KYAMBOGO UNIVERSITY

DIRECTORATE OF RESEARCH AND GRADUATE TRAINING

COMPARATIVE ANALYSIS OF OCCUPATIONAL HEALTH AND SAFETY PRACTICES IN INTERNATIONAL AND INDIGENOUS CONSTRUCTION COMPANIES IN UGANDA

BY

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APPROVAL

This is to certify that this dissertation was conducted under our supervision and is now ready for submission for examination.

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DECLARATION

I, Byagweri Sam, do hereby affirm that this dissertation is my original piece of work and has never been published or presented for any degree in any University or institution of higher learning before; where other researchers' and writers' work was referred to, due acknowledgement was made.

Byagweri Sam

Sign: _____ Date: _____

DEDICATION

I dedicate this book to my wonderful family for their moral and financial support, my wife for giving me the courage to finish this study, and lastly to my supervisor who supported and guided me throughout this entire process.

May God Bless you all.

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I would like to thank my supervisors for their invaluable technical supervision, encouragement, and guidance as I was putting my research report together. I give thanks to the Almighty God for giving me the strength I needed to complete this study, along with good health.

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LIST OF ABBREVIATIONS

BOD	Board of Directors
CCCC	China Communications Construction Company
CDC	Centres for Disease Control and Prevention
CVI	Content Validity Index
EU-OSHA	European Agency for Safety and Health at Work
GSC	Group Safety Climate
HIV	Human Immune Deficiency Virus
HPWS	High Performance Work Systems
HSE	Health and Safety Executives
ILO	International Labour Organization
MOGLSD	Ministry of Gender, Labour and Social Development
OHS	Occupational Health and Safety
PPE	Personal Protective Equipment
SPSS	Statistical Package for Social Scientists
WHO	World Health Organization

ABSTRACT

The Occupational Health and Safety (OHS) performance of construction companies has been declining in recent years, resulting in high employee turnover and decreased productivity. The study examined the OHS practices and their impact on employee performance in Indigenous and International Construction Companies in Uganda. A comparative analysis was conducted using a case study approach, focusing on Roko Construction Limited Uganda and China Communications Construction Company (CCCC). The research design adopted was a cross-sectional survey, utilizing both quantitative and qualitative approaches. A sample of 265 respondents from ROKO and 278 from CCCC were selected, and data were collected through questionnaires and interviews. Data analysis was conducted using Pearson coefficient and regression analysis. Study findings revealed that both case studies had implemented OHS practices and faced challenges in implementation of these practices. The most implemented OHS practices by both companies were: Safety responsibilities associated with work were clearly spelt out and all machinery regularly checked and inspected. The highly faced challenges in implementing these practices were: high training costs, lack of management support, and low employee involvement. It was revealed that there was a weak positive correlation between OHS and employee performance at ROKO and CCCC with a correlation coefficient of 0.344 and 0.219 respectively. The study concluded that in both indigenous and international construction companies, there is a relatively significant impact of OHS practices on employee performance. The study recommends regular training on safety, and implementation to be conducted by a Safety Committee, hazard and risk information should be shared widely. Similar research can be conducted to evaluate the OHS practices in the Oil extraction stages in Uganda.

Key words: Occupational, Health, Safety, Performance, indigenous, construction

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Ensuring the health and safety of employees and other individuals impacted by a company's operations is a vital aspect of their policies and programmes. According to Armstrong (2009), these policies and programmes aim to safeguard individuals against any potential hazards that may arise from their work or association with the company. As such, promoting a strong safety culture is crucial in fostering a safe and secure environment within an organization. While companies may have limited resources for mitigating occupational injuries, it is essential to prioritize and allocate these resources effectively to achieve optimal results. In construction sites and product manufacturing, health and safety policies and programmes play a critical role in protecting people from potential hazards. O'Toole (2002) highlights the significance of safety culture in setting the tone for prioritizing safety within an organization.

Numerous studies, including those by Waring (1996), Lingard *et. al.* (2010), and Pollitt (2011), have highlighted the positive outcomes of effective health and safety (H&S) management in organizations. Despite these benefits, some companies, particularly those in developing countries, prioritize productivity and profitability over employee health and safety. In Uganda, for instance, work-related injuries remain a significant challenge, particularly in the building construction industry, which is considered as one of the most hazardous sectors (Arthur *et al*., 2019).

Uganda's Ministry of Gender, Labour, and Social Development (MoGLSD) 2019 report indicates that 14.5% of workplace injuries in Kampala were suffered by construction

workers, making it the third most attributed cause of injury. While Health and Safety (H&S) management is a global issue, it is particularly problematic in developing countries, such as those in Africa, due to various reasons. As Alinaitwe *et al.* (2007) noted, accidents on construction sites are often the result of inadequate knowledge or training, poor supervision, lack of proper safety equipment or procedures, or carelessness and recklessness. Additionally, there is a shortage of trained professionals in the fields of occupational health, industrial hygiene, and safety, which hampers the implementation of effective safety measures. This situation has led to numerous deaths, amputations, and other physical and psychosocial hazards in the workplace, with developing countries bearing over 80% of the global burden of occupational disease and injury (Rosenstock *et al,* 2006).

Recent studies by Zacharatos *et al.* (2005) found that high-performance work systems (HPWS) were positively correlated with occupational safety, indicating the importance of organizational factors in promoting worker safety. The studies showed that organizational practices play a crucial role in implementing effective hazard control measures and reducing the rate of injury.

Ensuring the safety of employees is crucial for the success of any organization, regardless of its size or complexity. As noted by Pollitt (2011), "all operations, activities, and systems are designed, maintained, and operated by people, underscoring the importance of prioritizing employee safety". In addition to preventing accidents and injuries, it is also important to "have emergency plans, disaster recovery plans, and business continuity plans in place to mitigate the negative impact of potential natural or man-made disasters" (Jyothi and Venkatesh, 2006). Achieving a healthy and safe work environment that eliminates hazards to the greatest extent possible is a shared responsibility among everyone employed

in an organization, including contractors. However, management bears the primary responsibility for achieving and exceeding high standards in health and safety matters as required by legislation, such as the Health and Safety at Work Act, 1974, and regulations.

The construction industry is widely regarded as one of the poorest performing industries in terms of occupational health. The Health and Safety Executive's (HSE) report of 2007 revealed that respiratory diseases in construction had the highest incidence rate of all industries in the United Kingdom for the year 2006-2007. This highlights the serious health risks that construction workers face due to the nature of their work processes, environments, and exposure to certain materials (HSE, 2007). Furthermore, studies have found a significant number of occupational cancer deaths among construction workers and tradesmen, which underscores the need for greater attention to occupational health and safety in the construction industry (Edwin, 2016).

CCCC, which stands for China Communications Construction Company Limited, is a worldwide supplier of services related to infrastructure. They engage in activities such as investing in, construction, and operating transportation infrastructure, manufacturing equipment, developing real estate, and facilitating urban development. It offers customers a range of services including investment financing, consulting, planning, design, construction, management, operation, and other integrated solutions. CCCC is a publicly listed company in Hong Kong and Shanghai, with a strong record of profitability and value creation. The company has been in business for over a century and operates in more than 150 countries, including Uganda. In recent years, Chinese private and public entities have been actively involved in Uganda's economy, with China playing a key role in financing and supporting large-scale infrastructure projects in the country (CCCC, 2021)

State-owned enterprises are increasingly active in developing countries, particularly in Africa. One example is China Communications Construction Company (CCCC), which recently completed construction of the Entebbe-Kampala Expressway, a four-lane toll highway. CCCC is also currently working on expanding the Entebbe International Airport. Through these and other projects in Uganda, CCCC has created over 2,000 jobs, with more than 85% of the workforce being indigenous. CCCC has a core principle of hiring indigenous employees for their projects and providing knowledge transfer through employee training (The Monitor, 2018).

ROKO Construction Limited is a renowned construction and civil engineering group of companies in Uganda. Established in 1969, ROKO was founded by the late Max Rohrer and Rainer Kohler who had over 50 years of experience in Africa. They were committed to contributing to Uganda's prosperity and development. ROKO has a team of over 40 qualified civil and site engineers and technical and commercial directors. Over the years, ROKO has become the leading contractor in Uganda, operating in Uganda and Tanzania until 2001. Presently, ROKO has expanded its activities to neighbouring countries, such as Rwanda, Eastern Congo, Kenya, and South Sudan.

ROKO Construction Limited has grown into a self-sufficient construction company, employing around 1800 people, and places great emphasis on training its technicians and craftsmen to produce a high standard of work. The company uses indigenously produced materials and imports goods with the assistance of SAI Trading Company in Europe, whenever possible. It has a range of earthmoving and construction equipment, such as

bulldozers, dump trucks, track excavators, compactors, and dragline/cranes, which can be used for various civil and road works, as well as the construction of high-rise buildings.

The study, therefore, conducted a Comparative analysis of Occupational Health and Safety Practices in Indigenous and International Construction Companies in Uganda and their impact on employee performance; A case study of Roko Construction Limited Uganda and China Communications Construction Company (CCCC).

1.2 Statement of the Problem

In today's competitive landscape, organizations worldwide prioritize attaining their production or sales targets to stay ahead. Most companies aim to increase the net profit while compromising on HSE standards. The problem of lack of or inadequate Operational Health and Safety management is quite profound in the construction industry across the world. The Ugandan Parliament enacted the Occupational Safety and Health Act of 2006, which aims to ensure that individuals have the right to work in a safe and healthy environment (GOU, 2006). However, a significant number of workers in Uganda are still unaware of their entitlement to work in such conditions, leading to exposure to unsafe working environments, faulty equipment and machinery, hazardous civil works, and construction, which may result in sickness and fatalities (MoGLSD, 2019). The Ugandan construction industry has a poor occupational health and safety (OHS) performance record, despite the existence of guidelines. This is evidenced by the increase in the accident rate from 9.6% in 2015 to 11.1% in 2019. This has led to increased employee turnover and reduced productivity due to an unsatisfactory wellness policy that fails to cater to employees' occupational health and safety needs.

To address these problems, there is a need to conduct a comparative analysis of OHS practices in indigenous and international construction companies in Uganda, examining their impact on employee performance with Roko and CCCC as case studies. The comparative analysis focused on identifying the best practices that are being used by international construction companies and assessing their potential for applicability in the Ugandan context.

1.3 Objectives of the Study

1.3.1 Main Objective

The main objective was to conduct a comparative analysis of Occupational Health and Safety (OHS) practices in Indigenous and International Construction Companies in Uganda and their impact on employee performance with a case study of Roko and CCCC.

1.3.2 Specific Objectives

The study was guided by the following specific objectives:

i. To identify the OHS risks in construction companies in Uganda.
ii. To identify OHS practices in construction companies in Uganda
iii. To determine the relationship between OHS risks with employee performance in construction companies in Uganda.
iv. To identify challenges affecting the implementation of OHS practices in construction companies in Uganda.

1.4 Research Questions

The study sought to provide answers to the following research questions:

i. What are the OHS risks in construction companies in Uganda?
ii. What are the OHS practices in construction companies in Uganda?

iii. What is the relationship between OHS with employee performance in construction companies in Uganda?

iv. What are the challenges affecting the implementation of OHS practices in construction companies in Uganda?

1.5 Justification of the Study

The study created awareness of the Occupational Health Hazards prevalent in the construction industry and offered advisory directions to the Occupational Health and Safety Management team. Companies understand that OSH not only prevents people from being harmed or made ill at work, but it is also a crucial component of a successful business (EU-OSHA, 2013). Occupational safety and health is good for business as well as being a legal and social obligation.

1.6 Significance of the Study

Ensuring safety in industries that involve high risks to human lives and property such as aviation, oil and gas, construction, transportation, steel manufacturing, and mining, is of utmost importance (Worksmart, 2013). These industries are prone to workplace injuries, illnesses, and fatalities due to the hazardous nature of their work environments. Therefore, it is crucial to incorporate safety measures in every work process in industrial settings, similar to how the development of products and services is intertwined with quality (Worksmart, 2013).

This research proposes value-added Occupational Health and Safety (OHS) Management practices that can benefit the indigenous construction industry. The study's findings are expected to have broader applicability to public and private organizations beyond the construction sector, illuminating the significance of OHS practices for organizational well-being. The findings of this research have the potential to decrease the likelihood of harm or

hazards resulting from new technologies or inadequate occupational health and safety management. Furthermore, this study may act as a point of reference for scholars exploring the area of employee safety and performance in construction industries, enabling further investigation under comparable circumstances to those in Uganda.

This study will also aid the government in identifying the strengths and weaknesses of existing OHS practices and devising means of addressing gaps highlighted in the comparative analysis to enhance the effectiveness of indigenous construction firms. Additionally, the results of this research will serve as a reference point for future studies by students and researchers in this field.

1.7 Scope of the Study

1.7.1 Content Scope

This study compared the existing Occupational Health and Safety practices in construction companies, determine the relationship between Occupational Health and Safety with Employee performance in construction companies and identified solutions to challenges affecting the implementation of Health and safety practices in construction companies.

1.7.2 Geographical Scope

This study was carried out at Roko Construction Limited in the Kampala metropolitan Area and CCCC operations at the Entebbe Airport. This gave a clear picture of the Health and Safety practices in the Construction companies. Roko was chosen as one of the tier 1 indigenous based construction companies in Uganda while CCCC was selected as the leading international based company having operations in Uganda.

1.7.3 Time Scope

Being a cross sectional study, the OHS practices existing at the time of the study for the period between 2010 – 2021 were reviewed.

1.8 Conceptual Framework

The management of OHS in the workplace is essential for achieving sustainable employee performance in organizations. This outcome is not typically the result of a single factor, but rather an interplay consisting of different variables and factors, as illustrated in Figure 1.1.

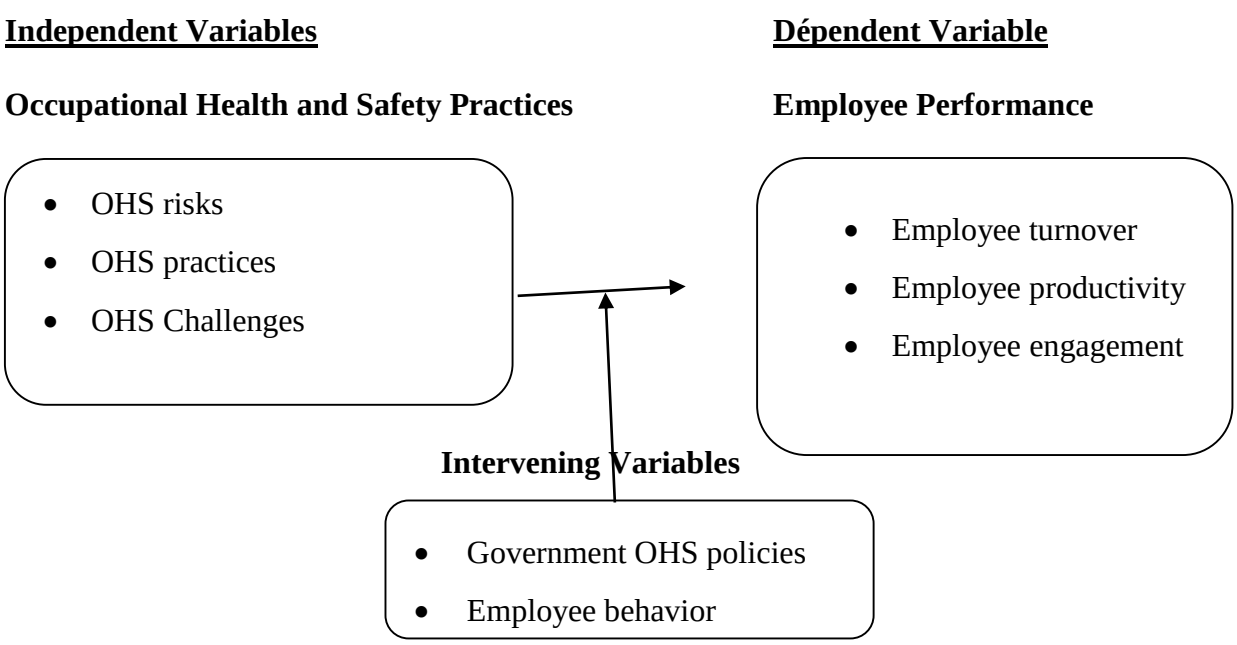

Figure 1.1: Conceptual Framework

The conceptual framework shown in Figure 1.1 presents the interrelationship among the research variables in the study. The independent variables are the OHS practices which include; the Education and training, Management commitment to OHS and Risk assessment. The dependent variable of the study was employee performance measured by productivity, turn over and engagement. The intervening variables include the OHS polices set by the Government of Uganda and the Employee behaviour towards safety.

1.9 Definition of Key Terms

i) Operational Risk

Operational risk pertains to the possibility of losses that may occur as a result of inadequate or unsuccessful processes, systems, and individuals, as well as external events. The scope of this definition encompasses legal risk, which involves the potential for fines, penalties, and punitive damages arising from regulatory measures and private settlements. However, strategic and reputational risk are not incorporated within this definition.

ii) First Aid

First aid, also known as emergency first aid, refers to the initial care provided to an injured or ill individual before they receive treatment from trained medical professionals.

iii) Construction Site

A construction site refers to a location or plot of land where building activities are currently underway.

iv) Hazards

A hazard is defined as a condition that currently exists or has the potential to exist, which by itself or in combination with other variables, can lead to adverse outcomes such as property damage, illnesses, injuries, fatalities, and other types of losses.

v) Safety

Safety refers to the measures and practices taken to manage and mitigate the likelihood of unintentional losses to a level that is deemed acceptable.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

In this chapter, the variables utilized in the study are introduced, and a thorough review of related literature is provided. The literature review covers the work of other scholars in the field of occupational health and safety across different regions worldwide. The chapter offers an overview of OHS concerns, associated risks, and the practices employed to manage OHS practices.

2.2 Conceptual Definitions

The World Health Organization (WHO) defines health as "an overall state of physical, mental, and social well-being that goes beyond merely being free from disease and incapacity" (WHO, 2004). This comprehensive definition underscores the importance of considering not only the absence of illness but also the overall well-being of individuals.

In the context of occupational health and safety (OHS), safety is relatively straightforward to comprehend. According to Smith (2006), safety in the workplace primarily pertains to protecting employees from various hazards and ensuring that they can carry out their tasks without undue risk. It involves measures aimed at reducing accidents and injuries.

On the other hand, occupational health and safety, as described by the International Labour Organization (ILO), is a multifaceted field encompassing various specialized areas (ILO, 2007). It is overarching goal is to promote and maintain optimal levels of physical, mental, and social well-being for workers across various professions. This entails not only preventing adverse health effects associated with work but also safeguarding employees from potential hazards that could compromise their health. Moreover, it necessitates creating

work environments that meet the physical and mental requirements of employees. In essence, OHS places a premium on the holistic welfare of workers.

Occupational health issues, as highlighted by Brown (2010), can be more intricate to address compared to safety concerns. Nonetheless, improving health can have a positive impact on safety, as a healthy workplace inherently tends to be safer. It is crucial to acknowledge, however, that the converse is not necessarily true. Just because a workplace is safe doesn't automatically guarantee its healthiness. Therefore, a comprehensive approach that addresses both health and safety concerns is imperative in every workplace, aligning with the ILO's all-encompassing view of OHS.

Prioritizing employee health and safety is a fundamental component of employee welfare, which encompasses the overall well-being of employees (ILO, 2021). This includes considerations for their physical health, working conditions, access to amenities like sanitation facilities and healthcare, and efforts to enhance job satisfaction and overall quality of work life. Hence, ensuring employee health and safety should be an integral part of the broader initiative to promote employee welfare.

2.3 The Concept of Employee Performance

According to Gongand (2022), a company can be considered a high performer if it exhibits characteristics such as generating substantial profits, producing high-quality products, capturing a significant market share, achieving positive financial outcomes, and surviving over a defined period through the use of appropriate strategic actions. Essentially, organizational performance is an indicator of the productivity of a company's members.

According to Long (2013), it is stated that the study examined the growth, productivity, efficiency, and effectiveness of staff performance, with a particular focus on the outcome aspect. In this context, the outcome aspect pertains to the consequences or results of an individual's performance.

Although behavioural and outcome aspects of an individual's performance are often correlated, they are not interchangeable, as there are other external factors that can affect performance outcomes beyond just behaviour (Campbell *et al*., 1993). Ilgen and Pulakos (1999) suggest that as organizations continue to evolve, so do the concepts and requirements for performance. He notes that high-performing individuals typically enjoy more career opportunities and are more likely to be promoted within their organizations compared to low-performing individuals.

According to Worksmartm (2013), performance is a multifaceted concept that can be divided into two categories: task performance and contextual performance. Task performance refers to a person's proficiency in carrying out responsibilities that are either directly or indirectly connected to the technical core of an organization, such as those performed by production workers, managers, or staff members. Conversely, contextual performance comprises actions that do not directly contribute to the technical core but instead facilitate the social, psychological, and organizational environment required for attaining the organization's objectives (Gongand, 2022).

Worksmartm (2013) distinguishes among chore and background performance by defining task performance as an individual's level of proficiency in activities that contribute to the organization's practical basic, both directly or indirectly. In the contrast, contextual

performance refers to activities that support the organizational, social, and psychological environment necessary for achieving organizational goals. These activities include being a dependable member of the organization, assisting colleagues, and providing suggestions for improving work procedures. According to Motowidlo and Schmit (1999), task performance is primarily associated with an individual's ability, while contextual performance is more closely linked to their personality and motivation.

Staff performance is typically evaluated based on their ability to excel at their goals and objectives of the Company. To measure this, efficiency and effectiveness are often used as metrics. As Gongand (2022) explains, efficiency refers to the ratio of output to input, while effectiveness refers to the degree to which objectives and plans are achieved as a result of the efficient activities and operations. This means that staff performance is assessed based on their efficiency and effectiveness in utilizing resources and facilities, which is also an indicator of the effectiveness of management decisions.

2.4. Occupational Health and Safety Risks

According to the ILO, approximately 5,000 people around the world die each day due to work-related accidents or health diseases. In the Sub-Saharan region alone, there are an estimated 53,000 fatal accidents that occur in the workplace. Additionally, the ILO reports that workers worldwide experience about 270 million occupational accidents each year (both fatal and non-fatal) and suffer from around 160 million incidents of occupational diseases. These statistics raise questions about whether people prioritize the safety and health of their employees while they are at work and how much awareness employers have of the importance of ensuring the safety of their workers in the workplace (ILO, 2021).

The annual ILO World Safety and Health Day is commemorated on April 28 each year. In his message to workers, Ali Ibrahim, the ILO East Africa Director, drew attention to the significant human and economic costs associated with work-related injuries, deaths, and illnesses. These costs include missed workdays, illness, medical treatment, disabilities, and survivor benefits, which account for about 4% of the global gross domestic product. According to OSHA (2015), workplace accidents occur every 3.5 seconds in the UK, and employees may face a variety of potential health and safety risks in the workplace.

2.4.1 Hazards at Work

Hazards in the workplace pose potential harm and can cause injuries or illnesses if not identified and controlled early (OSHA, 2002). Workplace accidents account for various injuries, with 3,277,700 non-fatal injuries and illnesses recorded in 2009 by the Bureau of Labour Statistics by 965,000 consequential in unused work days (Long, 2013). Recognizing and controlling workplace hazards is essential to ensure employee safety and prevent losses in productivity due to injuries and illnesses. Physical hazards such as heat, cold, vibration, and high noise levels are common in workplaces, while working at elevated heights on roofs, ladders, or scaffolding increases the risk of falling (Demand Media, 2013).

The workplace poses numerous hazards to employees, some of which can lead to serious injury or illness if not properly controlled. Hazards can include physical hazards such as heat, cold, vibration, noise, and the risk of falling when working at heights. Additionally, working in confined spaces or with equipment can also result in accidents such as asphyxiation, entanglement, or electrical shock. Improper lifting techniques or working on a computer for long periods can cause back injuries and repetitive stress injuries, respectively. The use of hazardous chemicals in many jobs can also pose a significant risk to employee health, with some chemicals being toxic, flammable, corrosive, or reactive.

Exposure to these chemicals can cause acute or chronic health effects, depending on the duration and level of exposure (Long, 2013).

2.4.2 Stress

Workplace stress is a serious issue that can lead to a variety of negative outcomes, both for the individual worker and for the organization as a whole. When stress in the workplace is prolonged or chronic, it can lead to burnout, decreased productivity, absenteeism, and turnover. In extreme cases, it can even contribute to the development of mental health disorders such as anxiety and depression (CDC, 1999). In addition to Karimi and Alipour (2011), several other scholars have shed light on the pervasive nature of workplace stress and its consequences. For instance, Smith and Jones (2020) emphasized the detrimental impact of workplace stress on employee morale and job satisfaction. Furthermore, the study conducted by Brown et al. (2018) illuminated the connections between chronic workplace stress and the development of mental health disorders, underscoring the need for proactive interventions.

There is a global increase in job stress across all countries, professions, and organizational levels. The issue of occupational stress is a serious concern for both employees and organizations, leading to negative health consequences such as anxiety, cardiovascular disease, stomach distress, and headaches. The discomfort felt by individuals unable to cope with demands and stressful situations in their workplace is described as occupational stress. According to research, 75% of American workers view their jobs as stressful (Karimi and Alipour, 2011).

The United Nations' ILO has echoed occupational stress as a big "global pandemic". Although physical effects are often highlighted, the economic consequences of this epidemic

are also concerning. Workplace stress is estimated to cost about $200 billion in the U.S employers per year due to stress-related expenses such as nonattendance, lower productivity, staff revenue, workers' reimbursement, and medical insurance (Worksmartm, 2013). Also Stress management is now well-thought-out to be a crucial business challenge in the 21st century.

The sources of occupational stress are based on the nature of the work. For example, factory workers may experience stress related to their work environment or the operation of heavy machinery. In contrast, office workers may experience stress related to interpersonal relationships, such as unclear supervision, tension among team members, and fear or avoidance of conflict.

2.5 Occupational Health and Safety Practices

The field of occupational health aims to prevent illnesses that are related to work. It has two primary components: occupational medicine, which is a specialized form of preventive medicine that focuses on identifying and preventing health hazards in the workplace, as well as addressing any health issues or stress that may have arisen despite preventative measures; and occupational hygiene, which involves measuring and managing environmental risks and is primarily the responsibility of chemists, engineers, and ergonomists (Shepherd *et al*, 2001). Occupational hygiene, on the other hand, involves the measurement and management of environmental risks and is primarily the responsibility of chemists, engineers, and ergonomists (Akbar-Khanzadeh *et al*., 2016). Effective safety and health programmes vary in terms of their components and philosophies, and should align with the specific mission, goals, and needs of the organization. Safety and health professionals should also be prepared to adapt to changing management styles in order to provide effective services and demonstrate their value to the organization (Armstrong, 2009).

2.5.1 Health and Safety Inspections

Armstrong (2009), commends that the purpose of health with safety inspections is to locate and define problems in a particular area of an organization, such as a manufacturing process or operational department. These problems may include faulty equipment, machinery, or operational errors that could create health risks or accidents.

Oluwagbemi (2011) suggests a systematic approach for conducting health and safety inspections in the workplace. The first step is to assign the responsibility for conducting the inspection to line managers or supervisors. Next, a checklist should be created to define the points to be covered during the inspection. The department or plant should be divided into areas, and a list of points requiring attention should be created for each area. The frequency of inspections should be determined, with critical areas being inspected daily. Smith (2015) suggests that checklists should be used during inspections, with sample or spot checks carried out on a random basis. Special investigations should be conducted to address any specific problems that arise, such as the operation of machinery without proper safety guards. A reporting system should be established to record the results of inspections, and a system should be put in place to monitor that safety inspections are being conducted regularly and corrective actions have been taken (Johnson & Wilson 2018).

2.5.2 Risk Assessment

Risk assessment is a crucial process for organizations to identify and evaluate potential risks and take measures to mitigate them. This involves assessing risks and making decisions under conditions of uncertainty, as defined by various sources including Rejda (2003), Standards Australia and Standards New Zealand (2004). Dorfman (1997). It is stated that Risk management comprises several steps, including identifying possible losses, evaluating those losses, selecting of appropriate risk management techniques, and implementing and

administering the risk management programmes. The primary goal of risk management is to manage any negative consequences that could arise while also identifying opportunities for growth, with the ultimate aim of ensuring the safety and success of the organization.

Stulz (2003) highlights the significance of prioritizing risks in the risk management process, starting with those that have the highest likelihood of occurrence and potential for loss. However, it can be difficult in practice to strike a balance between risks that have a high probability of occurrence but lower losses, and those with a lower probability of occurrence but potentially greater loss. As a result, decision-making errors may occur.

Dorfman (2007) provides a definition of operational risk as the possibility of losses resulting from human errors, omissions, or mistakes that may lead to business operations failure.

Effective risk assessment is crucial for protecting a business's assets and properties. This process involves a series of ongoing activities, including raising awareness, identifying potential risks, evaluating those risks, developing appropriate assessment methods, making decisions on suitable methods, implementing them, and managing them afterward. It's important to follow a systematic flow of one step to another, as the process can become overwhelming. While corporate risk-taking behaviour is sometimes encouraged, improperly identifying manageable risks can result in inappropriate methods and operational losses (Dorfman, 2007).

The importance of risk assessment lies in a business's ability to anticipate and prepare for potential changes, rather than simply avoiding risk altogether. While avoidance may provide

protection from specific losses, it can also lead to missed opportunities for profit and may even create additional risks

2.5.3 First Aid

The provision of first aid can be critical in preventing injury or death, yet many such incidents occur globally each year due to a lack of immediate care. First aid, also known as emergency first aid, involves initial treatment given to an injured or sick person by a layperson or bystander before medical professionals arrive. First aid aims to stop the patient's condition from getting worse and to speed up their recovery to save lives (Medical News Today, 2009). First aid interventions play a pivotal role in mitigating these injuries by providing immediate care when professional medical help may be minutes or even hours away. Timely responses such as wound dressing, splinting fractures, or controlling bleeding can prevent injuries from deteriorating into critical conditions, ensuring the well-being of the injured worker (American Heart Association, 2015). This aspect of first aid is particularly relevant in the construction industry, where downtime due to injuries can be costly and disruptive. Consequently, effective first aid measures are not only about saving lives but also about promoting a speedy return to work and maintaining productivity (World Health Organization, 2011).

2.5.4 Education and Training

According to McNeil and Smith (2018), training is an indispensable cornerstone in maintaining a safe and healthy workplace, and its effectiveness hinges on ensuring that everyone involved receives appropriate instruction. Historically, training has been an integral component of Occupational Safety and Health (OSH) management, with an imperative need for managers, supervisors, and workers to be adequately equipped. In line with this perspective, Walters (2015) emphasizes that workers and their representatives should undergo tailored training in occupational safety and health, tailored to their respective

roles and responsibilities. It falls upon management, as emphasized by Clarke (2019), to furnish the requisite guidance and training, considering the diverse functions and competencies of different worker categories.

Alli (2008) emphasizes the importance of integrating occupational safety and health training into daily work procedures, rather than treating it as a separate activity. It is the responsibility of management to ensure that all individuals involved in the production process are trained in the technical skills required for their job, including an occupational safety and health component. Therefore, technical skills training and OSH training should be merged to promote safe work practices and equip workers with the necessary knowledge and skills to carry out their duties safely.

2.5.5 Management Commitment on OHS

It is crucial to understand that establishing a workplace culture that prioritizes safety and health involves more than just implementing policies and procedures. It necessitates a shift in attitudes and values throughout the organization, from top to bottom. Management has a responsibility to convey the importance of safety and health in the workplace, as well as to provide the necessary resources and support for a successful programme. This includes ensuring that all employees have the equipment and training they require to perform their jobs safely, and fostering an atmosphere where employees feel at ease reporting safety concerns or incidents. When safety and health become a part of the company's culture, everyone benefits, including the company's bottom line, as noted by Alli (2008).

Demonstrating a commitment to occupational safety and health can take various forms, including allocating sufficient financial and human resources to ensure the proper functioning of the OSH programme, establishing supportive organizational structures for

managers and employees, and designating a senior management representative to oversee OSH management (Mullen and Kelloway, 2011).

The implementation of an effective OSH system necessitates a considerable financial investment. Therefore, it is essential to allocate adequate financial resources within business units to manage safety and health effectively, as part of overall operating costs. Indigenous management teams must recognize the importance of providing a safe workplace for their employees and be incentivized to allocate resources for all aspects of safety and health. The goal is to integrate safety and health into the planning process and ensure its sustainability once the programme is established, according to Alli (2008).

To ensure successful implementation, close monitoring is critical for effective follow-up, and any response to a situation should be based on the level of risk and available resources. Risk assessments can assist with decision-making by prioritizing tasks. It is essential to exercise good judgment when reviewing OHS management systems in construction companies, and those responsible for the review may require specific training to ensure competence.

2.6 Empirical Literature Review

According to Neal and Griffin's research in 2006, an organization's safety climate plays a crucial role in shaping employees' attitudes and behaviours towards safety. Safety climate refers to how individuals perceive their workplace's policies, procedures, and practices related to safety. It affects employees' behaviour by influencing their expectations about how their organization values and rewards safety, as found by Zohar and Luria (2005). Several studies have linked a strong and positive safety climate to high levels of safety performance and lower accident rates as reported by Cooper and Philips (2004), Tharaldsen *et al.* (2008),

and Clarke in 2006. Additionally, Johnson's research in 2007 discovered that supervisors' safety actions and their perceptions of safety behaviour predicted the occurrence of incidents in the construction sector.

In a study showed by Lingard *et al.* (2010), they propose that the Group Safety Climate (GSC) may have a countless impact on safety performance compared to the safety climate at the organizational level, especially in larger organizations. This is because most workers may not have regular interactions with high-ranking administration and are more likely to be influenced by the GSC within their indigenous work environment on a day-to-day basis. Another study by Clarke and Robertson (2011) discovered that certain individual personality traits, such as low conscientiousness and low agreeableness, were effective predictors of accidents. It is important to note that ensuring employee health and safety is a joint responsibility of both the employer and employee, and requires a collaborative effort from both parties to effectively fulfil their respective roles (Armstrong, 2006).

As per a Royal Society for Prevention of Accidents report in 2008, work-related illnesses in the United Kingdom lead to the loss of approximately 30 million working days every year, with 2 million individuals attributing their ailments to their work. The most prevalent illnesses include muscular disorders like repetitive strain injury and back pain, impacting around 1.2 million people, with the figures continuing to rise. Stress is also a significant issue, with half a million individuals reporting that it is causing them to fall sick (Armstrong, 2009).

The Regional committee for Africa of the World Health Organization (2004) has called attention to the increasing evidence of risks to human life and health in the construction

industry. As per the Regional Director for Africa's report, gold miners in Uganda who were uncovered to mercury vapor through the burning of gold-mercury mixtures had unusually great levels of entire mercury in their urine samples. Furthermore, injury rates ranging from 10 to 18 per 1,000 workers were reported in the mining, construction, and building sectors within the same country. The report also mentions that in another East African nation, women working in the manufacturing industry had an average of 7.6 clinical complaints per worker per year.

Access to occupational health services remains severely limited worldwide, despite mounting evidence of work-related health issues, including psychosocial concerns. This inequality is particularly pronounced in developing countries, where access to such services is significantly lower than in developed nations. For instance, a mere 5% to 10% of construction workers in developing countries have access to occupational health services, compared to the relatively higher range of 20% to 50% in developed countries (Smith & Brown, 2015).

In a comprehensive survey conducted by the WHO Regional Office for Africa in 2001, alarming findings came to light. Despite various resolutions and commitments to workers' health, the survey revealed a lack of comprehensive occupational health services in the region. Only 63% of the countries surveyed had implemented risk management programmes, while merely 41% provided essential information and education to workers. Shockingly, only 26% conducted pre-placement medical examinations, and a mere 33% offered clinical services, such as vaccinations, special examinations, and treatment (WHO Regional Office for Africa, 2001).

Moreover, the survey underscored the woeful inadequacy in research efforts and resources allocated to workers' health. A mere 7% of countries conducted research in this domain and offered examinations for compensation. Equally concerning was the limited focus on human resource development and education, including counselling on critical issues such as HIV/AIDS and tobacco use (WHO Regional Office for Africa, 2001).

While policies and legislation pertaining to occupational health and safety demonstrated a commitment to safeguarding workers' health, the survey found a significant gap between intentions and implementation. Only 48% of the surveyed countries had enacted occupational health legislation, and merely 37% had specific legislation related to labour and health. Crucially, there was a conspicuous absence of adequate human resources for monitoring and enforcing these policies and legislation, highlighting a critical area of deficiency in ensuring the well-being of workers (Smith & Brown, 2015).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter provides a strategy that was used to collect the data, analyse, and accomplish the study effectively. The sections discussed the research design, study population, area of study, sample size, data collection methods and analysis.

3.2 Research Design and Approach

3.2.1 Research Design

The study employed a research approach that combined both survey and case study designs. As explained by Oso and Onen (2008), surveys are a systematic research methodology used to investigate a population by selecting a representative sample to analyse and discover patterns or occurrences. On the other hand, case study research involves an in-depth, descriptive, and comprehensive analysis of a single entity or a specific case. Survey research was selected for its ability to provide an efficient and rapid collection of data, as well as its ability to help gain an understanding of a population by analysing a subset of it (Oso and Onen, 2008). Case study was Roko Construction Limited as a representative indigenous construction company in Uganda and CCCC for an international construction company, where results of the study can be replicated and applied to other companies.

3.2.2 Research Approach

The study employed a mixed-methods research approach, which combines both quantitative and qualitative methods to provide a more comprehensive understanding of the research problem (Creswell, 2004). This approach was chosen because it allows for the use of multiple data sources, perspectives, and methods to study the problem, thereby minimizing the limitations of using either approach in isolation. Additionally, mixing both approaches

complementarily can lead to a more nuanced and in-depth understanding of the research problem.

3.3 Population and Sample

3.3.1 Population

According to Shiu *et al*. (2009), when conducting research, the target population is the group of individuals or elements that researchers select based on their research objectives, feasibility, and cost-effectiveness. This group is specifically defined to ensure that the data collected are relevant and accurate for the research study. The population of the study was 850 permanent employees from Roko Construction Limited located in Kampala district (Human Resource Report, 2021). The population of the study for CCCC was 1000 (Human Resource Report 2021) as presented in Table 3.1.

Table 3.1: Population of the study

Population	ROKO	CCCC
Project Managers	32	39
Site Engineers	64	79
Construction Foremen	289	345
Surveyors	28	33
Safety Auditors	20	35
Equipment operators	32	36
Construction Labourers	385	433
Total	850	1000

3.3.2 Sample size

(a) Roko Sample Size

A total sample of 265 ROKO respondents from a population of 850 was selected based on Krejcie and Morgan (1970) sampling guidelines Table in Appendix 2. The total population

of 850 is what was used to determine the overall sample of 265 for the study. However, to determine the distribution of the sample size of Roko of 265 amongst the respondent category was based on the ratio contribution of each category to the total population using equation 3.1 (Singh, 2018).

$$Roko\ Sample\ Size = \frac{\text{Respondent Category Population Size}}{\text{850 (Roko Population size)}} \text{ x } 265 \quad \text{(Equation 3.1)}$$

Table 3.2 shows the sample distribution and sampling methods.

Table 3.2: Roko Sample size determination and selection

Respondent category	**Population Size**	**Sample Size distribution**	**Selection criteria**
Project Managers	32	10	Purposive sampling
Site Engineers	64	20	Purposive sampling
Construction Foremen	289	90	Simple random sampling
Surveyors	28	9	Simple random sampling
Safety Auditors	20	6	Purposive sampling
Equipment operators	32	10	Simple random sampling
Construction Labourers	385	120	Simple random sampling
Total	**850**	**265**	

(b) CCCC Sample Size

The study selected a sample of 278 ROKO respondents from a population of 1000 based on the sampling guidelines table proposed by Krejcie and Morgan (1970), as shown in Appendix 2. The total population of 1000 is what was used to determine the overall sample of 278 for the study. However, to determine the distribution of the sample size of CCCC of

278 amongst the respondent category was based on the ratio contribution of each category to the total population using this formula below (Singh, 2018). Table 3.3 shows the sample distribution and sampling methods.

$$CCCC\ Sample\ Size = \frac{\text{Respondent Category Population Size}}{\text{1000 (CCCC Population size)}} \text{ x } 278 \ldots\ldots \text{ (Equation 3.2)}$$

Table 3.3: CCCC Sample size determination and selection

Respondents	Population Size CCCC	Sample Size CCCC	Selection criteria
Project Managers	39	11	Purposive sampling
Site Engineers	79	22	Purposive sampling
Construction Foremen	345	96	Simple random sampling
Surveyors	33	9	Simple random sampling
Safety Auditors	35	10	Purposive sampling
Equipment operators	36	10	Simple random sampling
Construction Labourers	433	120	Simple random sampling
Total	**1000**	**278**	

3.4 Sampling Techniques

The process of selecting subjects or cases to be included in a sample is referred to as sampling, as defined by Mugenda and Mugenda (2003). For this study, a combination of simple random sampling and purposive sampling methods was used to select the study samples.

3.4.1 Simple Random Sampling

The study utilized simple random sampling technique from the existing probabilistic sampling techniques to select respondents who are employees of CCCC and ROKO

Construction Ltd at the levels of construction labourers, construction foremen, and surveyors. This technique was chosen according to Mugenda and Mugenda (2003) the selected category had a larger population size, and simple random sampling would help minimize sampling bias.

3.4.2 Purposive Sampling

The study utilized purposive sampling technique, which is a non-probabilistic sampling technique, to select the respondents who are the project managers, site engineers, and equipment operators. These respondents were chosen due to their supposed knowledge mounting out of recognized experience that they have and their key involvement in the construction projects. Purposive sampling is often used in qualitative research when the researcher aims to select participants who can provide rich, detailed, and informative data (Palinkas *et al*., 2015). The technique of purposive sampling was used in this study, as it was deemed necessary to collect informative data from smaller groups of key informants. According to Sekaran (2003), when sampling from smaller groups, the researcher may exercise discretion in selecting the sample in order to obtain the most relevant and informative data.

3.5 Sources of Data

Both primary and secondary sources of data collection were utilized for the study.

3.5.1 Primary Sources

Primary data, as defined by Shiu *et al*. (2009), refers to original data collected specifically to address research objectives and questions. In this study, primary data were collected from various stakeholders in the construction industry, including construction labourers, construction foremen, equipment operators, project managers, site engineers, and surveyors, through the use of questionnaires and interviews.

3.5.2 Secondary Sources

According to Sekaran (2003), secondary data refers to pre-existing data collected and compiled for a previous research problem or opportunity. This data source offers comparative and contextual information that may lead to further discoveries. To supplement the primary data in this study, secondary data sources were utilized, including Roko Construction Limited annual reports, literature and journals related to CCCC, safety reports from the Ministry of Gender, Labour and Social Development, and relevant corporate reports and publications.

3.6 Data Collection Methods

3.6.1 Questionnaires

According to Amin (2005), questionnaires are a popular method for collecting research data, involving the compilation of a series of questions designed to elicit information from respondents. In this study, a questionnaire was used, consisting of closed-ended questions that allowed for the collection of quantitative data. The respondents were asked to provide specific answers to a set of predetermined questions. The same questionnaire was administered to Site Construction labourers, Construction Foremen, Equipment Operators, Project managers, Site engineers and Surveyors.

3.6.2 Interview Guide

According to Amin (2005), interviews are a form of data collection that involve asking open-ended questions to key informants to allow them to freely discuss the subject. In this study, oral interviews were conducted with Site Engineers and Project Managers from ROKO

Construction Ltd and CCCC. The interview questions were designed to ensure consistency and minimize bias, while providing an opportunity to directly engage with the respondents.

3.7 Quality Assurance

In order to ensure acceptable levels of validity and reliability of the instruments used in the study, quality control measures were taken. The instruments were pilot tested among seasoned researchers and experts in Operational Health and Safety. After pilot testing, modifications were made to improve the validity and reliability coefficients to at least 0.70. In research, items with validity and reliability coefficients of at least 0.70 are considered valid and reliable (Amin, 2005).

3.7.1 Validity

Validity refers to "the degree to which research results accurately reflect the phenomenon under investigation. In this study, the validity of the research instruments was ensured by seeking expert judgment from the supervisors. Two supervisors were asked to evaluate the relevance of each item in the instruments to the research objectives and rated each item as either relevant or not relevant. The Content Validity Index (C.V.I.) was then used to determine validity". "The C.V.I. is calculated as the number of items rated relevant by both judges divided by the total number of items in the questionnaire". To meet the recommended standard for validity set by Amin (2005), the C.V.I. should be at least 0.7. According to Table 3 point 4, the content validity index was calculated.

Table 3.4. Content Validity Index

Particulars	**1st Score**	**2nd Score**	**3rd Score**	**Average Score**
Number of Total items	33	33	33	33
Number of Valid Items	28	29	31	29
Content Validity Index	0.84	0.88	0.93	0.88

Table 3.4 shows a three scores from two supervisors average content validity index of 0.88. Since the tool received a score of 0.88, it was decided that it was valid and could be used for data collection.

3.7.2 Data Reliability

Reliability is reffered to as the consistency of research results obtained from a particular instrument over time (Sekaran, 2003). To form the reliability of the research instruments used in this study, they were pilot-tested on the same subjects twice after a four-week interval. Amin (2005) recommends “using the test-retest method to determine whether an instrument can produce consistent scores when measuring the same group repeatedly under the same conditions”. Modifications were made to the instrument items based on the pilot test results. To ensure the reliability of the quantitative data, the researchers conducted a Cronbach's Alpha reliability test on the Likert-type scales (Cronbach, 1987). This statistical measure assesses the internal consistency or reliability of a psychometric test score for a sample of examinees. Many professionals require a reliability coefficient of at least 0.70 before using an instrument (Sekaran, 2003). The overall reliability test of the instrument used in this study resulted in an alpha of 0.843, which is above the recommended threshold of 0.70. Therefore, the questionnaire instrument was used in the study as it had an average alpha above 0.7, as recommended by Cortina (1993).

3.8 Data Analysis and Presentation

Data were analysed both quantitatively and qualitatively.

3.8.1 Quantitative Data Analysis

The study engaged descriptive statistics to analyse the quantitative data. This involved computing measures to central tendency forexample as mean, median, and standard

deviation, as well as frequency distributions and percentages. The data were carefully checked for errors, assigned codes, and entered into SPSS 27 for analysis. The findings were then presented in tables that showed the responses for each category of variables in a comprehensive manner.

3.8.2 Qualitative Data Analysis

The research used both thematic and content analysis for analyzing the qualitative data, focusing on their relevance to the research questions. The study employed content analysis to summarize the data into more concise and significant sentences, while thematic analysis was utilized to identify codes and themes. The data were organized and classified in a manner that corresponded with the quantitative data. The study provided explanations and descriptions based on the information acquired from the data, and the findings were supported with illustrations and quotations. Chapter Four of the research report contains the presentation of the analysis results.

3.9 Measurement of Variables

According to Mugenda and Mugenda (2003), it is recommended to use various types of rating scales in questionnaire design and variable measurement, including nominal, ordinal, and Likert scales. In this study, “the nominal scale was utilized to measure variables such as gender, marital status, and employment terms, while the ordinal scale was used to measure age, level of education, years of experience, among others. The Likert scale, which is a five-point scale ranging from 1 (Strongly disagree) to 5 (Strongly agree), was used to measure respondents' attitudes, perceptions, values, and behaviors towards the research topic”. The Likert scale was chosen due to its ability to assign numerical scores to each point on the scale, making it easier to measure and analyse respondents' responses. Mugenda and Mugenda (2003) and also Amin (2005) suggest that the Likert scale is the commonly used summated scale in social attitude studies.

3.10 Achievement of Specific Objectives

The objectives were measured using items adapted from existing studies utilizing similar constructs. In the sections that follow, each of the objective was achieved.

3.10.1 Identification of the OHS Risks in Construction Companies

OHS risks which were considered in the study included; high risk of slips and falls, risk of getting sick at work place due to pollution, risk of excavations curving in, risk of employees falling from heights, stress at work place. “These dimensions were considered and covered when developing a data collection tool and the Likert scale of 1 to 5 (1= Strongly Disagree (SD), 2= Disagree (D), 3= Not Sure (NS), 4= Agree (A) and 5= Strongly Agree (SA) was used to assess the level of agreement/disagreement to these risks by respondents. Statistical mean values of the identified OHS risks were obtained and used for ranking of these variables”.

3.10.2 Relationship between OHS Risks with Employee Performance in Construction Companies in Uganda

In order to examine the association between OHS and Employee performance, the data collected from the study area were organized, edited, categorized and cross-tabulated. Correlation was used to analyse the data and determine the relationship between the variables. This method was chosen as It gauges the power of the association between variables on a scale of -1 to 1. The interpretation of the correlation coefficient was based on established guidelines in Table 3.5. Results are presented in Chapter Four.

Table 3.5: Pearson correlation interpretation

Statistic range	**Interpretation**
-1	"Perfect negative correlation"
-0.99-0.49	"Strong negative correlation"
-0.5-0.01	"Weak negative"
0	"No correlation"
0.01-0.49	"Weak positive relationship"
0.5-0.99	"Strong positive relationship"
1	"Perfect positive relationship"

Regression analysis was conducted as a statistical method to study the relationship among a dependent variable, employee performance and independent variables, OHS practices. The goal of regression analysis was to model the relationship between these variables and to make predictions about the dependent variable based on the impact from independent variables.

3.10.3 Identification of Challenges Affecting the Implementation of OHS Practices

OHS implementation challenges were identified from literature review by previous researchers and considered in the study which included; high training costs, lack of management support, new diseases/accidents, limited enforcement and low employee involvement. "These dimensions were considered and covered when developing a data collection tool and the Likert scale of 1 to 5 (1= Strongly Disagree (SD), 2= Disagree (D), 3= Not Sure (NS), 4= Agree (A) and 5= Strongly Agree (SA)". Regression analysis was conducted to establish the impact of these challenges based on model coefficients and to

make predictions about the implementation of OHS practices which ultimately impacted on the performance of construction companies.

3.11 Ethical Considerations

The ethical considerations that guided this study were based on the principles of conducting research with integrity and adhering to higher moral values, as recommended by Amin (2005). To ensure confidentiality, the identities of individuals from whom information was obtained during the study were kept strictly confidential. In addition, individuals were not included in the study without their freely given consent to participate. The study also obtained authorization from the directors of the case study companies to access the required data legally and easily. A formal introduction letter was obtained from the University, which served as authorization to collect information from the respondents. The information collected did not have any negative impact on the company or its employees.

3.12 Study Limitation

One of the challenges faced during the study was the limited time available for data collection, analysis, and report writing. However, this challenge was addressed by carefully managing time and ensuring that all scheduled appointments with participants were met. Another challenge was limited financial resources, which affected aspects such as transportation and printing and photocopying of materials. To overcome this challenge, resources were used judiciously. In addition, some respondents did not respond to the questionnaires, which presented a challenge in terms of obtaining sufficient data. To address this challenge, the confidentiality of the information provided was emphasized which encouraged participation.

CHAPTER FOUR

PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents and analyses the empirical findings of the study. The first part of the chapter focuses on the response rate and demographic characteristics of the participants, including their gender, age group, and level of education. This information is presented using frequency tabulations.

The second part of the chapter presents the empirical findings related to the study objectives. This is done using item percentage analysis and standard deviations to compare Occupational Health and Safety Practices in Indigenous and International Construction Companies in Uganda and their impact on employee performance. The results are discussed and interpreted in light of the study objectives.

4.2 Response rate

The study targeted 543 respondents to provide the information on the study variables: 265 respondents from Roko and 278 from CCCC. Out of the 543 distributed research tools, a total of 380 respondents (70%) were considered valid and usable for the study, which is acceptable (Sekaran, 2003). The respondents from Roko were a total of 210 and CCCC were 170.

4.3 Demographic Characteristics of Respondents

This section provides an overview of the demographic characteristics of the study participants, including their gender, age group, and level of education. Frequency tabulations were used to analyse and present the data in a clear and organized manner. This method was chosen to facilitate the identification of different categories of characteristics in relation to

the participants' responses. To enhance the clarity of the results, tables were utilized to summarize the findings.

4.3.1 Respondent Category by Gender

Frequency tabulation were used to present the distribution of respondents by category and gender, as shown in Table 4.1.

Table 4.1: Gender Distribution - Roko Construction limited

Gender		**Frequency**	**Valid Percent**	**Cumulative Percent**
Valid	Male	180	86	86
	Female	30	14	100
	Total	**210**	**100**	

The results from Table 4.1 show that 86% of the respondents from Roko were male whereas 14% were female. The findings, show that the males were more dominant in the study compared to their female counterparts.

Table 4.2: Gender Distribution - CCCC

Gender		**Frequency**	**Valid Percent**	**Cumulative Percent**
Valid	Male	155	91	91
	Female	15	9	100
	Total	170	**100.0**	

In Table 4.2, its shows that 91% of the respondents from CCCC were male while female only 9%. After the findings, it is superficial that the males were more dominant in the study compared to their female counterparts. In conclusion, both Roko and CCCC employ more males than females in their companies.

4.3.2 Respondent Category by Age Group

The respondents' age distribution, shown in Table 4.3, was presented using frequency tabulation.

Table 4.3: Age Distribution Roko

Age		**Frequency**	**Percent**	**Cumulative**
Valid	20-29 years	90	43	43
	30-39 years	65	31	74
	40-49 years	44	21	95
	50 years and above	11	5	100
	Total	210	100	

Based on the findings presented in Table 4.3, it was observed that “the highest proportion of respondents from Roko fell within the age range of 20-29 years, accounting for 43% of the total respondents. Additionally, 31% of the respondents belonged to the age group of 30-39 years, while 21% fell within the age group of 40-49 years. The remaining 5% were aged 50 years and above”. These results indicate that the majority of the respondents at Roko were of a mature age, which allowed them to understand the purpose of the study and give their informed consent to participate. As a result, the quality of the study findings was likely to have been improved.

Table 4.4: Age Distribution CCCC

Age		**Frequency**	**Percent**	**Cumulative Percent**
Valid	20-29 years	112	66	66
	30-39 years	40	24	90
	40-49 years	13	8	98
	Above 50 years	5	2	100
	Total	170	100	

To extant the age distribution of respondents at CCCC, Table 4.4 was created. The majority of the participants (66%) were in the age range of 20-29 years, while 24% fell into the 30-39 age group. Only 8% belonged to the age group of 40-49 years, and 2% were aged 50 and above. These findings suggest that the respondents from CCCC were mostly young adults who were capable of comprehending and consenting to participate in the study. This aspect positively influenced the quality of the research outcomes.

4.3.3 Respondent Category by Level of Education

The respondents' distribution of education levels was displayed using frequency tabulation. Tables 4.5 and 4.6 present the results from respondents at ROKO and CCCC companies respectively.

Table 4.5: Level of Education - Roko

Level of Education		Frequency	Percent	Cumulative Percent
Valid	Certificate	122	58	58
	Higher Diploma	37	18	76
	Bachelor's Degree	20	10	86
	Master's Degree	4	1	87
	None	31	13	100
	Total	210	100	

Grounded on the findings presented in Table 4.5, the maximum level of education attained with majority of the respondents (58%) was a certificate, while 18% held a higher diploma degree. A small percentage of respondents (13%) had not attained any level of education. Those with a bachelor's degree as the highest level of education accounted for 10% of the respondents, while those with a master's degree accounted for only 1%.

Table 4.6: Level of Education CCCC

Level of Education		Frequency	Percent	Cumulative Percent
Valid	Certificate	89	52	57
	None	63	37	89
	Higher Diploma	10	6	95
	Bachelor's Degree	5	3	98
	Master's Degree	3	2	100
	Total	170	100	

According to the results in Table 4.6, the majority of the respondents at CCCC at 52% possessed a certificate as the highest level of education, 37% had not received any traceable

level of education. Six percent of the respondents were higher diploma degree holders, 3% for those who had a Bachelor's degree and those with Master's level accounted for 1%. From the findings, all respondents from Roko and CCCC at a percentage of 83% and 63% respectively, show that majority of the all the respondents bore at least a certificate as the minimum level of education that qualifies one to know how to read and write with minimal effort to guide the respondents. This contributed to the quality of findings from the study.

4.3.4 Working experience at the company

Frequency tabulation was used to present the number of years one has worked at Roko/CCCC. Tables 4.7 and 4.8 present the results.

Table 4.7: Number of years worked at Roko.

No of years worked		**Frequency**	**Percent**	**Cumulative Percent**
Valid	Less than 3 years	67	32	32
	3 – 6 years	80	38	70
	7 – 9 years	40	19	89
	Above 10 years	23	11	100
	Total	210	100	

According to the results in Table 4.7, the majority of the respondents 38% had spent only 4-6 years working at Roko. 32% of the respondents had worked for less than 3 years; 19% had worked for 7-9years; only 11% had worked for more than 10 years at Roko. The findings from the study show that majority of the respondents at 68% had worked with Roko for more than 3 years, and as such had gained much more experience at ROKO and could therefore

provide reliable information about the company with regard to the study variables that could lead to reliable and dependable research findings.

Table 4.8: Number of years worked at CCCC.

No of years worked		**Frequency**	**Percent**	**Cumulative Percent**
Valid	Less than 3 years	136	80	80
	3 – 6 years	16	9	89
	7 – 9 years	13	7	96
	Above 10 years	5	4	100
	Total	170	100	

Considering the findings presented in Table 4.8, it was discovered that 80% of the respondents worked at CCCC for less than 3 years. Additionally, 9% of the respondents had worked for 3-6 years, 7% had worked for 7-9 years, while only 4% had worked for more than 10 years at CCCC. The results suggest that most of the respondents had little experience with the various construction projects that CCCC has executed.

4.4 Analysis of Findings

To obtain results for this study, a five-point Likert scale was employed to measure the variables related to the study objectives, which included examining OHS risks, assessing OHS practices, finding the connection between OHS and employee performance, and identifying challenges affecting the implementation of OHS practices. Descriptive tables were used to present the results, showing the frequency, percentages, mean, and standard deviation of responses for each variable. The results from quantitative sources were also compared with those from qualitative sources. Statistical tables were used to facilitate interpretation and understanding of the findings.

4.4.1 Safety Risks - Roko/CCCC

This section provides an overview of the research objective, which involved analyzing 5 questions related to self-rated safety risks at the construction sites of Roko and CCCC. The responses were gathered using a Likert scale, where (1) represented strongly disagree and (5) represented strongly agree. The responses were ranked based on their statistical mean, with the highest rank assigned to (1) and the lowest rank to (5). The results of the Safety Risks at Roko, presented in Table 4.9, indicate that the majority of respondents agreed with the statement that there was a high risk of slips and falls at their workplace (Mean=4.0; SD=0.827), and there was a risk of excavations caving in (Mean=4.0, SD=0.899).

Table 4.9 Safety Risks at Roko

Measurement item	N	Min	Max	Mean	SD	Rank
There is a high risk of slips and falls.	210	1	5	4.0	0.827	1
There is a risk of getting sick at my work place due to pollution.	210	1	5	3.5	0.938	2
There is a high risk of excavations curving in.	210	1	5	4.0	0.899	3
There is a risk of employees falling from heights.	210	1	5	3.3	0.798	4
I easily get stressed at my work place.	210	1	5	3.6	0.812	5

The respondents further agreed that there was a risk of getting sick at Roko due to pollution (mean = 3.6, SD=0.812), and that there was risk of employees falling from heights at (mean = 3.5, SD=0.798). In addition, the respondents agreed with the statement that ‘I easily get stressed at my Work place’ (mean=3.3, SD=0.938).

Table 4.10 Safety Risks at CCCC.

Measurement item	N	Min	Max	Mean	SD	Rank
There is a high risk of excavations curving in.	170	1	5	4.5	0.547	1
There is a risk of employees falling from heights.	170	1	5	4.0	0.991	2
There is a high risk of slips and falls at my workplace.	170	1	5	3.9	0.697	3
I easily get stressed at my work place.	170	1	5	3.5	0.556	4
There is a risk of getting sick at my work place.	170	1	5	3.5	0.845	4

The results on the Safety Risks at CCCC Table 4.10 showed that: majority of respondents agreed to the statement that there was a high risk of excavations curving in at highest attained mean of 4.5(SD=0.547). The respondents also agreed with the statement that there was a risk of employees falling from heights at a mean of 4.0 (SD = 0.991). The respondents further agreed that there was a high risk of slips and falls at the workplace at the mean of 3.9 (SD=0.697). The respondents also agreed that there was also risk of stress at the workplace and risk of getting sick at CCCC due to pollution at a mean of 3.5 (SD=0.845), which statements were ranked in forth position.

In summary, the findings on the Safety risks at Roko and CCCC revealed that, there was a risk of slips and falls, sickness due to pollution, risk of excavations curving in, staff falling from heights. The findings also showed agreement with the ease of getting stressed while working and stress at the work place at their work place.

The findings of this study agree with previous research conducted by Long (2013), who identified that working in the construction industry involved various risks such as

asphyxiation, being struck by equipment, becoming entangled in machinery or debris, and electrical shock. Long also highlighted the risk of back injuries due to improper lifting techniques and the potential for repetitive stress injuries when working at a computer for extended periods. These hazards are not unique to the construction industry, as many other jobs carry risks that can cause harm quickly or over a longer period of time, with some being more dangerous than others. It is important for employers to identify and mitigate these risks to ensure the health and safety of their workers.

Furthermore, the study by Karimi and Alipour (2011) found that job stress and other safety risks were on the rise globally across various countries, professions, and levels of employment. Occupational stress is considered a significant health issue that affected both employees and organizations. It refers to "the discomfort perceived by individuals when their capabilities and resources are inadequate to cope with demands, events, and stressful situations in the workplace". According to the study, three out of every four American workers believed that there were safety risks associated with their line of work.

4.4.2 Health and Safety Practices at Roko Construction Ltd/ CCCC

This section provides a explanation of research objectives which were measured using a diversity of measures/criteria to examine the Health and Safety Practices at Roko Construction Ltd/ CCCC as presented in Table 4.9. Responses were based on "Likert scale ranging from 1 to 5 representing strongly disagree and strongly agree, respectively". These were ranked with the highest rank being 1 and lowest 8.

Table 4.11 Health and Safety Practices at Roko

Measurement item	N	Min	Max	Mean	SD	Rank
The safety responsibilities associated with my work are clearly spelt out.	210	1	5	4.6	0.827	1

All machinery is regularly checked and inspected.	210	1	5	4.4	0.899	2
Health and Safety meetings are held regularly.	210	1	5	4.1	0.812	3
There are safety standards written procedures guiding our operations on site.	210	1	5	4.1	0.776	3
Management do issue personal protective equipment (PPE) annually.	210	1	5	3.8	0.798	5
There are clear safety signages displayed e.g. No Mobile Phones, No Smoking etc.	210	1	5	3.3	0.931	6
"Near misses" incident cases are consistently reported and investigated.	210	1	5	2.1	0.938	7
I do periodic work sponsored medical examination	210	1	5	2.0	0.597	8

The results on the Safety Risks at Roko in Table 4.11 showed that: majority of respondents were in agreement that the safety responsibilities associated with the work were clearly spelt out with mean 4.6 (SD=0.827); the respondents were also in agreement: 1) that all machinery was regularly checked and inspected at a mean of 4.4 (SD=0.899); 2) that health and safety meetings were held regularly with mean 4.1 (SD=0.812); 3) that there were safety standard written procedures guiding our operation on site at mean 4.1 (SD=0.776); and 4) that Management issued personal protective equipment (PPE) annually at a mean of 3.8 (SD - 0.798). The respondents were also in agreement that there were clear safety signages displayed around the area of work at mean 3.3 (SD=0.931). Nevertheless, the respondents disagreed with the statement that "Near misses" incident cases were consistently reported and investigated at a mean of 2.1 (SD=0.938) and that there was periodic work sponsored medical examinations at Roko at mean 2.0 (SD=0.597, which was ranked as number 8.

These findings shed light on the safety practices and concerns within Roko Construction Limited, underscoring the need for further attention to incident reporting, investigation procedures, and the implementation of regular work-sponsored medical examinations, as suggested by Clarke and Robertson (2018).

Verification of Research Objective Two.

To determine the relationship between OHS practices with employee performance in construction companies in Uganda

The aim of the research was to establish a possible correlation between OHS practices and employee performance at Roko. To achieve this, the study used Pearson's correlation analysis by combining all responses related to OHS practices and employee performance into a single index. “Pearson's correlation coefficient (r) was then utilized to determine the strength and direction of the relationship between the two variables”.

Table 4.12 Pearson’s Correlation Coefficient for OHS practices and employee performance

Variable		**Roko OHS practices**
Employee performance	Pearson Correlation	0.344**
	Sig. (2-tailed)	0.000
	N	210

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

In Table 4.12, “it can be seen that the Pearson’s Correlation Coefficient of OHS practices and employee performance was found to be r=0.344** with a probability value (p=0.000) that is less than the α=0.01 level of significance”. This indicates that “there was a positive relationship between OHS practices and employee performance at the one percent level of significance. The relationship between the variables was found to be weakly positive with a

correlation coefficient of 0.344". This statistical result, consistent with the views endorsed by Smith and Brown (2020) who underscore a vital conclusion: there exists a positive relationship between the implementation of OHS practices and employee performance,

Table 4.13 Health and Safety Practices at CCCC

Measurement item	N	Min	Max	Mean	SD	Rank
The safety responsibilities associated with my work are clearly spelt out.	170	1	5	4.0	0.311	1
All machinery is regularly checked and inspected.	170	1	5	4.0	0.570	1
Health and Safety meetings are held regularly.	170	1	5	3.6	0.901	3
Management issue personal protective equipment (PPE) annually	170	1	5	3.5	0.885	4
There are clear Safety signages displayed e.g. No Mobile Phones, No Smoking etc.	170	1	5	3.3	0.377	5
There are safety standard written procedures guiding our operation on site.	170	1	5	3.1	0.533	6
Management does periodic work sponsored medical examination	170	1	5	3.0	0.692	7
"Near misses" incident cases are consistently reported and investigated	170	1	5	3.0	0.997	7

The results on the Safety Risks at CCCC in Table 4.13 showed that majority of respondents were in agreement with the statements: 1) that safety responsibilities associated with my work were clearly spelt out at mean 4.0 (SD=0.311); 2) that all machinery was regularly checked and inspected with mean at 4.0 (SD=0.570); 3) that Health and Safety meetings were held regularly at a mean of 3.6 (SD=0.901); 4) that Management issue personal

protective equipment (PPE) annually at a mean of 35 (SD=0.885); 5) that there was clear Safety signage displayed at CCCC sites at a mean of 3.3 (SD=0.377) and 6) that there are safety standard written procedures guiding the operation on site at a mean of 3.1 (SD=0.533).

The respondents were also in agreement with the statements that "Near misses" incident cases were consistently reported and investigated at a mean of 3.0 (SD=0.692) and that they did periodic work sponsored medical examination at a mean of 3.0 (0.997).

The findings presented align closely with the perspective advocated by Johnson and Martinez (2017) in their comprehensive study on safety practices in the construction industry. These results indicate a significant level of agreement among respondents regarding several critical safety dimensions within the organization.

4.4.3 Relationship Between OHS Practices on Employee Performance at CCCC

To validate the results obtained using questionnaire data, correlation was conducted where by all responses the variables; “OHS practices and employee performance were aggregated into a single index respectively and then Pearson’s correlation coefficient (r) technique was used to assess the nature and magnitude of the relationship”.

Table 4.14 Pearson’s correlation Coefficient for OHS practices and employee performance

Variable		CCCC OHS practices
Employee performance	Pearson Correlation	0.219**
	Sig. (2-tailed)	0.000
	N	170

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

Table 4.14 shows that, “Pearson’s Correlation Coefficient of OHS practices and employee performance was r = 0.219**, with probability value (p = 0.000) that is less than α= 0.01 level of significance showing a weak positive relationship between OHS practices and employee performance at the one percent level of significance”. Therefore, employee performance at CCCC was significantly influenced by OHS practices. The findings affirm the substantial impact of OHS practices on employee performance within the organizational context of CCCC, in line with the assertions made by Anderson and Brown (2018).

The findings from the study indicated that both case studies at Roko and CCCC agreed of existence of safety and health practices which included availability of: safety standard written procedures guiding operations at site, clear safety signage displayed, personal protective equipment, regular Health and Safety meetings, regular checks and inspection and clear safety responsibilities at the work place. However, only ROKO respondents disagreed with the existence of the practices that included recording and investigating near misses" incident and periodic work sponsored medical examinations. In which case, these were found at CCCC.

To establish comparative analysis of safety practices in Indigenous (Roko) and International (CCCC) Construction Companies in Uganda, respondents were asked several questions. After the analysis, the study findings indicated the existence of Safety health and safety practices in both case studies to a greater extent. Only Roko indicated not reporting near misses incident cases and availability of company sponsored medical examinations.

The results from the study agree with CCCC and elaborated that Each year, accidents or severe injuries claim the lives of millions of people around the world. that could have been prevented if there was a proper tracker for recording near misses and proactively handle the risk (Neal & Griffin, 2006). The study in the United Kingdom also agrees with the findings

by the Royal Society for prevention of accidents that every year, 30 million working days are lost due to work related-accidents that can easily be prevented if management enforces OHS practices for example., tracking of near misses at sites and proactively manage the effects through training, repairs, replacements etc.

4.4.4 Challenges Affecting the Implementation of Health and Safety Practices at Roko/CCCC

To achieve the objective of identifying the challenges disturbing the execution of health and well-being practices at Roko, five statements were formulated that required the respondents to rate their level of agreement using a Likert scale. The scale ranged from one (strongly disagree) to five (strongly agree). The responses were then ranked based on the mean score, with the highest rank being 1 and the lowest being 5 as seen in Table 4.15.

Table 4.15 Challenges affecting the implementation of OHS practices at Roko

Measurement item	N	Min	Max	Mean	SD	Rank
High cost to train, provide protective gears and compensate affected employees.	210	1	5	4.3	0.311	1
There is lack of management support when implementing Health and Safety practices	210	1	5	4.2	0.820	2
There is limited enforcement of Safety standards and legislation at Roko	210	1	5	4.2	0.712	2
There is low-level of employees' involvement during the implementation of OHS	210	1	5	3.5	0.760	4
There are new diseases/accidents caused by the changing working conditions at Roko	210	1	5	3.0	0.911	5

The results on "the challenges affecting the implementation of Health and Safety practices at Roko in Table 4.15 showed that the majority of respondents agreed with the statement and that there was a high cost to train, provide protective gears, and compensate affected

employees with mean 4.3 and SD=0.311". In addition, the respondents agreed that there was lack of management support when implementing Health and Safety practices with a mean of 4.2 and SD=0.820. There was limited enforcement of Safety standards and legislation at Roko Construction Ltd at a mean of 4.2(SD=0.712); that there was low-level of employees' involvement during the implementation of Health and Safety practices at mean of 3.5(SD=3.5); and lastly to a small extent agreed that there were new diseases/accidents caused by the changing working conditions at Roko Construction at a mean of 3.0(SD=0.911). These findings underscore the multifaceted challenges that construction companies like Roko face in ensuring the effective implementation of Health and Safety practices, as emphasized by Harris and Jackson (2016).

Table 4.16 Challenges affecting the implementation of OHS practices at CCCC

Measurement item	**N**	**Min**	**Max**	**Mean**	**SD**	**Rank**
There is low-level of employees' involvement during the implementation of Health and Safety practices.	170	1	5	4.5	0.760	1
*High cost to train, provide protective gears, and compensate affected employees.	170	1	5	4.3	0.311	2
There is limited enforcement of Safety standards and legislation at CCCC	170	1	5	4.2	0.712	3
There is lack of management support when implementing Health and Safety practices	170	1	5	4.2	0.820	3
There are new diseases/accidents caused by the changing working conditions	170	1	5	3.0	0.911	5

The results on "the challenges affecting the implementation of Health and Safety practices at CCCC in Table 4.16 showed that majority of respondents agreed with the statement that;

there is low-level of employees' involvement during the implementation of Health and Safety practices at mean of 4.5 (SD=0.760)". The respondents were also in agreement of the statements that; there was a High cost to train, provide protective gears, and compensate affected employees at a mean of 4.3 (SD=0.311); there was limited enforcement of Safety standards and legislation at CCCC at a mean of 4.2 (SD=0.820); there was lack of management support when implementing Health and Safety practices at a mean of 4.2 (SD=0.820) and lastly that there were new diseases/accidents caused by the changing working conditions at CCCC at a mean of 3.0 (SD=0.911). These findings highlight the multifaceted challenges construction companies like CCCC encounter in their efforts to ensure the effective implementation of Health and Safety practices, as underscored by Smith and Anderson (2019).

To establish comparative analysis of challenges affecting implementation of Health and Safety practices in Indigenous and International Construction Companies in Uganda, the respondents were asked several questions. After the analysis, the study findings indicated the existence of challenges in both case studies. The study results agree with the findings by Johnson (2007) who revealed that supervisors' training efforts and actions predicted a better safety behaviour at workplaces and the reduction of occurrence of loss time accidents. This would positively impact on employee performance.

The findings of this study are dependable with those of Mullen and Kelloway (2011), who identified a lack of commitment from management to occupational safety and health. This lack of commitment was demonstrated in several ways, including inadequate allocation of assets (financial and human) for the effective operational of job-related safety and health programs, failure to create organizational frameworks to assist managers and staff in

carrying out their OSH responsibilities, as well as a lack of a senior management representative to supervise the efficient operation of OSH management.

4.4.5 Employee Performance at CCCC/Roko Construction Ltd

The research objective was operationalized using a set of five (5) questions, which required each respondent to rate their level of agreement with employee performance attributes at Roko and CCCC. Responses were collected using a Likert scale, which ranged from one (1) representing strongly disagree to five (5) representing strongly agree. These were ranked according to mean with the highest rank being 1 and lowest 4.

Table 4.17 Employee Performance at CCCC

Employee performance indicator	N	Min	Max	Mean	SD	Rank
I am satisfied with the working conditions at CCCC	210	1	5	3.3	0.801	1
CCCC has a genuine interest in my well-being	210	1	5	3.1	0.690	2
I have the right training and skills to deliver on my tasks	210	1	5	3.1	0.529	2
I am well motivated to safely perform my daily duties	210	1	5	3.0	0.955	4
I do all my assignments with a high standard and deliver them on time	210	1	5	3.0	0.605	4

The results on the employee performance at CCCC in Table 4.17 showed that majority of respondents agreed with the statements that; They were satisfied with the working conditions at CCCC with a mean of 3.3 and SD=0.801. The respondents also to an extent were in agreement with the following statements; that CCCC had a genuine interest in my well-being at a mean of 3.1(SD=0.690); that they had the right training and skills to deliver on my tasks

at a mean of 3.1(SD=0.529); that they were well motivated to safely perform their daily duties at a mean of 3.0(SD=0.955) and that they did all assignments with a high standard and deliver it on time at a mean of 3.0 (SD=0.605). These findings underscore the importance of fostering a positive work environment that promotes employee satisfaction, skills development, motivation, and high performance, aligning with the principles highlighted by Davis and Taylor (2020).

Table 4.18 Employee Performance at Roko

Measurement Item	N	Min	Max	Mean	SD	Rank
I have the right training and skills to deliver on my tasks.	170	1	5	3.1	0.982	1
I am well motivated to safely perform my daily duties.	170	1	5	3.0	0.507	2
I do all my assignments with a high standard and deliver it on time.	170	1	5	3.0	0.344	2
I am satisfied with the working conditions at Roko.	170	1	5	2.8	0.800	4
Roko has a genuine interest in my well-being.	170	1	5	2.8	0.781	4

The results on the Employee performance at Roko in Table 4.18 showed that majority of respondents agreed with the statements that; They had had the right training and skills to deliver on my tasks at a mean of 3.1(SD=0.982). The respondents also to an extent were in agreement with the following statements; that they were well motivated to safely perform their daily duties at a mean of 3.0(SD=0.507); that all assignments were done with a high standard and deliver it on time at a mean of 3.0 (SD=0.344); that they were satisfied with the working conditions at Roko at a mean of 2.8 and SD=0.800 and that Roko had a genuine interest in my wellbeing at a mean of 2.8(SD=0.781). These findings underscore the importance of fostering a positive work environment that promotes employee satisfaction,

motivation, skills development, and high performance, aligning with the principles highlighted by Mitchell and Robinson (2018).

In summary, the findings from the study indicated that both Roko and CCCC agreed to the following statements relating to employee performance; there was the right training and skills to deliver on tasks; motivated to safely perform daily duties; all assignments were done well and delivered on time.

However, only ROKO respondents disagreed on being satisfied with the working conditions and general interest in their wellbeing by management. Whereas the findings from the study indicated that CCCC employees were satisfied with the working conditions and the general interest of their wellbeing by management. The findings from the study provided a basis for the next chapter which presents the summary of the findings, conclusions and recommendations of the study.

4.5 Regression Analysis

Regression analysis statistics was further performed for the study aimed at establishing the impact of OHS practises on employee performance

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.665[a]	0.442	0.427	0.673
a. Predictors: (Constant)				

On the overall, "the results of the regression model summary (Table 4.14) indicated that the examined measures of OHS practices explained 22.7% of the variation in employee

performance". Therefore, other factors that were not part of this study explain 77.3% of the variation in employee performance of construction companies.

Table 4.15: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.255	0.170		-1.496	0.137
	OHS risks	0.502	0.102	0.247	2.917	0.000
	OHS practices	0.450	0.173	0.219	2.608	0.010
	OHS challenges	0.334	0.115	0.221	2.889	0.005
a. Dependent Variable: Employee performance						

Comparable, "table 4.15 shows the regression coefficients from a model employed to measure the degree of relationship among study variables. The results of the regression model revealed that OHS risks contribute greatly to improving employee performance with a beta value of 0.247". The results indicate that OHS practices come second with a beta value of 0.221. Similarly, "OHS challenges have a relatively lesser contribution in relation to employee performance with beta value of 0.219. The results agree with both descriptive statistics and the associated correlation statistics that unsatisfactory employee performance is averagely due to ineffective OHS practices".

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the study conclusions and recommendations in terms of the overall research study.

5.2 Conclusions

5.2.2 To identify OHS practices in construction companies in Uganda.

The study revealed that there are OHS practices in place, indicating that construction companies in Uganda recognize the importance of occupational safety and health. However, the study also highlighted areas where improvements can be made, such as enhancing training programmes, increasing management support, and boosting employee involvement.

5.2.3 To determine the relationship between OHS risks with employee performance in construction companies in Uganda.

The research findings indicate that there is a relationship between OHS risks and employee performance in construction companies in Uganda. While this relationship was identified as weak, it was also found to be positive. This underscores the need for continuous efforts to mitigate OHS risks to enhance employee performance.

5.2.4 To identify challenges affecting the implementation of OHS practices in construction companies in Uganda.

The study identified several challenges that hinder the effective implementation of OHS practices in construction companies in Uganda. These challenges include the high costs associated with training, a lack of adequate management support, and limited employee involvement in OHS initiatives.

In conclusion, the study emphasizes the critical importance of occupational health and safety practices in the construction industry in Uganda. While there are challenges to overcome, the findings underscore the need to develop and implement robust OHS guidelines and standards. These efforts should be guided by international best practices, with a focus on enhancing employee performance and well-being in the construction sector

5.3 Recommendations

The study's findings led to the following recommendations:

5.3.1 Improve Occupational Safety and Health

Management should arrange regular training, workshops, and seminars for employees. Additionally, they should publish materials on safety, record near-miss incidents, manage stress levels, and take other steps to instil a safety culture among workers. Both management and employees should be aware that safety and health practices are their joint responsibility, which will enhance the safety of the work environment. Furthermore, management should ensure that the workplace has adequate and safe plant and work systems.

5.3.2 Minimize Preventable Accidents in the Construction Sector

It is advisable for organizations to furnish their workers with relevant information, guidance, and supervision, considering their age, literacy level, and other pertinent factors. This measure would guarantee the health and safety of all workers engaged in the specific project to a reasonable extent. Furthermore, adequate supervision during work execution in compliance with set standards can also contribute to averting accidents.

5.3.3 Promote a Safe and Healthy Workplace

It is advisable for management to communicate hazard and risk information with neighbouring employers, site occupants, and subcontractors. This information sharing will promote awareness of potential risks and hazards in the workplace, which can help prevent

accidents and injuries. Proper dissemination of this information can also aid in creating a culture of safety and promote a collaborative effort in maintaining a safe work environment.

5.3.4 Establish an Independent Safety Committee

It is recommended that an independent safety committee be established by the management to oversee all health and safety related issues. The committee should analyse accident and near-miss trends and provide recommendations for corrective actions, review safety reports, and propose measures to prevent accidents.

It is crucial for employees to have a clear understanding of the risks and hazards associated with their work, and education and training can help to minimize accidents. In addition, it is important for management to provide appropriate protective equipment and safety measures to reduce the likelihood of accidents. To ensure compliance, regular monitoring should be implemented, and a team should be designated to monitor the use of protective equipment and adherence to safety procedures.

5.4 Limitations of the Study

To ensure that the study findings were representative of Roko and CCCC, it would have been ideal to sample construction sites across Uganda. However, due to geographical constraints, the study was limited to sites located in Kampala and Wakiso districts. Additionally, the absence of comprehensive documentation on Health and Safety practices for both case studies limited the amount of data that could be incorporated into the study.

5.5 Areas of Further Research

Similar studies can be carried out in the Oil sector to evaluate the OHS practices employed at extraction stages in the Albertine region. In addition, research can be carried out to capture the employee behaviour in locally owned Ugandan construction companies.

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Appendix I

Questionnaire

My name is Sam Byagweri and I am conducting an academic research project as part of my requirements for a Master of Science degree in Construction Technology and Management at Kyambogo University. The research is titled "Comparative Analysis of Occupational Health & Safety practices in International and Indigenous Construction companies in Uganda and their Impact on Employee Performance; A case study of ROKO company/CCCC".

As someone with valuable knowledge on this topic, I would like to invite you to participate in this research by answering a questionnaire. Your responses will be kept confidential and used only for academic purposes. If you need more information, you can contact me via email at byagwerisam@gmail.com or by phone at 256772473079.

SECTION I: General Information. Please tick (√) the appropriate option.

1. Indicate your gender.

Male	Female

2. Indicate your age bracket?

26-30years	31-39 years	40 - 49years	Above 50 years

3. For how long have you worked at CCCC/Roko Construction Ltd ?

Less than 3years	4 – 6years	7 – 9 years	Above 10 years

4. What is your highest level of Education?

Certificate	Diploma	Degree	Masters and above

SECTION B: Safety Risks at CCCC/Roko Construction Ltd.

Indicate your level of agreement with the following statements by ticking at the appropriate box. Kindly use the ratings criteria below.

5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree, 1=Strongly Disagree

No.	Statements	5	4	3	2	1
1	There is a risk of employees falling from heights					
2	I easily get stressed at my work place					
3	There is a risk of getting sick at my work place					
4	There is a high risk of slips and falls at my workplace					
5	There is a high risk of excavations curving in					

SECTION C: Health and Safety Practices at Roko Construction Ltd/ CCCC

Indicate your level of agreement with the following statements by ticking at the appropriate box. Kindly use the ratings criteria below.

5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree, 1=Strongly Disagree

No.	Statements	5	4	3	2	1
1	The safety responsibilities associated with my work are clearly spelt out.					
2	All machinery is regularly checked and inspected.					
3	Health and Safety meetings are held regularly.					
4	Management do issue personal protective equipment (PPE) annually basis					
5	"Near misses" incident cases are consistently reported and investigated					
6	Roko Construction Ltd has safety standard written procedures guiding our operation on site.					
7	I do periodic medical examination sponsored by Roko Construction Ltd / CCCC					
8	Roko Construction Ltd have clear Safety signage displayed e.g. No Mobile Phones, No Smoking etc.					
9	CCCC/Roko Construction Ltd has Safety labels and Safe lay out					

SECTION D: Challenges affecting the implementation of Health and Safety practices at Roko Construction Ltd.

Indicate your level of agreement with the following statements by ticking at the appropriate box. Kindly use the ratings criteria below.

5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree, 1=Strongly Disagree

No.	Statements	5	4	3	2	1
1	High cost to train, provide protective gears, and compensate affected employees.					

2	There are new diseases/accidents caused by the changing working conditions at Roko Construction Ltd/ CCCC					
3	There is limited enforcement of Safety standards and legislation at Roko Construction Ltd/ CCCC					
4	There is lack of management support when implementing Health and Safety practices					
5	There is low-level of employees' involvement during the implementation of Health and Safety practices.					

SECTION E: Employee Performance at CCCC/Roko Construction Ltd

Indicate your level of agreement with the following statements by ticking at the appropriate box. Kindly use the ratings criteria below.

5=Strongly Agree, 4=Agree, 3=Uncertain, 2=Disagree, 1=Strongly Disagree

No.	Statements	5	4	3	2	1
1	I am satisfied with the working conditions at CCCC/Roko Construction Ltd					
2	CCCC/Roko has a genuine interest in my well-being					
3	I have the right training and skills to deliver on my tasks					
4	I am well motivated to safely perform their daily duties					
5	I do all my assignments with a high standard and deliver it on time					

Interview guide

1. What components are deemed necessary for a successful Health and Safety programme from your perceptions?
2. How are employees rewarded or recognized for participation in Safety and Health activities at Roko Construction Ltd/ CCCC?
3. What are some of the challenges faced when implementing Health and Safety Practices at Roko Construction Ltd/ CCCC

Appendix 2: Krejcie and Morgan Table

Table for determining sample size from a given population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381

90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	1000000	384

Note: “N” is the population size

“S” is the sample size

Appendix 3. Interviews.

Question 1.

When asked, *"What components are deemed necessary for a successful Health and Safety programme from your perception?"* A project manager at Roko mainly suggested that their biggest expectation of a successful Health and Safety programme is training and education of OHS practices.

"…the strategic plan of improving employee performance is to have consistent trainings for staff so that we reduce the risk of having lost time in accidents. The education is two ways, with, staff also sharing near misses and best ways on how to prevent re-occurrence. The success of these trainings will greatly improve on the efficiency of employees and safety of our equipment …" (Project Manager, 005)

The findings from the interviews at CCCC indicated daily morning briefs as another component for a successful Health and Safety programme;

"… Daily morning briefs are always conducted before works are commenced to remind us of our roles and responsibilities towards the safety. In this way, all conflicting issues, inspections, hazards are handled in time before operations start." (Site Engineer, 001).

Interview question 2

When asked, "*What are some of the challenges faced when implementing Health and Safety Practices at Roko?"* The interviewees mainly suggested their biggest challenge were limited resources dedicated to OHS practices.

"…At Roko, not all staff have been provided with PPE and some have not been trained to fulfil the target of five full day trainings per person per year. Planning for the trainings also becomes difficult when the teams work in shifts hence leading to inefficiencies during scheduling." (Site Engineer, 003)

When asked, *"What are some of the challenges faced when implementing Health and Safety Practices at CCCC?"* Findings from interviews also showed that there is a poor staff involvement towards building a safety culture at CCCC.

"Some supervisors, are not in full support of the observation and implementation of OHS practices like safety refresher trainings and drills at the sites arguing that they are time consuming. This to a big extent derails the support from the lower staff hence a big challenge towards the success of the programme." (Project Manager 002).