from questionnaires in such a way as to show how such factors as leadership, employee involvement and employee training can affect the implementation of HS practices. Through this test, the proper relationship among the variables was established.

This study has three objectives which correlate to three identifiable research questions. In objective one, the researcher attempted to find out the respondents' perception of the influence of leadership on the implementation of HS practices in workplace in Temeke municipality. For this objective, regression analysis was used. Actually, whenever there are two variables like X and Y in which X is an independent variable with Y being the dependent one, then a simple linear regression of Y on X will be expressed as being: Y

$= ß_0 + ß_1X$ whereas $ß_0$ and $ß_1$ are coefficients of regression. In mathematical correlation, $ß_0$ is the intercept of the variable Y and $ß_1$ is the slope/gradient of the regression line, as such, it represents the way in which Y relates to X. In a correlative manner, as with this study, implementation of HS practices was represented by Y and X stands for leadership influence in which the correlation (relationship) between the two was established. To put this model in a formula; $Y = ß_0 + ß_1X + e$

In light of the aforementioned variables, the simple linear regression model depicted above was applied for each of the independent variables, i.e. employee involvement and employee training. Mathematically, the general regression analysis formula is represented as;

$Y = ß_0 + ß_1 X_1 + ß_2 X_2 + X_3 ß_3 + e.$

Where;

Y = Implementation of HS Practices.

X_1 = Leadership influence

X_2 = Employee Involvement

X_3 = Employee Training

$ß_0$ = Is the Y intercept which is a constant being a dependent variable value, while all other independent variables remain 0.

$ß_1$, $ß_2$ & $ß_3$ = these are regression coefficients/constants of independent variables of X_1, X_2 and X_3 in relation to Y.

e **= the error term**

3.6.4 Analysis of Variance (ANOVA)

With the aid of the Statistical Package for the Social Sciences (SPSS), ANOVA tests were applied to test the significance of the variables under study and establish the intensity/strength by which the variables means differ from each other as suggested in Singh (2006) and Marczyk et al (2005) ANOVA compares the differences between variables means rather than the differences between variables variances and so it uses variances to decide whether the means are different (Marczyk et al, 2005) Through ANOVA technique one can, in general, investigate any number of factors which are hypothesized or said to influence the dependent variable (Kothari, 2004). Inferential statistics such as ANOVA and regression coefficients normally help us to draw general conclusions about the population on the basis of the findings identified in a sample; more importantly, they provide us with not only the means to make inferences, but the means to specify the amount of probable error as well (Marczyk et al, 2005)

3.6.5 Testing the Assumptions of Regression Models

It is generally perceived that approximately 50% of the published articles do contain at least one error. Most statistical procedures say, regression, correlation, t test and analysis of variance are operated basing on the assumption that the data are normally distributed; that is the populations from which the samples are drawn are assumed to be normally distributed. (Field, 2009)

Autocorrelation Assumption - Durbin–Watson Test; For any two observations the residual or error terms should be uncorrelated or independent which sometimes is described as a lack of Autocorrelation (Field, 2009). With the Durbin–Watson test, the assumption of autocorrelation was tested for serial correlations between errors, that is,

whether adjacent residuals were correlated. The Durbin-Watson value generated after a diagnosis indicated that there were no linear auto-correlation errors in the regression data.

Multicollinearity Assumption on Independent Variables; It is assumed that there should be no perfect linear relationship between two or more of the predictors. So, the predictor variables should not correlate too highly (Field, 2009) Multicollinearity exists when there is a strong correlation between two or more predictors in a regression model, i.e. independent variables are not independent from each other (Gujarat, 2010). If there is multicollinearity between predictors it becomes impossible to obtain unique estimates of the regression coefficients. Multi-collinearity was tested and values of Tolerance and Variance Inflation Factor (VIF) were generated and just indicated no violation of the multicollinearity assumption.

Homoscedasticity Assumption; Homoscedasticity assumes a situation where the error term at each level of the predictor variable(s) have similar variances. This just means that the residuals at each level of the predictor(s) should have the same variance; when the variances are very unequal there is said to be heteroscedasticity. (Field. 2009; Gujarat, 2004) Green (2003) suggests that it is useful to be able to test for homoscedasticity and if necessary, modify the estimation procedures accordingly so as to avoid violating the assumption; because it may pose potentially severe problems for inferences based on least squares. White test was used to test for homoscedasticity and found no exhibition of heteroscedasticity. (Carter-Hill, Griffiths, & Lim, 2011)

3.7 Ethical Considerations

Most authors highlight the importance of ethical considerations in research (Babbie 2007; Babbie 2010; Creswell 2014; Locke, Spirduso, & Silverman, 2013; Marczyk et al. 2005; Marshall & Rossman, 2011; Merriam, 1998; Sekaran, 2003; Spradley, 1980). First and foremost, the researcher has an obligation to respect the rights, needs, values, and desires of the informant(s) (Creswell, 2014). As such, ethical behavior pervaded each step of the research process in this study—data collection, data analysis, reporting, and dissemination of information (Sekaran, 2003) Codes of research ethics all emphasizing the protection of human participants were established to ensure autonomy, beneficence, and justice as it is insisted in Marczyk, et al (2005) The researcher adhered to autonomy, which means that participants had the right to decide what they wanted to do and to made their own decisions about the kinds of research experiences they wanted to be involved in, if any. Participants' voluntariness was encouraged where the informed consent was also voluntary and without pressure of any kind as observed Kumar (2011), De Vaus (2001) and Marczyk et al (2005). To maintain the participants' confidence, then, confidentiality, anonymity, privacy and "harmless exposure" to respondents was addressed by unnecessarily not exposing the respondents' identity or names in all course of filling the questionnaires.

3.8 Expected Results of the Study

The study contributes to better understanding of HS practices and afterwards help in promoting and sustaining the OHS. In the long run, both employers, managers, employees, stakeholders and all people involved in working, will not only grasp the continuing benefits of implementing HS practices, but also understand in a new light

how to protect themselves against work-induced illnesses, accidents, injuries and hazards. Implementing HS practices in an excellent manner will raise employees' morale and commitment resulting to an increased efficiency, effectiveness and productivity. This study made an effort towards addressing the pressing HS needs of employers and workers, society, government and the world at large, and thus be a data base for furtherance and improvement of OHS practices in workplaces.

CHAPTER FOUR

4.0 RESEARCH FINDINGS AND ANALYSIS

4.1 Introduction

In light of the foregoing, this chapter presents in-depth research findings, analysis and feasible discussions. Hereby, the study has employed various descriptive as well as statistical tools to establish factors affecting the implementation of health and safety practices in Temeke Municipality. In essence, the study sought to unearth the influence of leadership, employee involvement and employee training on the implementation of health and safety practices. With intent to achieve the aforementioned objectives, this chapter initially provides descriptive analysis followed by inferential statistics. As such, the design was well fitted and explicitly explained.

4.2 Response Rate

Nonetheless, the target population of this study consisted of the employees working in Temeke municipality. The researcher was affiliated with an estimated accessible population pool of 175 potential participants. Out of 175 distributed questionnaires, only 168 were returned duly filled in. So far the return/completion rate was 96%. This completion rate is recommendable and acceptable, surpassing the return rate of 70% inferred as excellent by Mugenda and Mugenda (2003) and Kothari (2004). On his further elaboration, Babbie (2013) altogether deduces that, completion rates of above 50% are acceptable for analysis and publishing, while 60% are good and equal to 70% or more are very good. Figure 4.1 below illustrates the respondents' rate.

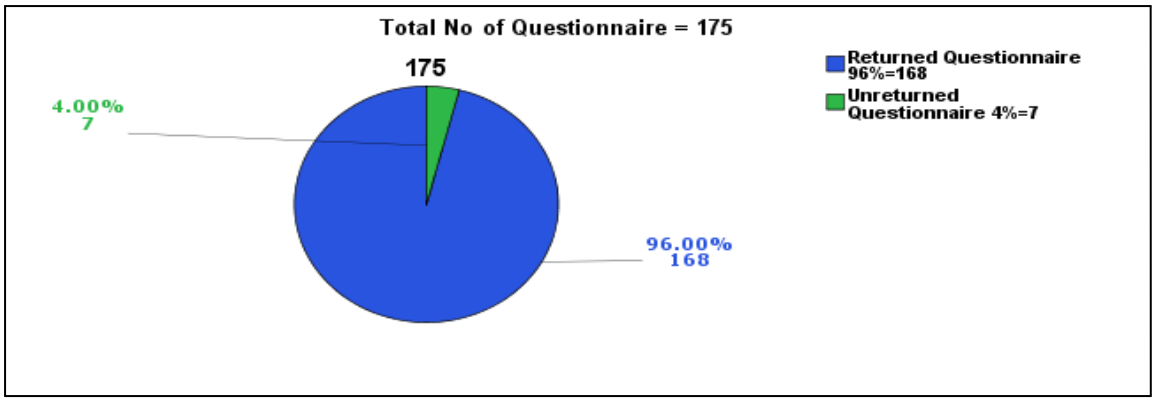


Figure 4. 1: Respondents Rate

4.3 Results of the Pilot Study

A pilot testing was done just before the applicability of the variables under study to certify that the research instrument measured what was absolutely intended for as suggested by Yin (2011), Creswell (2011), Blaxter, Hughes & Tight (2006) and Saunders et al., (2009).

4.3.1 Reliability and Validity Analysis

The Reliability Test was also conducted as it was highlighted in Kumar (2011) that**,** reliability indicates accuracy, stability and predictability of a research instrument: the higher the reliability, the higher the accuracy of the instrument. However, the Cronbach's Alpha Coefficient was applied in testing the reliability of the questionnaire. Having a reliability coefficient scale of more than 0.7, a recommendable threshold, the items under study were considered reliable with relatively high internal consistency and stability of measures in conformity to what were agreed and suggested by Bernard (2006), Cohen, Manion, and Morrison (2007), Bryman and Cramer (1990: 71) and Corbetta, (2003). The findings are shown in Table 4.1.

Table 4.1: Reliability Test Statistics

Variables/Constructs	Cronbach's Alpha	N of Items
Leadership	.715	7
Employee Involvement	.938	6
Employee Training	.919	6
Implementation of Health & Safety Practices	.910	7

On the other hand, construct validity was performed to ensure believability of the measuring instrument and the extent to which the measuring instrument provides adequate coverage of the topic under study.

To rightly test the construct validity as with a phenomenon under study, variables were defined in terms of specific concepts and relate them to meet the original objectives of the study and then, identified operational measures or instruments that match the concepts preferably by citing published studies/literatures that make the same matches as recommends Yin (2009). To enhance construct validity, multiple sources of evidence were used. Furthermore, the items were subjected to some intellectuals who commented on them and judged them by evaluating their credibility and their representativeness as to how well the measuring instrument meets the standards within the domain of the same phenomenon. (Foxcroft, Paterson, Roux, & Herbst, 2004; Kothari, 2004).

4.4 Respondents' Background (Demographic Information)

Respondents' gender, age and education background all were taken into consideration in the domain of this study, basically to avoid any possibility of biasness which might be posed by the existed participants' demographic characteristics. Below are the tabulated results.

4.4.1 Gender of the Respondents

Tabulated findings presented in Table 4.2 indicate that out of 168 respondents, 91 (54.2%) were males meanwhile 77 (45.8%) were females. This indicates that both genders were incorporated in the study proportionally, albeit males exceeded females. Nevertheless, gender biasness was checked.

Table 4.2: Gender of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	**Female**	77	45.8	45.8	45.8
	Male	91	54.2	54.2	100.0
	Total	**168**	**100.0**	**100.0**	

4.4.2 Respondents' Ages

Ages of the respondents were gauged and findings were tabulated in Table 4.3. In normal situation, it was found that respondents' ages ranging between 36-45 and 26-35 years occupied majority of respondents with 63.1% and 25.0% respectively. Honestly, it is reasonable to suppose that, most of workers start to assume supervisory roles and management positions at 36 ages or above. This is why the majority of respondents have fallen in 36-46 ages category showing most of them were middle aged ones. Meanwhile, the rest with 35 years of age and below could have been average employees with average experience notably from various departments shouldering different supervisory responsibilities.

Table 4.3: Ages of the Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25 years	4	2.4	2.4	2.4
	26-35 years	42	25.0	25.0	27.4
	36-45 years	106	63.1	63.1	90.5
	46-55 years	14	8.3	8.3	98.8
	56 years & above	2	1.2	1.2	100.0
	Total	**168**	**100.0**	**100.0**	

4.4.3 Respondents' Educational Levels

As indicated in Table 4.4, 67.3% (n = 113) of the respondents had a bachelor's degree, 17.9% (n = 30) had a diploma, 8.9% (n = 15) held a master's degree, 4.8% (n = 8) had a certificate, and 1.2% (n = 2) had completed secondary education. The general results indicated that greater numbers of the respondents had educational level beyond secondary school; at least between a certificate and a master's degree. In line with this level of education, many respondents were suitable to participate in this study. In essence this is supported by Hecker (1998), who infers that albeit education and training cannot solve all OSH problems, they are, however, critical components of an effective safety and health programme when employed in conjunction with engineering and technical solutions. Hacker observes that cumulative, interactive and continuous learning is essential to prepare our rapidly changing work environments to meet the needs of workers, especially as regards the prevention of debilitating injuries and illnesses.

Table 4.4: Respondents' Educational Backgrounds

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary Level	2	1.2	1.2	1.2
	Certificate	8	4.8	4.8	6.0
	Diploma	30	17.9	17.9	23.8
	Undergraduate	113	67.3	67.3	91.1
	Postgraduate	15	8.9	8.9	100.0
	Total	**168**	**100.0**	**100.0**	

4. 5 Descriptive Statistics and Analysis of Variable Constructs

In essence, the study aimed at establishing the facts about how do leadership, employee involvement and employee training influence implementation of HSPs. The respondents' perceptions (views) on the influence of leadership, employee involvement and employee training on implementation of HSPs were gathered. In line with this, descriptive statistics were computed and interpreted essentially by using percentages and means. In highlighting this, Mills and Gay (2014) recommend that, it is useful to convert numbers to percentages so as to be able to talk about the proportion/relationship responding a certain way and to be able to make comparisons. Using means to present and interpret data helps in summarizing the key features of items and enabling data to be compared and for so allows easy understanding (Kothari, 2004) Herein an in-depth explanation on the descriptive statistics of independent and dependent variables is presented.

4.5.1 Descriptive Statistics and Interpretation for Leadership Construct

The study intended to determine the perceptions of the effect of leadership on implementation of HSPs in Temeke municipality. The descriptive statistics' results were tabulated in Table 4.5. The results revealed that 29.8% as well as 33.9% (63.7%) of the respondents agreed and strongly agreed that there was a formulated policy to implement OHS, meanwhile 8.3% and 13.7% (22.0%) strongly disagreed and disagreed respectively and 14.3% took an ambivalent stand. This is in accordance with Stranks (2006) who suggests that, it shall be the duty of every employer to prepare and as often as may be appropriate revise a written statement of his general policy with respect to the HS at work of his employees and the organization and arrangements for the time being in force for the carrying out of that policy, and to bring the statement and any revision of it to the

notice of all his employees. A clear health and safety policy contributes to business efficiency and continuous improvement throughout the operation. (Hughes & Ferrett, 2011; Ngirwa, 2005)

In line with this, answers were sought to evaluate leadership's influence and how it is involved in implementing the HS practices. For so responses on some clearly defined statements were gathered to demonstrate leadership's influence on implementing HS practices; 62.5% of all respondents agreed that management was highly committed to HS practices, 57.2% admitted that the management recognized and rewarded safety behavior, 65.5% concurred that the management provided the necessary protective and safety equipment whenever needed, 58.9% said that management had regular audits and inspections on HS system, 60.7% acknowledged the presence of a committee for overseeing HS issues and 71.5% stated that management regularly communicated with employees on HS measures. Having used a rating scale of 1 to 5, it was then revealed that the means for all factors tested under leadership were above 3 indicating that most of respondents concurred that all determinants (factors) aforementioned under leadership construct were affecting implementation of HS practices in the municipality of Temeke.

In view of these findings, a bunch of scholars have commented on the role of leadership in implementing HS practices. Citing few of them, Flintrop (2013b) infers that, bad leadership can result to OHS risks that can lead to work accidents. He states that, the success of OHS management is therefore also based on leaders´ behaviour when it comes to developing and transposing visions and strategies on OSH. This is also backed up by Stranks (2006), Hughes and Ferrett (2007), Armstrong (2012), EU-OSHA (2016) and Hopkins (1995) who posit that, strong effective and visible leadership is vital to good

workplace safety and health and good HS reflects strong leadership from the top and that is what we want to see. In line with the foregoing, the municipality of Temeke should not also overlook those percentages representing disagreement opinions. 31.5% disagreed that the management neither rewarded nor recognized safe behavior. This contradicts the views of DeCenzo et al (2016) as they suggest that, in order to earn the employee involvement in OHS matters, there should be provision of safety incentives including awards, prizes, or cash for workers or work units with excellent safety records. Sooner or later, these incentives will generate safety consciousness among employees. In light of the aforementioned suggestions above, then, the municipality of Tmeke is urged to see to it that safety behavior is recognized, highlighted and appreciated and even rewarded.

Nevertheless, 32.7% disagreed that there were regular audits and inspections on HS system, more simply put, regular audits and inspections though done but were found unsatisfactorily performed in the municipal workplace. This is contrary to Hughes and Ferrett (2009) and Armstrong (2012) who declare that, auditing supports monitoring by providing managers with information and it will show how effectively plans and the components of HS management systems are being implemented. In addition, it will provide a check on the adequacy and effectiveness of the management arrangements and risk control systems. With regards to HS inspections, Ngirwa (2005), Armstrong (2012) and Dessler (2014) they all emphasize that, periodic physical inspection of the organisation's HS facilities should be carried out because the moral is that safety inspections should always be part of the supervisor's daily routine.

Looking at the results, 30.9% did not acknowledge the presence of a committee for overseeing HS measures. As shown in the findings, HS committee is not highly acknowledged within the municipality and among workers. This is not in accordance

with Hughes and Ferrett (2009) according to which they suggest that setting up a separate risk management or HS committee as a subset of the board, chaired by a senior executive, can make sure the important issues are addressed and guard against time and effort being wasted on trivial risks and unnecessary bureaucracy. Opinions of the respondents on leadership influence are tabulated in Table 4.5 below table.

Table 4.5: Descriptive Statistics on Leadership Influence

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
There is a formulated policy to implement OHS practices.	8.3%	13.7%	14.3%	29.8%	33.9%	3.67
The management is highly committed to HSPs.	5.4%	11.3%	20.8%	31.5%	31.0%	3.71
The management recognizes and rewards safe behavior.	8.9%	22.6%	11.3%	28.6%	28.6%	3.45
The management provides the necessary protective and safety equipments.	6.0%	9.5%	19.0%	38.7%	26.8%	3.71
The management has a regular audits and inspections on HS System.	7.7%	25.0%	8.3%	27.4%	31.5%	3.50
There is a committee for overseeing or checking HS issues.	8.3%	22.6%	8.3%	29.2%	31.5%	3.53
Management communicates regularly with employees on HS measures.	6.0%	12.5%	10.1%	40.5%	31.0%	3.78

4.5.1.1 Effects (Influence) of Leadership on Implementation of HS Practices

The study also sought to determine the effects of some measures or actions taken by management on implementing HS practices and making the OHS a success. In essence, the responses were gathered from respondents stating how those measures or actions taken by management influence implementation of HS practices. 89.3% admitted that good results can be achieved whenever employees are directed on HS matters, 82.1%

concurred that clear communication is the most powerful tool for improving work HS, 85.7% stated that to improve HS, leaders should take personal responsibility and acting as a role model for others, while 88.7% agreed that provision of sufficient resources for work HS can improve HS practices and 84.5% admitted that promoting a greater awareness of the value of work HS can achieve better results**.** As per the findings above, the implications behind this is that the entire list of practices (actions) listed under leadership construct had shown to have influence on implementation of HS practices in the municipal workplace.

Accordingly, 82.1% of the respondents agreed that clear communication is the most powerful tool for improving workplace HS. The findings correspond to Hughes and Ferrett (2009) and Channing (2008) who declare that organizations with a positive safety culture are characterized by communications founded on mutual trust, by shared perceptions of the importance of safety and by confidence in the efficacy of preventive measures. They argue that, many problems in HS arise due to poor communication; it arises from ambiguities or, even, accidental distortion of a message.

Furthermore, 88.7% were in agreement that provision of sufficient resources for work HS can improve HS practices. However, this is in line with Hughes and Ferrett (2007; 2009) as they posit that, to achieve this level of performance, sufficient financial and human resources must be made available for the HS function at all levels of the organization. The detailed information about the effects of some actions taken by management on implementation of HS practices is shown below in Table 4.6.

Table 4.6: Effects (Influence) of Leadership on Implementation of HS Practices.

Statements	Yes	No	Not sure
Good results can be achieved whenever employees are directed on HS matters.	89.3%	4.2%	6.5%
Clear communication is the most powerful tool for improving workplace HS.	82.1%	6.0%	11.9%
To improve HS, leaders should take personal responsibility and acting as a role model for others.	85.7%	3.6%	10.7%
Provision of sufficient resources for work HS can improve HSPs.	88.7%	5.4%	6.0%
Promoting a greater awareness of the value of work HS can achieve better results.	84.5%	7.7%	7.7%

4.5.1.2 The Extent Leadership Influences the Implementation of HSPs

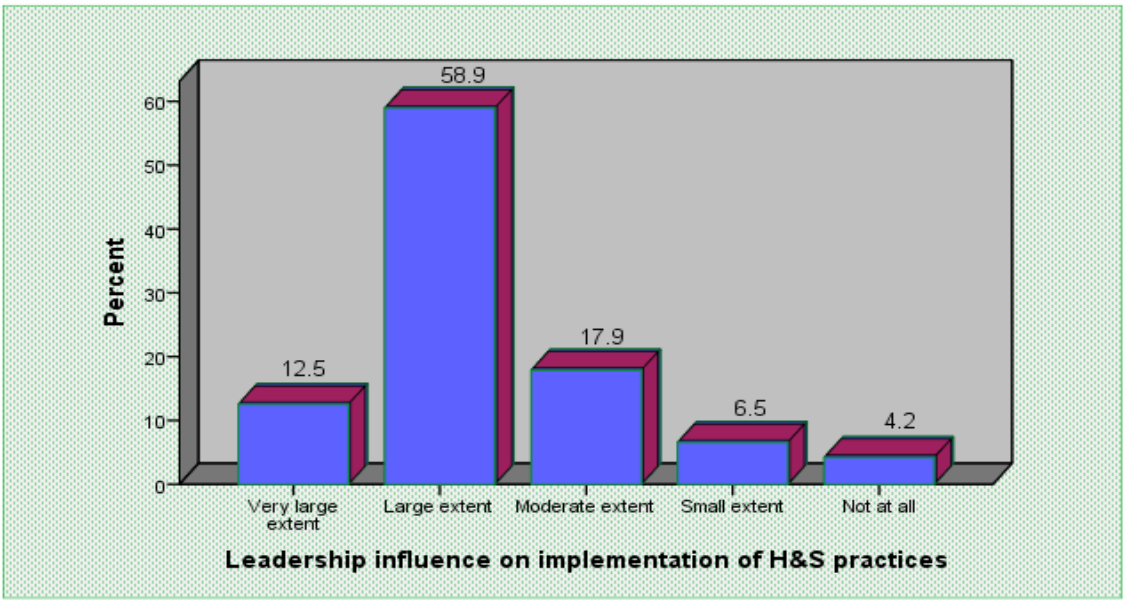
The study intended to determine from the respondents the extent by which leadership influences the implementation of HS practices in Temeke municipality. The findings are as presented in the figure 4.2. 58.9% opined that leadership influences the implementation of HSPs to a large extent, meanwhile 12.2% admitted that leadership influences the implementation of HSPs to a very large extent, 17.9% said that leadership influences the implementation of HSPs to a moderate extent while 6.5% agreed that it influenced the implementation of HS practices to a small extent and 4.2% not at all.

In line with the foregoing, a number of scholars concur with the findings above. As depicted in the findings, 58.9% opined that leadership influences the implementation of HSPs to a large extent; meanwhile 12.2% admitted that leadership influences the implementation of HSPs to a very large extent. This coincides with the views of Channing (2008) who avers that leadership style has a strong positive impact on the safety performance of those individuals who generally would otherwise have been less

committed to safety. However, a study by Griffin et al (2000) concluded that safety performance improved where the manager adopted a supportive and caring style and this is not surprising because a good manager will seek to explain and understand a poor or 'at-risk' behaviour before applying a workplace safety rule. Additionally, Channing (2008) and Simard and Marchand, (1997) found that, low accident rates occurred where the supervisor adopted a participatory leadership style.

Nonetheless, 84.5% of the respondents stated that promoting a greater awareness of the value of work health and safety can achieve better results. The findings are supported by Dessler (2013) who underpins that a safety awareness program enables trained supervisors to orient new workers arriving at a job site regarding common safety hazards and simple prevention methods.

Figure 4.2: The Extent Leadership Influences the Implementation of HS Practices.



4.5.2 Descriptive Statistics and Interpretation for Employee Involvement Construct

Furthermore, the study determined to establish the level of perceptions of respondents on the effect of employee involvement on the implementation of HSPs. This is in line with

Stranks (2006) and Channing (2008) who found that reduction of injury will only be successful if there is widespread involvement of those who are potentially affected by the hazard.

The findings in this study unveiled 67.3% of the respondents admitted that whenever necessary employees usually wear personal protective equipment (PPE) given to them, meanwhile 20.8% disagreed and 13.1% stayed ambivalent. It further revealed that, 66.6% of the employees strongly agreed and agreed that the municipality has HS cultures followed by employees while 17.2% disagreed and 16.1% decided not to take either part. Probing more into employee involvement's influence on implementing HS practices, 69.7% of employees concurred that they usually comply with OSH rules and regulations at work whereas 17.2% disagreed and 11.3% did not take either part. However, 57.1% of respondents said that employees have representatives in safety committee while 31.0% disagreed and 11.9% stayed ambivalent. So far 69.6% concurred that they (employees) usually report hazardous condition to the management whereas 15.4% disagreed and 14.9% had a neutral position. When asked whether they felt that they are responsible for their health and safety and not the employer, 69.6% concurred they were, 12.5% disagreed and 17.9% maintained a neutral position.

In light of the aforementioned results, it was revealed that majority of employees of Temeke municipality were involved in matters pertaining to HSPs in workplace. This can be reflected in such behavior like wearing PPE given to them (67.3%), their compliance to the agency's HS cultures (66.6%) as well as their adherence to OSH rules and regulations (69.7%). However employees also concurred to have a tendency of reporting hazardous conditions to the management whenever they erupt (69.6%) and they felt to shoulder the responsibility for their health and safety and not the employer (69.6). Seeing the means

scores of the entire factors tested under employee involvement construct were higher than 3, deploying a rating scale of 1-5, then the implication behind these findings were that most respondents were in agreement with the fact that the factors listed under employee involvement were affecting implementation of HSPs.

In essence, employee involvement is seen by many scholars as one of the significant factor in determining the successfulness of OSH programs. In line with these findings, Dessler (2013) agrees that, employees are often your best source of ideas about what the safety problems are and how to solve them. Stranks (2006) also concurs that, achieving high HS standards can be helped by the creation of a positive culture that secures involvement and participation at all levels. The results revealed that, most respondents (67.3%) admitted that they wore PPE given to them. This is in line with Stranks (2006) who opines that, the provision and use of PPE is the classic 'safe person' strategy. Nevertheless, Decenzo et al. warn that, the refusal to use protective clothing or equipment must be taken seriously by all.

The findings also indicated that, majority of the respondents concurred with the fact that the agency has HS cultures followed by employees (66.6%) This corresponds to what was highlighted by Hughes and Ferret (2009), and Stranks (2006) that, to earn a successful positive HS culture needs the involvement of the whole staff, more simply put, there must be a joint commitment in terms of attitudes and values. Nevertheless, basing on the findings above, 31.0% of the employees did not admit that employees have representatives in safety committee. This should not be ignored as it is contrary to the views of Hughes and Ferrett (2007; 2009), Dessler (2013) and Biggins, Phillips, and O'Sullivan (1991) who declare that, employee safety committees can improve workplace safety basically by taking on the role of safety watchdog, and training its members in

hazard identification for so be able to correct the problem quickly. Table 4.7 shows the descriptive statistics' results of the effects of Employees involvement on implementation of HS practices.

Table 4.7: Descriptive Statistics on Employees Involvement Influence/Effect.

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
Whenever necessary employees usually wear personal protective equipments (PPE) given to them.	8.9%	11.9%	11.9%	36.9%	30.4%	3.68
The agency has HS cultures followed by employees.	8.3%	8.9%	16.1%	35.1%	31.5%	3.73
The employees have representatives in HS Committee.	13.1%	17.9%	11.9%	34.5%	22.6%	3.36
Usually employees comply with OSH rules and regulations at work.	8.9%	8.3%	13.1%	30.4%	39.3%	3.83
Employees usually report hazardous condition to the management.	6.5%	8.9%	14.9%	21.4%	48.2%	3.96
Employees feel that they are responsible for their HS and not the employer	3.6%	8.9%	17.9%	33.9%	35.7%	3.89

4.5.2.1 Effects of Employee Involvement on Implementation of HS Practices

So far, the study sought to determine the effects of employee involvement on implementation of HS practices in Temeke municipality. Employees gave answers that most reflected their opinions on each of the listed statement. 95.2% agreed that consulting workers to encourage their participation is an important step for ensuring HS matters, 93.5% concurred that delegation of safety activities or responsibility will improve HS and 92.3% were in agreement that a two way communication between employees and managers facilitates the effective implementation of OSH. Moreover, 96.4% opined that involving workers to tackle safety issues can also increase staff morale and job satisfaction, 94.6% admitted that employees' participation will lower

occupational risk level and accident rates while the rest, 94.0% postulated that it is a fundamental right of workers to be thoroughly informed about hazards at work. Just a look at the findings above gives the implications that all the factors compiled under employee involvement construct were exerting considerable influence on implementation of HS practices in municipal workplace.

The findings also showed that 92.3% of the respondents agreed that a two way communication between employees and managers facilitates the effective implementation of OSH. This corresponds to the views of Dejoy, Murphy and Gershon 1995; Lin and Mills, 2001; who maintain that a two-way communication between employees and managers can facilitate the effective implementation of OSH. Yet, most respondents (95.2%) said that consulting workers to encourage their participation is an important step for ensuring HS matters. This was supported by Gilbert, (2008) and Hughes and Ferrett (2009) who highlight consultation between employers and employees on the likely risks and dangers arising from their work and the necessary measures to reduce or get rid of the risks.

Accordingly, 93.5% of the respondents admitted that the delegation of safety activities or responsibility improved OHS. This is in agreement with the views of Barrett and Howells (2000) and Walters and Nichols, (2007) that, in this context more than most, greater involvement of workers in HS arrangements via delegation of safety activities encourages workers to be more HS conscious and to prompt employers to take a more proactive HS stance The detailed information about the effects of employee involvement on implementation of HS practices are depicted below in Table 4.8.

Table 4.8: Effects of Employee Involvement on Implementation of HS Practices

Statements	Yes	No	Not sure
Consulting workers to encourage their participation is an important step for ensuring safety and health matters.	95.2%	1.8%	3.0%
The delegation of safety activities or responsibility will improve health and safety.	93.5%	4.8%	1.8%
A two way communication between employees and managers facilitates the effective implementation of OSH.	92.3%	3.0%	4.8%
Involving workers to tackle safety issues can also increase staff morale and job satisfaction.	96.4%	1.2%	2.4%
Employees' participation will lower occupational risk level and accident rates.	94.6%	1.2%	4.2%
It is a fundamental right of workers to be thoroughly informed about hazards at work	94.0%	2.4%	3.6%

4.5.2.2 The Extent Employee Involvement Influences the Implementation of HSPs

Then again, the study sought to establish the extent by which employee involvement influences the implementation of HS practices in Temeke municipality. The findings are as depicted in the figure 4.3. As it can be seen, 47.6% opined that employee involvement influences the implementation of HS practices to a very large extent, meanwhile 35.1% stated that employee involvement influences the implementation of HS practices to a large extent, 10.7% said that it influences the implementation of HS practices to a moderate extent while 4.8% agreed that it influenced the implementation of HS practices to a small extent and 1.8% not at all.

Most respondents (82.7%) admitted that employee involvement influences HS implementation. In this light, here is a sheer truth reflected in some scholars' views in support of the revealed results above. Gallagher's (2000) study, underscored employee involvement as a key characteristic of the 'best practice' cases. Studies in industrial

psychology have shown that people are more likely to support something that they have personally contributed to—sometimes referred to as buying into a process. (Lingard & Rowlinson, 2005) An individual's perception that he or she can make a valued contribution and change the working environment for the better is highly motivating. They also contend that, it is, in any case, morally right that employees should be consulted on decisions that affect their well-being and working conditions. (ibid)

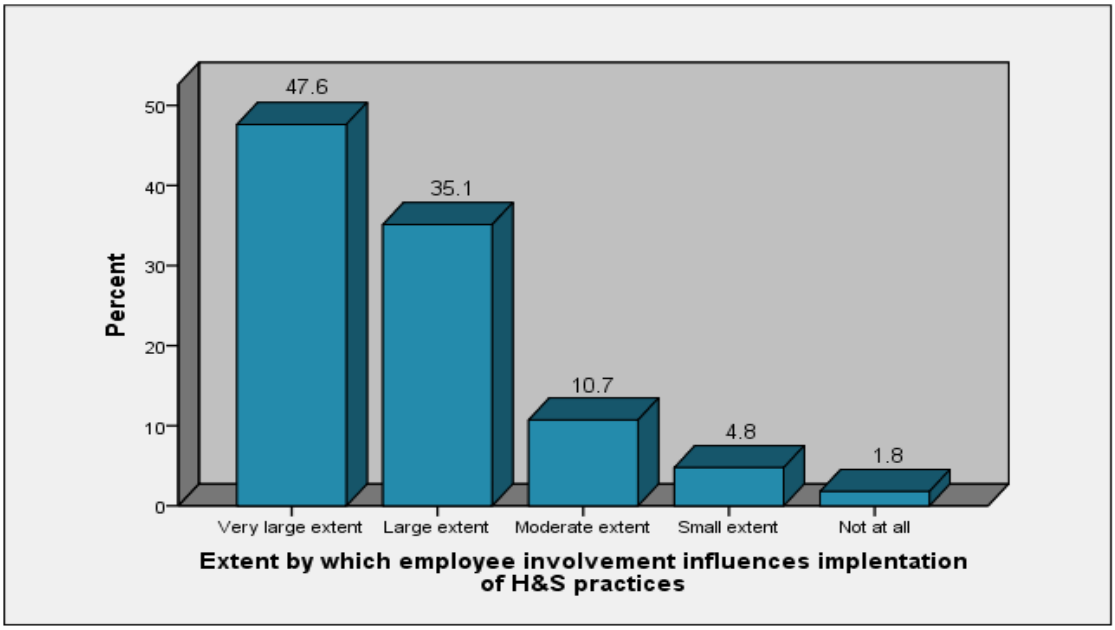


Figure 4.3: The Extent Employee Involvement Influences the Implementation of HS Practices.

4.5.3 Descriptive Statistics and Interpretation for Employee Training Construct

All along, the study aimed at establishing the degree with which the respondents perceive the effects of employees training on the implementation of HS practices. Looking at the findings, it was revealed that 37.5% and 39.9% (77.4%) agreed and strongly agreed respectively that training on safety was incorporated (included) in OSH Policy of their agency while 13.6% disagreed and 8.9% remained ambivalent. Another probe was on

whether the agency regularly provides information about HS issues. Responding to this, 67.8% concurred with the statement, whereas 28.5% disagreed and 3.6% decided not to take either position. 68.4% admitted that the employees were trained on protective measures meanwhile 19.0% disagreed and 12.5% were undecided.

On further exploration, 62.5% stated that employees participate in seminars instructing on OHS matters, while 25.6% disagreed and 11.9% stood ambivalent. To the statement whether employees consider OSH training as very important, 69.7% agreed, 11.4% disagreed and 19.0% took not either part. The study also requested the respondents to state whether the absence of training can reduce improvement in HS issues in their municipality. 68.4% were in agreement with the statement, 11.4% disagreed while 20.2% remained undecided as they took a neutral position. Considering the used rating scale of 1 to 5, the means scores of the tested factors under employee training construct were found to be above 3 thus implying that most respondents were in agreement with the fact that the factors listed under employee training were affecting implementation of HS practices.

The findings above indicates that, 77.4% of the participants concurred that training on safety was incorporated (included) in OSH Policy of their agency (Municipality) These results are reflected in the suggestions of Hughes and Ferrett (2009) who contend that, one of the crucial performance targets embedded in the HS policy's objectives is to increase in number of employees trained in HS, and this in turn will increase their HS awareness. More results revealed that most respondents (64.8%) agreed that they were trained on protective measures. The idea is emphasized in Ngirwa (2005), Dessler (2013), Stranks (2006; 2008), Hughes and Ferrett (2009) and Barrett and Howells (2000) that, training workers on means to protect themselves, can be a paramount

countermeasure in preventing accidents through minimizing both, unsafe conditions as well as unsafe acts.

Basically, others (67.8%) admitted that there was regular provision of information about HS issues. Correspondingly, Lingard and Rowlinson (2005) contend that, provision of instructions for new workers and updating training for existing workers when new models of a particular plant or equipment arrive will enable employers to monitor the health of employees and conditions at the workplace. However, 28.5% did not acknowledge that there was regular provision of information about HS issues in the municipal workplace. In actual sense this goes contrary to what is asserted by Armstrong (2012) and Hughes and Hughes (2008) that, employers are obliged not only to disseminate appropriate HS information to workers, but also to further ensure that, employees are made aware of what constitutes safe working practices so that they can protect themselves and their fellow workers.

The survey study by Kheni, Gibb and Dainty (2010, agreed with the findings above (68.4%), that, absence of training can reduce improvement in HS issues. The reports of the survey study showed that low literacy levels of workers and managers' ignorance of OHS responsibilities were key factors in limiting the capacity of construction small-and medium-sized enterprises to manage OHS effectively. The results in Table 4.9 below depict the descriptive statistics' results of the effects of Employees training on implementation of HS practices.

Table 4.9: Descriptive Statistics on Employee Training

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
Training on safety is incorporated (included) in OHS Policy of our agency (organization).	7.1%	6.5%	8.9%	37.5%	39.9%	3.96
The agency regularly provides information about health and safety issues.	9.5%	19.0%	3.6%	46.4%	21.4%	3.51
The employees are trained on protective measures.	7.7%	11.3%	12.5%	47.6%	20.8%	3.63
Employees participate in seminars instructing on OHS matters/issues.	7.7%	17.9%	11.9%	46.4%	16.1%	3.45
Employees consider OSH training as very important.	5.4%	6.0%	19.0%	29.2%	40.5%	3.93
Absence of training can reduce improvement in HS issues in our agency/organization.	5.4%	6.0%	20.2%	22.0%	46.4%	3.98

4.5.3.1 Effects of Employee Training on Implementation of HS Practices

All along, this study also aimed at determining the effects of employee training on implementation of HS practices in Temeke municipality. Basically, the responses given reflected the thoughts and beliefs of employees on the subject under investigation. In light of the aforesaid briefing, 78% of the respondents opined that developing a safety-conscious attitude can improve workplace HS while 10.7% disagreed and were unsure respectively. 87.7% agreed that, provision of training for new employees can develop their awareness of HS issues, 89.3% concurred that training employees about the hazards they may be exposed to at work can reduce work related accidents and more emphatically 95.2% admitted that employees need to be made aware of the safety rules and procedures so that they may comply with them. Moreover, 91.1% expressed their concurrence with the suggestion that lack of training on safety equipments or proper use of work tools may result in work induced accidents/illnesses and 88.7% believed that HS

education should start with employee induction when a worker joins the organization/transferred to a new job. The picture given by the results above suggested that, all aforementioned factors under employee training construct had the effect of influencing the implementation of HS practices in municipal workplace.

Alongside this, 78% of employees believed that developing a safety-conscious attitude can improve workplace HS. Actually this view is in concurrence with Dessler (2013) who deduces that, employers also can use safety awareness programs to improve employee safety behavior essentially through orienting new workers arriving at a job site regarding common safety hazards and simple prevention methods. At the same time, it goes to 87.7% of respondents who were in agreement that, provision of training for new employees can develop their awareness of HS issues. This is in accord with Stranks (2008) and Ngirwa (2005) that employees should be provided with adequate safety training at the time of first employment to enable them to develop the necessary skills, which they will need to use in the undesirable event of an industrial accident.

Allegedly, 95.2% postulated that, employees need to be made aware of the safety rules and procedures so that they may comply with them. Their opinions were concurrent with Ngirwa's (2005) who argues that, safety training programmes make employees aware of their responsibilities as groups and as individuals and inform them the rules and procedures drawn by the organisation to enforce the implementation of the HS programme. But other majority, 91.1% believed that lack of training on safety equipments or proper use of work tools may result in work induced accidents/illnesses. These results were in accord with the earlier views of Hughes and Ferrett (2009) who observe that, lack of specific training on proper use of work-tools or correct utilization of

safety equipments will expose employees to a highly dangerous risk of injury that may result into illness or even death.

Then again, 88.7% of the employee agreed that HS education should start with employee induction when a worker joins the organization/transferred to a new job. Their suggestions were in line with what were emphasized by Hughes and Ferrett (2009), Stranks (2008), Armstrong (2012) and Walters and Nichols (2007) that, employer are responsible to ensure employees are provided with sufficient safety training at the time of first employment, and on being exposed to new or increased risks arising from transfer or change of responsibilities, introduction of, or change in, work equipment or the introduction of new technology. Below in Table 4.10, is the descriptive information and statistics depicting the effects of employee training on implementation of HSPs.

Table 4.10: Effects of Employee Training on Implementation of HS Practices

Statements	Yes	No	Not sure
Developing a safety-conscious attitude can improve workplace HS.	78.6%	10.7%	10.7%
Provision of training for new employees can develop their awareness of HS issues.	85.7%	9.5%	4.8%
Training employees about the hazards they may be exposed to at workplace can reduce work related accidents.	89.3%	3.6%	7.1%
Employees need to be made aware of the safety rules and procedures so that they may comply with them.	95.2%	1.8%	3.0%
Lack of training on safety equipments or proper use of work tools may result in work induced accidents/illnesses.	91.1%	2.4%	6.5%
HS education should start with employee induction when a worker joins the organization/transferred to a new job.	88.7%	1.2%	10.1%

4.5.3.2 The Extent Employee Training Influences the Implementation of HSPs

The study also investigated the degree with which employee training influences the implementation of HS practices in Temeke municipality. Respondents' opinions were recorded and interpreted. The results are shown in Figure 4.4. Amongst all respondents, 14.9% just admitted that employee training influences the implementation of HS practices to a very large extent, at the same time 57.1% contended that it influences the implementation of HS practices to a large extent. In due time, 13.1% of respondents concurred that it influences the implementation of HS practices to a moderate extent, 8.9% opined it influences it to a small extent and 6.0% said it doesn't at all.

In light of the aforementioned results, Alli (2008) postulates that, in fact, a number of researches have been focused on this topic and apparently found that, one of the most effective steps towards the sustenance of organizational safety as well as employees' health is in the training of employees. As shown above, 72% of respondents were in accord with the fact that employee training has considerable influence on implementation of HS practices. This is in line with Stranks (2008), who observes that proper HS training guarantees not only better safety performance and morale but also results in greater earnings and productivity. It is a sheer truth that, even the best HS policy can be completely ineffective if people don't know it exists.

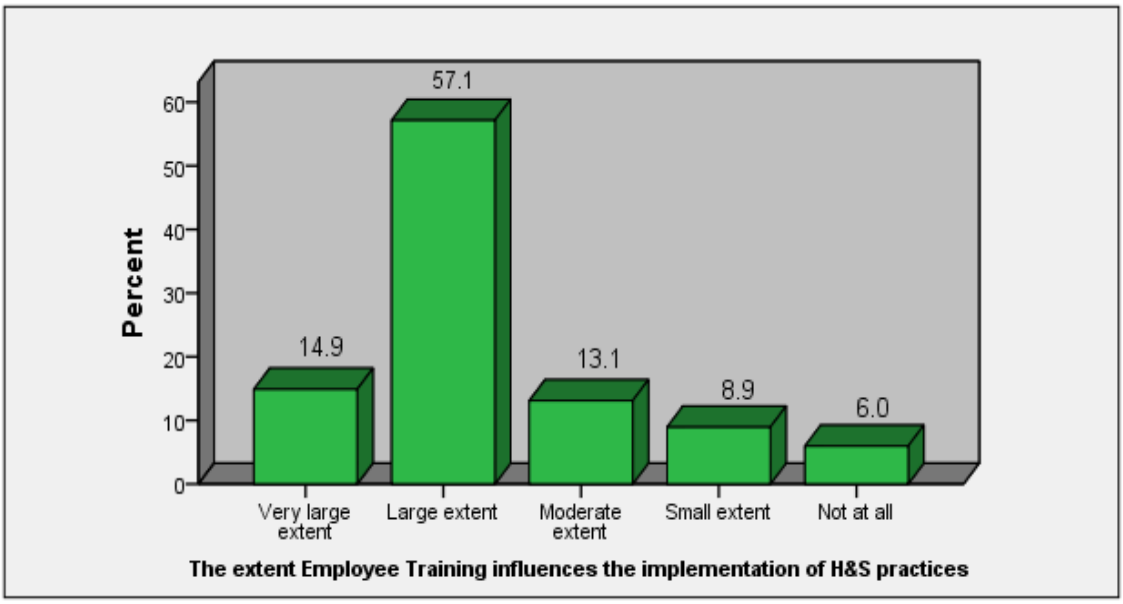


Figure 4.4: The Extent Employee Training Influences the Implementation of HSPs.

4.5.4 Descriptive Statistics and Interpretation for Implementation of HS Practices Construct

Alongside the said above, this study again determined to find out the effectiveness of implementation of HS practices in Temeke municipality. 66.7% and 66.6% of the respondents were concurrent with the suggestion that the agency has low or reduced injury rates report and has low/minimal loss of working hours or days due to work related injuries/illnesses respectively. Apparently, the implication behind this is that, the municipality has a reduced number of work-induced injuries and minimal loss of working hours due to her having implemented HS practices in workplace. Alli (2008) and Sranks (2008) expresses their concurrence with what was suggested above that, through implementation of continuous improvement of OSH's regulations and technical standards, occupational injuries, diseases and even deaths will periodically be checked.

On the other hand, 70.2% of the respondents admitted that employees were not frequently absent due to work-induced illness or injuries and again 67.8% were in concurrence with the fact that there were low rates of accidents at workplace. These opinions are in agreement with what Hughes and Ferrett (2011) observed that a positive promotion of HS performance will achieve far more than simply preventing accidents and ill health. With a rating scale of 1 to 5, the means scores obtained of the entire items tested under implementation of HSPs were higher than 3 and so implying that most respondents were in agreement with the fact that the factors listed under implementation of HS practices were determining the effectiveness of implementation of HS practices.

The findings also revealed that, 69% of the respondents acknowledged that employees were satisfied with working environments while 25.6% disagreed. On another hand, 65.5% concurred that the agency reported few compensation cases due to injuries while 75.0% opined that, generally, there were an improvement in organizational productivity and performance. These views were reflected in Hughes and Ferrett (2011) and Alli (2008) that implementing a well-considered HS progrmme contributes to business efficiency and continual improvement throughout the organization; less accidents and compensation claims, and lower insurance premiums.

It is worth noting that, as per the findings above, 25.6% of the respondents showed their dissatisfaction with working environments. In line with these results, Alli (2008) warns that, exposing workers to poor working environments, low HS standards, and environmental hazards, ultimately, may result in suffering poor health or injury. This is why Taylor et al (2004) are being concerned for employees' safety, thus reminding employers that they are required to provide a work environment, plant and system of

work which, so far as is reasonably practicable, do not present a threat to the health and safety of employees. The need for well-established HS practices is, therefore, paramount if this loss to the country is to be reduced. Inevitably, alongside all these events, Hughes and Ferrett (2011) highlight that; the moral reasons should therefore be centred on the need to protect people from injury and disease while they are at work, regardless whether they are in offices, in factories, in construction sites or in agricultural activities. Detailed information depicting respondents' point of views on the effectiveness of implementation of HS practices is shown in Table 4.11.

Table 4.11: Descriptive Statistics on the Implementation of HS Practices

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	Mean
The agency has low or reduced injury rates report.	3.0%	9.5%	20.8%	23.8%	42.9%	3.94
The agency has low/minimal loss of working hours or days due to work related injuries/illnesses	3.0%	7.7%	22.6%	19.6%	47.0%	4.00
The employees are not frequently absent due to work-induced illness or injuries.	1.8%	10.7%	17.3%	25.0%	45.2%	4.01
There are low rates of accidents at workplace.	3.0%	9.5%	19.6%	19.6%	48.2%	4.01
Employees feel satisfied with working environments.	11.9%	13.7%	5.4%	48.8%	20.2%	3.52
The agency reports few compensation cases due to injuries.	4.8%	13.1%	16.7%	18.5%	47.0%	3.90
Generally, there is an improvement in organizational productivity and performance	2.4%	7.1%	15.5%	35.7%	39.3%	4.02

4.5.4.1 Factors Determining the Implementation of HS Practices

This study, also investigated on the determinants of implementation of HS practices in the municipality. Respondents' views were gathered, with intent to find out the extent to

which each factor under test can influence the implementation of HS practices. The factors under test were leadership attitudes and commitment, workers' training on HS issues, employee involvement, communication and feedback, introduction of bonuses and rewards on safe behavior and provision of sufficient resources for workplace HS; all were evaluated so as to find out with which degree each factor can influence the implementation of HS practices in Temeke municipality.

It was noted that, opinions of most respondents were concurrent with the fact that, all listed factors had varied considerable influence on implementation of HS practices. So 86.3% of respondents agreed that leadership attitudes and commitment influenced implementation of HS practices to a large and very large extent. This view is highlighted in Hughes and Ferrett (2011) that health and safety is integral to success and therefore leaders who do not show leadership in this area are failing in their duty as directors and their moral duty, and are damaging their organization. (Hughes & Ferrett, 2011)

On another hand, 85.8% of the workers admitted that to a large as well as very large extent, workers' training in HS issues influenced implementation of HS practices. The results are in accordance with the views of Alli (2008), Stranks (2008), Hughes and Ferrett (2007;2009;2011) and Taylor et al (2004) who perceive employees' training as a vital component of safe and healthy working environments, and therefore a very significant factor in increasing HS awareness and the culture as a whole.

In line with the foregoing, 88.1% of the respondents expressed their concurrence with the fact that employee involvement impacts implementation of HS practices. More simply put, employee involvement was considered to have had a considerable influence on implementation of HS practices. These findings are in line with Taylor et al (2004) who

contend that to have an effective safety plan, it needs the cooperative involvement of all employees which helps foster the joint effort that may result in forming a team that can be more effective in solving general HS issues than a single individual.

On further probe, it was then revealed that 85.7% of workers opined that to a large as well as to a very large extent communication and feedback influenced implementation of HSPs. Their opinions are shared by Lingard and Rowlinson (2005) and Lewis and Thornbory (2006) as they both argue that good communication and co-operation are widely acknowledged to be an essential feature of effective OHS management and, essentially, good HSPs start with good communication. Eventually, 86.9% and 86.3% of respondents were concurrent with the opinions that the introduction of incentives (bonuses and rewards) for safe behavior and provision of sufficient resources for workplace HS, both had influence on implementation of HSPs respectively. Underpinning the above views, Taylor et al (2008), Stranks (2008) and Hughes and Ferret (2009; 2011) observe that incentive schemes promote safe work behaviours by encouraging worker participation in the programme, and substantially motivating employees to work safely. The results of the respondents' opinions on the extent to which each factor influences implementation of HSPs are presented in Table 4.12.

Table 4.11: Factors Determining the Implementation of HS Practices.

Factors determining implementation of HS Practices.	Not at all	Small extent	Moderate extent	Large extent	Very large extent	Mean
Leadership attitudes and commitment.	3.6%	1.8%	8.3%	61.9%	24.4%	4.02
Workers' training on HS issues.	4.8%	3.6%	6.0%	55.4%	30.4%	4.03
Employee involvement.	1.2%	3.0%	7.7%	47.6%	40.5%	4.23
Communication and feedback.	3.0%	4.2%	7.1%	36.3%	49.4%	4.25
Introducing bonuses and rewards for safe behavior.	2.4%	4.2%	6.5%	67.3%	23.2%	4.01
Provision of sufficient resources for workplace safety and health.	4.2%	3.6%	6.0%	51.8%	34.5%	4.09

4.6 Testing of Assumptions

It is apparently agreeable that, it is common to find statistical errors in scientific literature (Curran-Everett & Benos, 2004). Thus, once more, it is reported that approximately 50% of the published articles do contain at least one error. Field (2009) observed that most statistical procedures such as regression, correlation, t test and analysis of variance are operated basing on the assumption that the data follows a normal distribution, or more simply put, the populations from which the samples are drawn are assumed to be normally distributed.

4.6.1 Test of Autocorrelation Assumption - Durbin–Watson Test

According to Greene (2003), a Durbin–Watson test of correlation among the residuals usually reveals some substantial autocorrelation statistics. Nevertheless, Field (2009) observes that for any two observations the residual terms should be uncorrelated or independent which sometimes is described as a lack of autocorrelation. Nevertheless, Field (2009) observes that for any two observations the residual terms should be

uncorrelated or independent which sometimes is described as a lack of autocorrelation. Furthermore, he suggests that the test statistic can vary between 0 and 4 with a value of 2, meaning that the residuals are uncorrelated. A value greater than 2 indicates a negative correlation between adjacent residuals, whereas a value below 2 indicates a positive correlation.

In light of the foregoing explanation, it is therefore, reasoned that the statistic values of Durbin-Watson (d) should not be less than 1 or greater than 3 and definitely not approximately 2, thus, the recommendable values should range between 1.5 and 2.5 (Field, 2005; 2009; Green, 2003; Statistics Solutions, 2013b). With the results in Table 4.13 showing the multiple linear regression model summary and overall fit statistics, it was found that the Durbin-Watson value 'd' was 1.513, which lays between the two acceptable values of $1.5 < d < 2.5$. Therefore, it can be assumed that there were no first order linear auto-correlation errors in the multiple linear regression data, implying that the regression model was correctly specified with uncorrelated variables and supposedly enhancing its accuracy.

Table 4.12: Measure of Autocorrelation Assumption – Durbin-Watson

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.874[a]	.764	.759	3.21299	1.513

a. Predictors: (Constant), Leadership, Employee involvement, Employee training

b. Dependent Variable: Implementation of HS practices

4.6.2 Test of Multicollinearity Assumption on Independent Variables

Table 4.14 shows the results of the test of multicollinearity assumption. Multicollinearity is the extent to which a variable can be explained by the other variables in the analysis

(Hair, Black, & Babin, 2010). The presented results below provide two values: Tolerance and Variance Inflation Factor (VIF). According to Pallant (2007), tolerance is an indicator of how much of the variability of the specified independent is not explained by the other independent variables in the Model and the other value given is the VIP (Variance inflation factor), which is just the inverse of the Tolerance value (1 divided by Tolerance)

Various recommendations for acceptable levels of tolerance and VIF have been published and presented in the literature with cut-off points for determining the presence of multicollinearity. Most commonly, a value of more than .10, that is, 0.1 for tolerance has been reported to suggest the possibility of multicollinearity and the value of not above 10 as the maximum level of VIF (Kutner, et al 2005; Pallant, 2007, 2013; Field 2000, 2009; Green 2003). More simply put, as a rule of thumb, a tolerance value of less than .10 and the VIF values above 10 would be a concern here or the larger the value of VIF the more troublesome the multicollinearity of the variables (Gujarati, 2004; Hair et al. 2010; Pallant, 2009). According to this study's results of multicollinearity test (Table 4.14), the tolerance value for each independent variable is greater than .10; thus, it indicates that there was no violation of the multicollinearity assumption. This is also supported by the VIP threshold which is well below the cut-off of 10 thus indicating no concern with multicollinearity; thus all variables will be retained.

Table 4.13: The Results of the Test of Multicollinearity Assumption

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Leadership	.340	2.942
	Employee involvement	.169	5.934
	Employee training	.189	5.295

a. Dependent Variable: Implementation of H&S practices

4.6.3 Test of Homoscedasticity Assumption

Homoscedasticity usually depicts a situation where the error term, or random disturbance in the relationship between the independent and dependent variable is the same across all values of the independent variables (Statistics Solutions, 2013a) On the contrary, heteroscedasticity, that is, the violation of homoscedasticity is present if the size of the error term differs across values of an independent variable. Green (2003) highlights that it is useful to be able to test for homoscedasticity and if necessary modify the estimation procedures accordingly so as to avoid violating the assumption because it may pose potentially severe problems for inferences based on least squares.

Most scholars allegedly, consider the White test as the commonest test for heteroskedasticity (Carter-Hill et al, 2011; Green, 2003; Gujarat, 2004; Gujarat & Porter, 2010). Moreover, they infer that to measure heteroskedasticity with White Test, the calculated (expected) Chi-square value and observed (critical) chi-square value are compared by this formula*:* $NR^2 \sim X^2$df; where NR^2 = is the calculated (expected) chi-square value, N= is the sample size (observed number of individuals), R^2 = is R-square (coefficient of determination), X^2= is the critical chi-square value at chosen level of significance, and df = is the degrees of freedom (number of regressors).

As a rule of thumb, whenever calculated chi-square value is greater than the critical chi-square value at a chosen level of significance, the hypothesis of homoscedasticity is then rejected in favour of heteroscedasticity. Conversely, if the calculated chi-square value is less than the critical chi-square value then there is no violation of the assumption of homoscedasticity. From this perspective, this study's data analysis (Table 4.13), indicates that $R^2 = 0.764$ and $N = 168$; thus, the calculated chi-square value is given by $NR^2 = 0.764x168 \rightarrow 128.35$ whereas, the critical chi-square value at a 0.05 level of significance and a df = 167 is 198.154. The results show that the critical (observed) chi-square value exceeds the calculated chi-square value at a chosen level of significance (0.05), so the conclusion is that there is no exhibition of heteroscedasticity problem in the model as suggested in Green, (2003), Gujarat, (2004), Gujarat and Porter (2010) and Carter, Hill, et al. (2011).

4.6.4 Test of Normality Assumption

The assumption of normality is of great importance in many aspects of statistical inference, essentially, for constructing confidence intervals or statistics for testing hypothesis as well as in establishing reference intervals for variables (Binder & Roberts, 2009; Carter Hill et al 2011; Greene, 2003; Royston, 1991) Ghasemi and Zahediasl (2012) highlight that the assumption of normality should be checked for many statistical procedures, i.e. parametric tests, because their validity depends on it. However, Öztuna, Elhan and Tüccar (2006) and Field (2009) argue that, a careful consideration should be given to normality and other requisite assumptions, for when properly applied, these assumptions help in drawing good, accurate and reliable replica of reality. The Kolmogorov-Smirnov and Shapiro- Wilk tests were used for testing normality. The significant p-value of more than .05 indicates normality, that is, normal distribution

(Elliott & Woodward, 2007; Field, 2000, 2009; Greene, 2003; Pallant, 2007, 2013; Tabachnick & Fidell, 2007). The results of the Shapiro-Wilk statistics show the p<.001 (.000) which is lower than the 0.05 level of significance and so inferring that the test was significant. This is quite common in larger samples as Pallant (2013), Field (2000, 2009), Elliott and Woodward (2007) and Hazra and Gogtay (2016) observe. They further deduced that, with large sample sizes (say n > 100), the violation of the assumption of normality often does not deviate enough from normality to make a substantive difference in the analysis. This assumption often holds even when the sample is not so large but say is over 30. In other words, with large samples the parametric procedures can be used even though the data are not normally distributed. The results also were in agreement with the views of Tabachnick and Fidell, (2007) and Gujarati (2004) who underscored that if the sample size is reasonably large, we may be able to relax the normality assumption as it is enough to suggest normality of sampling distributions of means. It is therefore, stressed that there is no reason to expect distortion of results due to failure of multivariate normality. The Kolmogorov-Smirnov and Shapiro-Wilk statistics were tabulated in Table 4.15.

Table 4.14: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Variables	Statistic	df	Sig.	Statistic	df	Sig.
Leadership	.170	168	.000	.906	168	.000
Employee involvement	.147	168	.000	.910	168	.000
Employee training	.252	168	.000	.810	168	.000
Implementation of H&S Practices	.199	168	.000	.858	168	.000

a. Lilliefors Significance Correction

To further meet the assumption of normality, Skewness and Kurtosis tests were also applied. Tabachnick and Fidell (2007) observed that skewness has to do with the symmetry of the distribution; a skewed variable is a variable whose mean is not in the center of the distribution; but kurtosis has to do with the peakedness of a distribution; a distribution is either too peaked (with short, thick tails) or too flat (with long, thin tails). They posit that, a variable can have significant skewness, kurtosis, or both. A distribution is normal when the values of skewness and kurtosis are zero, however, the values for skewness (asymmetry) and kurtosis ranging between -2 and +2 are considered acceptable for accurate interpretation and as a proof for normal univariate distribution. (George & Mallery, 2010; Gravetter & Wallnau, 2014; Field, 2007; 2009) According to the results above, normality of both four variables was altogether validated as all skewness and kurtosis' values were ranging between -2 and +2 as illustrated in Table 4.16.

Table 4.15: Skewness and Kurtosis Tests of Normality Statistics

Descriptive statistics		Statistic	Std. Error
Leadership	Std. Deviation	5.397	
	Skewness	-.586	.187
	Kurtosis	-.870	.373
Employee Involvement	Std. Deviation	6.564	
	Skewness	-.719	.187
	Kurtosis	-.421	.373
Employee Training	Std. Deviation	6.020	
	Skewness	-1.223	.187
	Kurtosis	-.467	.373
Implementation of H&S Practices	Std. Deviation	6.548	
	Skewness	-.996	.187
	Kurtosis	.015	.373

4.7 Inferential Statistics

Inferential analysis was done with an aim to determine the nature of the existing relationship between independent variables and dependent variable. To make it easier, both correlation and linear regression analysis were carried out. Investigators use the correlational statistic to describe and measure the degree of association or relationship between two or more variables or sets of scores; simply put, the goal is to determine whether two or more variables are related (Cresswell, 2014; Marczyk, et al., 2005**).**

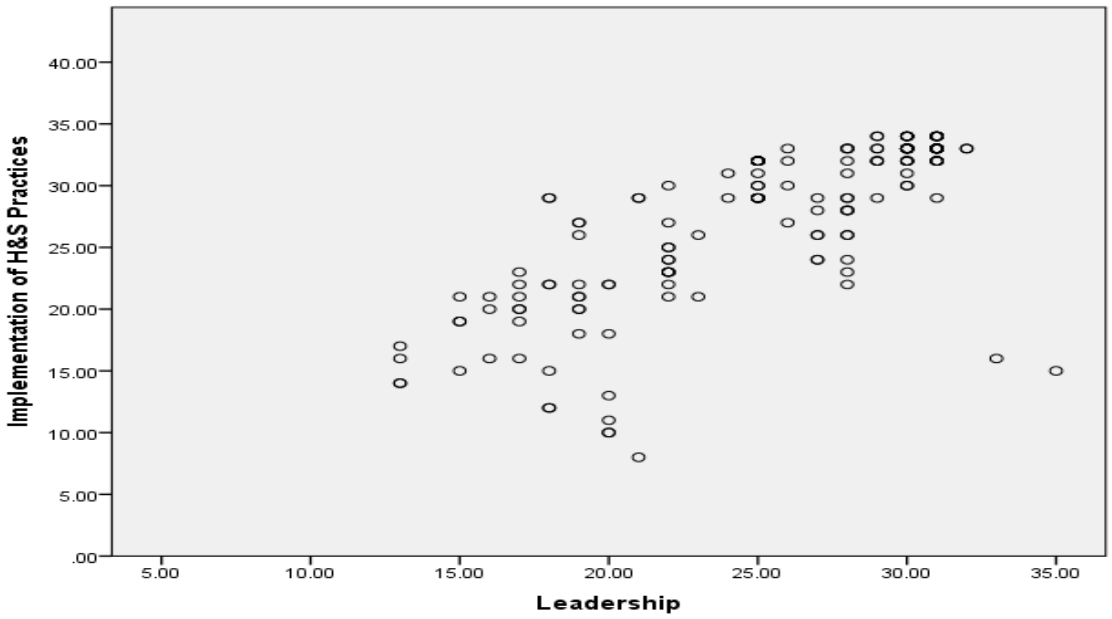
Pearson correlation coefficient was used to establish the direction and intensity of the relationship between independent variables and dependent variable (Marczyk et al, 2005). The scatter plots were obtained to illustrate an understanding of the nature of the relationships between the variables (Peat & Barton, 2005). Alongside this was the best-fitting straight line, the line that minimizes the squared errors of prediction or residuals in such a way that best fits the data under study (Carter-Hill et al., 2011; Tabachnick & Fidell, 2007). On further analysis, the linear regression model summary and analysis of variance (ANOVA) were generated. Linear regression was used to predict a score on one variable from a score on the other; that is, it estimates or predicts an outcome or a value on a dependent variable in relation to the values of one or more independent variables (Elliott & Woodward, 2007; Tabachnick & Fidell, 2007). The overall multiple regression eventually was conducted to establish the relationship between the dependent variable, implementation of HS practices and independent variables, leadership, employee involvement and employee training.

4.7.1 Correlation and Regression Analysis for Leadership and Implementation of HS Practices

A pictorial scatter plot in Figure 4.5 illustrates the correlation between implementation of HS practices and leadership. Pallant (2013) suggests that it is a good idea to generate a scatter plot before calculating correlations because the scatter plots indicate whether the variables are related in a linear (straight-line) or curvilinear fashion. He further infers that, the scatter plots also indicate whether the variables are positively related (high scores on one variable are associated with high scores on the other) or negatively related (high scores on one are associated with low scores on the other).

For a strong relationship, the points will form a vague cigar shape, with a definite clumping of scores around an imaginary straight line (Pallant (2013), Tabachnick & Fidell, 2007, 2013). The results have indicated that there was a strong positive correlation between the two variables. Simply put, leadership had shown to have had an influence on implementation of HSPs. For this reason, we can conclude that there was a strong relationship between implementation of HS practices and leadership variable.

Figure 4.5: Scatter Plot for Implementation of HS Practices and Leadership



4.7.1.1 Pearson's Correlation Statistics for Leadership

In light of what is presented in Table 4.17, the Pearson's r statistic results revealed that there was a strong correlation between implementation of HS practices and leadership ($r = .763$, $p = .000$). With a Pearson's r of 0.763 which is very close to 1 and a p-value of $0.001<0.01$, it can be concluded that there was a strong positive relationship of 76.3% between implementation of HS practices and leadership variables. The results were in agreement with the suggestions of Flintrop (2013b) who reported that the success of OHS management bases on leaders' behaviour when it comes to developing and transposing visions and strategies on OSH. Moreover, Gomez et al. (2012) noted that the sustenance of accidents and risk free working environment is an obligation for any socially responsible manager.

Table 4.16: Correlations between Implementation of HS Practices and Leadership

Correlations

		Implementation of HS Practices	Employee training
Implementation of HS Practices	Pearson Correlation	1	.763**
	Sig. (2-tailed)		.000
	N	168	168
Leadership	Pearson Correlation	.763**	1
	Sig. (2-tailed)	.000	
	N	168	168

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

The line of best-fitting below in Figure 4.6, illustrates how closer the points to the line are and thus vindicating that there was some positive correlation between implementation of HS practices and leadership.

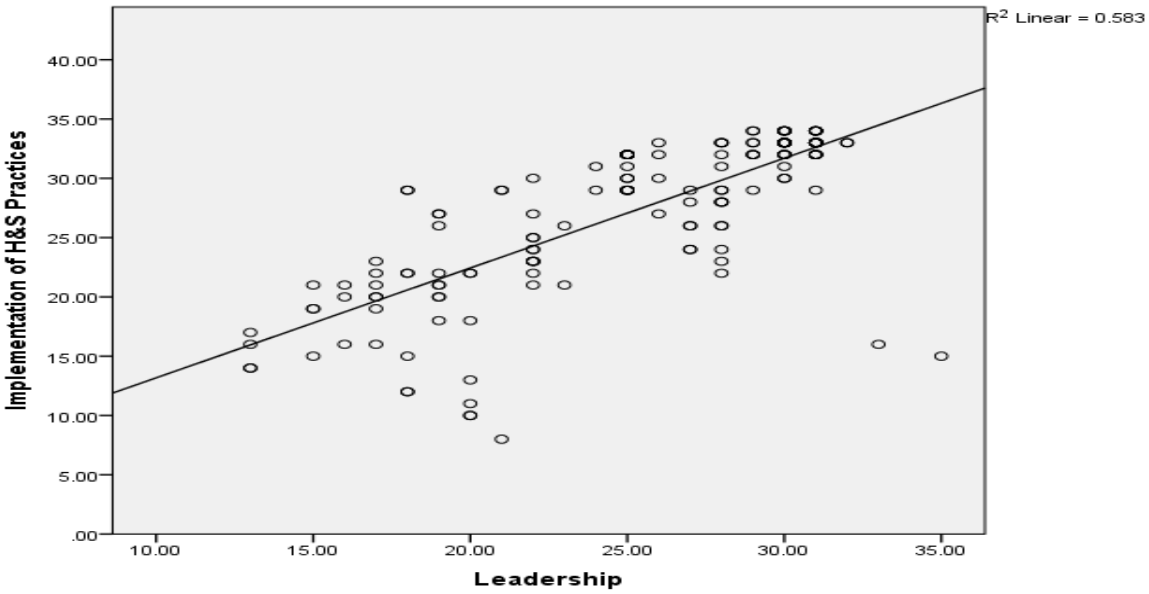


Figure 4.6: The Line of Best-fitting between Implementation of HS Practices and Leadership

4.7.1.2 Regression Analysis for Leadership

The results of regression analysis presented in the model summary box (Table 4) established a relationship between leadership and implementation of HS practices. With

the value of R= 0.763 and R^2 = 0.583, it therefore means that 58.3% of implementation of HS practices was predicted by leadership influence. The fact behind these findings is that, to make implementation of HS practices succeed, leadership's influence is required in Temeke Municipality. This is in concurrence with the study of Hon and Chan (2009) who reported that managers can be the best channel to creating a positive safety environment at work. The WHO (2010), underscores leadership commitment as one of the main five keys to enhancing the occupational health and safety.

Table 4.17: Model Summary for Leadership

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763[a]	.583	.580	4.24416

a. Predictors: (Constant), Leadership
b. Dependent variable: Implementation of HS practices

4.7.1.3 The Analysis of Variance (ANOVA) for Leadership

Table 4.19 generates ANOVA statistics for leadership and implementation of HS practices. As indicated in the box of results, there was a statistically significant difference between the variables' means as generated by one-way ANOVA ($F(1,166) = 231.620$, $p = .001$) With p value of 0.000 being less than 0.05 i.e. 0.001<0.05 we thus reject the null hypothesis and that the means are different implying that there was a significant differences between the means of the two variables, leadership and implementation of HS practices in the municipality of Temeke.

Table 4.18: ANOVA results for Leadership and Implementation of HS Practices

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4172.139	1	4172.139	231.620	.000[b]
	Residual	2990.141	166	18.013		
	Total	7162.280	167			

a. Dependent Variable: Implementation of HS practices

b. Predictors: (Constant), Leadership

4.7.1.4 Regression Coefficients between Leadership and Implementation of HS Practices

The tabulated beta coefficients results in Table 4.20 displays the t-values to be 2.482 and 15.219 respectively. The p-values were 0.001 (0.000) < 0.05 and so it was postulated that the model was essentially significant. The model was represented and defined as $Y = 3.916 + 0.926X_1 + e$. Hence, simply put, it was demonstrated that to every unit change or alteration of leadership influence lead to 0.926 increase of implementation of HS practices. What is being inferred here is that leadership influence is vital in the implementation of HS practices in the municipality.

Table 4.19: Beta statistics on Implementation of HS Practices and Leadership

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.916	1.577		2.482	.014
	Leadership	.926	.061	.763	15.219	.000

a. Dependent Variable: Implementation of HS Practices

So far, the above correlation and regression results depict a well-defined relationship between leadership and implementation of HS practices. These findings also align with other empirical findings by Wu, Wang, Zou and Fang (2016), Soenderstrup-Andersen,

Carlsen, Kines, Bjoerner, and Roepstorff (2011) and Hossain, Hossain, Tarannum and Chowdhury (2015), who in their studies on OHS matters found leadership commitment to be a key factor in influencing workers' health and safety and directly influencing intention to adopt OHS measures. Thus far, it can be concluded that the study's findings have resolved research question one.

4.7.2 Correlation and Regression Analysis for Employee Involvement and Implementation of HS Practices

The examination of scatter plots in Figure 4.7 showed a positive linear relationship between implementation of HS practices and employee involvement. In essence, this suggests that the more employees are encouraged to involve in the processes of HS practices by the administration, the more HS practices are realized in the workplace in the municipality.

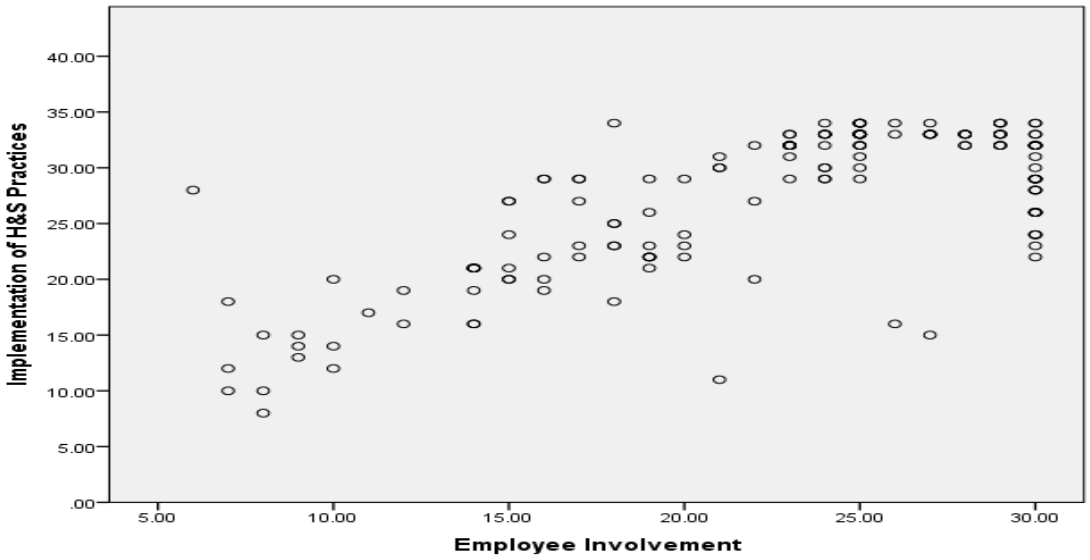


Figure 4.7: Scatter Plot for Implementation of HSPs and Employee Involvement

4.7.2.1 Pearson's Correlation Statistics for Employee Involvement

A Pearson correlation was calculated to determine the relationship between implementation of HS practices and employee involvement. As presented in Table 4.21, the findings indicated that there was a strong positive correlation between the two variables ($r(166) = 0.723$, $p = .000<0.001$). Employees who involve or participate in the HS practices tend to be healthy and safe at workplace environment. These findings are in agreement with the views of Stranks (2008) and Hughes and Ferrett (2009) who posit that the achievement of high HS standards is structured and enhanced by the creation of a positive culture that secures involvement and participation of employees at all levels. Similarly, Alli (2008) underscores employee participation as an identified key precondition of successful OSH management.

Table 4.20: Correlations between Employee Involvement and Implementation of HSPs

Correlations

		Implementation of HS Practices	Employee training
Implementation of H&S Practices	Pearson Correlation	1	.723**
	Sig. (2-tailed)		.000
	N	168	168
Employee training	Pearson Correlation	.723**	1
	Sig. (2-tailed)	.000	
	N	168	168

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

Alongside this is the line of best-fit shown in Figure 4.8. Some observations, albeit, seem to lie away from the line, still there is a general trend establishing a positive correlation between implementation of HS practices and employee involvement. This establishes the fact that employee's participation in OSH matters enhanced implementation of HS practices in Temeke municipality.

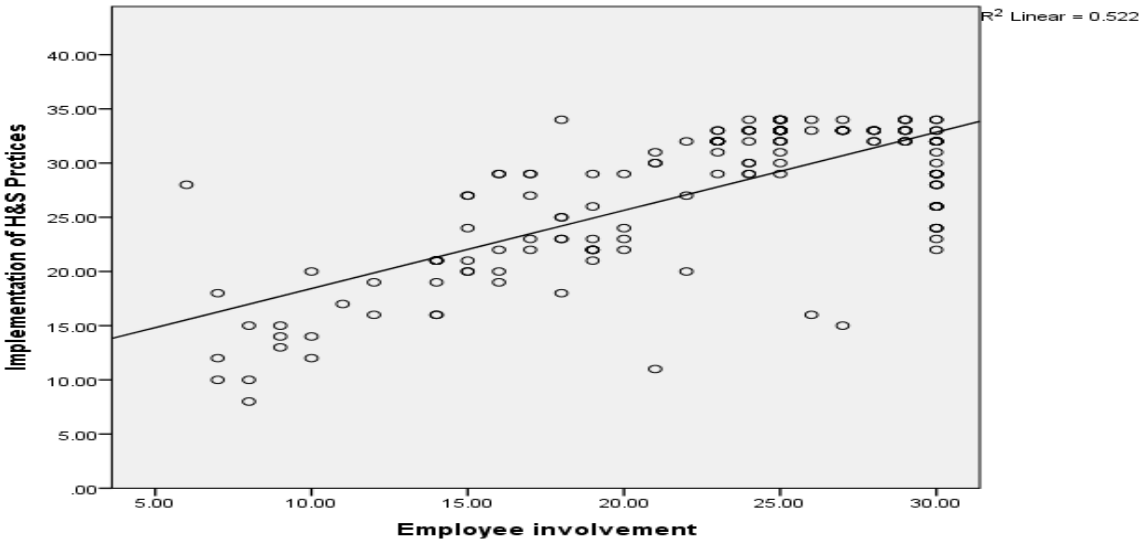


Figure 4.8: The Line of Best-fitting between Implementation of HS Practices and Employee Involvement

4.7.2.2 Regression Analysis for Employee Involvement

As indicated in Table 4.22, a statistically significant regression equation indicated a significant positive relationship between the two variables, $F(1, 166) = 181.400$, $p = .000$, $R^2 = 0.522$, Adjusted $R^2 = 0.519$. An adjusted R^2 value of 0.519, suggests that 52% of the variance in the implementation of health and safety practices was explained by the employee involvement. Hence, to make implementation of HS practices more effective, employee involvement should be fostered in Temeke Municipality. This finding corresponds with those by WHO (2010) and Alli (2008), who deduce that involvement of workers by forming the collaboration between management and workers or their representatives within an enterprise is an essential element of prevention of accidents and diseases at the workplace.

Table 4.21: Model Summary for Employee Involvement

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.723[a]	.522	.519	4.54057

c. Predictors: (Constant), Employee involvement

d. Dependent variable: Implementation of HS practices

4.7.2.3 The Analysis of Variance (ANOVA) for Employee Involvement

One-way ANOVA was conducted to determine significant means differences in the implementation of HS practice for employee involvement. A statistically significant difference was found as indicated in Table 4.23 where ($F(1, 166) = 181.400$, $p = 0.000 < 0.05$). This infers that the model of implementation of HS practices with employee involvement was statistically significant altogether. On these grounds, it can therefore be said that employee involvement had a noteworthy effect on the implementation of HS practices in the municipality of Temeke.

Table 4.22: ANOVA Results for Employee Involvement and Implementation of HS Practices

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3739.891	1	3739.891	181.400	.000[b]
	Residual	3422.388	166	20.617		
	Total	7162.280	167			

a. Dependent Variable: Implementation of HS practices

b. Predictors: (Constant), Employee involvement

4.7.2.4 Regression Coefficients between Employee Involvement and Implementation of HS Practices

A further analysis on the beta coefficient of the subsequent model box exhibited in Table 4.24 reveals a *t*-value of 8.967 and 13.468 respectively and p value of 0.001(0.000) being

less than 0.05 and so implying that the model is statistically significant. The model was expressed by $Y = 11.22 + 0.721X_2 + e$. Therefore as noted from the findings, it indicates that for every unit of employee involvement there was an increase of implementation of HS practices by 0.721 units in Temeke municipality.

Table 4.23: Beta statistics on Implementation of HSPs and Employee Involvement

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	11.22	1.251		8.967	.000
	Employee involvement	.721	.054	.723	13.468	.000

a. Dependent Variable: Implementation of HS Practices

In light of the foregoing results of correlation, ANOVA and regression on employee involvement and implementation of HS practices, it was eventually concluded that employee involvement positively correlated with and influenced the implementation of HS practices ($r = 0.723$, $p < 0.001$). These findings addressed research question two. In support of the findings of this study, a number of empirical studies were sited. Her survey study on determinants of implementation of OSH programmes, Ndegwa (2015) found that employee participation among other factors was responsible for better implementation of OSH programmes. Another study was by Gaceri (2015) who also investigated factors affecting the implementation of HS and concluded that a participative approach whereby employees were involved influences the implementation of HS measures.

4.7.3 Correlation and Regression Analysis for Employee Training and Implementation of HS Practices

Pictorial test of the scatter plot in Figure 4.9 reveals that there was a positive linear relationship between Implementation of HS practices and employee training. This signifies that increased level of employee training leads to the realization of implementation of HS practices.

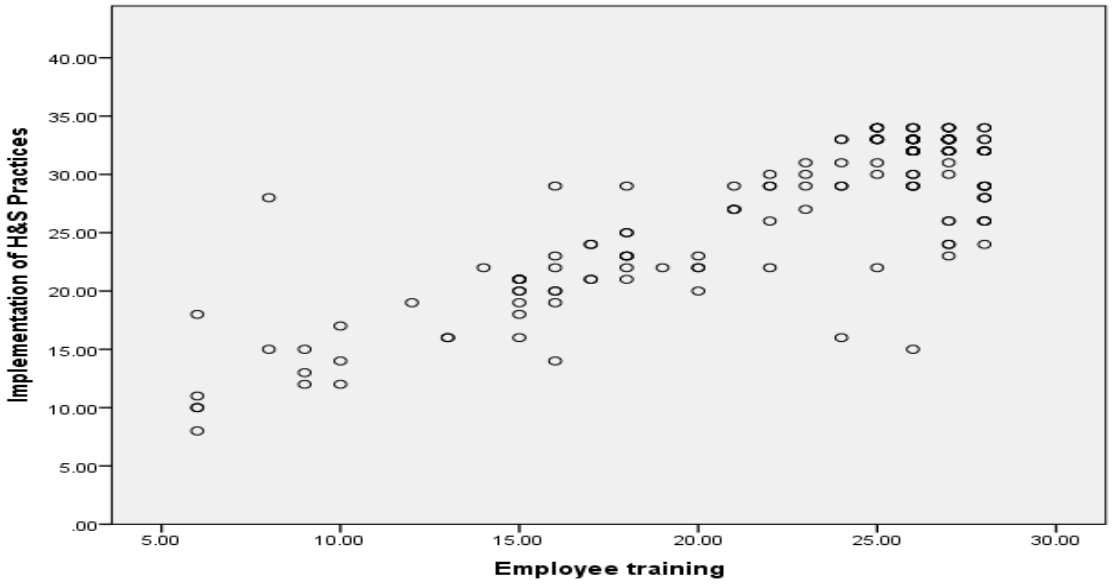


Figure 4.9: Scatter Plot for Implementation of HS Practices and Employee Training

4.7.3.1 Pearson's Correlation Statistics for Employee Training

As indicated in Table 4.25, the results of Pearson's correlation coefficient denotes that there was a strong positive linear relationship between employee training and implementation of HS practices, that is, $r(166) = 0.843$, $p = 0.000$. The model therefore was deemed statistically significant as p-value was < 0.05. This suggests that there was a strong positive correlation (or relationship) between the two variables depicting an 84.3%.

Table 4.24: Correlations between Employee Training and Implementation of HSPs

Correlations

		Implementation of HS Practices	Employee training
Implementation of HS Practices	Pearson Correlation	1	.843**
	Sig. (2-tailed)		.000
	N	168	168
Employee training	Pearson Correlation	.843**	1
	Sig. (2-tailed)	.000	
	N	168	168

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

Alongside this, the line of best-fitting in Figure 4.10 gave a pictorial picture illustrating how closer the points to the line of fit are and thus asserting that there was some positive correlation between implementation of HS practices and employee training. This signifies that increased employee training positively enhanced implementation of HS practices in the municipality of Temeke.

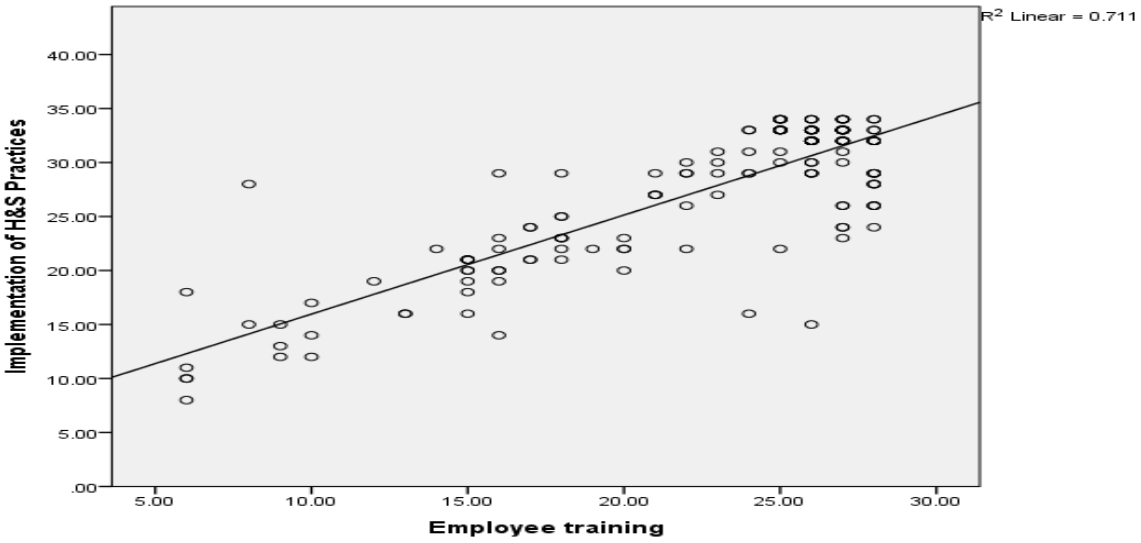


Figure 4.10: The Line of Best-fitting between Implementation of HS Practices and Employee Training.

4.7.3.2 Regression Analysis for Employee Training.

Generated results of regression analysis between Employee training and Implementation of HSPs are shown in Table 4.26. The model box presents the R value as 0.843 signifying that there exists a strong positive relationship between employee training and implementation of HSPs. In line with this, the coefficient of determination value of R^2 was 0.711 signifying that 71.1% of implementation of HS practices was predicted by employee training. This infers that training in OSH matter is vital for high achievement in implementing HS practices in Temeke municipality. These results are in concurrence with Alli (2008) who opines that to enhance OSH, training on OSH should meet the needs of all workers, and be supported in a manner that is fitting to national conditions and practice.

Table 4.25: Model Summary for Employee Training.

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.843[a]	.711	.709	3.53408

e. Predictors: (Constant), Employee training
f. Dependent variable: Implementation of HS practices

4.7.3.3 The Analysis of Variance (ANOVA) for Employee Training

The ANOVA statistics for employee training and implementation of HS practices in Table 4.27 shows that, the statistic value of F (1,166)= 407.455, p = 0.000 which is less than 0.05 signifying that the model of implementation of HS practices with employee training was statistically significant as one variable mean differed from the other variable mean.. Conclusively, it can be posited that employee training had a noteworthy effect on the implementation of HS practices in the municipality of Temeke.

Table 4.26: ANOVA Results for Employee Training and Implementation of HSPs.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5088.989	1	5088.989	407.455	.000[b]
	Residual	2073.290	166	12.490		
	Total	7162.280	167			

a. Dependent Variable: Implementation of HS practices
b. Predictors: (Constant), Employee involvement

4.7.3.4 Regression Coefficients between Employee Training and Implementation of HS Practices

The analysis on the beta coefficient in Table 4.24 reveals t values of 8.967 and 13.468 respectively and p value of 0.000 that is less than 0.05 and so implying that the model is statistically significant. In light of this, the B-value describing to what extent the predictor (training) affects the outcomes β is equal to 0.917 as shown in the model. On this basis, it suggests that as employee training increased by one unit, the implementation of HS practices also improved by 0.917. This is concluded by defining the model with this model equation as $Y = 6.797 + 0.917X_3 + e$.

Table 4.27: Beta Statistics on Implementation of HS Practices and Employee Training

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	6.797	1.056		6.434	.000
	Employee training	.917	.045	.843	20.186	.000

a. Dependent Variable: Implementation of HS Practices

The above correlation and regression analysis results for training and implementation of HSPs shows that there was a positive relationship between the two variables establishing that employee training affected implementation of HS practices in the municipality of Temeke. These findings are concurrent with the opinions of Friend and Kohn (2007); Ontario Ministry of Labour, (2013); Reese, (2008); Taylor et al (2004); who assert that proper training on worksite procedures can help prevent caught-between incidents, allowing the workforce to be flexible and acquire new knowledge and skills which they can put into practice and eventually help in preparing them to positively respond to many OHS issues and hazards.

Then, as now, this study reveals a real correspondence between its findings and the same views taken by other modern scholars say, Vredenburgh (2002), Vinodkumar and Bhasi (2010) and Rotich and Kwasira, (2015) who infer that employee training resulted in better implementation of OSH programmes, enhanced the sustenance of organizational HS, and established a strong and statistically significant relationship between OHS programs and effective implementation of OHS programs; simply put, safety training was identified as the most important safety management practice. Thus far it can be established that the study findings satisfied research question three.

4.7.3.5 A Regression Summary for All Variables

As per summary results in model box - Table 4.29, it is evident that there exists a relationship between X_1–Leadership, X_2–Employee involvement, X_3–Employee training and implementation of OHS practices in which R= 0.874. It can be seen from the coefficient of determination R^2 = 0.764 that our independent variables – leadership, employee involvement and employee training (X_1, X_2 and X_3) explain 76.4% of the

variability of the dependent variable – implementation of HSPs. Alongside this, ANOVA results in table 4.30 indicates that the implementation of HSPs model and leadership (X_1), employee involvement (X_2) and employee training (X_3) was statistically significant having a value of F=176.600 and p-value=0.000 less than 0.05. The final overall regression model resulted in significantly better prediction of implementation of HSPs. At last the beta coefficient summary was presented in Table 4.31 in which the positive *b* values for all predictor variables revealed positive relationships; with regards to the p-values, all were less than 0.05 (0.000<0.05) and for this reason it was concluded that the model was statistically significant. In line with the above explanation, the model was defined as: $Y = 2.547 + 0.455X_1 + 0.368X_2 + 0.960X_3$ which signifies that all factors positively influenced the implementation of OHS practices. Presented in Tables 4.29, 4.30 and 4.31 are the findings for the overall multiple regression and correlation.

Table 4.28: Model Summary for All Variables

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.874[a]	.764	.759	3.21299

g. Predictors: (Constant), Leadership, Employee involvement, Employee training

h. Dependent variable: Implementation of HS practices

Table 4.29: ANOVA Results for All Variables.

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5469.263	1	1823.088	176.600	.000[b]
	Residual	1693.017	164	10.323		
	Total	7162.280	167			

a. Dependent Variable: Implementation of HS practices

b. Predictors: (Constant), Leadership, Employee involvement, Employee training

Table 4.30: Beta Statistics for All Variables.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.547	1.221		2.087	.038
	Leadership	.455	.079	.375	5.759	.000
	Employee involvement	.368	.092	.369	3.985	.000
	Employee training	.960	.095	.882	10.100	.000

a. Dependent Variable: Implementation of HS Practices

Table 4. 32: Correlations for All Variables

		Implement of HSPs	Leadership	Employee Involvement	Employee Training
Implementation of HSPs	Pearson Correlation	1	.763**	.723**	.843**
	Sig. (2-tailed)		.000	.000	.000
	N	168	168	168	168
Leadership	Pearson Correlation	.763**	1	.802**	.775**
	Sig. (2-tailed)	.000		.000	.000
	N	168	168	168	168
Employee Involvement	Pearson Correlation	.723**	.802**	1	.896**
	Sig. (2-tailed)	.000	.000		.000
	N	168	168	168	168
Employee Training	Pearson Correlation	.843**	.775**	.896**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	168	168	168	168

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

CHAPTER FIVE

5.0 SUMMARY AND DISCUSSION OF THE FINDINGS

5.1 Introduction

The study endeavored to establish the factors, which affect or influence implementation of health and safety practices in workplace in the municipality of Temeke. This chapter presents a precise summary of key findings based on the objectives of the study. Also presented in the chapter include discussion of the findings and explanation of how they are consistent or inconsistent with the literature.

5.2 Summary of Key Findings

In line with the aforementioned introduction, this part arrays a discussion of key findings based on the objectives of the study. The specific objectives discussed here are directly related to the variables under study; that is to say, leadership, employee involvement and employee training all are discussed with vividness

5.2.1 The Effect of Leadership on Implementation of HS Practices in Temeke Municipality

As per the findings above, it was vividly revealed that there existed a positive significant relationship between leadership and implementation of HS Practices. This means that leadership was instrumental in implementation of HS practices in Temeke municipality. This presents a clear fact that leadership is needed in sustaining an effective OHS system in workplace in Temeke municipality. Leadership contributory part was reflected in formulation of policy to implement OHS practices, provision of the essential PPE, establishment of regular audits and inspections on HS system, recognition and rewarding

safe behavior, institution of committees for overseeing HS issues, introduction of regular communication with employees on HS issues and their high commitment to HS practices.

These findings align with the opinions of EU-OSHA (2016) who reports that strong, effective and visible leadership is not only vital to good workplace safety and health but also prevents accidents and illness; increases productivity and efficiency; improves employee morale; helps the business to win new contracts and attract high-quality employees.

5.2.2 The Effect of Employee Involvement on Implementation of HS Practices in Temeke Municipality

Having analyzed the findings above, it was noted that there existed mixed views with regards to the variables that were precisely used for measuring employee involvement. One side of the majority of the respondents was in concurrence with the fact that whenever necessary they usually wear PPE given to them and the agency has HS cultures followed by employees. Others on another side comprising more than a half also stated that they (employees) usually report hazardous condition to the management, felt that they are responsible for their HS and not the employer and they even agreed that they usually comply with OSH rules and regulations at work. Albeit, a little bit more than a half of respondents said that employees had representatives in safety committee, yet few, less than a half also contended that there were no employees representatives in HS committees. This shows that a need is raised for management in Temeke municipality to make sure that there is a reliable employees' representativeness in HS committees. All in all, it was concluded that ample number of employees in the municipality was in

concurrence with the fact that employee involvement affected implantation of HS practices.

Nonetheless, the relationship between implementation of HS practices and employee involvement was also attested through correlation and regression analysis which precisely revealed with vividness that there exists a significant linear relationship between the two variables. Simply put, it denotes that employee involvement had a significant effect on implementation of HS practices and inevitably implementation of HS practices was explained by employee involvement.

The findings convincingly agreed with opinions of some modern scholars who contend that involvement of workers by creating the cooperation between management and workers or their representatives within an organization is an essential element of prevention of accidents and diseases at the workplace and eventually sustaining a "healthy and safe" workplace. (WHO, 2010; Alli, 2008) This may be achieved by the use of formal HS committees where they exist, and by the use of teamworking, where employees are involved in deciding on the appropriate preventive and protective measures and written procedures, etc.

5.2.3 The Effect of Employee Training on Implementation of HS Practices in Temeke Municipality

The obtained findings reveal that there exists a significant and positive direct relationship between employee training and implementation of HS practices. This conveys a message that enhanced employee training enhanced implementation of HS practices in workplace. More than three quarters of the respondents admitted that training on safety was incorporated (included) in OSH Policy of the agency, and more than half contended that

there was regular provision of information about HS issues, employees were trained on protective measures and participated in seminars instructing on OHS matters. Moreover, they also concurred that they seriously consider OSH training as very important and stated that the absence of training can reduce improvement in HS issues in their municipality. Meanwhile few of them did not acknowledge that there was regular provision of information about HS issues in the municipal workplace. Generally, in view of the findings above, it is worth noting that the majority of respondents agreed to the fact that employee training affected implementation of HS practices. However, it is advisable to see to it that the management ensures there is a constant and reliable regular provision of information about HS issues in the municipal workplace.

The findings are reflected in the views of Dessler (2013), who asserts that safety training reduces unsafe acts, especially for new employees; additionally, the Institute for Work and Health (2010) suggests that, training can also guide workers on how to find additional information about potential hazards; it can empower workers and managers to become more active in implementing hazard control programs or effecting organizational changes that enhance workplace protection.

CHAPTER SIX

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This chapter presents a conclusion and recommendations based on the study's findings. Nonetheless, it also introduces areas for further research.

6.2 Conclusion

Basically, from what was noted from the findings of this study it can be finalized that all the independent variables in the study, that is to say, leadership, employee involvement and employee training did affect or influenced the implementation of HS practices - a dependent variable. The existed relationship between those variables was established through correlation and regression analysis which unveiled that there was a positive significant linear relationship between the independent variables and dependent variable.

In light of the aforementioned description, the generated regression model summary signified also that implementation of HS practices was explained by leadership, employee involvement and employee training; simply put, the cooperation that existed between management and workers or their representatives within an organization was a contributory key in prevention of accidents and work-induced diseases at the workplace. The model of the study was also confirmed statistically significant as p values in all illustrations were less than 0.05. The overall multiple regressions revealed that all the variables/factors combined together explained 76.4% of implementation of HS practices.

6.3 Recommendations

Basing on the generalized findings of the study, the recommendations were eventually

presented focusing on each of the objective of the study. Such objectives included; determining the degree to which leadership influences/affects the implementation of health and safety practices in workplace in Temeke municipality; unearthing the extent to which employees' involvement influences the implementation of health and safety practices in workplace in Temeke municipality; ascertaining whether training of workers wholly influences the implementation of health and safety practices in workplaces in Temeke municipality.

6.3.1 Leadership and Implementation of HS Practices

As noted earlier in the findings of the study, leadership was found to have a contributory impact in improving implementation of HS practices. Nevertheless, the fact that 32.7% of the respondents reported to have no regular audits and inspections on HS system in the municipality is a matter that should not be overlooked. More simply put, regular audits and inspections were found unsatisfactorily performed in the municipal workplace. It is noteworthy to remember that, auditing supports monitoring by providing managers with information and it will show how effectively plans and the components of HS management systems are being implemented. In addition, it will provide a check on the adequacy and effectiveness of the management arrangements and risk control systems. Therefore, it is important for the management of the municipality to emphasize on the periodic physical inspection of the organisation's HS facilities to be carried out because the moral is that safety inspections should always be part of the supervisor's daily routine.

However, the study revealed that 30.9% of the respondents did not acknowledge the presence of a committee for overseeing HS measures. In essence, the presence of a

committee for overseeing HS measures should not be neglected or underrated by the municipal management because setting up a separate risk management or HS committee can make sure the key issues are addressed and guard against time and effort being wasted on trivial risks and unnecessary bureaucracy. Management and/or employee safety committees will monitor day-to-day problems and any concerns of the employee HS issues. It was also noted that 31.5% disagreed that the management neither rewarded nor recognized safe behavior. In light of the aforementioned suggestions above, then, as now, the municipality of Temeke is urged to see to it that safety behavior is recognized, highlighted, appreciated and even rewarded wherever possible. It is possible that, sooner or later, these incentives may likely generate safety consciousness among employees.

Generally, the management is advised to highly be committed to HS practices in a sense that will result in them being role models to their employees in implementing HS practices. Better HS practices may prove economically advantageous and beneficial to the municipality. On the contrary, poor implementation of HS practices may prove costly to the employer and so triggering unwelcome costs associated with work induced illnesses, accidents or injuries and compensations or even the employer be subject to OSHA's penalties.

6.3.2 Employee Involvement and Implementation of HS Practices

More than a half of respondents contended that employees had representatives in HS committees. At the same time the findings revealed that few respondents of about 30.1% opined that there was no employee representativeness in safety committee. This implies that a need is raised for management of the municipality to make sure that there is a reliable employees' representativeness in HS committees. This is vital in improving HS

practices in the agency because HS committee representatives can improve workplace safety basically by taking on the role of safety watchdog, representing employees to the employer on health, safety and welfare matters and also help in investigating employee complaints relating to health, safety and welfare and report them to the management for constructive measures. With this in mind, the municipality is, therefore, advised to ensure that there is an active employee HS representation so as to retain a more systematic approach to OHS. All in all, active employee representation in OHS matters should be properly propagated and emphasized. This emphasis should include not only large businesses but also small ones if at all both employees as well as employers want to achieve a high level of HS standards.

Generally speaking, a small percentage of employees (20.8%) reported that whenever necessary employees did not usually wear personal protective equipment (PPE) given to them. Even though the number of those who seemed to ignore wearing PPE given to them was small yet the negative impact of this act of negligence is inestimable. . This is why it is more appropriate to insist that wearing of PPE is just for the betterment of workers themselves, keeping them safe and healthy and protecting them from work-induced accidents and work-induced illnesses. A strong positive attitude must be established that far more it is employees themselves who benefit from better HS practices and they are the ones responsible for their health and safety and for the health and safety of their associates. In so doing will enable them to be more familiar with OSHA requirements; and this inevitably might be a major foundation on which high level of HS standards is built through covering all foreseeable and unforeseeable situations.

6.3.3 Employee Training and Implementation of HS Practices

Though the findings revealed that there was regular provision of information about HS issues in the municipal workplace, yet 28.5% of the respondents thought otherwise and did not acknowledge it. This study urges the municipality of Temeke to regularly disseminate appropriate HS information to workers so that they are made aware of what constitutes safe working practices because it is them and their fellow workers who can be affected by lack of proper information on OHS practices.

New workers should be given instructions and the provision of updating training for existing workers when new models of a particular plant or equipment arrive. This is vital because, by providing them with appropriate OHS information and training of the work under their control, employers will be able to monitor the health of employees and conditions at the workplace and eventually avoid costly and regrettable HS incidences.

A further report came out that 25.6% of respondents disagreed that employees participated in seminars instructing on OHS matters. It is therefore advisable for the municipal management to understand that conferences and seminars can be used as good motivational tools. In these meetings all members of the group are focused on one topic, problem, or activity and everyone can respond to the same information and materials. In this setting the group can be motivated to act as one entity. Therefore, Temeke municipality should not overlook the possibility of using this type of method; it can be very beneficial. When returning from a conference or seminar, individuals or groups are often rejuvenated because of the new ideas they received during the meetings.

If the municipality's goals of OSH policy are to be achieved, employers and workers must be continuously involved in its implementation and review through various

OSHA's seminars and conferences. Whether it is at a national level, regional or district level, seminars can be an effective means of associating employers and workers in the OHS policy-making process. The consensus developed by such seminars increases the commitment to implement the agreed HS measures. By means of attending properly organized safety conventions and seminars, a worker can keep him/herself informed on the latest developments in the field of safety, such as PPE, new safety standards, workers' compensation legislation, and new literature pertaining to safety. In turn, this can improve the effectiveness of HS at workplace in Temeke municipality.

Although majority of the respondents concurred that the employees were trained on protective measures, on the other hand a small percentage thought otherwise (19.0%). This being the case, the study suggests that the management should prioritize training employees on proactive measures because this can help in sensitizing employees of new hazards associated with the introduction of new technology. Training workers on strategies and techniques to protect themselves from accidents or hazardous material is critically important. Such techniques could include but not limited to how to handle materials safely, how to use fire extinguishers in case of fire outbreak. Additionally, techniques on how to use PPE before the accident, rather than after it, can be a paramount countermeasure in preventing accidents through minimizing both, unsafe conditions as well as unsafe acts. The municipality of Temeke thus, is reminded of an old adage that prevention is better than cure and more importantly is, if employees will consider their trainings on HS and so far implement them correctly on time, this in turn will end by reducing the potential risks to acceptable levels.

6.3.4 Emerging Areas for Further Research

This study' findings presented several emerging gaps, which can establish a foundation for further researches in HS practices at workplace in the municipality of Temeke. More noticeably were the regression analysis results, which revealed that all the independent variables combined together explained 76.4% of the implementation of HS practices at workplace in Temeke municipality. In light of the aforementioned, it is reasonable to suggest that further research may focus on investigating, which factors other than leadership, employee involvement and employee training affect the implementation of HS practices at workplace in Temeke municipality or other municipalities with similar working environment.

On another side, occupational, public and environmental health researchers may focus on investigating how the outcomes of each of the predictor variables in this study can be applied more effectively to improve HS practices at workplace. Furthermore, researchers can opt to investigate the effectiveness and efficiency of the existing OHS systems at workplaces in the municipality of Temeke. Finally, by understanding that this study was restricted to workplace in the municipality of Temeke, much the same studies can also be carried out in other economic sectors or places across the region or country as a whole.

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LIST OF APPENDICES

APPENDIX I: Letter of introduction (Assistance Letter)

Dear Respondent,

I am conducting a key research focusing on **Factors Affecting Implementation of Health and Safety Practices in Workplace particularly directing my endeavours in Temeke municipality.** Being a student, this is a partial fulfillment of the requirement for the award of the Masters degree in Human Resource Management at the Open University of Tanzania.

In line with the foregoing, attached with is a questionnaire of which I sincerely request you to respond to. Please answer all the questions with your own keen understanding, opinions and freedom of choice. Your cooperation as well as your opinions are all most valuable. This is not a test to test you. This is why you should feel comfortable to filling in the questionnaire, as there are neither wrong nor correct responses (answers) for any of the compiled statements in the questionnaire. Information provided in the questionnaire will be highly treasured and used for the academic purpose only.

However, for the fastest way to respond, I would suggest to you to feel free using any of my contacts provided below.

Thank you very much indeed for your time used to fill in the questionnaire.

Thank you once more,

Cordially,

PETRO SENSO.

Personal Contacts:

P.O Box 76648, Dar es salaam. Cell: +255713687785 Email: cbirore@yahoo.com

NOTE; Please kindly be informed that, the researcher expects to collect the filled in questionnaire not later than ……

APPENDIX II: QUESTIONNAIRE

Preliminary information:

The purpose of this study is to examine **the factors affecting the implementation of health & safety practices in Temeke Municipality** in order to refine workplace health and safety. This questionnaire asks about your PERSONAL opinions or beliefs of how leadership, employee involvement (participation) as well as employee training can influence implementation of health and safety practices. Consider the influence of these factors and answer the following questions based on your beliefs. Do NOT write your name on this questionnaire. Your response will be anonymous and will NEVER be linked to you personally. Sincerely, the information will be used for academic purposes and not otherwise. Your participation is entirely voluntary. If there are items you do not feel comfortable answering, please skip them. Thank you in advance for your hearty cooperation.

PART 1: DEMOGRAPHIC DATA

What is your age? Please tick (√) the age group you are in and the most appropriate response in other items.

1: Age

- 18-25 years ☐
- 26-35 years ☐
- 36-45 years ☐
- 46-55 ☐
- 56 years & above ☐

2: Gender

Male ☐

Female ☐

2: Education qualification

- Secondary level ☐
- Certificate ☐
- Diploma ☐
- Undergraduate ☐
- Postgraduate ☐
- Others ……..

PART 2: LEADERSHIP

This part will investigate how leadership can influence the implementation of health and safety practices.

1. Please, indicate your degree of agreement or disagreement with the following statements by ticking **(√)** your response using this scale:

1 Strongly disagree **2 Disagree** **3 Neutral** **4 Agree** **5 Strongly agree**

	Statements	**1**	**2**	**3**	**4**	**5**
1	There is a formulated policy to implement occupational health and safety practices					
2	The management is highly committed to health and safety practices					
3	The management recognises and rewards safe behavior					
4	The management provides the necessary protective and safety equipments					
5	The management has a regular audits and inspections on health & safety system.					
6	There is a committee for overseeing or checking health and safety issues.					
7	Management communicates regularly with employees on health and safety measures					

2. Please **tick (√)** the answer that most reflects your opinion on each of these statements.

	Statements	**Yes**	**No**	**Not sure**
1	Good results can be achieved whenever employees are directed on health and safety (HS) matters			
2	Clear communication is the most powerful tool for improving workplace H&S.			
3	To improve H&S, leaders should take personal responsibility and acting as a role model for others			
4	Provision of sufficient resources for work health and safety can improve H&S practices.			
5	Promoting a greater awareness of the value of work health & safety can achieve better results			

3. How does leadership influence implementation of health and safety practices? Please, put a **tick -√** to show an extent to which leadership influences the implementation of Health and Safety Practices.

i: Not at all ☐

ii: Small extent ☐

iii: Moderate extent. ☐

iv: Large extent. ☐

v: Very large extent. ☐

PART 3: EMPLOYEE INVOLVEMENT

The following items examine the influence of employee involvement (participation) on the implementation of health and safety practices

1. Please, indicate your agreement or disagreement with the following statements by **ticking (√)** your response using this scale:

1 Strongly disagree **2 Disagree** **3 Neutral** **4 Agree** **5 Strongly agree**

	Statements	**1**	**2**	**3**	**4**	**5**
1	Whenever necessary employees usually wear personal protective equipments (PPE) given to them.					
2	The agency has health and safety cultures followed by employees					
3	The employees have representatives in health and safety committee					
4	Usually employees comply with occupational safety & health (OSH) rules and regulations at work					
5	Employees usually report hazardous condition to the management					
6	Employees feel that they are responsible for their health and safety and not the employer					

2. Please **tick (√)** the answer that most reflects your opinion on each of these statements.

	Statements	**Yes**	**No**	**Not sure**
1	Consulting workers to encourage their participation is an important step for ensuring safety and health matters			
2	The delegation of safety activities or responsibility will improve health and safety			
3	A two way communication between employees and managers facilitates the effective implementation of OSH			
4	Involving workers to tackle safety issues can also increase staff morale and job satisfaction.			
5	Employees' participation will lower occupational risk level and accident rates			
6	It is a fundamental right of workers to be thoroughly informed about hazards at work			

3. How does employee involvement influence implementation of health and safety practices? Please, put a tick **(√)** to show an extent to which employee involvement influences implementation of Health and Safety Practices.

i: Not at all. ☐

ii: Small extent. ☐

iii: Moderate extent. ☐

iv: Large extent. ☐

v: Very large extent. ☐

PART 4: EMPLOYEE TRAINING

The following items investigate the influence of employee training on the implementation of health and safety practices.

1. Please, indicate your agreement or disagreement with the following statements by **ticking (√)** your response using this scale:

1	**2**	**3**	**4**	**5**
Strongly disagree	**Disagree**	**Neutral**	**Agree**	**Strongly agree**

	Statements	**1**	**2**	**3**	**4**	**5**
1	Training on safety is incorporated (included) in Occupational Health & Safety Policy of our agency(organization)					
2	The agency regularly provides information about health and safety issues.					
3	The employees are trained on protective measures					
4	Employees participate in seminars instructing on occupational health and safety matters/issues.					
5	Employees consider OSH training as very important.					
6	Absence of training can reduce improvement in health and safety issues in our agency/organization.					

2. Please **tick (√)** the answer that most reflects your opinion on each of these statements.

	Statements	**Yes**	**No**	**Not sure**
1	Developing a safety-conscious attitude can improve workplace health and safety			
2	Provision of training for new employees can develop their awareness/understanding of H&S issues.			
3	Training employees about the hazards they may be exposed to at work can reduce work related accidents.			
4	Employees need to be made aware of the safety rules and procedures so that they may comply with them.			
5	Lack of training on safety equipments or on proper use of work tools may result in work induced accidents/illnesses.			
6	H&S education should start with employee induction when a worker joins the organization or is transferred to a new job.			

3. How does training influence implementation of health and safety practices? Please, put a tick **(√)** to show an extent to which employee training influences the implementation of HS Practices.

i: Not at all ☐

ii: Small extent. ☐

iii: Moderate extent. ☐

iv: Large extent. ☐

v: Very large extent ☐

PART 5: IMPLEMENTATION OF HEALTH & SAFETY PRACTICES

The following items determine how effective is the implementation of health and safety practices in the agency/organization.

1. Please, indicate your agreement or disagreement with the following statements by **ticking (√)** your response using this scale:

1 Strongly disagree **2 Disagree** **3 Neutral** **4 Agree** **5 Strongly agree**

	Statements	**1**	**2**	**3**	**4**	**5**
1	The agency has low or reduced injury rates report					
2	The agency has low/minimal loss of working hours or days due to work related injuries/illnesses					
3	The employees are not frequently absent due to work-induced illness or injuries.					
4	There are low rates of accidents at workplace					
5	Employees feel satisfied with working environments					
6	The agency reports low/few compensations due to injuries					
7	Generally, there is an improvement in organizational productivity and performance					

2. The following items describe factors which determine the implementation of health and safety Practices in workplace. Please **tick (√)** the answer that most reflects your opinion to indicate the extent to which each factor can determine or influence the implementation of H&S Practices. Here is a scale to be used;

1 Not at all **2 Small extent** **3 Moderate extent** **4 Large extent** **5 Very large extent**

	FACTORS determining implementation of health & safety practices	**1**	**2**	**3**	**4**	**5**
1	Leadership attitudes and commitment					
2	Workers' training on health and safety issues					
3	Employee involvement					
4	Communication and feedback					
5	Introducing bonuses and rewarding safe behaviour					
6	Provision of sufficient resources for work health and safety					

THANK YOU FOR YOUR PRECIOUS TIME.