

**FACTORS INFLUENCING THE IMPLEMENTATION OF OCCUPATIONAL HEALTH
AND SAFETY MEASURES AT KITALE COUNTY REFERRAL HOSPITAL, KENYA**

EDWARD NGOGA

**A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENT OF THE DEGREE OF MASTER OF SCIENCE IN HEALTH
SYSTEMS MANAGEMENT, KENYA METHODIST UNIVERSITY.**

September 2023

DECLARATION

I hereby declare that this thesis that I submit in partial fulfilment of the requirements of the degree of Master of Science in Health Systems Management, is entirely my original work and has not been submitted for the award of any degree in any other university.

Edward Otieno Ngoga

Signature:

Date: 19/9/2023

HSM-3-0145-1/2019

Declaration by the University Supervisors

This Master of Science thesis in Health Systems Management has been submitted with our approval as the university supervisors.

Dr. Kezia Njoroge

Department of Health Systems Management, Kenya Methodist University

Sign:

Date:

Ms. Lillian Muiruri

Department of Health Systems Management, Kenya Methodist University

Sign:

Date

© Edward Ngoga, 2023

All rights reserved. No part of this thesis may be reproduced, stored in any retrieval System, or transmitted in any form or by any means, Electronically, mechanically, by photocopying, or otherwise, without prior written permission of the author or Kenya Methodist University on that behalf.

DEDICATION

This thesis is dedicated to my family, siblings, and friends for their unwavering love, support, care, encouragement, as well as understanding during the study.

ACKNOWLEDGEMENT

Individuals who contributed significantly to the creation of this proposal. My supervisors, Dr. Kezia Njoroge and Ms. Lilian Muiruri, never tired of going over my thesis with me, so I would like to thank them first, and foremost. Second, I would like to thank my friends for their support, especially Paul Ndeda, who served as a source of inspiration and encouragement throughout my studies. Lastly, and most importantly, I would like to thank our mighty God for providing me with strength, wisdom, and patience during this research.

ABSTRACT

Most people, including healthcare workers, spend one-third of their adult lives in hazardous work environments. Despite significant advancements in safety management over the last few decades, occupational health continues to contribute to work-related health injuries around the world, including in Kenya. Healthcare workers too are exposed to various occupational hazards at the workplace namely, biological, Physical, Psychosocial, ergonomics hazards. This study's main goal was to investigate factors influencing the implementation of Occupational Health and Safety measures at Kitale County Referral Hospital. The specific objectives of the study were to investigate the influence of management commitment, staff accountability, staff participation, staff training and role of government policy on the implementation of occupational health and safety measures at Kitale County Referral Hospital. The study was based on Domino and Heinrich Safety theory. This research methodology used was a cross-sectional descriptive design with a mixed-methods approach. The targeted study population was 246 healthcare workers and ten hospital managers at Kitale County Referral Hospital. 146 health workers and ten hospital managers who were sampled to participate in the study were determined by simple random and purposive sampling. Approval for data collection provided by Scientific Ethics Committee at Kenya Methodist University and National Council of Science and Technology, data was collected using a 5-point Likert scale structured questionnaire, and Key Informant Interview (KII) guide. Descriptive present while Statistical Package for Social Sciences SPSS version 25 was used to analyze quantitative data. Qualitative data from key informant interview was analyzed using thematic approach. The Spearman's correlation coefficients, namely (0.623, $p < 0.05$) for management commitment, (0.602, $p < 0.05$) for staff participation, (0.687, $p < 0.05$) for training, and (0.678, $p < 0.05$) for role of government policy were high indicating that there existed a significant statistical relationship between each of the independent variables and the implementation of Occupational Health and safety. This implies that that each of the independent variables had a direct effect on the implementation of Occupational Health and safety at the hospital. In addition, ordered regression results, namely, age ($\Phi = 0.055$; $p < 0.01$), gender ($\Phi = 0.208$; $p < 0.05$), marital status ($\Phi = 0.002$ $p = ns$), education ($\Phi = 0.105$; $p < 0.01$), cadre ($\Phi = 0.098$; $p < 0.1$), Management Commitment ($\Phi = 0.018$; $p < 0.01$), Staff Participation ($\Phi = 0.012$; $p = ns$), Safety Staff Training ($\Phi = 0.090$, $p < 0.05$), and Government Policy ($\Phi = 0.223$; $p < 0.01$) also confirmed that there existed a direct and positive relationship between the Occupational Health and Safety implementation and each of the independent variables. As such, the study recommends the need for every public hospital to train staff to take key roles in promoting the implementation of Occupational Health and Safety at their facilities. The facilities should also set up a management committee charged with the responsibility of leading the implementation of Occupational Health and Safety and the County Government should ensure that government policies are in place to promote the implementation of in County Referral Hospitals.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iv
ACKNOWLEDGEMENT	v
ABSTRACT.....	vi
TABLE OF CONTENTS.....	vii
LIST OF TABLES	ix
LIST OF FIGURES	x
ABBREVIATIONS AND ACRONYMS.....	xi
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the study	1
1.2 Problem statement.....	8
1.3 Purpose of the study	11
1.4 Objective of the research	11
1.5 Research questions.....	12
1.6 Justification of the study	13
1.7 Limitation of the study.....	14
1.8 Delimitation of the study	15
1.9 Significance of the Research.....	15
1.10 Assumption of the study	16
CHAPTER TWO: LITERATURE REVIEW.....	18
2.1 Introduction.....	18
2.2 Occupational Health and Safety.....	18
2.3. Management Commitment on Implementation of Occupational Health and safety Measures	21
2.4 Staff Participation in Implementation of Occupational Health and Safety Measures	27
2.5 Staff Training in Implementation of Occupational Health and Safety Measures.....	31
2.6 Government Policy on Implementation of Occupational Health and Safety Measures.	35
2.2 Theoretical framework.....	38
2.8 Conceptual Framework.....	40
CHAPTER THREE: RESEARCH METHODOLOGY	42
3.1 Introduction.....	42
3.2 Research design	42

3.3 Target Population.....	42
3.4 Sample size determination and sampling technique	43
3.5 Research Data Collection Instruments.....	44
3.6 Inclusion and exclusion criterion	45
3.7 Data management.....	46
3.8 Data analysis and presentation.....	46
3.9 Operational definition of variables	47
3.10 Ethical considerations and approval	48
CHAPTER FOUR: RESULTS AND DISCUSSION.....	49
4.1 Introduction.....	49
4.2. Pre-test Results.....	49
4.3 Response Rate.....	50
4.4 Demographic Information.....	50
4.4.4 Level of Education of the Respondents.	52
4.5 Implementation of occupational health and safety measures.	53
4.6 Management Commitment on Occupational Health and Safety Measures	56
4.7 Staff participation on Occupational Health and Safety measures.....	60
4.8 Training of Health Workers on Occupational Health and Safety Implementation.....	62
4.9 Role of Government Policy on Occupational Health and Safety Implementation.	65
4.10 Inferential results	67
4.9 Discussion.....	70
CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS	74
5.1 Introduction.....	74
5.2 Summary of findings.....	74
5.4 Recommendations.....	78
5.5 Area for future research	80
References.....	81
APPENDICES	89
Appendix I: Consent Form.....	89
Appendix II: Research Questionnaire.....	92
Appendix III: Interview Guide for The HMT Members.....	99
Appendix V: Budget	100
Appendix VI: Project Timeline.....	101
Appendix VII: KeMU Ethical Approval Letter	102
Appendix VIII: NASCOTI Letter.....	102

Appendix VIII: County Approval Letter	104
---	-----

LIST OF TABLES

Table 1. 1	<i>Operational definition of key terms</i>	16
Table 3. 1	<i>Target population</i>	43
Table 3. 2	<i>Sampling frame</i>	44
Table 3. 3	<i>Operational definition of variables</i>	47
Table 4. 1	<i>Reliability test</i>	49
Table 4. 2	<i>Response rate</i>	50
Table 4. 3	<i>Gender</i>	51
Table 4. 4	<i>Age</i>	51
Table 4. 5	<i>Marital status</i>	52
Table 4. 6	<i>Level of Education</i>	52
Table 4. 7	<i>Designation</i>	53
Table 4. 8	<i>Implementation of occupational health and safety</i>	53
Table 4. 9	<i>Management commitment</i>	56
Table 4. 10	<i>Staff participation</i>	60
Table 4. 11	<i>Staff Training</i>	63
Table 4. 12	<i>Role of Government Policy</i>	65
Table 4. 13	<i>Spearman’s Rho (ρ) correlation coefficients</i>	67
Table 4. 14	<i>Ordered logit model results</i>	69

LIST OF FIGURES

Figure 2. 1 Conceptual Framework	40
--	----

ABBREVIATIONS AND ACRONYMS

AIDs	Acquired Immunodeficiency Disease
BBP	Blood Borne Pathogen
CEO	Chief Executive Officer
COVID 19	Coronavirus Disease 19
EU	European Union
GOK	Government of Kenya
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HMTs	Hospital Management Teams
KII	Key Informant Interview
MOH	Ministry of Health
NACOSTI	National Commission for Science, Technology, and Innovation.
OHS	Occupational Health and Safety
OHSA	Occupational Health and Safety Assessment
PHD	Doctor of Philosophy
SPSS	Statistical Package for the Social Sciences
TB	Tuberculosis
USA	United States of America
WHO	World Health Organization

CHAPTER ONE: INTRODUCTION

This chapter provides an overview of Occupational Health and Safety (OHS), both globally and in Kenya. This is followed by problem statement, the study objectives, the research questions, the significance scope, limitations, delimitation, and assumptions of the research and operational definition of terms.

1.1 Background of the study

Occupational Health and Safety (OHS) is a multidisciplinary field dedicated to promoting and ensuring the well-being, safety, and health of workers in a variety of industries and professions. OHS includes the identification, assessment evaluation, and control of hazards in the workplace to prevent accidents, injuries, and illnesses. The primary objective of OHS is to create safe and healthy workplaces that protect the physical, mental, and social health of employees. OHS involves implementing measures and practices aimed at mitigating risks and fostering a safety culture in the workplace. This includes conducting risk assessments, implementing hazard controls, providing suitable safety training and education, maintaining occupational health services, and ensuring compliance with applicable laws, regulations, and standards (World Health Organization [WHO], 2015). With the knowledge most employees and organizations are not keen in ensuring compliance with and adherence to occupational health safety procedure and guidelines, this has resulted in workers exposed to various occupational hazards and workplace injuries resulting into job dissatisfaction, unsatisfactory performance, low morale, inadequate commitment leading to improper function of the organization. All organizations need to be aware that the workplace environment can adversely affect the general efficiency and effectiveness of its set goals and objective (Bernardin, 2007).

Worldwide most organizations tend to have a competitive edge due to external drivers like modern technology, globalization, and competent employees. In the healthcare industry human resources for health is one of the major factors in competitiveness for any healthcare organization. And to enhance workers performance its prudent to have robust and effective occupational health and safety measure for workers at workplace, Occupational health and safety is key preventing work-related accidents and illnesses, this will ensure workers are protected from hazards and are healthy by improving conditions and work environment. Occupational health and safety are key in promoting, maintaining, and making the utmost possible efforts to ensure the employees' social, emotional, and physical welfare (Taderera, 2012)

Recently Occupational Health and Safety measures is being given priority due to increasing cases of losses, illness and injuries arising from exposure to workplace hazards in different organizations, rising cases of mortalities and injuries happening at workplace has attracted attention of managers of many organizations. Occupational health and safety programs are aimed at ensuring workers are comfortable, are secure while performing their duties and interacting with workplace environment (Braton, 2019).

To promote OHS awareness and ensure that healthcare workers possess the necessary knowledge and skills to mitigate risks, training and education initiatives are also essential. International organizations, national health agencies, and professional associations provide healthcare workers with specialized training programs. These programs include infection prevention and control, safe handling of hazardous substances, radiation safety, ergonomic practices, stress management, and mental health support. Continuous training empowers healthcare workers to provide high-quality care in safe environments by keeping them abreast of the most recent OHS guidelines and best

practices (Atusigizwe et al., 2019; Beus et al., 2018; Braton, 2019; Gatchel & Kishino, 2012; WHO, 2015;).

Occupational Health and Safety measures (OHS) protect the health and safety of healthcare workers who provide essential preventive and medical services. Professionals in the healthcare industry face exposure to numerous hazards, including biological, chemical, physical, and psychosocial risks and ergonomics hazards due to the nature of their work. The global health sector includes hospitals, clinics, laboratories, research institutions, and public health organizations, among other settings. OHS is essential for ensuring the safety and well-being of healthcare personnel, who are at the forefront of patient care and disease prevention. By prioritizing OHS, healthcare organizations can create safe workplaces that increase worker productivity, reduce absenteeism, and contribute to the overall quality of healthcare (Ashraf, 2015; Beus et al., 2018).

Due to exposure to infectious diseases, hazardous chemicals, radiation, physical risks, ergonomic challenges, and psychosocial stressors, the global health sector poses unique dangers. Through direct contact with patients, handling contaminated materials, and exposure to airborne pathogens, healthcare workers are susceptible to contracting infectious diseases. In addition, they may encounter hazardous substances, such as disinfectants or drugs, which require proper handling and disposal. Additionally, healthcare professionals who work with radiation, such as those in radiology departments, are exposed to certain risks. Physical risks, such as ergonomic issues and patient handling, are what cause musculoskeletal injuries. In addition, psychosocial hazards, such as job-related stress, long working hours, and emotional demands, can negatively affect the mental health and well-being of healthcare workers (Atusigizwe et al., 2019; Braton, 2019; Gatchel & Kishino, 2012).

Various protective measures are implemented in the health sector to combat these threats. Important infection control and prevention measures including use of safety equipment hand washing, proper waste management, including access immunizations. For disinfection, sterilization, and the safe handling of hazardous substances, healthcare facilities must adhere to strict guidelines and protocols. The implementation of engineering controls, such as ventilation systems and ergonomic equipment, reduces physical risks and improves workplace ergonomics. In addition, counseling services and employee assistance programs contribute to the safety of healthcare workers (Ashraf, 2015).

Worldwide, it is estimated that 160 million new incidents of occupational related injuries and diseases occur yearly (WHO, 2013). It is further estimated that 2.2 million employees die yearly due to Injuries and illness happening at workplace (International Labor Organization [ILO], 2011), of which approximately 350,000 of the deaths are attributable to workplace accidents and the rest attributable to work related illness. While an additional 264 million non-fatal injuries are reported every year contributing to approximately 3 days of missing work, with 160 million contracts work related illness. It is further estimated by ILO that 4% of annual world's GDP is lost due to occupational illness and injuries at workplace (ILO, 2013).

Most countries and organizations in Africa are reluctant to put robust measures in place to comply with practices on occupational health and safety. It is reported that over 63,000 deaths and over 1.5 million injuries have been reported in over 54 Africa counties (ILO, 2011). It is reported that most organization Africa are not having well established structure for implementation of occupational health and safety because they are more focus on productivity and profitability and leaving out occupational health and safety practices. In a study conducted by Thobora and Thuita (2015) revealed that South Africa, Ghana and Zimbabwe and Kenya majorities of morbidity and

deaths are attributable to workplace injuries and accidents with study indicating that 17% of mortalities that occurred to persons aged 15-64 in a rural district in Kenya in the 1908s were because of injuries and accidents.

In Kenya various stakeholders including employers, government departments, manufactures, leaders are yet to recognize the importance of occupational health and safety at workplace (Nyakango, 2011). The Work Injury and Benefits Act, (WIBA, 2007) clearly outline that employers are expected to take key responsibilities in implementing Occupational safety and health measures at place of work try to mitigate accidents, and diseases which might lead to death.

In Kenya, the health sector plays a crucial role in providing the population with essential medical services. Occupational Health and Safety (OHS) is of the utmost importance in this industry to ensure the health and safety of healthcare workers who tirelessly serve the public. Kenya's health sector includes hospitals, clinics, dispensaries, and other medical institutions, among others. OHS is essential for ensuring employees are guarded and are healthy at the workplace, who are exposed to numerous hazards daily. By prioritizing OHS, the health sector can create a safe and healthy workplace, improve employee well-being, and enhance the quality of patient care (Afubwa & Mwanthi, 2014; Ministry of Health, 2014; Ministry of Labor, 2012; Kimalu et al., 2004;).

Due to the nature of healthcare work, the industry faces a variety of risks. While providing patient care, healthcare workers may be exposed to infectious illnesses like lung infections, Human Immunodeficiency Virus including additional airborne or bloodborne pathogens. They may also be exposed to hazardous chemicals, such as disinfectants, sterilizers, and pharmaceuticals, which must be handled and disposed of properly. In healthcare settings, physical hazards such as needlestick injuries, ergonomic challenges, and the risk of falls or injuries from patient handling are common. In addition, psychosocial hazards, like stress related to work environment and duties,

long working hours, together emotional demands, can have a negative effect on the mental health of healthcare workers (Okoth-Okello et al., 2012)

In response, the Kenyan government has developed and implemented numerous protective measures in the health sector, which are utilizing equipment's for individual protection like hand gloves, face mask including gowns, as well as hand hygiene practices, to control and prevent infection. To reduce the risk of infection, healthcare facilities are required to adhere to stringent waste management, disinfection, and sterilization regulations. To reduce physical hazards and improve workplace ergonomics, engineering controls, such as ventilation systems and ergonomic equipment, have been implemented. Furthermore, psychosocial support programs, such as counseling services and employee assistance programs, are essential for the health of healthcare workers. (Ministry Of Health, 2014).

Various organizations, including the Ministry of Health, professional associations, and training institutions, have provided healthcare workers with OHS training programs on topics such as infection prevention and control, handling of hazardous substances, safe patient handling techniques, emergency planning, and psychosocial support. In addition, continuous training and refresher courses keep healthcare workers abreast of the most recent OHS regulations and best practices (Okoth-Okello et al., 2012;).

Despite efforts to promote OHS in the global health sector, significant obstacles still exist. Resource limitations, particularly in low-income countries, limit access to necessary protective equipment, adequate staffing levels, and training resources. Infrastructure inadequacies, such as inadequate ventilation systems and ergonomic equipment, have impeded the implementation of comprehensive OHS measures. In addition, Emerging and Reemerging diseases, such as the

COVID 19 pandemic, have continued to impact the global health sector, posing significant challenges that have necessitated rapid adaptation and implementation of control and prevention measures to prevent outbreaks. As they face heavy workloads, traumatic events, and emotional stress, the mental health and well-being of healthcare professionals has required ongoing attention. (Atusigizwe et al., 2019; Braton, 2019; Gatchel & Kishino, 2012; Leka & Andreou, 2012; WHO, 2015;).

Healthy working environment and workers health is the most important and valuable asset to individuals, communities and countries, an effective OHS program is the key not only in promoting health and safety of the workers but also its important in enhancing productivity at work, ensuring provision of quality services, motivation at work , job satisfaction, which often result in good quality of life for workers and the society (WHO, 2013). For an organization to maximize productivity and enhance workers performance, it ensures all its workers are well taken care of just like any other resources in the organization (Makori et al., 2012).

In the modern world most organizations are facing in creating and ensuring workplace could attract, motivate and retain workers, which requires organizations to develop new measure to address the challenges by coming up with strategies that will make the working environment more attractive, working environment that make workers enjoy their work, disclose their work and make them proud allowing them realized their full potential (Nowier, 2009).

1.2 Problem statement

The international Labor organization (ILO, 2013) reported that economic losses due to work related injuries and infection are high as 4% of the worldwide GDP. The environment in which health workers work is perceived to be carrying most occupational hazards as they usually encounter numerous occupational hazards as a result activities related to work (Andersen et al., 2018). Most countries including Africa have put forth interventions on occupational health to ensure workers' exposure to hazards is minimized. A plan of action 2008 – 2017 on health worker was ratified in 2007 by World Health Organization (WHO) in its sixtieth World Health Assembly (WHA), where member states were asked to put more effort towards covering special groups like underserved populations, informal sectors workers, Small and medium sized entities, and farmer and workers on contract.

Healthcare workers are often exposed to occupational hazards due to low knowledge on safety measures, poor handling of medical equipment's and failure to comply with set procedure while performing duties, and failure by the hospital management to put in place right safety guidelines including allocating resources towards implementation of occupational hazards measures. Noncompliance with health and safety practices at the workplace often leads to injuries, accidents, and illnesses which have huge financial costs to an institution. Unhealthy and Unsafe working environment always influences quality of health care services offered, productivity and performance of healthcare workers including retention of workforce. It is prudent that hospitals make health and safety of workers a priority due to the nature of the work, patient handling and carrying diagnosis of patient illness and diseases. Study done by (Adema & Ladaique, 2019) pointed out that allocation of resources towards implementation of occupational health measures

and interventions by organization are influence by legal requirement, financial status, and moral factors

Workplace Hazards and injuries can lead to an increase in physical workload, burnout and psychosocial stress which may affect the ability of workers to adequately perform their duties. Creating safe working environments is more beneficial for all workers and the organization can do this considering safety of workers by reducing exposure to occupational hazards. Poor implementation of OHS measures often lead to deficient performance and injuries at work resulting in high cases of psychological stress (Shikdar & Sawaqed, 2003). Studies have shown unsafe and hazardous working environments may lead to accidents, stress, burnout often leading to deficient performance, dissatisfaction, and lack of commitment at work. (ILO, 2013) reported that organizations with safe working environment always have reduced hazards and, low rate of injuries, illness, increases employee satisfaction, performance, and commitment.

Inadequate training and awareness, inadequate provision of personal protective equipment (PPE), ineffective infection prevention and control practices, poor ergonomic conditions, and limited access to occupational health services all contribute to the low implementation of OHS practices at the hospital. Despite the recognition of these obstacles, there is a dearth of scientific literature addressing hospital healthcare workers' occupational health and safety incidents. This knowledge gap has impeded comprehension of the factors influencing the effective implementation of OHS measures at the hospital. (Leka & Andreou, 2012).

Ndejjo et al., (2015) in study done in Uganda on occupational health hazards among healthcare workers found out that occupational health hazards cases are increasing with no clear measures to address and prevent the exposures. Another study done by (Atusingwize et al., 2019) showed that

most health care workers were well conversant with procedures and guideline on incident and accident reporting at the hospital and most prevalent hazards were injuries from needle stick, cut from sharp object, body fluid splash. In Tanzania, a study done by Manyele et al., (2008), documented that nurses and patient are more likely to be exposed to occupational hazards because they are involved in hazardous activities like doing injections, cleaning the ward, changing patient beds, wound dressing, giving medication.

Ministry of Health in collaboration with IntraHealth international conducted health risk assessments in ninety-seven public health facilities ranging from level 2 to level 5 in Kenya in 2013 found that hospital lacked an inclusive approach to putting in place measures to promote workplace health and safety. Despite the government of Kenya through MOH putting more effort geared towards providing and ensuring working environments in all public hospital across the country is safe and healthy. The risk assessment pointed out glaring gaps in the public health sector. The gaps were poor occupational hazard analysis, lack of OHS training needs assessment, lack safety standards and guidelines well displayed (MOH and Intra health International, 2013).

Kenya Ministry of Health (MOH) has Occupational Health and Safety guidelines which provides a wide range of initiative on how OHS measure should be implemented to ensure health and safety of healthcare workers. The guideline is aiming at creating safe and healthy working environment by lying out procedures and workplace to reduce injuries, ensure management commitment, encouraging staff participation, staff training, Provision of equipment and PPEs, and engineering control (Ministry of Health, 2014). Despite the availability of these policy guidelines Kitale County Referral Hospital is faced with implementation of OHS Measures leading to high rate of workplace accidents and infection.

The Kitale County Referral Hospital was chosen because it is a public health hospital in TransNzoia county providing healthcare services to over one million people not only in TransNzoia County but also to neighboring counties like West Pokot, Elegeyo Marakwet, Uasin Gishu and Bungoma County. The hospital is also the referral point for other level 2 and 4 hospitals. Most public health hospitals are known to have poor management of OHS practices thus putting workers at risk of occupational hazards. The hospital has a responsibility and mandate to provide quality health care services and ensure that the community and population are attended to by adequately trained health care workers and adhere to OHS measures.

To address this gap in the literature, this study sought to identify the underlying factors that impede the successful implementation of occupational health and safety measures at the Kitale County Referral Hospital in Kenya. By identifying these factors, the study aimed to provide valuable insights and recommendations to enhance OHS practices, improve the well-being of healthcare workers, and improve hospital patient care quality.

1.3 Purpose of the study

The purpose and aim of this research were to determine factors influencing how workplace health and safety measure are implemented at Kitale County Referral hospital in Transnzoia county. These factors include Management commitment, Staff participation, Staff training and role of government policies and guidelines on how workplace health and safety measures are implemented. This research was purely for academic purposes.

1.4 Objective of the research

The general objective of this research was to analyze conditions that influence how workplace health and safety measure are implemented at Kitale County Referral Hospital, Kenya so that vital

policy information could be availed to the relevant stakeholders in the county and the National Government for better implementation of OHS at hospital.

1.4.1 Specific objectives

The specific objectives of the study were:

1. To analyze the influence of management commitment on the implementation of occupational health and safety measures at Kitale County Referral Hospital.
2. To assess the influence of staff participation on the implementation of occupational health and safety measures at Kitale County Referral Hospital.
3. To evaluate the influence of OHS Training on the implementation of occupational health and safety measures at Kitale County Referral Hospital.
4. To explore the role of government policy on OHS implementation at Kitale County Referral Hospital.

1.5 Research questions

The following were the study's Research questions.

1. To what extent does the management commitment affect the implementation of OHS measures at Kitale County Referral Hospital?
2. To what extent does staff participation impact the execution of OHS measures at Kitale County Referral Hospital?
3. To what extent does OHS Training affect the implementation of OHS at Kitale County Referral Hospital?
4. What is the role of government policy on OHS implementation at Kitale County Referral Hospital?

1.6 Justification of the study

In Kenya's healthcare industry, occupational events, and healthcare-related risks such as needle stick injuries, exposure to poisonous gases, fire, congestion, injuries, and deaths continue to be reported despite legislation mandating the highest safety standards. These are essential for instilling concerns about compliance and readiness. According to the WHO International Council of Nurses (Wilburn & Eijkemans, 2004), over 75% of Kenyans sustain needlestick injuries annually. Numerous OHS-related studies have neglected the health sector in favor of focusing on OHS as a strategy. Occupational health among healthcare workers is a component of comprehensive occupational health that promotes health contributions and the protection of all healthcare workers; therefore, factors that impede its implementation as a strategy must be researched.

Due to health workers frequent contact to infectious microorganisms like bacterium, viruses, and fungi, health care workers are at risk for biological hazards. Needlestick injuries, splashes from body fluids, and nosocomial infection, a disease associated with biological hazards such as HIV, Hepatitis B and C, and TB, are the sources of exposure to these agents (Taegtmeier et al., 2008). In addition to chemical, physical, and psychosocial hazards, health workers face chemical, physical, and psychosocial hazards. Chemical hazards include formaldehyde used for pathological tissue preservation and drugs such as cytotoxic drugs. Temperature extremes, noise, vibration, and radiation are examples of physical hazards. Lastly, the psychosocial risks include workplace violence and overwork (Ashraf, 2015).

The absence of records or data on the incidence and prevalence of health hazard exposure among health workers in public health facilities is the greatest barrier to occupational safety. In addition

to this barrier, the studies conducted in Kenya have only focused on biological hazards; no study has been conducted in Kenya to determine the prevalence of all occupational hazards among health workers at their workplace. Due to the increasing demand for high-quality and effective health service delivery, there is a strong need to comprehend the hazards experienced by health workers at their place of employment to develop stringent measures to address the hazards (Matsiko, 2010).

The Kitale County Referral Hospital was chosen because it is a public health hospital in TransNzoia county providing healthcare services to over one million people not only in TransNzoia County but also to neighboring counties like West Pokot, Elgeyo Marakwet, Uasin Gishu and Bungoma County. The hospital is also the referral point for other level 2 and 4 hospitals. Most public health hospitals are known to have poor management of OHS practices thus putting workers at risk of occupational hazards. The hospital has a responsibility and mandate to provide quality health care services and ensure that the community and population are attended to by adequately trained health care workers and adhere to OHS measures

1.7 Limitation of the study

The fact that hospital employees work in shifts and at odd hours complicated the data collection process and made it difficult to conduct interviews and distribute questionnaires. The respondents' reluctance to disclose information out of concern that it would be disclosed to outsiders and used against the organization was another limitation of the study. The study was limited to Kitale County Referral Hospital; consequently, it was unlikely that the findings would be applicable to other hospitals in the country. Due to limited time and resources, the researcher did not conduct the study at other public facilities. In addition, due to the substantial number of patients at the facility, the researcher had trouble locating responses from study participants.

1.8 Delimitation of the study

The demarcations in which the study was conducted, as well as the processes that were used, are presented in the study's delimitations (Mugenda & Mugenda, 2003). The study was limited to the Kitale County Referral Hospital. To address the busy schedule of healthcare workers, the researcher looked for the most appropriate time to administer the questionnaire. The researcher explained the aim of this study, maintained confidentiality and privacy of participants, as this was anticipated to elicit honest and reliable responses from the participants.

1.9 Significance of the Research

The goal this research was to determine conditions influencing how occupational health and safety measures are implemented at Kitale County Referral Hospital, there it is believed that the findings will be useful contributor to effective implementation of Occupational Health and Safety Measure at the hospital. Its believe that the research will form a solid ground for additional studies to test and compare the findings and other theories that will be elicited, which will be key in providing additional information on relationship between management commitment, staff participation, staff training and role of government policy on Implementation of Occupational Health Measures aimed at reducing exposure to occupational health hazards. The study finding will be key to stakeholders and partners including government and decision makers responsible for ensuring the safety of workers at workplace and will be useful in bridging the information gap on Occupational health hazards. Additional benefits that will be realized from the study are providing platform for improving quality of care and enhancing patients' safety. It believes the findings from the study are crucial in improving and making the workplace safe for healthcare workers. A safer work environment always results in improved workers performance, increased motivation, job satisfaction, proper work life balance, and reduction in work related burn out. Finally, the findings

from the study will help the hospital develop policies and guidelines that would reduce cross infection at the facility, provide appropriate equipment.

1.10 Assumption of the study

According to Ali and Bhaskar (2016), research assumptions are the conditions under which statistical techniques applied in a study will yield legitimate results. In this case, the researcher anticipated that when filling out surveys, the study respondents would be truthful. Furthermore, efforts were made to have sampling of the study participant be a true representation of the study population, with the presumption that they have experienced similar events and have been exposed to occupational health hazards.

Table 1. 1

Operational definition of key terms

Compliance with Occupational safety standards	In this study, compliance to OHS will refer to health facilities adhering to the set of approved guidelines for workplace procedures that would prevent any occupational hazards and this study adopted the healthy policy guidelines set aside for the health sector.
Hazards	In this study, a hazard will refer to any risk that a health worker might be exposed to at a health facility that can cause temporary or permanent damage to a health worker's life.
Health facility	In the current study, this will refer to a specifically designated site including buildings and surroundings where health services are provided.

Health worker The term will refer to the individuals whose job is to protect and improve the health of a population. In this study, health workers will be individuals who directly provide care and treatment to patients.

Occupational Health hazard The term occupational health hazard refers to a dangerous phenomenon, substance, human actions, or related activities, or even a state/condition that may pose or cause life losses. They can be injurious or have other health consequences in the workplace.

OHS Implementation This refers to measures put in place to anticipate, recognize, evaluate and controlling of hazards arising in or from workplace that could affect the well beings of employees.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section outlines past written work on OHS and the attributes that affect its implementation in public health organizations. The chapter also presents conceptual and theoretical frameworks that grounded this study.

2.2 Occupational Health and Safety

As previously stated, Occupational Health and Safety (OHS), also known as workplace health and safety, is a crucial field devoted to protecting the well-being, safety, and health of individuals in the workplace (WHO, 2019). It encompasses numerous principles, practices, and regulations aimed at preventing injuries and infection including deaths related to work conditions. The significance of a healthy and safe working environment stems from its commitment to worker safety, legal compliance, productivity, and organizational reputation (Friend & Kohn, 2017).

OHS is essential for protecting workers from harm and ensuring their physical and mental health wellbeing (Leka & Andreou, 2012). By identifying and eliminating hazards in the workplace, OHS programs create a safe and healthy work environment. These hazards may include physical dangers such as machinery or hazardous substances, chemical exposures, biological risks, ergonomic concerns, and psychosocial elements. OHS professionals evaluate the potential risks to worker health and safety through exhaustive hazard identification and risk assessment procedures. This proactive approach permits organizations to implement effective control measures to reduce or eliminate these risks (Datey-Baah & Amponsah-Twaiah, 2012).

The management of hazards is another fundamental aspect of OHS. Utilizing a hierarchy of control measures is required. If possible, the first step is to eliminate all potential dangers. If complete

elimination is not possible, safer alternatives are substituted for hazardous substances or processes (Datey-Baah & Amponsah-Tawiah, 2012). To minimize exposure to hazards, engineering controls such as installing safety guards and ventilation systems are implemented. To ensure safe work practices, administrative controls such as clear procedures, effective communication, and training programs are implemented. Equipment's to minimize exposure, like helmets, hand gloves, and respirators, is provided to further safeguard employees against hazards (Dyck, 2013; Friend & Kohn, 2017).

Similarly, OHS programs emphasize occupational health surveillance. Monitoring and assessing the health of workers to identify and prevent occupational diseases and health issues (Armstrong, 2018; Gatchel & Kishino, 2012;). To detect potential health risks early, routine health examinations, medical screenings, and monitoring of exposure to hazardous substances are conducted. By monitoring and analyzing health data, OHS professionals can implement targeted interventions and preventive measures to safeguard the health and safety of employees (Armstrong, 2018; Gatchel & Kishino, 2012).

Education and training are integral components of OHS initiatives. OHS programs provide comprehensive training on safety procedures, hazard identification, and emergency response protocols to employees and management (Taylor et al., 2014). By providing workers with the knowledge and skills to effectively identify and manage hazards, organizations foster a safety culture. Continuous education ensures that employees are current on the most recent safety practices and regulations, fostering a proactive approach to risk prevention (Dessler, 2013; Ngirwa, 2005).

Compliance with the law is crucial in OHS. Governments and regulatory bodies enact laws and rules to safeguard the rights and safety of workers (Beus et al., 2018). Organizations are required by law to comply with these regulations, which ensure a safe workplace for their employees. Compliance is monitored and enforced by OHS professionals, who conduct inspections and investigations to ensure safety standards are adhered to. Compliance not only protects employees but also aids organizations in avoiding legal issues, financial penalties, and reputational harm (Beus et al., 2018).

Effective OHS programs provide benefits beyond worker protection. A safe and healthy workplace contributes to increased productivity, improved employee morale, decreased absenteeism, and lower employee turnover (Dyck, 2013). OHS initiatives also improve organizational efficiency and performance because organizations that prioritize OHS demonstrate a commitment to their employees' well-being, thereby gaining the confidence and trust of stakeholders (Friend & Kohn, 2017). This is in addition to improving the organization's reputation and appeal to prospective employees, customers, investors, and the public.

Occupational Health and Safety (OHS) is an all-encompassing field that focuses on protecting workers from harm and promoting their well-being at work. OHS programs contribute to a safe, healthy, and productive work environment by identifying hazards, implementing control measures, monitoring health, providing training, ensuring legal compliance, and fostering a safety culture. The holistic approach of OHS creates a win-win situation for worker safety and organizational success, benefiting both individuals and organizations.

2.3. Management Commitment on Implementation of Occupational Health and safety Measures

Commitment of management plays key role in ensuring effective Occupational Health and Safety (OHS) within an organization is crucial (Dessler, 2013) and it involves how managers would prioritize safety at workplace during business planning and resource allocation towards implementation of occupational safety measures. An organization can use three principles in ensuring safety at the workplace which includes safety values that are expressed by managers, secondly safety principles and compliance and finally putting in place safety measures. It requires the commitment and active participation of top management in promoting and prioritizing a safety culture. It also sets the tone for the organization. When managers prioritize and demonstrate their commitment to safety, they send employees a clear message that their well-being is valued (Elser et al., 2012). This commitment begins with the implementation of a robust OHS policy that outlines the organization's dedication to providing a safe and healthy workplace for all employees.

In a study conducted by (Fernandez Muniz et al., 2012) on relationship of management commitment to implementation of occupational health measures and worker safety behavior, Pressure at work, Motivation and communication revealed that management commitment positive effect on motivation, and effective communication but did not have effect of reducing work pressure.

Management commitment as defined by (Vinodkumar & Bhasi 2009) is making the work climate safe which affect staff behavior, motivation, Satisfaction, competitiveness, and performance positively, in the same study, the study reported that workers who of got accidents at workplace had taken fewer precaution on safety, had low staff participation and lack of commitment from

management on occupational safety measures. In another study done by (McGonale et al., 2016) effect of management commitment on implementation of occupational safety measures showed that there is positive relationship between management commitment to staff motivation, participation on safety measures, complying to safety rules and regulation at workplace but there was negative relationship with minor accidents at workplace.

Studies have recently recommended that employers need to use participatory approach for improving implementation of OHS programs and ensuring employees are empowered to be able to manage their work environment (Mcgonale et al., 2016). The study involves janitors at a 600-bed hospital where safety team was formed that included workers, managers and experts on safety, training was provided to workers that included identification of hazards, hazard control and reduction of safety risk. The safety team developed and implemented initiatives such as change in procedures to allow easy cleaning of floors, procure safe equipment's, implementing rotation of job frequently to reduce exposure to repetitive strains. A post implementation review was done, and it recorded that rate on claims for compensation drastically reduced by 67%, cost of compensation by 73%, accidents by 43%, the reported made a conclusion that if workers are empowered and encouraged to participate in safety program there is an increased adherence to safety protocol and procedures.

In another study done by O'Toole (2002) on concrete manufacturing firm in the United States of America on perception of workers safety for a period of 45 months. The research indicated management commitment to health and safety programs had stronger positive association on workers perfection to health and safety measures which was associated closely with reduce accidents and injuries at workplace and it also found that line manager who are most of the time supervisors of the employee has a key role in any organization implementation of OHS programs,

this is because the supervisor are most of the time are the one responsible for the implementation of policies and procedures that are developed by senior management.

In a study done by Griffin and Neal (2000) showed that manager who are actively in promoting safety measures and behaviors at workplace have positive effect on workers preciseness on safety climate and participate in promoting safety behavior aimed at preventing injuries at workplace, this is because workers are aware and put more focus on safety measures. This is also demonstrated in a study by (Hofman & Morgeson, 2003) that workers who observe their managers adhering to safety procedure and behaving safely at workplace are more likely to comply to safety procedures and guidelines since they view the managers as role models.

Allocating adequate resources to support OHS initiatives is a requirement of management commitment. This includes providing adequate funds, personnel, and time to implement safety programs (Bratton, 2019). It also involves integrating OHS considerations into the overall business strategy and decision-making processes of the organization. Additionally, management must ensure that OHS responsibilities are clearly defined and assigned to the appropriate personnel within the organization (Elsler et al., 2012). This entails appointing qualified individuals or safety committees to oversee OHS programs, monitor compliance, and drive continuous improvement. By establishing distinct roles and responsibilities, management ensures accountability and ownership of OHS results at all organizational levels.

Consequently, management commitment provides numerous advantages for both employees and the organization. When management prioritizes OHS, it reduces the likelihood of workplace accidents, injuries, and illnesses, thereby safeguarding the health and safety of employees. A safe and healthy workplace improves employee engagement, morale, and productivity. Additionally, it

decreases absenteeism and turnover, resulting in cost savings for the organization. Moreover, management commitment to OHS facilitates compliance with legal and regulatory requirements (Braton, 2019)

By proactively addressing safety issues and implementing best practices, organizations can reduce the likelihood of legal violations and the penalties that accompany them. Demonstrating a commitment to OHS improves the organization's reputation and fosters trust among stakeholders, such as employees, customers, and investors (Braton, 2019; Dessler, 2013; Elsler, et al., 2012;).

In the past management commitment was measured as a unidimensional construct, but Meyer et al., (2002) recommended three types management commitments as affective, normative and continuance commitment to implementation of occupational health and safety measures, where affective commitment is the emotional attachment, Identification ,participation a worker has towards the organization including enjoying to part of the organization, while continuance commitment is explained as the desire for an employee to continue being employed at the organization due associated cost of exiting the organization. And the normative commitment the obligation on an employee feeling to continue being in the organization (Meyer et al., 2002).

Workplace accident and injuries are often viewed as negligence of workers, technological failure, employees' collective attitudes and poor supervision by management, however the safety measure must be considered to responsibility of the organization (Cohen, 1977). Many organizations have developed initiatives to promote safety behavior among workers like creating departments in charge of implementation of occupational health and safety measures, developing reward system

to incentive safe behaviors at workplace. Gerhart et al., (2008) note that most organizations develop short term initiatives and goals that often results in inefficiency and confusion for workers.

Managers are faced with multiple challenges in implementing occupational health and safety measures in proving safe working environments which are majorly influence by economic, policy, legislation, regulations, practice codes and labor laws with many organizations leaving this role human resource practitioners (Bratton, 2019). Policies include occupational health and safety policies will work optimally if managers show examples and are dedicated to maintaining them (O'Brien, 2001) since most workers will not adhere to the policies if the managers show bad examples hence involving employees, working workers union, safety committees on all the safety measure would help in employees to get acquittance e with policy regulations documents that are applicable to them and will take action in case the policies are breached.

There is need for institution to integrate all safety measure in its operations and give it more attention like all institution mission this can be achieved by inclusion of all safety measures and procured as part of total quality management for enhancing quality of services (Meyer et al., 2002). It is vital for all organizations to develop robust methods for evaluating implementation of occupational health and safety indicators (ILO, 2011). ILO (2013) recommends that health and safety performance must be measure in line with set targets and standards, Organization must put more emphasis on self-monitoring by all employees to support in early detection of occupational hazards and suggest improvement for successful execution of occupational safety and well-being measures.

Management commitment requires every organization to put robust system for monitoring occupational health and safety measures that involves works system inspection, site monitoring and work environment examinations (ILO, 2011). As recommended by WHO (2015) regular inspection of workplace is key in detecting and identifying hazards at workplace and developing control, preventive, and control measures to mitigate reoccurrence and exposure to occupational hazards.

To enhance implementation of occupational health and safety measures (ILO, 2011) recommends that health and safety measures should be part of organization board meetings, because it is in these meetings that organization policies and procedures are investigate, staff grievance, important communication and organizational report are reviewed. The board meeting good avenues for drawing actions towards improving occupational health safety measures (WHO, 2015). The board meetings which form part of executive meetings are key for the management to review if all safety measures are included in the organization strategic plan which is key is assessing the effectiveness of risk management system (ILO, 2011).

Health and safety regulation requires managers to regular consult and get inputs from staff according to Hall and Torrington (2005) by discussing safety issues, getting views, and reaching collective decisions that would have an impact on implementation of occupational health and safety measure (Mearn & Hope, 2005). Cascio (2006) recommends that if it is required that representative from workers union be consulted in all matters of safety program it will be prudent to the management to first develop clear safety policies, secondly draw implementation and sustainability plan this can be done through a loss control program with four components namely

development of safety budget, clear safety records, managing personnel concerns and managers leading by examples.

2.4 Staff Participation in Implementation of Occupational Health and Safety Measures

For effective implementation of occupational health and safety measures management in any organization is required to adopt participatory approaches in consulting with staff in addressing problems and making recommendations and decisions, this will enhance teamwork at workplace. Effective participation encompasses psychological involvement of persons in a group giving them opportunity to support goals and objective of the group including responsibility sharing, participation includes staff contribution, shared responsibility, and meaningful involvement (Newstrom, 2007).

Dessler (2008) pointed out that involvement of staff in implementation of occupational health and safety measure has two benefits, first it is because workers are the major sources of innovative ideas and information to management hence it will be easy to identify potential problems and developed potential solutions to be problem. Secondly, staff participation would always lead to employees accepting safety programs in place. Bayram (2019) pointed out that robust and professionally managed safety programs always have clear information to committee responsible for safety, involving all units and departments in the organization. It is important for all organizations to encourage staff participation by considering employees' input while making decisions geared towards improving workplace safety.

It is reported that organization and institutions with professionally managed safety programs are more likely to record less injuries, less employee compensation, few lawsuits and reduce cost

operation, it is recommended that institutions involve staff by creating a committee responsible for safety implementation (James & Walter 2002). To foster commitment to safety, management should strive to educate and explain to employees the importance of adhering to safety practices, i.e., it would be prudent that all employees in the organization get clear understanding that the cost associated with injuries at workplace includes penalties for violating safety procedures (Casio 2006). Once employees have a clear understanding of the implications of violating safety procedures, the resistance to adhering and complying with safety measures will drastically reduce. But this requires a delicate balance because it is often difficult to eliminate human resistance, hence it requires commitment and patience (Dyck, 2002).

International Labor Organization occupational health and safety standards strive to recognize and recommend full participation of employees on safety measures as was recommended during ILO (2013) convention on Occupational health and safety, 1981 (No.155) accompanied by recommendations no. 164 together with ILO policies on Occupational Health and Safety management system. It requires that management provide clear information, capacity building of workers through training and coaching coupled with proper discussion with workers and including representative from workers union (ILO, 2011). Participation in providing a safe working environment should apply an ecosystem approach going beyond employee and employer interactions but involving external stakeholders which may include professional bodies, trade unions, Government departments, host community, clients, and other key partners including shareholders (Kogi, 2002).

Communication channels in any organization between line managers and employees should be open and transparent and must be bi-directional in that any concerns that are voiced by the nurses and patient attendants in the wards, clinic must be given due attention and passed on to senior

management including hospital management team, by implementing this organization will be deemed to be peoples focus in implementing OHS measure (Institution of Occupational health and safety 2009).

The participation of employees is a crucial component of OHS programs. It involves involving employees at all levels in the identification, evaluation, and resolution of workplace hazards and fostering a safety culture. (Bullock, 2018) Staff participation in OHS empowers employees to play an active role in ensuring their own and their coworkers' safety. By involving employees in hazard identification, risk assessment, and decision-making processes, organizations capitalize on their employees' firsthand knowledge and experience. Staff members are frequently the most familiar with the daily tasks and potential hazards associated with their work, making their input invaluable when identifying and mitigating risks.

Through mechanisms such as safety committees, suggestion programs, and regular safety meetings, employee participation is encouraged. These platforms allow employees to voice their concerns, offer improvement suggestions, and contribute to OHS initiatives (Stranks, 2016). In this manner, employees can report hazards, near misses, and incidents, enabling prompt investigation and corrective action. Employees develop a sense of ownership and responsibility for safety when they work in an environment that promotes open communication and active participation. By involving employees in OHS, businesses gain access to a wider variety of perspectives and expertise.

Involving employees in the decision-making process also increases their understanding of safety policies and procedures, thereby enhancing compliance and the safety culture. Staff involvement also fosters a sense of ownership and commitment to OHS (Dessler, 2013). When employees are

actively engaged and empowered to contribute to safety initiatives, they develop a greater sense of responsibility for their own and their coworkers' safety. This ultimately reduces the likelihood of accidents, injuries, and illnesses by increasing vigilance and compliance with safety protocols (DeCenzo et al., 2016). In addition, employee participation in OHS programs boosts employee morale and job satisfaction. When employees perceive that their opinions and contributions are valued, a positive work environment and a sense of teamwork are fostered. This, in turn, increases employee engagement, productivity, and job retention.

Effective implementation of occupational health and safety measure is largely influenced by workers participation and involvement which entails various structure and processes that encourages and enable workers to influence and contribute to decision being made either directly or indirectly (Karolina et al., 2013). Occupational and health safety management models do encourage active involvement of workers as key initiatives to enhance staff performance (Walters et al., 2005). The goal of workers participation in safety measures is to minimize injuries at the workplace and improve workers health (Bayram, 2019).

In study done by Mullen et al., (2017) indicate strong relationships between workers participating in safety measures and low cases of reported accidents at workplace, in another study done by, Li et al., (2010) showed that there is positive association between workers involvement and reduction in injuries while Widerszal-Bazyl and Warszewska-Makuch (2008) reported there is reduction in work absenteeism due injuries and illness when workers actively participate in safety measures. There was a significant reduction in injuries due to manual procedure when there was robust involvement of workers on ergonomics initiatives. And finally, it has been demonstrated that the

OHS committee has a positive impact on implementation of OHS measure in any organization as reported by Walters et al., (2005).

In summary, participation of workers in implementation of OHS measure is key for its positive outcome as outline by (Nowier, 2009). Motivated workers view OHS measure is prioritized by the management and everybody in the organization, with this comprehensive approach to workers involvement often results in reduced injuries and accidents at work (Grant et al., 2007).

2.5 Staff Training in Implementation of Occupational Health and Safety Measures

Most organization often have training programs for their employees as on the key strategies on implementing safety measures at workplace (Colligan & Cohen 2004), some work done early on evaluating safety measure pointed out that training is major predictor for successful implementation of safety measures at workplace (Cohen, 1977).

Training is the process of acquiring and developing skills, knowledge, and the right attitudes needed by workers to effectively carry out duties, responsibilities and enhance productivity at the workplace (Goldstein, 1980). This implies that training involves interventions that are geared toward impacting new skills, attitudes and knowledge that can be applied to work requirements.

Training is aimed at ensuring workers' performance is optimal and meets the organizational goal, it gives the workers opportunities to accept challenges and effectively accept changes happening in the organization to be part of their duties (Blanchard & Thacker, 2003). Training methodology can be formal (offsite) i.e., seminars workshop, conference as well as it can be on site through coaching, and mentorship. Effective training on safety can result in workers gaining knowledge

and skills on safety measures, developed robust problem solving and analytical skills, and become keener and workplace hazards. Past studies have indicated that workers who have undergone safety training are more likely to adhere to safety rules as compared to workers who are not trained (Lu & Yang 2010). Safety training also positive change on workers behaviors where trained workers are likely to comply to policies hence control risk at workplace (Cooper, 1998) and it's also document that trained workers are likely not to engage in risk activities at workplace (Monterelli et al., 2017). As much as the trained workers are not likely to engage in risky activities at workplace, organization should not use training as alternative to risk assessment, control, and management.

The effectiveness of training on how its influence performance on safety measure relies on numerous factors, the main factors is training transfer where the skills and knowledge gained during the training are applied effectively, maintained for over a period, and generalized at workplace. The transfer is determined by certain conditions like how the training was designed, how the training was delivered, workplace environment (Baldwin and Ford 1988). Properly designed training and delivered effectively often leads to transfer of skills and knowledge at workplace hence improved performance (Salas et al., 1999).

Outcome of learning is always demonstrated by how the training was effective and the outcomes can be broadly categorized into three outcomes (Kraiger, et al., 1993), namely skill based, affective and cognitive. Cognitive outcomes refer to how the workers can recall latest information and the ability to correctly apply the new knowledge, whereas skill-based outcome refers to workers performance speed and rare of errors at workplace and finally, affective outcome refers to changes in workers attitudes, and motivation towards work.

Previous studies have shown that training on safety is associated with favorable outcomes on safety measures that includes acquisition of relevant knowledge of safety measures that are crucial to implementation of safety measures (Griffin & Neal, 2000), Proper use of personal protective equipment, avoidance of risky activities, open communication on potential health hazards. A study done in India by Vinodkumar and Basi (2010) concluded that training on safety is key practice to implementation of safety measure, the training can predict proper knowledge, motivation, compliance, and participation by workers on implementing health and safety measures at workplace. In addition to influencing the behavior, Safety education can enhance workers culture in detecting and mitigating health hazards appropriately. Leiter et al., (2009) further documented that employees who are adequately trained in safety measures shown the ability to handle health hazards effectively exposed to them.

Involving employees in the decision-making process also increases their understanding of safety policies and procedures, thereby enhancing compliance and the safety culture. Staff involvement also fosters a sense of ownership and commitment to OHS (Dessler, 2013). When employees are actively engaged and empowered to contribute to safety initiatives, they develop a greater sense of responsibility for their own and their coworkers' safety. This ultimately reduces the likelihood of accidents, injuries, and illnesses by increasing vigilance and compliance with safety protocols (DeCenzo et al., 2016). In addition, employee participation in OHS programs boosts employee morale and job satisfaction. When employees perceive that their opinions and contributions are valued, a positive work environment and a sense of teamwork are fostered. This, in turn, increases employee engagement, productivity, and job retention.

Training employees improves workplace hazard identification and risk management. By equipping employees with the knowledge to identify hazards, evaluate risks, and implement control measures, organizations foster a proactive risk prevention culture. Employees with adequate training are more likely to identify potential hazards and take preventative measures before accidents occur. This can reduce the probability of incidents, injuries, and illnesses. (Taylor et al., 2014)

Training employees also contributes to adherence to OSHA regulations and standards. By ensuring that employees are aware of and comprehend safety protocols, organizations can comply with legal requirements and avoid penalties or legal liabilities. Compliance training includes topics such as the safe dealing with materials that are hazardous, using equipment's correctly, and adherence to industry-specific regulations. Compliance with OHS standards not only protects employees, but also enhances the reputation and credibility of the organization. In addition, staff training promotes an OHS culture of continuous improvement and lifelong learning. It ensures that employees are current on the most recent safety practices, emerging risks, and technological developments.

Regular training sessions and refresher courses offer the opportunity to reinforce existing knowledge, address new challenges, and incorporate lessons learned from incidents and near misses. By promoting a learning mindset, organizations create an environment in which employees are continuously engaged in improving safety performance because they are prepared to handle potential emergencies, minimize the impact of incidents, and provide prompt assistance to injured coworkers or visitors (DeCenzo et al., 2016). Finally, workers who are satisfied with the training tend to be committed to safety measures and are also highly committed to the organization (Zacharatos & Barling, 2004).

2.6 Government Policy on Implementation of Occupational Health and Safety Measures.

WHO (2015) recommends that government policy plays a pivotal role in shaping and regulating OHS standards and practices regarding OHS implementation. It establishes the legal framework and guidelines that organizations must follow to ensure the health and safety of their employees. The legal framework and guidelines cover a vast array of areas, such as hazard identification and control, PPE requirements, emergency preparedness, training, recordkeeping, and incident reporting. The guidelines are continually revised and updated to account for emerging risks, technological advances, and shifting work practices. By establishing these standards, governments provide organizations with a clear benchmark for ensuring compliance and promoting OHS best practices.

The establishment of regulatory bodies or agencies tasked with monitoring and enforcing OHS compliance is also mandated by government policies. These agencies conduct inspections, investigations, and audits to ensure that organizations comply with safety requirements. They may issue fines, penalties, or pursue legal action against organizations that do not comply. The presence of these regulatory bodies discourages noncompliance and reinforces the significance of protecting and addressing occupational hazards at the workplace. In addition, government policies establish guidelines for risk evaluation and hazard identification processes. Organizations are required to conduct periodic assessments of workplace hazards to identify potential risks to the health and safety of their employees. Frequently, policies provide frameworks and methodologies for conducting these assessments effectively, ensuring that organizations take a comprehensive and methodical approach. Risk assessments facilitate the prioritization of control measures and the allocation of resources to minimize or eliminate hazards (Gutsi et al., 2019).

The role of government policy in promoting employee rights and participation in OHS matters is also significant. Organizations may be required by policy to establish safety committees or representatives to facilitate employee participation and consultation. These committees provide employees with a forum for raising safety concerns, recommending improvements, and participating in decision-making processes. By mandating employee participation, government policies guarantee that workers have a say in the development of OHS practices and policies that directly affect them. In addition, government policies promote OHS education and training. They mandate that employers provide employees with adequate skills through training on how to recognize hazards, practices safety measure, handling emergency situations and proper handling and use of work equipment's and PPE. By mandating training, policies ensure that employees possess the knowledge and skills necessary to protect themselves and their coworkers from potential risks. Organizations are required to keep records of incidents, injuries, and illnesses, as well as report them to the appropriate regulatory bodies, according to government policies that emphasize the significance of recordkeeping and incident reporting. This data enables the identification of trends, the monitoring of performance, and the development of strategies to prevent future incidents.

In Kenya, the Government of Kenya's Occupational Health, and Safety Act (2007) is the primary legal framework for promoting and maintaining safe and healthy working conditions in the country. Employers are mandated and expected to make the working environment safe, conduct risk assessments, together with implementing control measures. In addition to emphasizing employee participation, training, and awareness, the Act establishes reporting and investigation requirements for workplace incidents. By enacting the OHS Act, the Kenyan government intends

to protect the health and safety of workers, promote compliance with OHS standards, and instill a culture of safety in the country's workplaces.

The (GOK-OSHA, 2007), is applicable to all places of work where an employee is employed and its applicable to all term of employment, the act is to ensure employees are safe, health and welfare are maintained and provides protection to employees against occupational risk and hazards at workplace, it's a requirement by the act that all employers provides and ensure working is safe and healthy to all its workers by ensuring that the workplace is well spaced and not congested when workers are performing their duties to allow free flow of air. The act also requires employers to provide sufficient lighting ventilation in all workplaces where it is also required that all passages must have sufficient source of lighting preferable natural lighting, proper drainage, proper storage facilities and provision of ergonomics equipment's. Through this act employees are required to provide relevant information related to occupational hazards to all employees as well forming occupational health implementation committees where employees have representatives.

Provision of safe and healthy environment is further entrenched in Kenya constitution 2010 under bill of rights, article 41 the spell out that all workers have the right to reasonable working conditions and employment terms, furthermore, articles 42 and 43 of the constitution states that employees and all persons have a right to and must be provided clean environment together with highest attainable health standards.

2.2 Theoretical framework.

This section outlines the theoretical framework the study is based on and the conceptual framework.

Based on Heinrich's Safety and Domino theories, on which this research was conducted, Heinrich's Safety Theory was developed by Herbert William Heinrich in the 1930s, posits, on the one hand, that for every major workplace accident resulting in a severe injury or fatality, a certain number of minor incidents and near misses precede it. The theory proposes that these minor incidents, which may not have resulted in significant harm, share the same root causes and underlying factors as the more serious accidents happening at the workplace.

According to Heinrich's Safety Theory, a variety of factors combine to cause workplace accidents. Deeper factors like a person's behavior, the workplace environment, and management systems have an impact on the unsafe acts and conditions at the base of the triangle. Unsafe acts are actions or behaviors that deviate from established safety procedures and protocols whereas unsafe conditions refer to potentially accident-causing physical or environmental hazards. Heinrich argues that by addressing the underlying factors, such as unsafe acts and conditions, organizations can drastically reduce the frequency of minor incidents and near-misses, thereby preventing the occurrence of more severe accidents. This theory emphasizes the significance of proactive safety measures, through hazard identification assessment, and risk management in establishing a safer workplace.

In contrast, Heinrich's Domino Theory extends his Safety Theory by demonstrating how accidents can be viewed as a chain reaction. According to this theory, accidents are comparable to a series of toppling dominoes, where the initial incident, referred to as the "domino," sets off a chain of

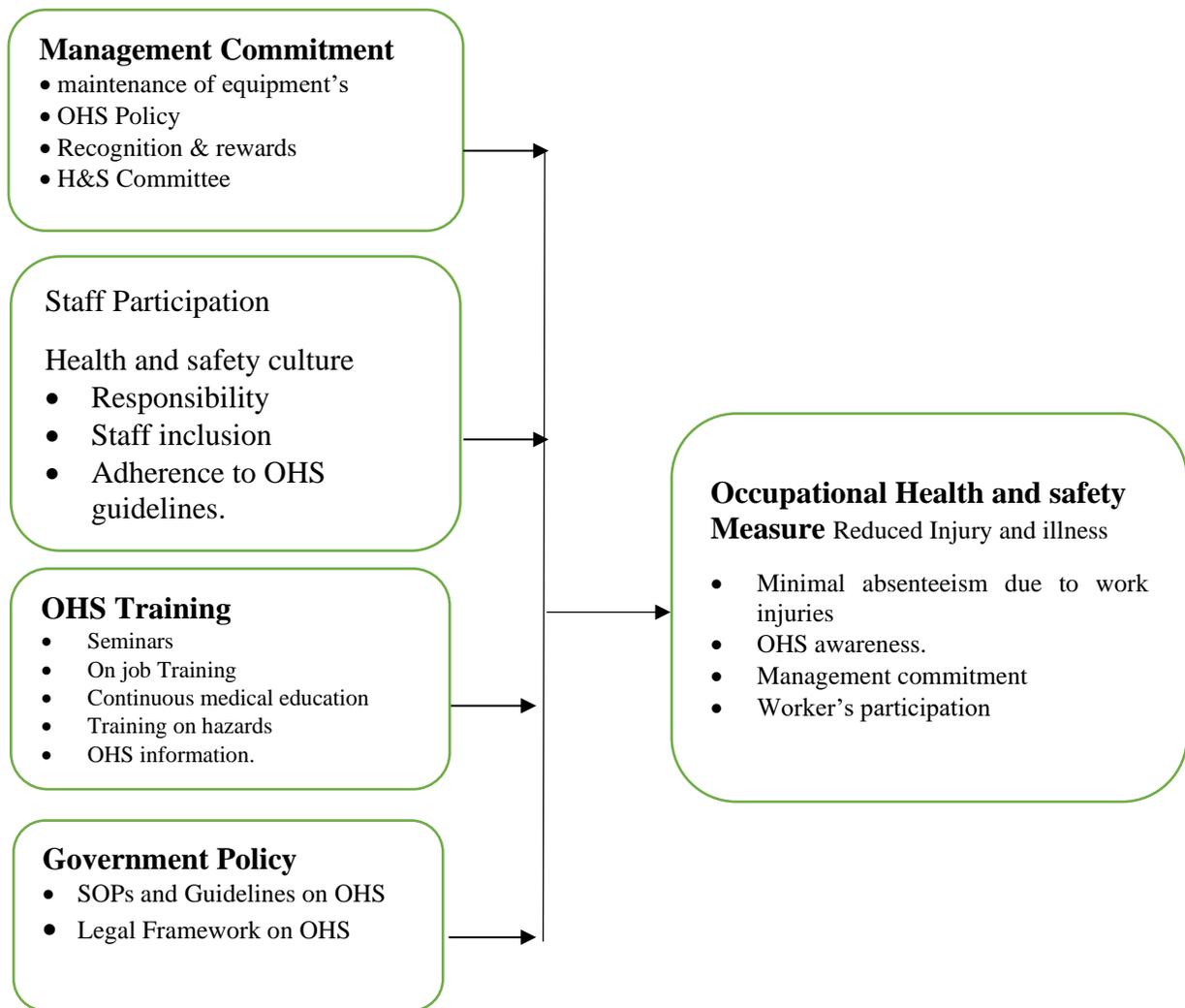
subsequent events that culminate in an accident. According to Domino Theory, five dominoes contribute to an accident. The first domino is the "social environment," which represents the organization's overall safety culture, communication, and attitudes toward safety procedures. The second domino is "fault of person," which refers to individuals' unsafe actions or behaviors. The third domino is "unsafe practices," including inadequate safety procedures, a lack of training, or ineffective enforcement of safety rules. The fourth domino is "unsafe conditions," which includes both physical dangers and environmental factors that contribute to accidents. The final domino is the "accident" itself, which results in injuries, property damage, or other adverse outcomes. The Domino Theory suggests that by addressing the underlying causes at each stage of a chain reaction, organizations can prevent accidents from occurring. By fostering a strong safety culture, enforcing safe practices, providing adequate training, and identifying and mitigating unsafe conditions, organizations can break the domino effect and improve workplace safety. The theory emphasizes the significance of proactive measures and comprehensive risk management to prevent accidents and safeguard the health and safety of employees.

In this study, Heinrich's Safety Theory and Heinrich's Domino Theory provided a comprehensive framework for understanding OHS incidents in an organization. Heinrich's Safety Theory identifies the connection between minor incidents, near-misses, and major accidents, whereas the Domino Theory illustrates the chain-reaction nature of accidents. Together, they emphasize the significance of addressing underlying factors, promoting a safety culture, and implementing preventive measures to reduce workplace accidents and improve overall safety performance. The Heinrichs Safety Theory focuses on the progression from minor incidents to major accidents, whereas the Domino Theory illustrates how accidents are precipitated by a series of causal factors at the workplace.

2.8 Conceptual Framework

Figure 2. 1

Conceptual Framework



The conceptual framework above shows the relationship between management commitment, staff participation, staff training, government policy and OHS implementation conceptualized as crucial in creating a safe and healthy work environment. In this case, management commitment is seen to set the tone for OHS implementation. When management prioritizes OHS, allocates resources, establishes clear policies, and actively participates in safety activities, it creates a culture of safety that permeates the organization.

Staff participation is also seen as essential as it involves engaging employees in hazard identification, risk assessments, and decision-making processes. When employees are actively involved, they contribute their knowledge and experience, fostering a sense of ownership and accountability for safety. As for staff training, it is seen to play a vital role in OHS implementation by equipping employees with the necessary knowledge and skills to identify hazards, adhere to safety protocols, and contribute to a safe workplace. Training ensures employees are prepared to handle potential risks and emergencies effectively. Government policy, on the other hand, provides the legal framework and guidelines for OHS implementation. It sets standards, mandates compliance, and promotes a safety culture within organizations.

Overall, the relationship between these factors is seen as interdependent. That is, the management commitment drives the implementation of staff participation and staff training initiatives. Staff participation and training, in turn, contribute to effective OHS implementation, aligning with government policies and legal requirements. Government policies provide guidance and oversight, reinforcing the importance of management commitment, staff participation, and staff training in creating a safe and healthy work environment.

Together, management commitment, staff participation, staff training, and government policy form a comprehensive approach to OHS implementation. When these elements are effectively integrated, organizations can establish a strong safety culture, prevent accidents, and protect the well-being of their employees. It is this relationship that this study investigated further with a case application to Kitale County Referral Hospital in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The subtopics outlined in this chapter include research design, data collection, and subsequent data analysis techniques that were used. Target population, sample size, and sample selection are also covered in this chapter. In addition, this chapter discusses data collection instruments, instrument pre-testing, instrument validity, and instrument reliability.

3.2 Research design

This study used a cross-sectional descriptive design with a mixed-methods approach. Descriptive study design Malhotra and Birks, (2007), comprises monitoring and summarizing a subject's behavior without interfering in any way. This design helped the researcher investigate factors influencing the implementation of work health & safety measures at Kitale County Referral Hospitals.

3.3 Target Population

The population from which the researcher concludes is referred to as target population. This population should theoretically be countable and exist within a specific time frame. Target population's units must be specified (Groves, et al., 2009). Gerrish and Lacey (2014) pointed out that the target or study population is a sub-set of the target population and forms the basis from where the sample for the study was taken (Gerrish & Lacey, 2014). The study population was 246 healthcare workers and 10 managers working at Kitale County Referral Hospital in Trans Nzoia County and are directly providing clinical care to patients.

Table 3. 1

Target population

Cadre	Total Number
Doctors	31
Nurses	185
Clinical Officers	30
Total	246

3.4 Sample size determination and sampling technique

3.4.1 Sampling technique

The researcher used purposive sampling to select Kitale County Referral Hospital and to achieve equal representation of the healthcare workers at Kitale County Referral Hospital, the researcher used a stratified sampling technique where the target population was divided into medical doctors, nurses, clinical officer who are providing clinical care to patients. The subjects from each group were selected proportionately as recommended by (Suresh, 2011). Consequently, the research achieved representativeness of the actual population of healthcare workers at Kitale County Referral Hospital.

3.4.2 Sample size determination

Yamane's (1967:886) simplified technique for estimating sample size for proportions was used to calculate the number of health professionals included in the study, algebraically as:

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

Where:

n = the sample size.

N = the total population

e = the margin error at 0.05

$$n = 246 / (1 + 246(0.05)^2)$$

$$n = 153$$

Table 3. 2

Sampling frame

Cadre	Total Number	Sampling Frame (%)	Sample Size
Doctors	31	12	19
Nurses	185	76	116
Clinical Officers	30	12	18
Total	246	100	153

A sample of 153 which is 62% of the population which is above 30% as recommended by Mugenda and Mugenda (2003) was deemed enough to carry out the study it is a true representative of the study population, which is more diverse and heterogeneous, the finding in the study is sufficient to be applied to general population of healthcare workers working at Kitale County Referral Hospital.

3.5 Research Data Collection Instruments

Data collecting methods are research techniques that assist a researcher in gathering information for their research project. The tools help ensure that data is collected without prejudice and that the material is analysed and relevant to the issue (Kumar, 2005). There are many different types of data collection tools, with the tool selected based on the sample size and information needed.

3.5.1 Structured Questionnaires

This study utilized a questionnaire to collect the primary data on variables impacting the execution of measures to towards health and safety at Kitale County Referral Hospital. Structured questionnaires provided the study with an easy platform to standardize questions so that they maximize the number and depth of the insights of the stratified random sample. The questionnaires were administered to the 153 healthcare workers in Kitale County Referral Hospital.

3.5.2 Key informant interview (KII) guide

The key Informant Interview (KII) guide was used to collect and complement the data collected through questionnaires and was administered to 10 Kitale County Referral Hospital Management Team members involved in implementation of OHS in hospital. The guide provided opinions about factors influencing occupational safety in public hospitals within Trans-Nzoia County. The procedure involved face to face interviews on occupational safety policies in Kenya as Ross (2012) recommends.

3.6 Inclusion and exclusion criterion

3.6.1 Inclusion criterion

The researcher sampled healthcare workers working at Kitale County Referral Hospital and providing direct clinical care to patients and consented for the study.

3.6.2 Exclusion criterion

The researcher omitted healthcare workers who are not working at Kitale County Referral Hospital and are not providing direct care to patients, health workers who decline to consent into the study were excluded.

3.6.3 Validity and Reliability of The Research Instrument

The degree to which a test accurately measures what it is intended to measure is called validity of a research instrument (Cooper & Schindler, 2006; Kumar 2005). Study dependability was used to determine if a study accurately measured what it was supposed to assess or if research conclusions were correct. As part of the study, evidence for verifying external validity was gathered by making sure that the study participants samples are true representation of the study population in which the study results can be extrapolated in the entire population. The appropriateness of a research

instrument's content is determined by whether the data that was collected appropriately represents what the researcher wants to know.

3.7 Data management

The collected data was coded and entered by computerized data analysis software, SPSS v25 (Statistical Package for Social Sciences). Data analysis includes analyzing, cleaning, manipulating, and modeling the acquired data to highlight relevant information, draw conclusions, and aid decision-making. Data management was done to ensure that there is the proper handling of the collected data. This included validation, storing, and protection of the data collected. Validation of the data was done by going through the data collected to ascertain their completeness. Data was stored in a safe place with only the researcher having access to the data from any destruction or interference. Thematic approach was to analyze the qualitative data

3.8 Data analysis and presentation

Using the statistical software, SPSS v25, the study data was cleaned, transformed, and then subjected to Spearman's correlation analysis to assess if there was significant association between the study variables. Moreover, the ordered logit model was also fitted into the data owing to the ordered nature of the dependent variable to draw useful inferences that could aid decision-making. Algebraically, the statistical model for ordered logit regression was specified as:

$$**OHS implementation = \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \beta_4x_4 + \dots + \beta_nx_n + \epsilon**$$

where DV = OHS implementation; IVs = likert scaled X_5 with 1 = strongly disagree and 5= strongly agree; β_i = model coefficients; ϵ = model error term. The final empirical model estimated in the study was thus expressed as:

$$\begin{aligned}
 \text{OHS implementation} = & \beta_1 \text{age} + \beta_2 \text{gender} + \beta_3 \text{maritalstatus} + \beta_4 \text{education} \\
 & + \beta_5 \text{cadre} + \beta_6 \text{management commitment} + \beta_7 \text{staff participation} \\
 & + \beta_8 \text{staff training} + \beta_9 \text{Government policy}
 \end{aligned}$$

3.9 Operational definition of variables

Before beginning to create the self-administered questionnaire, the researcher operationalized the variables. A 5-point ordinal Likert scale was used by researcher. Using descriptive and inferential statistics, all of indicators in the following variables were investigated.

Table 3. 3

Operational definition of variables

Objective	Type of Variable	Measurement construct	Measurement scale
Management Commitment	Independent Variable	<ul style="list-style-type: none"> • Maintenance of the equipment. • OHS Policy • Recognition & rewards • H&S Committee 	5-point Likert scale
OHS Training	Independent Variable	<ul style="list-style-type: none"> • Seminars • On job training • Continuous Medical education • Training on hazards • OH&S information. • Training on protective measures 	5-point Likert scale
Staff Participation	Independent Variable	<ul style="list-style-type: none"> • Health and safety culture • Responsibility • Staff inclusion • Adherence to OHS guidelines 	5-point Likert scale
Government Policy	Independent Variable	<ul style="list-style-type: none"> • SOPs and Guidelines on OHS • Legal Framework on OHS 	5-point Likert scale

3.10 Ethical considerations and approval

To facilitate collection of data, an introduction letter introducing the researcher as a student to Kitale County Referral was issued by the university. Kenya Methodist University's Science, Ethics, and Research Committee gave the ethical approval. There after the authorization was also sought from NACOSTI. Final Research approval was also received from the County Director of Health to permit data collection and recruit health workers at county referral hospital into the study. All the respondents gave written consent before participating in the study.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1 Introduction

This section analyses and present that data collected from the study participants

4.2. Pre-test Results

Pretesting of the questionnaires was done at Bungoma County Referral Hospital due to its proximity and homogeneity of services being offered at Kitale County Referral Hospital before commencing the study. According to Mugenda and Mugenda, (2003), pretesting is key to revealing deficiencies in the questionnaire. The pretest study conducted involved 10% of the sample size, where consistency of the questions in the questionnaire was determined using the Cronbach's alpha reliability test. Pretesting of the tools were aimed at looking at the time that was taken to complete the questionnaire and the relevance of the questions in addressing or achieving the study's objectives. The comments and suggestions made during pretesting were used to improve the quality of the questionnaire.

The pretest result as outlined in Table 4.1 indicates that all the study variables had a Cronbach Alpha value above 0.7, which is the acceptable and recommended value (Taber, 2018). Hence the questionnaire was found to be reliable.

Table 4. 1

Reliability test

Variable	Cronbach Alpha	Number of Questions	Conclusion
Management commitment	0.783	16	Reliable
Staff Participation	0.817	10	Reliable
Training	0.816	10	Reliable
Government Policy	0.795	7	Reliable

4.3 Response Rate

A total of 153 research questionnaires were issued to staff at Kitale County Referral Hospital. From these questionnaires, a total of 146 completely and accurately filled questionnaires were returned by the respondents translating to 95.4% response rate as shown in Table 4.2. The response rate is in is acceptable according to Mugenda and Mugenda (2003) and Babbie (2015) who recommends a response of greater than 70% as sufficient and excellent and can be analyzed.

Table 4. 2

Response rate

Cadre	No. Targeted	No. Sampled	Response Rate %
Nurses	116	110	94.8
Clinical Officers	18	17	94.4
Doctors	19	19	100
Total	153	146	95.7

4.4 Demographic Information

This section was to determine the gender, age, Marital status, cadre, and level of education for the study respondents.

4.4.1 Gender of the Respondents

Table 4.3 displays the gender distribution of health workers at Kitale County Referral Hospital who participated in the research.

Table 4. 3

Gender

Gender	Number	Percentage (%)
Male	49	33.6
Female	97	66.4
Total	146	100.0

Table 4.2 shows that Majority of respondents in Kitale County Referral Hospital were female at 66.4% while 33.6% were male. The findings also indicated that more female workers are exposed to occupational health hazards than male counterparts.

4.4.2 Age of Respondents

Table 4.4 below shows the age distribution of the responded

Table 4. 4

Age

Designations	Number	Percentage (%)
21-30	66	45.21
31-40	30	20.55
41-50	29	19.86
51-60	21	14.38
Total	146	100.0

The study findings in table 4.3 indicate that most workers are aged between 21-30 years at 45.2%, 20.55% were between 31-40 years, 19.86% were between 41-50 years while 14.38% were between 51-60 years.

4.4.3 Marital Status of the Respondents

Table 4.5 shows marital status of the study participants. As shown, 75.3% of respondents were married, 13.0% separated while 11.7% were single.

Table 4. 5*Marital status*

Designations	Number	Percentage (%)
Single	17	11.7
Married	110	75.3
Separated	19	13.0
Total	146	100.0

4.4.4 Level of Education of the Respondents.

All the participants were asked to indicate the highest level of education. Table 4.6 shows that 75.3% had Diploma, while 13.1% had degrees while 11.7% had a higher national diploma. These findings indicate the study participants were educated and were able to understand the research questions.

Table 4. 6*Level of Education*

Designations	Number	Percentage (%)
Diploma	110	75.3
Higher National Diploma	17	11.7
Degree	19	13.0
Total	146	100.0

4.4.5 Designation of the Respondents

As shown in Table 4.7, the Designation of the respondent was established at the health facility. 75.3% of the respondents were nurses, 11.7% were clinical officers while 13% were Doctors.

Table 4. 7*Designation*

Designations	Number	Percentage (%)
Nurses	110	75.3
Clinical Officers	17	11.7
Doctors	19	13.0
Total	146	100.0

4.5 Implementation of occupational health and safety measures.

This research study was conducted to determine conditions influencing execution of health and safety measures at Kitale County Referral Hospital. Table 4.8 below shows that status of implementation of OHS measures.

Table 4. 8*Implementation of occupational health and safety*

Statements	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
1. There are low or reduced injury rates reported	27	18	85	58	19	13	8	5	7	5
2. There is low/minimal loss of working hours or days due to work-related injuries/illnesses	16	11	99	68	9	6	7	5	15	10
3. I am usually away from work because of work-related injuries	24	16	101	69	10	7	6	4	5	3
4. I got an accident at the workplace	17	12	90	62	13	9	16	11	10	7
5. I am satisfied with the working environment at my workplace	16	11	20	14	7	5	33	23	70	48
6. Leadership attitudes and commitment affect the implementation of health and safety measures.	19	13	31	21	6	4	25	17	65	45
7. Workers' training on health and safety issues exists	10	7	23	16	3	2	23	16	87	60
8. Employees participate in the health and safety implementation	15	10	22	15	7	5	34	23	68	47

9. There is feedback on the implementation of health and safety measures.	13	9	17	12	4	3	45	31	67	46
10. Rewarding safe behavior is done for the promotion of health and safety measures.	5	3	21	14	9	6	24	16	87	60
11. Provision of sufficient resources for work health and safety is done at the implementation of health and safety measures.	10	7	16	11	10	7	34	23	76	52
12. There are devices for the safe handling of loads, such as patient handling, lifting, pushing, and pulling of loads that are regularly serviced.	12	8	14	10	6	4	35	24	79	54
13. There is policy prevention of violence and harassment at the workplace, including gender-based violence and harassment	11	8	13	9	2	1	39	27	81	55
14. The facility has adequate hand washing facilities	18	12	20	14	9	6	24	16	75	51
15. There is a policy for the management of staffing, workload, working hours, shifts, rest, and recuperation with the purpose to prevent fatigue	12	8	13	9	11	8	41	28	69	47

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

On whether there is low or minimal loss of working hours due to work related injuries, 76% of the respondents disagreed that there is low or reduced rate of reported injuries that implying that the injuries rate in the hospital is high.

On responding to whether there is low/minimal loss of working hours or days due to work-related injuries/illnesses, 79% of the respondents disagree thus indicating work related injuries contribute to loss of working hours. In contrast 85% of the respondents indicated that they are not usually away from work due to work related or induced illness and 74% reporting that have not had an accident at work.

In responding to a question on being satisfied with the working environment at the workplace, a bigger percentage of 81% indicated that they are satisfied with the working environment at the workplace. On Leadership attitude and commitments affecting health safety and implementation OHS measures 62% agreed that hospital leadership is committed to implementation of OHS measure at Kitale County Referral Hospital.

On existence of OHS training 76% of the respondents agreed that the hospital has training plan for its staff on OHS measures, on employee involvement 70% of the respondent agreed that the facility does involve staff on the implementation of OHS measures. When asked on whether there is feedback on health and safety measures, 77% of the respondents agreed that the hospital has system for giving feedback to staff on OHS measures, in addition to feedback a higher percentage of 76% agreed that rewarding of safe behavior is done for the promotion of health and safety measures. Besides, 75% of the respondents agreed that provision of sufficient resources for work health and safety is done at the implementation of health and safety measures. From the analysis, in response to whether there are devices for handling loads, 78% of the respondents agreed that the hospital has devices for handling patients. On whether there is policy prevention of violence and harassment at the workplace including gender-based violence and harassment, 82% of the respondents agreed that the hospital has a policy in place to protect workers from violence and harassment.

In a bid to know if the facility has hand washing facilities as a way of infection prevention, 67% of the respondents agreed that the hospital has hand washing facilities to control and prevent infection among the staff, and finally 75% of the respondents agreed that the hospital has policy on managing staffing level, workload, working hours, shifts, rest, and recuperation with the purpose to prevent fatigue and burnout.

The findings of this study generally agree with those in Armstrong (2018); Beus et al., (2018), DateyBaah and Amponsah-Tawiah (2012), Dessler (2013), Frieden (2013), Friend and Kohn (2017), Gatchel and Kishino (2012), Leka and Andreou (2012), Straube (2013), Taylor et al., (2014), and others that having OHS measures in an organization is critical in protecting workers from harm and promoting their well-being within the workplace.

4.6 Management Commitment on Occupational Health and Safety Measures

The first aim of this research was to focus at determining how management commitment affects the implementation of occupational health and safety measures at Kitale County Referral Hospital.

The Respondents were asked specific questions and the responses are presented in table 4.9.

Table 4. 9

Management commitment

Statements	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
1. There is a formulated policy to implement occupational health and safety practices	5	3	21	14	9	6	24	16	87	60
2. The Leadership is supportive on OHS safety measures.	10	7	16	11	10	7	34	23	76	52
3. The leadership recognizes and appreciates positive behavior	12	8	14	10	6	4	35	24	79	54
4. The management provides the necessary equipment's	11	8	13	9	2	1	39	27	81	55
5. The leadership conducts regular checks of the occupational health and safety.	18	12	20	14	9	6	24	16	75	51
6. The management has regular inspections of the occupational health and safety.	12	8	13	9	11	8	41	28	69	47
7. There is team responsible for implementation of safety measures.	16	11	20	14	7	5	33	23	70	48
8. Leadership regularly updates staff on occupational safety measures	19	13	31	21	6	4	25	17	65	45

9. Communication is clear about health and safety among management	10	7	23	16	3	2	23	16	87	60
10. Management regularly conducts environmental cleanup and disinfection	15	10	22	15	7	5	34	23	68	47
11. There is an assessment of workplace health and safety risks and controls regularly conducted by a trained person in consultation with management and staff	13	9	17	12	4	3	45	31	67	46
12. There are engineering controls for a safe working environment, such as ventilation, physical barriers, safer devices	5	3	21	14	9	6	24	16	87	60
13. Are there procedures in place for the triage of patients in the emergency rooms and reception areas, including early detection and isolation of infectious patients, or those with suspected infection	27	18	85	58	19	13	8	5	7	5
14. Workers have been adequately vaccinated against most communicable diseases like Hepatitis B	16	11	99	68	9	6	7	5	15	10
15. There is a policy for infection prevention in the facility	24	16	101	69	10	7	6	4	5	3
16. There are regular consultations between management and workers regarding health and safety at work, for example, a joint labor-management committee	17	12	90	62	13	9	16	11	10	7

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

As shown in table 4.9, on whether there are formulated policies to implement occupational health and safety practices or not, 76% of the respondents agreed the management has formulated policies to guide in implementation OHS measures at the hospital. To assess if the management of the facility is committed to health and safety practices at the facility, 75% of those who responded agreed that the management is supportive and committed to implementation of OHS measure in the hospital. Regarding whether the management recognizes and rewards safe behavior practices,

78% agreed that management also strives to recognize and reward staff safe behavior towards OHS measures.

On whether the hospital management provide the required equipment to support work, 82% of the respondents agreed that the hospital leadership is providing required safety equipment's and other personal protective supplies, this suggest that the management is concerned about the commitment on occupational health and safety measures implementation at the hospital. Concerning whether hospital leaderships conduct regular assessment on occupational health and safety, 67% of the respondents agreed while 36% disagreed.

Regarding regular inspection of the health and the safety system by the management, most respondents at 75% agreed that the management has put in place a mechanism to conduct OHS inspection at the facility. Besides, 71% of the respondents agreed that there is a team responsible for implementation of safety measures at the facility, The results also show that 62% agreed that the Leadership regularly updates all workers on occupational health and safety procedures. This shows positive commitment to the facility.

Availability of clear communication about health and safety to staff by the management 76% of the respondents agreed that the communication channel is clear and precise, this implies that the hospital staff are well updated and informed about OHS measures. To ensure environment is clean and safe for the staff 70% of the respondents agreed that the management conduct regular environmental clean-up and disinfection in the hospital thus implying that staff were happy with environment at the hospital, furthermore 77% of the respondents agreed that there is regular OHS assessment conducted by trained personnel in consultation with management.

Most of the respondents, 76%, agreed that there are engineering controls for a safe working environment such as ventilations and physical barriers and safer devices, on the question if the hospital has put in place procedures for the triaging of patients in the emergency rooms and

reception areas, including early detection and isolation of infectious patients, or those with suspected infection, 76% of the respondents disagreed this implying the infection prevention are not well adhered thus exposing workers to cross infection from patients seeking treatment.

To ascertain that the workers have been adequately vaccinated against most communicable diseases like Hepatitis B, the data analyzed indicated that majority 79% disagreed that health workers have adequately vaccinated thus exposing workers to communicable disease like hepatitis B and Covid 19, in addition to lack of vaccination program for workers, 85% of the respondent pointed out that facility don't have policy of infection and prevention putting workers and patients at risk of contracting infection, and finally most of the respondents, 74% disagreed that there are regular consultations between management and workers regarding health and safety at work, for example, a joint labor-management committee.

Regarding the health and safety measures put in place at Kitale County Referral Hospital, two key informants responded as follows:

“.....a policy has been developed to implement occupational health and safety measures. Safe behavior is recognized and rewarded by management. There is also a committee in charge of overseeing or checking on health and safety issues. To enhance implementation of OSHA, management communicates effectively on health and safety. In addition, there are always qualified people to assess workplace health and safety risks and controls on a regular basis in cooperation with management and personnel.” (Respondent MC2)

“.....there are protocols in place for triaging patients in emergency rooms and reception areas, such as early detection and isolation of infectious or suspected infectious patients. There are regular talks between management and workers about workplace health and safety, such as a combined labor-management commission as these contribute to promotion of workplace safety. Lastly, there are regular talks between management and workers about workplace health and safety, such as a combined labor-management commission.” (Respondent MC5)

These results above concur with those found in Braton (2019); Dessler (2013); Elsler et al., (2012); Flintrop (2018) and others documented that management commitment ensures there is effective

implementation of OHS practices, leading to reduced workplace incidents, increased employee morale, and improved overall safety performance.

4.7 Staff participation on Occupational Health and Safety measures

The second objective of the study was aimed at establishing the influence of staff involvement and participation on the implementation of occupational health and safety measures at Kitale County Referral Hospital. Questionnaires were administered and responses recorded as outlined in table 4.10

Table 4. 10

Staff participation

Statements	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
1. I always wear personal protective equipment (PPE) given to me while at work.	12	8	13	9	11	8	41	28	69	47
2. The hospital has health and safety cultures adhered to by staff	16	11	20	14	7	5	33	23	70	48
3. Staff have representation at OHS committee	19	13	31	21	6	4	25	17	65	45
4. I comply with occupational health & safety (OHS) rules and regulations at work	10	7	23	16	3	2	23	16	87	60
5. I usually notify the Management of risky conditions	15	10	22	15	7	5	34	23	68	47
6. I feel responsible for my health and safety at work	13	9	17	12	4	3	45	31	67	46
7. Consulting workers to encourage their involvement in OHS implementation.	5	3	21	14	9	6	24	16	87	60
8. I am thoroughly informed about hazards at work	27	18	85	58	19	13	8	5	7	5
9. I have access to psycho-social support and counseling	16	11	99	68	9	6	7	5	15	10
10. I am aware of infection prevention and control in the health facility	24	16	101	69	10	7	6	4	5	3
11.										

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

From table 4.10, in determining influence of staff participation on the measures put in place to implement Occupational Health and Safety. The respondents were asked whether they put on personal protective equipment given to them at work, 75% of the respondents agreed that they always put on personal protective equipment to prevent them from contracting infection and cross infection. With 71% of the respondents agreeing that health workers adhere to occupational health and safety procedures indicating positive culture among workers and shows that most of the staff were aware of these cultures and followed them to ensure occupational health and safety measure are implemented. While determining the level of staff participation at the facility, most of respondents agreed at 62% that the staff are represented in the committee responsible for implementing safety measures at the facility.

In addition, 78% of the respondents agreed that they comply with occupational health & safety (OHS) rules and regulations at work. According to the results on the table, it shows that 70% of the respondents would report any hazardous occurrence and injuries to the management. This is further supported by 77% of the respondents who felt that they are responsible for their health and safety at work. Notably, seeking staff input and ideas is a key step in promoting safety measures and culture at the facility with 76% of staff reporting that they are always consulted on matters of OHS implementation while 76% of staff reported that they are not adequately informed about hazards in the hospital pointed out they might be able to identify and mitigate risks.

Further to most staff not having adequate information, 79% of the staff disagree that they have access to psychosocial support counselling implying that most staff are predispose to stress, burnout and mental health problem arising from the workplace which can adversely affect performance and productivity. A bigger number of the staff confirmed that they were not aware of infection prevention and control in the health facility, they were represented by those who

disagreed at 85%. The qualitative findings were also in support of the quantitative results, and this is demonstrated by excerpts below:

“..... the staff participation contributes towards promoting the implementation of OHSM in Kitale County Referral Hospital by ensuring that workers always wear personal protective equipment (PPE) given while at work. Employees appoint representatives on the Health and Safety Committee who work around the clock to ensure there is compliance with occupational health & safety (OHS) rules and regulations at work. ...Consulting workers to encourage their participation is a crucial step for ensuring safety and health matters. As a result, other staffs always get thoroughly informed about hazards at work and the need to adhere to (OHS) guidelines while on duty.” (Respondent SP 3, 4,)

These results agree with those in Bullock (2018); DeCenzo et al., (2016); Dessler (2013); Stranks (2016), and others that staff participation fosters a culture of ownership and accountability for OHS, as employees become more engaged in identifying hazards, suggesting improvements, and implementing safety protocols.

4.8 Training of Health Workers on Occupational Health and Safety Implementation

The third objective is aimed at establishing the influence of OHS training to staff on the implementation of occupational health and safety measures. Questionnaires were administered and responses recorded as shown in table 4.11.

Table 4. 11***Staff Training***

Statements	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
1. Training on safety is included in Occupational Health & Safety Policy	11	8	15	10	10	7	29	20	81	55
2. There is a person designated to be responsible for occupational safety and health in the health facility	10	7	16	11	6	4	45	31	69	47
3. The employer regularly provides information about health and safety issues.	12	8	12	8	2	1	44	30	76	52
4. I am trained in safety measures at work	18	12	20	14	9	6	24	16	75	51
5. There is appropriate monitoring of the health of individual health workers in their jobs, such as regular preventive medical examinations	12	8	13	9	11	8	41	28	69	47
6. I usually participate in seminars on occupational health and safety measures.	16	11	20	14	7	5	33	23	70	48
7. I recognize OHS education very crucial and key.	19	13	31	21	6	4	25	17	65	45
8. I have a safety-conscious attitude at work	10	7	23	16	3	2	23	16	87	60
9. I am aware of safety rules and procedures	15	10	22	15	7	5	34	23	68	47
10. There is a system for health workers to report hazardous exposures and safety concerns (such as exposures to infections, incidents of violence, lack of protective measures) without risk of retaliation	13	9	17	12	4	3	45	31	67	46

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

From the table 4.11, 75% of the respondents agreed that training on safety is included in Occupational Health and Safety Policy, still from the table, the analysis shows that 78% of the respondents agreed that there is a person designated to be responsible for occupational safety and

health in the health facility. On whether the employer regularly communicates and update staff on OHS practices, 82% of the respondents agreed the hospital provides occupational safety information on a regular basis with 66% of respondents confirming that they are trained in safety measures at work.

Respondents were asked whether there is appropriate monitoring of individual health workers in at workplace such as regular preventive medical examinations and check, 75% of the respondents agreed that they normally under regular check to identify any potential hazard and exposure this allows for early detection and treatment.

The study was also seeking to know whether the staff normally attend Inservice training on OHS measures, 71% reported that they have attended training informs of seminars and workshops. Additionally, 62% of the respondents considered OHS education particularly important by agreeing, and. Most staff strongly agree that they have safety conscious attitude at work. This was supported by 76% of the respondents agreeing that they have a safety-conscious attitude at work which is key in adherence and compliance to OHS policies and guidelines, this finding was further supported by 70% of respondents agreeing that they are aware of safety rules and procedures of OHS and finally, 77% agreed that there is a system for health workers to report hazardous exposures and safety concerns (such as exposures to infections, incidents of violence, and lack of protective measures) without risk of retaliation which is crucial for creating safety culture at workplace.

The key informants were asked about the how training on OHS influence the implementation of occupational health and safety measures at Kitale County referral hospital. Their responses were as presented below:

“.... training on occupational hazards and safety is part of guidelines on OHS and there is a person designated to be responsible for occupational safety and health in the health facility.” (TOHS R3)

“..... the employer and managers regularly provide information about health and safety issues which are always relevant to me since I am trained in safety measures at work. In addition, there is appropriate monitoring of the health of individual health workers in their jobs, such as regular preventive medical examinations.” (TOHS R5)

“..... I usually attend in-service training on occupational and safety measures. Through such I learned that there is a system for health workers to report hazardous exposures and safety concerns (such as exposures to infections, incidents of violence, lack of protective measures) without risk of retaliation.” (TOHS R1)

4.9 Role of Government Policy on Occupational Health and Safety Implementation.

The fourth objective is aimed at establishing the role of government policy on OHS implementation. Questionnaires were administered and responses recorded in table 4.12.

Table 4. 12

Role of Government Policy

Statements	SD		D		N		A		SA	
	F	%	F	%	F	%	F	%	F	%
1. The Occupational Safety and Health Act promotes the implementation of OHS	13	9	15	10	12	8	7	5	99	68
2. The Occupational Safety and Health Act stipulates the duties and responsibilities of health managers at various levels.	4	3	24	16	6	4	10	7	105	72
3. National OHS Policy promotes the implementation of OHS through the continual development and maintenance of National OHS systems	17	12	10	7	9	6	20	14	90	62
4. National OHS policy promotes the implementation of OHS by compensating workers injured	20	14	16	11	7	5	23	16	80	55
5. National OHS Policy recognizes workers' right to be safeguarded from present and emerging risks in the workplace.	19	13	21	14	6	4	25	17	75	51

6. National OHS Policy recognizes health and safety at work as fundamental human rights.	10	7	13	9	3	2	33	23	77	53
7. Through National OHS Policy, there is OHS awareness and education by collaborating with other stakeholders in mainstreaming OHS.	15	10	22	15	7	5	25	17	77	53

Key: SD-Strongly Disagree, D-Disagree, N-Neutral, A-Agree, SA-Strongly Agree

The results on table 4.12 indicates that 73% of the respondents strongly agreed that the Act on occupational health promotes the implementation of OHS at the hospital. In addition, 79% of the respondents agreed that the Act on Occupational Health clearly stipulates the roles and responsibilities of health managers at various levels. In determining if national OHS Policy promotes the implementation of OHS through the continual development and maintenance of National OHS systems 76% of the respondents agreed with the statement.

Furthermore, 71% of the respondents agreed that the National OHS Policy promotes the implementation of OHS by ensuring that workers who are injured or contracted infection at workplace are well supported and compensated. Study results also showed that 68% respondents agreed that National OHS policy recognizes workers' right to be safeguarded from present and emerging risks at workplace. On responding to whether National OHS policy recognizes health and safety at work as fundamental human rights, 76% of the respondents agreed with the statement.

Similarly, the respondents 70% of the respondents agreed that through National OHS Policy, there is OHS awareness and education by collaborating with other stakeholders in mainstreaming OHS.

As regards the qualitative data collection, respondents were asked about the role of government in promoting the implementation of OSH within Kitale County Referral Hospital. Their responses were as follows:

“.....the National OHS Policy encourages OHS implementation through the continuous development and maintenance of National OHS systems, as well as by guaranteeing that those who are injured, or contract infection are adequately supported and paid.” (GP R2)

“.....the National OHS Policy recognizes workers' right to be protected from current and emerging workplace hazards. Through the National OHS Policy, OHS awareness and education are promoted by collaborating with other stakeholders in the mainstreaming of OHS.” (GP R4)

These findings concur with those in DeCenzo et al., (2016); Dessler (2013); Hughes and Ferrett (2016); Ngirwa (2015); Taylor et al., (2014), and others that well-trained staff are more likely to follow safety guidelines, mitigate hazards, and respond appropriately to emergencies, leading to a reduction in accidents, injuries, and illnesses.

4.10 Inferential results

4.10.1 Spearman’s Rho (ρ) correlation analysis

Spearman’s correlation analysis was used to determine the strength and direction of association relationship independent and dependent variables. Table 4.13 displays the computed correlation coefficients for each of the study variables.

Table 4. 13

Spearman’s Rho (ρ) correlation coefficients

Variable	1	2	3	4	5
1. Implementation of Occupational Health and safety.	1.000				
2. OHS Management Commitment	0.623	1.000			
3. OHS Staff Participation	0.602	0.529	1.000		
4. OHS Training	0.687	0.641	0.256	1.000	
5. OHS Government Policy	0.678	0.688	0.419	0.594	1.000

Key: $P < 0.05$ for one tailed test

The results in table 4.13 indicate that the four regressor variables have a positive association with the implementation of Occupational Health and Safety. The mean score of each Likert statement for independent variables was used to calculate the correlation coefficient.

Respective correlation coefficients (r) for OHS Management Commitment among health workers and management, OHS Staff Participation, OHS Training, and OHS Government Policy were 0.623, 0.602, 0.687, and 0.678, respectively. High correlation coefficients indicate a statistically significant association between independent and dependent variables which is the implementation of Occupational Health and safety. Thus, each independent variable had a direct effect on the implementing Occupational Health and Safety measures which means increase in one the variable there increase in implementation of Occupational Health Safety measure at Kitale County Referral Hospital.

4.10.2 Ordered logit model results.

The statistical relationships between each independent variable and the implementation of occupational health and safety were determined using ordinal regression analysis. Regression coefficient for the independent variables were calculated using the regression equation. Marginal effects of the ordered regression results revealed the existence of positive and direct association between each of the independent variables and the implementation of occupational health and safety.

Table 4. 14**Ordered logit model results**

Descriptions	Marginal Effects Coefficients (Φ)	Std. Error	P-Value
Implementation of OSH (y)			
Age (x1)	0.055***	0.019	0.001
Gender (x2)	0.208**	0.083	0.027
Marital status (x3)	0.002	0.061	0.168
Education (x4)	0.105***	0.04	0.004
Cadre (x5)	0.098*	0.056	0.096
Management commitment (x6)	0.018***	0.007	0.009
Staff participation (x7)	0.012	0.235	0.123
Staff training (x8)	0.090**	0.04	0.014
Government policy (x9)	0.223***	0.081	0.006
Model summary statistics			
Log-likelihood	-186.84		
LR chi-square (9 d.o.f.)	20.17		
Probability > chi2	0		
Pseudo R2	0.1512		
Number of respondents	146		
Parameters	9		

Key: * denotes $p < 0.1$, ** denotes $p < 0.05$ and*** denotes $p < 0.01$; mfx – marginal effects (dy/dx)

The marginal effects coefficients of the predictor variables were: age ($\Phi = 0.055$; $p < 0.01$), gender ($\Phi = 0.208$; $p < 0.05$), marital status ($\Phi = 0.002$ $p = ns$), education ($\Phi = 0.105$; $p < 0.01$), cadre ($\Phi = 0.098$; $p < 0.1$), OHS Management Commitment ($\Phi = 0.018$; $p < 0.01$), OHS Staff Participation ($\Phi = 0.012$; $p = ns$), OHS Staff Training ($\Phi = 0.090$, $p < 0.05$), and OHS Government Policy ($\Phi = 0.223$; $p < 0.01$). The variables point to a strong positive relationship indication that all the independent variables, except marital status and staff participation, were good predictors of hospital's implementation of the occupational health and safety measures.

As for age, the results imply that a one-year increase in the age of the hospital staff was more likely to increase the execution of the Occupational Health and Safety measures in the hospital by 5.5%.

In addition, female staff members were more likely to increase the implementation of the OHS

measures in the hospital by 20.8% as opposed to the male staff. Higher education status of the hospital staff was also more likely to increase the implementation of the OHS measures in the facility by 10.5% compared to lower educational status. On the cadre of the hospital staff, doctors were more likely to increase the implementation of the OHS measures in the facility by 9.8% in contrast to either the clinical officer or nurses. Moreover, a committed management in the facility had probability of increasing the implementation of OHS measures by 1.8% While staff participation variable was not statistically significant, the variable statistics also implied a positive effect on the implementation of OHS measures.

4.9 Discussion

The findings of this study generally agree with those in Armstrong (2018), Beus et al., (2018), Datey-Baah and Amponsah-Tawiah (2012), Dessler (2013), Gatchel and Kishino (2012), Friend and Kohn (2017), Leka and Andreou (2012), Taylor et al., (2014), and others that having OHS measures in an organization is critical in protecting workers from harm and promoting their well-being within the workplace. Identifying hazards, implementing control measures, providing training, ensuring legal compliance, and fostering a culture of safety can contribute to a safe, healthy, and productive work environment in an organization.

On management commitment, the study results found that it plays a fundamental duty successful implementation of Occupational Health and Safety (OHS) at Kitale County Referral Hospital because whenever management is committed to OHS measure, it creates a basis for a safe and healthy work environment where workers generally adhere to safety rules, its fosters a positive safety culture at work place, where employees are encouraged to actively participate and get involvement in hazard identification, assessment, reporting, and the development of safety measures. These results concur with those found in Braton (2019), Dessler (2013), Elsler et al.,

(2012), study that management commitment to ensuring the effective implementation of OHS practices, always drastically leads to reduction in workplace incidents, increased employee morale, and improved overall safety performance in an organization including Kitale County Referral Hospital.

As regards staff participation, the research also found out that it significantly influences the implementation of OHS at Kitale County Referral Hospital because when staff members actively participate and are involved in OHS initiatives, they contribute their knowledge, experience, and perspectives in enhancing the effectiveness of OHS measures. These results agree with those in Bullock (2018), DeCenzo et al., (2016), Dessler (2013), Stranks (2016), and others that staff participation fosters a culture of ownership and accountability for implementation OHS measure, as employees become more engaged in identifying hazards, assessing, suggesting improvements, and implementing safety protocols. This involvement increases hazard reporting, leading to timely corrective actions and the prevention of future accidents. Thus, through collaborative efforts and shared responsibility, staff participation and involvement in the implementation of OHS at Kitale County Referral Hospital is critical as it would lead to creating a safer work environment, reduced injuries, and improved overall employee well-being hence enhancing workers productivity (stranks 2016).

On staff training, the study found that staff training has a significant and positive influence on the implementation of Occupational Health and Safety (OHS) at Kitale County Referral Hospital since comprehensive training programs ensures employees are adequately equipped with necessary knowledge, skills, and resources to effectively identify and manage workplace hazards, adhere to safety protocols, and contribute to creating a safe work environment. These findings concur with those in DeCenzo et al., (2016), Dessler (2013), Hughes and Ferrett (2016), Ngirwa (2015the

workplace et al., (2014), and others that well-trained staff are more likely to follow safety guidelines, mitigate hazards, and respond appropriately to emergencies, leading to a reduction in accidents, injuries, and illnesses at workplace. Thus, staff training at Kitale County Referral Hospital is crucial in enhancing OHS implementation which is key in creating a safer and healthier workplace for all employees.

This study also found that government policies have a significant influence on the implementation of Occupational Health and Safety (OHS) at Kitale County Referral Hospital since the policies provide a legal framework and guidelines that the hospital must adhere to ensure a safe and healthy work environment. These findings agree with those in Straube (2013) that by requiring organizations to comply with OHS standards, conduct risk assessments, and implement control measures to mitigate workplace hazards, government policies not only protect the well-being of employees but also avoids legal liabilities and penalties that may arise owing to negative workplace incidents. Thus, by aligning with government policies, Kitale County Referral Hospital is capable of effectively implementing the OHS practices, promoting a positive safety culture, and ensuring the overall well-being of its staff members.

Finally, the integration of Heinrich's Safety Theory and Domino Theory provides a robust foundation for the implementation of Occupational Health and Safety (OHS) at Kitale County Referral Hospital. Heinrich's Safety Theory equips the hospital with valuable insights into hazard identification, risk assessment, and control measures, enabling a proactive approach to accident prevention. The theory emphasizes the importance of addressing underlying factors to prevent severe incidents. By implementing proactive measures, such as regular hazard assessments and

control protocols, the hospital can reduce the likelihood of accidents and promote a safer work environment.

Complementing Heinrich's Safety Theory, the Domino Theory offers guidelines for establishing a strong safety culture at the hospital. It emphasizes the chain reaction nature of accidents and highlights the importance of employee participation, safety procedures, and training. By understanding the interconnectedness of numerous factors, such as the social environment, unsafe acts, and conditions, the hospital can proactively break the chain of dominos and prevent accidents from occurring.

By incorporating both Heinrich's Safety Theory and Domino Theory, Kitale County Referral Hospital can implement a comprehensive OHS strategy. This strategy would involve proactive hazard identification, addressing underlying factors, promoting active employee participation, and implementing effective safety procedures. By fostering a safety culture, engaging employees in safety initiatives, and providing regular training, the hospital can create a safe and healthy work environment for all staff members. This integrated approach to OHS would help to reduce accidents, protect the well-being of healthcare workers, and enhance the overall quality of patient care at the Kitale County Referral Hospital.

CHAPTER FIVE: CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter summarizes the study findings, draws conclusion together with recommendations on the factors that influence the implementation of occupational health and safety measures at Kitale County Referral Hospital, Kenya.

5.2 Summary of findings

The study found that Occupational health and Safety measures are being implement in all the hospital departments with the aim of reducing exposure to occupational health hazards.

5.2.1 Implementation of occupational health and safety

The study found that Occupational health and safety implementation in Kitale County Referral Hospital is affected by several factors. Nonetheless, there was a low and reduce reported rate of injuries, though there are reduced injuries, the study found out that work-related accidents have resulted in significant loss of working hours among staff. The staff has not been away from work because of work-induced illness. The four independent variables had a positive relationship with the implementation of Occupational Health and Safety. Corresponding correlation coefficients (r) were 0.623 for OHS Management Commitment among staff and managers, 0.602 for OHS Staff Participation, 0.687 for OHS Training, and 0.678 for OHS Government Policy. The correlation coefficients were strong hence proving that there is a strong statistical association between the four independent variables and the Implementation of Occupational Health and safety. The results indicate that an increase in any independent variable will have a positive influence on implementation of OHS measure at Kitale County Referral hospital.

5.2.2 Management commitment and occupational health and safety measures

The study found the hospital management has formulated policies to implement occupational health and safety measures and the management is committed to promote safety practices in the hospital, the management has formed OHS implementation committee, the committee is mandated to ensure staff are trained, retrained, conduct regular assessment and audits, and provides necessary personal protective equipment's which are key in implementation of OHS measure's

The study also found that there is a team leader at the facility that is responsible for coordinating the implementation of OHS measures at the facility and the management regularly updates and educates staff about occupational health and safety measures. There is also the availability of clear communication channels about health and safety measures among management and as a result, the management of the facility can regularly conduct environmental clean-up and disinfection. Results also showed that there are proper engineering controls for a safe working environment such as ventilations and physical barriers and safer devices include work equipment. There is a policy within the facility that ensures occupational health and safety measures implementation, the respondents were required to give feedback if there is a policy for infection prevention in the facility, majority of the workers were not aware on infection prevention and were not vaccinated against communicable diseases like Hepatitis B. There are regular consultations between management and workers regarding health and safety at work. These findings indicate that if one unit is increased in OHS Management commitment causes an increase of 0.623 units.

5.2.3 Staff participation and occupational health and safety measures

Results of the study implied that staff participation on occupational health and safety measures implementation. A situation that is always enhanced by the hospitals that have health and safety cultures. Moreover, staff participation in the facility gives them an opportunity to identify representatives on the Health and Safety Committee who promote compliance with occupational health & safety (OHS) rules and regulations at work. To successfully implement OHS measure in hospitals, findings indicated staff embrace reporting any hazardous occurrence to the management who can then work on them and address the challenges. Participation reducing work related injuries, findings showed that staffs in the facility feels responsible for their health and safety at work, Majority of workers agreed that collecting inputs and ideas to promote and enhance staff participation on safety measures and adhere to OHS guidelines is key in implementation of OHS measures. A bigger percentage of the respondents admitted that they are always adequately informed about the occupational hazards at work although some may be unaware of infection prevention and control measures in the health facility.

5.2.4 Staff Training and occupational health and safety measures

The study also established that training on health and safety measures is key in promoting the occupational health & safety policy implementation at the hospital. This can be achieved by putting in place a person designated to be responsible for occupational safety and health in the health facility. They should be trained in health and safety measures at the workplace by regularly attending OHS training and how to update and ensure workers adherence to OHS guidelines and policy in place. The study also found that the hospital management team involved in implementation of OHS measures always have a safety conscious attitude towards safety measures

at work. In addition, there is a system for health workers to report hazardous exposures and safety concerns (such as exposures to infections, incidents of violence, and lack of protective measures) without risk of retaliation or punitive. The statistical test backs up this finding by indicating that a unit increase of OHS Training predicts an increase of 0.687 units in implementation of OHS measures.

5.2.5 Role of government policy on Occupational Health and Safety implementation.

The findings of the study showed that the Occupational Health and Safety Act promotes the implementation of OHS. This is because the Act on Occupational Health and Safety stipulates the duties and responsibilities of health managers at various levels, and it helps in determining if national OHS Policy promotes the implementation of OHS through the continual development and maintenance of National OHS systems. In addition, the National OHS Policy promotes the implementation of OHS by ensuring and making sure workers who are injured, or contract infections are well supported and paid. The National OHS Policy also recognizes workers' right to be safeguarded from present and emerging risks like covid nineteen in the workplace respectively, and National OHS Policy also recognizes health and safety at work as a fundamental human right. Lastly, through the National OHS Policy, there is increased OHS awareness and education at the hospital due to enhanced collaboration with other stakeholders to support in mainstreaming OHS at the hospital.

5.3 Conclusion:

This Study concludes that most institutions and employers usually provide training on occupational health and safety to their employees both new and old staffs. OHS training has helped in modelling employees' behaviors towards compliance and adherence to safety procedure in the hospital. The hospital has policy of OHS that to promotes safety culture in the hospital with clear roles and responsibility of the staff, the policy also outlines the reporting procedure for any OHS hazards and incidents and how the incidents are supposed to be managed.

The study also concludes the OHS committee at hospital is very effective and is able to address and handle safety issue at the hospital hence improving the safety of staff in the hospital, in addition to this the it evident from the study that most organization do consider working environment health and safety to be important the same as work quality and most staff do get treatment due to exposure of hazards. On risk identification the study concludes that manager do make information available include audit and assessment report to staff helping risk mitigation and prevention and finally the study concludes that robust and effective implementation of OHS measures is influence by management commitment.

5.4 Recommendations

This study gives the following recommendations on the implementation of OHS measures at Kitale County Referral hospital.

5.4.1 Management commitment to Implementation of OHS measure

The study recommends a more proactive approach to management commitment to implementation of OHS measure by ensuring hospital staff received adequate training and sensitization on prevention of occupational hazards, creating work life balance to reduce burnout, provision of

adequate PPEs and ergonomic equipment's, further the study would recommend that the management adequately budget for the OHS activities every financial year. To promote culture of adherence to safety protocol the study recommends that management set up a reward system for appreciating staff and department that performs well in prevention of hazards. To encourage staff involvement management the study recommends that the management to involved in risk assessment, investigation, and prompt feedback.

5.4.2 Staff participation and Training in Implementation of OHS Measure

Staff participation and involvement is key in prevention of occupational health hazards, The study recommends that Kitale County Referral Hospital should encourage staff participation on prevention of hazard by developing an open-door policy were workers inputs and ideas and solicited, creating non punitive reporting on hazards and injuries by workers, developing clear mechanism to receiving and giving feedback on action taken for all reported incidents. And final the study recommends that hospitals involve staff in finding solutions to occupational hazard. To enhance staff participation the study, recommend that the hospital develops a training program for its employee which includes induction training on safety measure the induction training should target new employees joining the workforce and refresher training for the existing training, the study would further recommend that refresher training to be conducted annually. Further the study recommends that hospital should develop vaccination programs especially non communicable disease like Hepatitis B, and this should be accessible by all staff in the hospital.

5.4.3 Recommendation for policy Change

The study recommends that hospitals should provide adequate support to workers and address existing challenges in prevention of occupational health hazards. This can be realized by developing relevant policies and guidelines on safety measures and domesticating the MOH OHS

guidelines that would support occupational safety in the hospital. The study recommend that the hospital create a department in the hospital that would manage all the occupational and safety issue and the incharge of the department should also be part of the hospital management team reporting directly to the hospital director/Medical superintendent.

5.5 Area for future research

The study recommends that in future, a comparative study should be conducted to determine the success of OSH implementation in Public compared to Private Hospitals in Trans Nzoia County. Furthermore, a study should be done on the role of the psychosocial factors s such as workplace stress, burnout, work-life balance, organizational culture, and their influence on worker well-being and safety performance is recommended in the Referral Hospital investigated in this study.

References

- Adema, W. & Ladaique, M. (2009), "How Expensive is the Welfare State?: Gross and Net Indicators in the OECD Social Expenditure Database (SOCX)", *OECD Social, Employment and Migration (Working Papers, No. 92.)* OECD Publishing, Paris, <https://doi.org/10.1787/220615515052>.
- Afubwa, S. O., & Mwanthi, A. M. (2014). *Environmental Health and Occupational Health and Safety*. Acrodile.
- Ali, Z., & Bhaskar, S. B. (2016). Basic Statistical Tools in Research and Data Analysis. *Indian journal of anaesthesia*, 60(9), 662–669. <https://doi.org/10.4103/0019-5049.190623>
- Amponsah-Tawiah K, Mensah J. (2016) Occupational Health and Safety and Organizational Commitment: Evidence from the Ghanaian Mining Industry. *Safety Health Work*. 7(3),225-30. doi: 10.1016/j.shaw.2016.01.002.
- Andersen, J. H., Malmros, P., Ebbelhoej, N. E., Flachs, E. M., Bengtsen, E., & Bonde, J. P. (2019). Systematic literature review on the effects of occupational safety and health (OSH) interventions at the workplace. *Scandinavian Journal of Work, Environment & Health*. 45(2),103–113. DOI:10.5271/sjweh.3775.
- Armstrong, M., & Taylor, S. (2018). *Armstrong's Handbook of Human Resource Management Practice* (13th ed.) Kogan Page.
- Ashraf, E. (2015) Prevalence and Response to Occupational Hazards among Nursing Students in Gaza Strip, Palestine: The Role of Personal Protective Equipment and Safety Regulations. *Public Health Research*, 5 (1), 32-328, doi: 10.5923/j.phr.20150501.06
- Atusingwize, E., Musinguzi, G., Ndejjo, R., Buregyeya, E., Kayongo, B., Mubeezi, R., Mugambe, R.K., Ali, H. A., Sekimpi D.K., Bazeyo W., Wang J.S., & Ssempebwa J.C. (2019) Occupational safety and health regulations and implementation challenges in Uganda. *Archives of Environmental and Occupational Health*. 74(1-2),58-65. doi: 10.1080/19338244.2018. 1492895.
- Babbie, E. (2005). *The Basics of Social Research* (3rd ed.). Thomson/Wadsworth
- Bayram, M. (2019). Safety Training and Competence, Employee Participation and Involvement, Employee Satisfaction, and Safety Performance: An Empirical Study On Occupational Health And Safety Management System Implementing Manufacturing Firms. *Alphanumeric Journal*, 7 (2), 301-318 . DOI: 10.17093/alphanumeric.555154
- Bernardin, H. J. (2007). *Human Resource Management* (4th ed.). McGraw- Hill/Irwi
- Beus, J. M., Payne, S. C., Bergman, M. E., & Arthur Jr, W. (2018) Safety climate and injuries: An examination of theoretical and empirical relationships. *Journal of Applied Psychology*, 95(4), 713–727. DOI:10.1037/a0019164
- Blanchard P & Thacker J. (2003) *Effective training: systems, strategies, and practices* (2nd ed.). Prentice Hall,.

- Braton R. (2019). *Occupational Health and Safety Law: Text and Materials* (2nd ed.). Cavendish.
- Bullock, R., & Scontrino-Powell (2018). *What is employee involvement?* University Consulting Alliance, Washington. <https://www.washington.edu>.
- Cascio, W. F. (2006). *Managing Human Resources, Productivity, Quality of Work Life, Profits*, (7th ed). Tata McGraw Hill
- Cohen, A. (1977). Factors in successful occupational safety programs. *Journal of Safety Research*, 9,(1), 168-178. <http://www.sciepub.com/reference/131490>
- Colligan, M. J., & Cohen, A. (2004). The role of training in promoting workplace safety and health. In Barling J. & Frone M. R (Eds.), *The psychology of workplace safety* (pp. 223–248). American Psychological Association. <https://doi.org/10.1037/10662-011>
- Cooper M. (1998). *Health and safety training* (2nd Ed). Financial Times,
- Cooper, D.R. & Schindler, P.S. (2006) *Business Research Methods*. (8th Ed), McGraw Hill, Tata.
- Dartey-Baah, K., & Amponsah-Tawiah, K. (2019). Strategic talent management scholarship: a review of current foci and future directions. *Industrial and Commercial Training*, 51(5), 299-314. DOI:10.1108/ICT-11-2018-0095
- DeCenzo, D. A., Robbins, S. P., & Verhulst, S. L. (2016). *Fundamentals of human resource management* (12th ed.): John Wiley & Sons.
- Dessler, G. (2008) *Human Resource Management*. Pearson Prentice Hall, Upper Saddle River.
- Dessler, G. (2013). *Fundamentals of human resources management* (3rd ed.). Pearson
- Dyck, D. E. G. (2013). *Disability management: Theory, strategy, and industry practice*. (5th ed.) Markham.
- Elsler, D., Flintrop, J., Kaluza, S., Hauke, A., Starren, A., Drupsteen, L., & Bell, N. (2012). Leadership and occupational safety and health (OSH): an expert analysis. *European Agency for Safety and Health at Work – EU-OSHA*. 1(1),1-61. doi:10.2802/15578
- Fernández-Muñoz B, Montes-Peón JM, Vázquez-Ordás CJ (2012). Safety climate in OHSAS 18001-certified organisations: antecedents and consequences of safety behaviour. *Accident Analysis Prevention*. 45,745-58. doi: 10.1016/j.aap.2011.10.002.
- Frieden T. R. (2014). Six components necessary for effective public health program implementation. *American journal of public health*, 104(1), 17–22. <https://doi.org/10.2105/AJPH.2013.301608>
- Friend, M. A., & Kohn, J. P. (2007). *Fundamentals of occupational safety and health*. (4th ed). Government Institutes.
- Gatchel, R. J., & Kishino, N. D. (2012). Conceptual approaches to occupational health and wellness: An overview. In Gatchel, R. J. & Schultz, I. Z. (Eds.), *Handbook of occupational health and wellness* (pp. 3–21). Springer Science. https://doi.org/10.1007/978-1-4614-4839-6_1

- Gerhart, H., Hollenbeck, N., Noe, C. & Wright, M. (2008). *Human Resource Management Gaining a Competitive Advantage*, (6th ed). Tata Mc Graw Hill
- Gerrish, K. & Lacey, A. (2013) *The Research Process in Nursing*. (6th Ed), Wiley-Blackwell, Chichester.
- Goldstein, I. L. (1980). Training in work organizations. *Annual Review of Psychology*, 31(1), 229–272. <https://doi.org/10.1146/annurev.ps.31.020180.001305>
- Government of Kenya (2007a). *The Work Injury and Benefits Act 2007*. Nairobi: Government Printers.
- Government of Kenya, (2007b). *Occupational Safety and Health Act*. <https://www.labour.go.ke/sites/default/files/2022-10/Occupational-Safety-and-Health-Act-2007.pdf>
- Grant, A.M. Christianson, M.K. & Price, R.H. (2007). Happiness, health, or relationships? Managerial practices and employee well-being tradeoffs. *Academy of Management Perspectives*, 21(3), 51–63. doi: 10.5465/AMP.2007.26421238
- Griffin, M. A., & Neal, A. (2000). Perceptions of safety at work: A framework for linking safety climate to safety performance, knowledge, and motivation. *Journal of Occupational Health Psychology*, 5(3), 347–358. <https://doi.org/10.1037/1076-8998.5.3.347>
- Groves, R. M., F. J. Fowler, M. P. Couper, J. M. Lepkowski, E. Singer, & Tourangeau R. (2009). *Survey Methodology*. (2nd ed), John Wiley.
- Gusti, D., Sienna P., Astawa D., & Ariany F., (2019). *Improving Occupational Health and Safety (OHS) implementation in a construction project in Bali*. MATEC Web of Conferences <https://doi.org/10.1051/mateconf/201927602022>
- Hall, L., Taylor, S. & Torrington, D. (2005). *Human Resource Management*, (6th ed), Prentice Hall.
- Hofmann, D. A., Morgeson, F. P., & Gerras, S. J. (2003). Climate as a moderator of the relationship between leader-member exchange and content specific citizenship: Safety climate as an exemplar. *Journal of Applied Psychology*, 88(1), 170–178. <https://doi.org/10.1037/0021-9010.88.1.170>
- Hughes, P., & Ferrett, E. (2016). *International health and safety at Work: For the NEBOSH International General Certificate in Occupational Health and Safety* (3rd ed.) Routledge
- Institution of Occupational Safety and Health, (2009). *Systems in Focus; Guidance of Occupational Health and Safety*. <https://www.iosh.co.uk/~media/Documents/Books%20and%20resources/Guidance%20and%20tools/Systems%20in%20focus.ashx>
- International Labor Organization (2013). *Health and safety at work: Facts and figures*. <https://osha.europa.eu/en/facts-and-figures>
- International Labour Organization. (2011). *Occupational Safety and Health Management System; A tool for Continual Improvements; World Day for Safety and Health at Work*. International Labour

Organization. Geneva. https://www.ilo.org/safework/info/promo/WCMS_153930/lang--en/index.htm

- Israel, G. D. (1992): *Sampling the Evidence of Extension Program Impact. Program Evaluation and Organizational Development*, IFAS, University of Florida. https://www.gjimt.ac.in/wp-content/uploads/2017/10/2_Glenn-D.-Israel_Determining-Sample-Size.pdf
- James, P., & Walters, D. (2002). Partnership in Health and Safety: A Source of Fair and Ethical Treatment? *Business & Professional Ethics Journal*, 21(2), 27–43. <http://www.jstor.org/stable/27801278>
- Karolina P. & Konarska, M. (2013) Working Life of Women With Disabilities—A Review, *International Journal of Occupational Safety and Ergonomics*, 19(3), 409-414, DOI: 10.1080/10803548.2013.11076997
- Kimalu, P. K., Nafula, N. N., Manda, D. K., Bedi, A., Mwabu, G., & Kimenyi, S. M. (2004, March). *A Review of the Health Sector in Kenya*. (Kenya Institute for Public Policy Research and Analysis. Working Paper No. 11), https://pdf.usaid.gov/pdf_docs/PNADS084.pdf
- Kogi, K. (2002). Work Improvements and Occupational Safety and Health Managements; Common Features and Research Needs. *Industrial Health* 40(2), 121 – 131. DOI:10.2486/indhealth.40.121
- Kraiger K., Ford J. K. & Salas E. Application of cognitive, skill-based, and affective theories of learning outcomes to new methods of training evaluation. *Journal of Applied Psychology* 78(2), 311–328. DOI:10.1037//0021-9010.78.2.311
- Kumar, R. (2005). *Research Methodology: A Step-by-Step Guide for Beginners*. SAGE.
- Leiter M. P, Zanaletti W. & Argentero P. Occupational risk perception, safety training, and injury prevention: testing a model in the Italian printing industry. *Journal of Occupational Health Psychology* 14(1), 1–10. DOI:10.1037/1076-8998.14.1.1
- Leka, S., & Andreou, N. J. A. (2012). Improving occupational safety and health through Policy initiatives. In Jain K. A., Puplampu B. B., Amponsah-Tawiah K., Andreou N. J. A., (Eds). *Occupational Safety & Health and Corporate Social Responsibility in Africa: Repositioning Corporate Social Responsibility Towards National Development* (pp.29). Cranfield Press. <https://www.centershhs.org/assets/docs/OSH-CSR-in-Africa-Dec-12.pdf>
- Li, J. Guangtao, Y. Yongjuan, L. & Feng, L. (2010). Perceived colleagues' safety knowledge/behavior and safety performance: Safety climate as a moderator in a multilevel study. *Accident Analysis & Prevention*. 42(5), 1468–1476. doi: 10.1016/j.aap.2009.08.017
- Lu, C., & Yang, C. (2010). Safety leadership and safety behavior in container terminal operations. *Safety Science*, 48(2), 123-134. DOI:10.1016/j.ssci.2009.05.003
- Makori, E. Nandi O.M.J, Thuo, J.K & Wanyonyi K. W. (2012). Influence of Occupational Health and Safety Programmes on Performance of manufacturing Firms in Western Province, Kenya. *Africa Journal of History and Culture*, 4(4), 46-58. DOI: 10.5897/AJHC11.036

- Malhotra, N. & Birks, D. (2007) *Marketing Research: An Applied Approach*. Prentice Hall.
- Manyele S. V., Ngonyani H. A., Eliakimu E., (2008) The status of occupational safety among health service providers in hospitals in Tanzania. *Tanzania journal of health research*. 10(3),159-165. doi: 10.4314/thrb.v10i3.14356. PMID: 19024341
- Matsiko, W. C. (2010). *Positive Practice Environments in Uganda: Enhancing health worker and health system performance Kampala*. https://www.k4health.org/sites/default/files/Uganda_Positive Work Environment.pdf
- McGonagle, A., Essenmacher, L., Hamblin, L., Luborsky, M., Upfal, M. & Arnetz, J., (2016). Management Commitment to Safety, Teamwork, and Hospital Worker Injuries. *Journal of Hospital Administration*. 5(6),46-52. doi: 10.5430/jha.v5n6p46.
- Mdhlalose, D. (2022) Transfer of Training: The Revised Review and Analysis. *Open Journal of Business and Management*, 10 (2), 3245-3265. doi: 10.4236/ojbm.2022.106161.
- Mearns, K. & Hope, L. (2005). *Health and Wellbeing in Offshore Environment; the Management of Personal Health*, (Research report no.305); Health and Safety Executive <https://abdn.pure.elsevier.com/en/publications/health-and-well-being-in-the-offshore-environment-the-management->
- Meyer, J. P., Stanley, D. J., Herscovitch, L. & Topolnytsky, L. (2002) Affective, Continuance, and Normative Commitment to the Organization: A Meta-Analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behavior*, 61(1), 20-52. <https://doi.org/10.1006/jvbe.2001.1842>
- Ministry of Health & IntraHealth International, (2013). *Report of the Occupational Safety and Health Risk Assessment*.<http://internationaljournalcorner.com/index.php/theijhss/article/viewFile/155919/107782>
- Ministry of Health (2014). *Occupational Safety and Health: Policy guidelines for the Health Sectors in Kenya*. <http://repository.kippra.or.ke/handle/123456789/1760>
- Ministry of labor, (2012, May). *The National Occupational and Health Policy*. <https://www.labour.go.ke/sites/default/files/2022-10/National-OSH-Policy.pdf>.
- Montorselli N B, Lombardini C, Magagnotti N, Marchi E, Neri F, Picchi G. & Spinelli R. (2010). Relating safety, productivity, and company type for motor-manual logging operations in the Italian Alps. *Accident Analysis and Prevention*; 42(6),2013-2017 DOI: 10.1016/j.aap.2010.06.011
- Mugenda, O.M. & Mugenda, A.G. (2003) *Research Methods, Quantitative and Qualitative Approaches*. ACT.
- Mullen, J., Kelloway, E. K., & Teed, M. (2017). Employer safety obligations, transformational leadership, and their interactive effects on employee safety performance. *Safety Science*, 91(2), 405-412. <https://doi.org/10.1016/j.ssci.2016.09.007>

- Ndejjo R, Musinguzi G, Yu X, Buregyeya E, Musoke D, Wang J. S, Halage A. A, Whalen C, Bazeyo W, Williams P, Ssempebwa J. (2015). Occupational health hazards among healthcare workers in Kampala, Uganda. *Journal Environment Public Health*. 2 (1) 913-741. doi: 10.1155/2015/913741.
- Newstrom, J., & Davis, K. (2007). *Organizational Behavior: Human Behavior at Work*. McGraw-Hill.
- Ngirwa, C.A. (2005). *Human resource management in African work organization*. National Printing.
- Nowier M (2009) Workplace environment and Its Impact on Employee Performance. *Leadership & Organization Development Journal*, 16(1), 5 - 12. <https://www.researchpublish.com/upload/book/Influence%20of%20Leadership%20on%20Implementation-4653.pdf>
- Nyakango, J.B. (2011). *Status of Occupational Health and Safety in Kenya*.(Workshop on IUPAC-NESCO-UNIDO) Safety Training Programme, part of IUPAC Congress in Beijing, China. <https://old.iupac.org/standing/coci/STP-Beijing05workshop/05-Nyakango.pdf>
- O'Brien, P.D. (2001). *The Safety Officer's Concise Desk Reference*. Lewis's publishers.
- Okoth-Okelloh A. M., Onyango R., Tonui W. K., Okumu W., & Ouma C. (2012). Occupational Health, and Safety Administration (OSHA) in the morgues: Management and Practice of the Universal Precautions in morgues in Kenya. *Biosafety*. 4(1),1-12 Doi:10.4172/2167-0331.1000121
- O'Toole, M. (2002). The relationship between employees' perceptions of safety and organizational culture. *Journal of Safety Research*, 33(2), 231–243. [https://doi.org/10.1016/S0022-4375\(02\)00014-2](https://doi.org/10.1016/S0022-4375(02)00014-2)
- Salas E, Cannon-Bowers J. A, Rhodenizer L. & Bowers C. A. (1999). Training in organizations. *Research in Personnel and Human Resources Management* 17 (2), 123–161. <https://files.eric.ed.gov/fulltext/ED501679.pdf>
- Shikdar, A. & Sawaqed, N. M. (2003). Worker productivity, and occupational health and safety issues in selected industries. *Computers & Industrial Engineering*. 45(4), 563-572. DOI:10.1016/S0360-8352(03)00074-3.
- Stranks, J. (2016). *The health and safety handbook: A practical guide to health and safety law, management policies and procedures*. Kogan Page.
- Straube, B. M. (2013). A Role for Government: An Observation on Federal Healthcare Efforts in Prevention. *American Journal of Preventive Medicine*, 44(1), S39-S42, <https://doi.org/10.1016/j.amepre.2012.09.009>
- Suresh K. (2011). An overview of randomization techniques: An unbiased assessment of outcome in clinical research. *Journal of human reproductive sciences*, 4(1), 8–11. <https://doi.org/10.4103/0974-1208.82352>

- Taber, K. S. (2018) The Use of Cronbach's Alpha When Developing and Reporting Research Instruments in Science Education. *Research in Science Education* 48 (2), 1273–1296. <https://doi.org/10.1007/s11165-016-9602-2>
- Taderera, H. (2012) Occupational Health and Safety Management Systems: Institutional and Regulatory Frameworks in Zimbabwe. *International Journal of Human Resource Studies*, 4(1), 99-117. <https://doi.org/10.5296/ijhrs.v2i4.2149>
- Taegtmeier M., Suckling R. M., Nguku P. M., Meredith C., Kibaru J., Chakaya J. M., Muchela H., & Gilks C, F. (2008) Working with risk: occupational safety issues among healthcare workers in Kenya. *AIDS Care*. 20(3),304-10. Doi: 10.1080/09540120701583787.
- Taylor, G., Easter, K., & Hegney, R. (2014). *Enhancing occupational health and safety*. Elsevier.
- Thobora, P. & Thuita, S. (2015). Assessing the Level of Compliance of Occupational Safety and Health Risk Management Practices with Occupational Safety Legislation in Public TVET Institutions in Nairobi, Kenya. *Journal of Industrial Engineering*, 1(1), 2-10. <https://researchjournali.com/view.php?id=1599>
- United States Census Bureau (2019). *Census profile. US Department of Commerce, the United States*. <https://www.census.gov>.
- Vinodkumar M. N. & Bhasi M. (2010). Safety management practices and safety behaviour: assessing the mediating role of safety knowledge and motivation. *Accident Analysis and Prevention*, 42(6), 2082–2093. <https://doi.org/10.1016/j.aap.2010.06.021>
- Vinodkumar, M. N., & Bhasi, M. (2009). Safety climate factors and its relationship with accidents and personal attributes in the chemical industry. *Safety Science*, 47(5), 659–667. <https://doi.org/10.1016/j.ssci.2008.09.004>
- Walters, D., Nichols, T., Connor, J., Tasiran, A., & Cam, S. (2005). *The role and effectiveness of safety representatives in influencing workplace health and safety*. <https://www.researchgate.net/publication/267362858>
- Widerszal-Bazyl M, Warszewska-Makuch M. (2008) Employee Direct Participation in Organisational Decisions and Workplace Safety. *International Journal of Occupational Safety and Ergonomics*, 14(4), 367–378. DOI:10.1080/10803548.2008.11076776
- Wilburn S. Q, & Eijkemans G. (2004) Preventing needlestick injuries among healthcare workers: a WHO-ICN collaboration. *International Journal on Occupational Environment Health*. 10(4),451-6. Doi: 10.1179/oeh.2004.10.4.451
- World Health Organization (2010). *Healthy workplaces: A model for action for employers, workers, Policy Makers, and practitioners*. World Health Organization http://www.who.int/occupationalhealth/healthy_workplaces/en/.
- World Health Organization (2013), *Healthy Workplace Framework and Model: Background and Supporting Literature and Practices*. WHO <https://apps.who.int/iris/handle/10665/113144>

- World Health Organization. (2015). *Global status report on road safety 2015*. https://www.afro.who.int/sites/default/files/2017-06/9789241565066_eng.pdf.
- Zacharatos, A., & Barling, J. (2004). High-performance work systems and occupational safety. In J. Barling & M. R. Frone (Eds.), *The psychology of workplace safety* (pp. 203–222). American Psychological Association. <https://doi.org/10.1037/10662-010>

APPENDICES

Appendix I: Consent Form

Kenya Methodist University

P. O Box 267-60200

MERU, Kenya

SUBJECT: INFORMED CONSENT

Dear Respondent,

My name is Edward Ngoga, and I am a Kenya Methodist University MSc student. I am working on a study titled; *Factors Affecting Implementation of Occupational Health and Safety Measures at Kitale county referral hospital*. The findings will be used to improve Kenya's and other Africa's low-income countries' health systems. As a result, enhanced healthcare services will benefit countries, communities, and individuals. This study project is vital to the building of health systems since it will provide latest information in this field, allowing decision-makers to make research-based decisions.

Procedure to be followed.

I will need to ask you some questions and acquire access to all the hospital's departments to address the six pillars of health systems for this study. In a questionnaire checklist, I will keep note of your responses. You can choose whether to participate in this study. If you decline to participate in the study, you will not be fined or harmed, and your decision will not be used against you or have an impact on your work. Please keep in mind that participation in the study is entirely optional. You are free to ask any questions about the study at any time. You have the right to refuse to answer any questions and to end an interview at any moment. You are free to leave the study at any moment without affecting the services you are providing.

Discomforts and Risks

Please bear in mind that taking part in the study is completely voluntary. You may ask any questions you want regarding the study at any time. You have the right to refuse to answer questions and terminate an interview at any time. You can quit your study at any time without interrupting the services you are giving.

Benefits

By taking part in this study, you will aid in the strengthening of health systems in Kenya and other low-income African nations. As a result, enhanced healthcare services will benefit countries, communities, and individuals. This field attachment is crucial to the healthcare system's strengthening since it will provide added information in this area, allowing decision-makers to make research-based decisions.

Rewards

Anyone who wishes to engage in the study will not be compensated.

Confidentiality

The interviews will take place in a secure area of the hospital. The surveys will be kept in a secure location inside the University and your name will not be written on them.

Contact Information

If you have any questions, you may contact the following supervisors:

Dr. Kezia Njoroge - Head of Department of Health Systems Management of Kenya Methodist University, Nairobi campus.

Participant’s Statement

I understand the declaration regarding my participation in the study. I was allowed to ask questions, and my queries were satisfactorily answered. On its whole, my participation in this study is entirely optional. I accept that my information will be kept confidential and that I am free to leave the study at any time. I realize that whether I leave the study or not, I will not be mistreated at work and that my decision will have no bearing on how I am treated at work.

Name of Participant..... Date.....

Signature.....

Investigator’s Statement

I, the undersigned, have explained the procedures to be followed in the study, as well as the risks and rewards associated with the participant in a language he or she understands.

Name of Interviewer.....Date.....

Interviewer Signature.....

Appendix II: Research Questionnaire

PURPOSE OF THE QUESTIONNAIRE

The following questionnaires outline questions intended to help in establishing factors affecting the occupational safety of healthcare workers in Kenya through a case study of Kitale county referral hospital. You are requested to fill out the questionnaire to collect relevant information. The information requested will help in the carrying out of the research and fulfilling its objectives. You are required to fill in all the questions and seek clarification through the contact details provided at the end of the questionnaire. Each section might have a separate set of instructions. Kindly read and respond keenly.

Instructions:

For those questions that require more detailed replies, please check the appropriate box, and fill in the blank spaces supplied. This questionnaire should be completed as honestly and objectively as possible.

SECTION A: BACKGROUND INFORMATION

1. Gender:

- a) Male
- b) Female
- c) Do not prefer to disclose.

2. Age in years:

- a) 21- 30
- b) 31- 40
- c) 41-50

d) 51- 60

3. Marital status

a) Single

b) Married

c) Separated

d) Divorced

4. Highest completed qualification Certificate:

a) Certificate

b) Diploma

c) Higher National Diploma

d) Degree

e) Masters

f) PHD

5. Cadre _____

SECTION B: Implementation of Occupational Health and Safety

This section will assess how effective is the implementation of OHS at Kitale County Referral Hospital. Indicate your level of agreement or disagreement using the following Likert Scale by ticking your responses as per the scale.

Key: SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree

Statements	SA	A	N	D	SD
There is low or reduced injury rates reported					
There is low/minimal loss of working hours or days due to work-related injuries/illnesses					
I am usually away from work due to work-induced illness or injuries.					
I got an accident at the workplace					
I am satisfied with the working environment at my workplace					
Leadership attitudes and commitment affect the implementation of health and safety measures.					
Workers' training on health and safety issues exists					
Employees are involved in the health and safety implementation					
There are feedbacks on the implementation of health and safety measures.					
Introducing rewarding safe behavior is done for the promotion of health and safety measures.					
Provision of sufficient resources for work health and safety is done at the implementation of health and safety measures.					
There are devices for safe handling of loads, such as patient handling, lifting, pushing, and pulling of loads that are regularly serviced.					
There is policy prevention of violence and harassment at the workplace, including gender-based violence and harassment					
The facility has adequate hand washing facilities					
There is policy for management of staffing, workload, working hours, shifts, rest, and recuperation with the purpose to prevent fatigue					

SECTION C: Management Commitment

This section will assess how leadership and management commitment at the hospital has influenced the implementation of OHS at Kitale County Referral Hospital. Indicate your level of agreement or disagreement using the following Likert Scale by ticking your responses as per the scale.

Key: SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree.

Statements	SA	A	N	D	SD
There is a formulated policy to implement occupational health and safety practices					
The management is highly committed to health and safety practices					
The management recognizes and rewards safe behavior					
The management provides the necessary protective and safety equipment's					
The management has regular audits on health & safety system					
The management has regular inspections on the health & safety system.					
There is a committee for overseeing or checking health and safety issues.					
Management communicates regularly with employees on health and safety measures					
There is clear communication about health and safety from management					
Management regular conduct environmental cleanup and disinfection					
There is assessment of workplace health and safety risks and controls regularly carried out by a trained person in consultation with management and staff					
There is engineering controls for a safe working environment, such as ventilation, physical barriers, safer devices					

Are there procedures in place for triage of patients in the emergency rooms and reception areas, including early detection and isolation of infectious patients, or those with suspected infection					
Workers have been adequately vaccinated against most communicable disease like Hepatitis B					
There is policy for infection prevention in the facility					
There are regular consultations between management and workers regarding health and safety at work, for example a joint labor-management committee					

SECTION D: Staff Participation

This section will assess how staff accountability and participation at Kitale County Referral Hospital the hospital has influenced the implementation of OHS. Indicate your level of agreement or disagreement using the following Likert Scale by ticking your responses as per the scale.

Key: SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree

Statements	SA	A	N	D	SD
I always wear personal protective equipment (PPE) given to me while at work.					
The hospital has health and safety cultures followed by Employees					
Employees have representatives in the health and safety Committee					
I comply with occupational health & safety (OHS) rules and regulations at work					
I usually report the hazardous condition to the Management					
I feel responsible for my health and safety at work					
Consulting workers to encourage their participation is a crucial step for ensuring safety and health matters					
I am thoroughly informed about hazards at work					
I have access to psycho-social support and counselling					
I am aware of infection prevention and control in the health facility					

SECTION E: Training on OHS

This section will assess how OHS Training at Kitale County Referral Hospital the hospital has influenced the implementation of OHS. Indicate your level of agreement or disagreement using the following Likert Scale by ticking your responses as per the scale.

Key: SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree

Statements	SA	A	N	D	SD
Training on safety is included in Occupational Health & Safety Policy					
There is person designated to be responsible for occupational safety and health in the health facility					
The employer regularly provides information about health and safety issues.					
I am trained in safety measures at work					
There is appropriate monitoring of health of individual health workers in relation to their jobs, such as regular preventive medical examinations					
I usually participate in seminars on occupational health and safety matters/issues.					
I consider OHS training especially important.					
I have a safety-conscious attitude at work					
I am aware of safety rules and procedures					
There is a system for health workers to report hazardous exposures and safety concerns (such as exposures to infections, incidents of violence, lack of protective measures) without risk for retaliation					

SECTION F: Government Policy on OHSA

This section will assess how government policy influence the implementation of OHS. Indicate your level of agreement or disagreement using the following Likert Scale by ticking your responses as per the scale.

Key: SA-Strongly Agree, A-Agree, N-Neutral, D-Disagree, SD-Strongly Disagree

Statements	SA	A	N	D	SD
Occupational Safety and Health Act promotes implementation of OHS					
Occupational Safety and Health Act stipulates the duties and responsibilities of health managers at various levels.					
National OHS Policy promotes implementation of OHS through the continual development and maintenance of National OHS systems					
National OHS Policy promotes implementation of OHS through ensuring that people who suffer work-related injuries or diseases are appropriately compensated.					
National OHS Policy recognizes workers' right to be safeguarded from present and emerging risks in the workplace.					
National OHS Policy recognizes health and safety at work as a fundamental human right.					
Through National OHS Policy, there is OHS awareness and education by collaborating with other stakeholders in mainstreaming OHS.					

Appendix III: Interview Guide for The HMT Members

1. What health and safety measures have been put in place at Kitale county referral hospital?
2. How does management commitment affect the implementation of occupational health and safety measures at Kitale county referral hospital?
3. How often do you discuss health and safety issues with the staff at Kitale county referral hospital?
4. To what extent does staff participation effect in implementation of occupational health and safety measures at Kitale county referral hospital?
5. Is there a health and safety policy in place at Kitale county referral hospital?
6. To what extent does OHS Training affect the implementation of occupational health and safety measures at Kitale county referral hospital?
7. Do you organize training in health and safety measures for your staff at Kitale county referral hospital?
8. Do you have a committee dealing with the health and safety of the employees at Kitale county referral hospital?
9. Which criteria do you use to communicate health and safety matters to staff at Kitale county referral hospital?
10. What are some of the limitations faced in implementing the health and safety program for staff at Kitale county referral hospital?
11. What suggestions do you have to improve the existing health and safety of staff at Kitale county referral hospital?

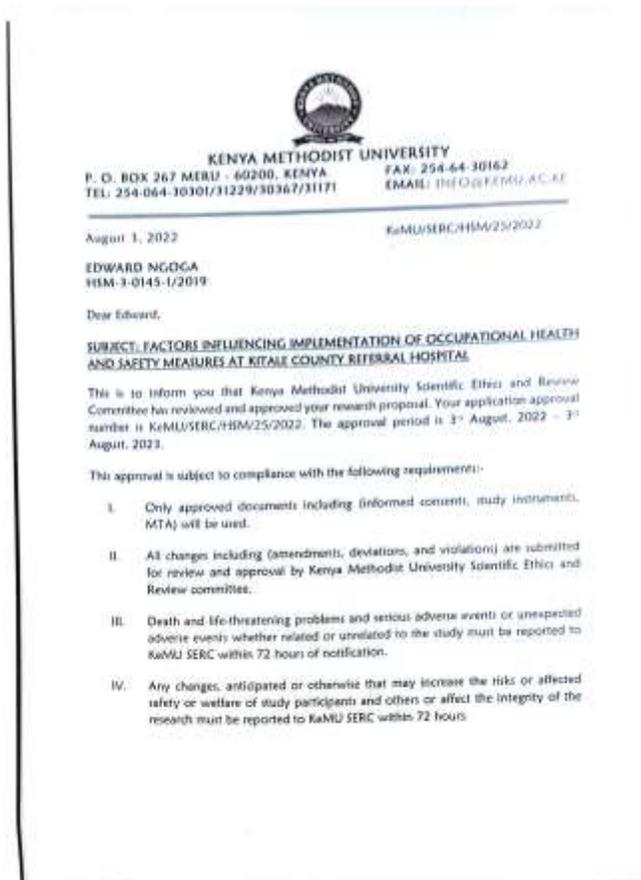
Appendix V: Budget

	Item	Qty	Unit cost	Total Cost - Kes
1	Internet Costs	6	1,000.00	6,000.00
2	Printing and Photocopying	4	2,500.00	10,000.00
3	Binding	10	300.00	3,000.00
4	Printing paper	5	500.00	2,500.00
5	Transport from Kisumu to Nairobi to meet the supervisor	6	1,500.00	9,000.00
6	Travel cost for data collection	30	3,500.00	105,000.00
7	Data analysis	1	20,000.00	20,000.00
	Total			155,500.00

Appendix VI: Project Timeline

Activity	2022/23										
	1	2	3	3	4	5	6	7	8	9	10
Identify an area of interest, concept paper developed, presented, and approved											
Topic refined to develop study proposal											
Comprehensive literature review written											
Write, submit, defend Proposal and Ethical Approval											
Collection of data and analysis											
Thesis report writing											
Submission of the report											
Thesis Defense and Publication											

Appendix VII: KeMU Ethical Approval Letter



Appendix VIII: NASCOTI Letter

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 152600	Date of Issue: 22/August/2022
RESEARCH LICENSE	
	
<p>This is to Certify that Mr. Edward Ngoga of Kenya Methodist University, has been licensed to conduct research in Transzoia on the topic: FACTORS INFLUENCING IMPLEMENTATION OF OCCUPATIONAL HEALTH AND SAFETY MEASURES AT KITALE COUNTY REFERRAL HOSPITAL, for the period ending : 22/August/2023.</p>	
License No: NACOSTI/P/22/19644	
152600 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
<p>NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.</p>	

Appendix VIII: County Approval Letter

REPUBLIC OF KENYA



COUNTY GOVERNMENT OF TRANS NZOIA
DEPARTMENT OF HEALTH
HEALTH CORPORATE SERVICES

Office of the Director (H.C.S.)
health-corporate-services@outlook.com

P.O. Box 4211-30200, Kitale
Tel: +254-722-540-959

23rd August, 2022

To: Mr. Edward Otieno Ngoga,
Kenya Methodist University,
P.O. Box 267 - 60200,
Meru,
Kenya.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on the topic "*Factors Influencing Implementation of Occupational Health and Safety Measures at Kitale County Referral Hospital*", I am pleased to inform you that the authority is hereby granted.

Please note that the authority granted is only administrative and is subject to the validity of the following two (2) requirements:

- i. Approval from a competent Institutional Ethics Review Committee (IERC);
- ii. Approval from the National Commission for Science, Technology and Innovation (where applicable);

Please ensure that your research is conducted within the time stipulated in your application. Any extensions shall require fresh endorsement.

With Best Wishes.

Sincerely,

Dr. Masibo W. Sammy,
Director - Health Corporate Services,
County Government of Trans Nzoia.

Vision: A Healthy and Nationally Competitive County