ST. MARY'S UNIVERSITY

SCHOOL OF POSTGRADUATE STUDIES

PROJECT MANAGEMENT PROGRAM

THE EFFECT OF CONSTRUCTION SAFETY MANAGEMENT PRACTICE ON EMPLOYEES PERFORMANCE: THE CASE OF GIFT CONSTRUCTION PRIVATE COMPANY

BY

MIHRET ABREHAM

February, 8, 2025

ADDIS ABABA

THE EFFECT OF CONSTRUCTION SAFETY MANAGEMENT PRACTICE ON EMPLOYEES PERFORMANCE: THE CASE OF GIFT CONSTRUCTION PRIVATE COMPANY

BY

MIHRET ABREHAM

ADVISOR: TEWODROS MEKONNEN (PhD)

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATES IN PARTIAL FULFILLMENT FOR THE REQUIREMENT OF THE DEGREE OF MASTERS OF PROJECT MANAGEMENT

February, 8, 2025

ADDIS ABABA

ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

THE EFFECT OF CONSTRUCTION SAFETY MANAGEMENT PRACTICE ON EMPLOYEES PERFORMANCE: THE CASE OF GIFT CONSTRUCTION PRIVATE COMPANY

BY

MIHRET ABREHAM

APPROVED BY BOARD EXAMINERS

---------- -	----------
Dean, Graduate Studies	Signature and Date
Tewodros Mekonnen (PhD)	
----------	----------
Advisor	Signature and Date
Yilekal Wassie (Asst.Prof.)	
----------	----------
External Examiner	Signature and Date
Hailemelkot Taye (Asst.Prof.)	
----------	----------
Internal Examiner	Signature and Date

DECLARATION

I, the undersigned, declare that this thesis entitled "The effect of construction safety management on employees performance; the case of Gift construction private company" is my original work, prepared under the guidance of Tewodros Mekonnen (PhD)All sources of materials used for this thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or full to any other higher learning institution for the purpose of earning any degree.

_____ _____

Name Signature

St, Mary's University, Addis Ababa December 2024

ENDORSEMENT

This thesis has been submitted to St. Mary's University, School of Graduate Studies for examination with my approval as a university advisor.

Tewodros Mekonen (PhD) _____

Advisor Signature

St, Mary's University, Addis Ababa December 2024

ACKNOWLEDGEMENT

First and foremost, I would like to express my deepest gratitude to God and His Mother for granting me the strength and perseverance throughout this academic journey. I am truly thankful to my thesis advisor, Tewodros Mekonnen (PhD), for his exceptional guidance and constant encouragement, which were essential in shaping this thesis. I am also deeply grateful to my friends, Mahilet Shiferaw and Melkamu Ameha, for their ongoing academic support and thoughtful insights, which played a significant role in the success of my research. Special thanks to my supervisor, Moges Cherinet, for his steady support and understanding throughout my research process. I would also like to acknowledge the employees of Gift Construction for their cooperation and willingness to participate in this study, without which this research would not have been possible. Finally, I am thankful to all my colleagues and everyone who helped me in any way during this journey; your contributions have been truly appreciated.

Table of Contents

Contents page

LIST OF TABLES

LIST OF FIGURES

ACRONYMS

SAHP - Safety and Health procedure

FAS - First Aid Support

OSS - Organizational Safety Support

TA – Training and Awareness

EP – Employee Performance

ABSTRACT

This study examines the effect of construction safety management practices on employee performance at Gift Construction Private Company. Using an explanatory research design and a quantitative approach, data were collected from 112 employees through a structured questionnaire. Statistical analyses were conducted using SPSS 23.0, including multiple linear regression analysis. The findings indicate that safety management practices, such as safety and health procedures, organizational safety support, first aid support, and training and awareness, significantly enhance employee performance by reducing workplace accidents and increasing efficiency. Leadership commitment, resource allocation, and systematic safety training were identified as key contributors to a safer work environment, ultimately improving employee productivity. Given that this study focused on a single company, future research is recommended to examine multiple construction firms to provide a broader perspective on the relationship between safety management and employee performance. The study highlights the need for construction companies to implement comprehensive safety policies, regular training programs, and proactive organizational support to create a secure and efficient workplace. These insights offer practical guidance for industry practitioners and policymakers seeking to improve workplace safety and optimize performance outcomes in construction.

Keywords: *Safety and Health Procedures, Organizational Safety Support, First Aid Support, Training and Awareness, Employee Performance.*

CHAPTER-ONE
INTRODUCTION

1.1. Background of the Study

The construction industry plays an essential role in economic development globally, providing necessary infrastructure, housing, and commercial buildings that drive growth. However, it remains one of the highest-risk industries, characterized by frequent accidents, hazardous working conditions, and complex coordination among stakeholders (Li et al., 2021). Studies in recent years have consistently shown that a safe working environment is crucial for enhancing employee performance, productivity, and satisfaction, as well as for minimizing project delays and cost overruns (Zhou et al., 2022). In contrast, unsafe environments can have detrimental effects, leading to injuries, absenteeism, and reduced morale, ultimately compromising project outcomes (Ahmed & Hassan, 2023).

According to safety performance theories, such as the safety culture model, a strong safety culture within an organization enhances employee compliance with safety regulations, ultimately improving performance and job satisfaction (Lee et al., 2022). Safety and Health Procedures, for instance, establish a structured approach to mitigating risks through regular audits and emergency response planning, which boosts employee confidence and efficiency (Johnson et al., 2022). Additionally, Organizational Safety Support, which includes the provision of safety resources and a supportive safety culture, directly influences employee motivation, as employees who feel safe and valued demonstrate higher engagement and loyalty to their organization (Almeida et al., 2023).

First Aid Support and Training also play an essential role, as proper training enables workers to respond appropriately to hazards, minimizing accidents and work disruptions (Kim et al., 2022). Risk management and safety training, according to cognitive-behavioral theory, allow employees to recognize hazards, respond efficiently, and avoid preventable accidents, fostering a sense of security and enhancing work productivity (Gomes et al., 2023).

In developing countries like Ethiopia, the construction sector's rapid expansion presents safety management challenges. For instance, Addis Ababa's construction industry faces challenges

such as limited resources, inadequate training, and weak enforcement of safety regulations (Teshome & Mulugeta, 2022). In these settings, the effect of safety management on employee performance is more pronounced, as employees in unsafe environments experience high stress levels, reduced productivity, and higher turnover rates (Chen et al., 2022). Research on safety procedures and risk management reveals that construction companies with well-implemented safety practices report fewer accidents, contributing to improved worker performance and project success (Boyle, 2015).

First aid support has also proven effective in reducing work disruptions and mitigating the severity of injuries. Ethiopian construction workers, for instance, often face physical, mechanical, and chemical hazards, necessitating immediate first aid access and regular safety training to ensure prompt responses to accidents (Asres, 2017). Evidence suggests that companies with comprehensive first aid support and training programs see fewer accidents and more stable employee performance due to higher vigilance and preparedness on-site (Davies & Wang, 2023).

In conclusion, the literature underscores the critical role of construction safety management in enhancing employee performance, satisfaction, and efficiency. Factors such as organizational safety support, effective safety and health procedures, first aid support, and training and awareness are shown to have a direct effect on employee outcomes. This study attempted to fill a gap in the literature by examining the effect of safety management on employee performance.

1.2. Statement of the Problem

The construction industry is a vital sector for economic growth, but it remains one of the most hazardous industries globally, with a high incidence of accidents and injuries (Zhou et al., 2022). Numerous studies have explored the relationship between safety management and employee performance in construction, consistently highlighting the critical role of safety in improving productivity, reducing accidents, and enhancing job satisfaction (Ahmed & Hassan, 2023; Smith & Brown, 2023). However, despite the increasing recognition of the importance of safety in the construction sector, significant gaps remain in understanding how safety management practices specifically influence employee performance, particularly in the context of developing countries

like Ethiopia, where rapid urbanization and construction growth demand stronger safety protocols (Teshome & Mulugeta, 2022).

The construction sector in Addis Ababa is rapidly expanding, fueled by both private and public investments. However, this growth has not been matched by a corresponding improvement in safety standards (Tesfaye & Mekonnen, 2021; Yonas, 2020). Studies conducted on construction safety in Ethiopia have primarily focused on regulatory challenges, accident reporting, and compliance with occupational safety laws. However, there is a lack of research directly linking safety management practices to employee performance and productivity outcomes within private construction companies like Gift Construction Private Company. As a company handling diverse and high-stakes projects, understanding how safety environments affect employee performance is critical to improving productivity, reducing workplace accidents, and ensuring successful project completion.

Lee et al. (2022) conducted a meta-analysis revealing that effective safety management practices positively influence construction performance metrics. Similarly, Chen et al. (2022) highlighted the significant relationship between safety management systems and performance outcomes, demonstrating improved efficiency and reduced accidents. Furthermore, studies in Europe and the United States have provided evidence that safety management systems, when properly implemented, lead to enhanced employee efficiency, reduced absenteeism, and improved motivation (Almeida et al., 2023). However, these findings are not necessarily generalizable to the Ethiopian context due to differences in regulatory frameworks, resources, and construction practices. This empirical gap highlights the need for localized research that explores the effect of safety management on employee performance within Ethiopia's unique construction environment.

In addition, there is a methodological gap in existing studies on safety practices in Ethiopia, as many rely on qualitative data from interviews and surveys. For instance, Yonas (2020) identifies challenges such as inadequate training and weak regulatory enforcement, while Teshome and Mulugeta (2022) highlight that gaps in training and communication hinder effective implementation. Although This study aims to address this gap by employing both qualitative and

quantitative methods to evaluate how safety environments and organizational support affect employee performance in Gift Construction.

Another key area of concern is the temporal gapin the literature. As construction techniques and technologies evolve, so too do the safety challenges faced by employees. Many of the studies in Ethiopia that focus on construction safety are now outdated, as they were conducted during periods of slower economic growth or before the introduction of newer safety technologies and training programs (Tesfaye & Mekonnen, 2021). Given the rapid growth of the construction sector in Addis Ababa in recent years, there is a pressing need for up-to-date research that captures the current safety landscape and its effects on employee performance.

The scientific rationale for this study lies in the critical need to bridge these knowledge and methodological gaps. By focusing on Gift Construction Private Company, which are pivotal in Ethiopia's construction boom, this study will provide essential insights into how safety management practices can be improved to boost employee performance. Furthermore, this research can inform policy makers and contractors on the importance of investing in safety management systems not only for compliance but as a strategic factor in enhancing productivity and minimizing workplace disruptions.

1.3. Research Questions

1. How does organizational safety support affect employees' performance at Gift Construction Private Company?

2.How do safety procedures affect employee performance at Gift Construction Private Company?

3.What is the effect of first aid support on employee performance?

4. What is the effect of training and awareness on employee performance?

1.4. Objective of the Study

1.4.1 General Objective

To examine the effect of construction safety management practice on employees' performance in Gift Construction Private Company.

1.4.2. Specific Objectives

1.To examine how organizational safety support influences employees' performance in Gift Construction Private Company.

2.To analyze the effects of employee performance in the study area.

3.To examine the effects of first aid support on employee performance in the study area.

4.To analyze how training and awareness influence employee performance.

1.5. Significance of the Study

This study aims to provide valuable insights into the effect of construction safety management on employee performance, focusing on Gift Construction Private Company. The findings will be particularly beneficial for construction companies, as they will better understand how effective safety management practices can enhance operational efficiency and performance. By identifying key safety measures and support systems, companies can reduce accidents and improve project outcomes, ultimately leading to increased profitability.

Employees stand to gain significantly from this research, as strengthened safety management practices directly contribute to enhanced job satisfaction and motivation. The study will shed light on the relationship between organizational safety support and employee morale, encouraging construction firms to invest in a safer work environment. This commitment to employee well-being fosters a culture of safety, leading to higher retention rates and a more motivated workforce.

Moreover, the insights gained from this study will be valuable for regulatory bodies involved in establishing construction safety standards. By providing evidence-based recommendations, the

research can inform policies that promote safer working conditions within the industry. Additionally, the findings will serve as a reference for academics and future researchers exploring related topics, contributing to a deeper understanding of construction safety management and its effects on employee performance. Ultimately, this study seeks to enhance safety practices within the construction sector, benefiting not only workers and companies but also the broader community by reducing workplace accidents and promoting public health.

1.6. Scope of The Study

Conceptual Delimitation: This study focuses specifically on the relationship between construction safety management practices and employee performance within the construction industry. It will explore key components such as safety procedures, organizational safety support, the role of first aid support and training and support in enhancing employee efficiency. The research will not cover broader aspects of occupational health and safety or delve into other industries outside of construction, ensuring a focused examination of safety management's effect in this specific context.

Time Delimitation: The study is based on data collected during the current year, 2024, to ensure relevance to contemporary practices and challenges within the construction industry. While existing literature may be referenced to provide a background, the primary data collection will be limited to this timeframe. This approach allows for an assessment of current safety management practices and their effects on employee performance, making the findings applicable to present-day conditions and challenges faced by Gift Construction Private Company.

Geographic Delimitation: The research is geographically confined to Gift Construction Private Company in Addis Ababa, Ethiopia. This specific focus allows for an in-depth analysis of safety management practices within the local context, accounting for regional construction industry dynamics and cultural factors. While the findings may have implications for other areas or countries, the study will not extend its analysis beyond the defined geographic boundaries, ensuring the results are contextually relevant.

Methodological Delimitation: The study uses employ quantitative approach surveys to gather comprehensive data on the effect of construction safety management on employee performance. The quantitative aspect involves structured questionnaires distributed to employees and management within the selected contractors. This methodological focus will limit the scope to

these specific research methods and exclude other approaches, such as observational studies or case analyses of non-construction-related organizations.

1.7. Definition of Key Terms

Construction Safety Management: This refers to the systematic approach of ensuring safety in construction processes through the implementation of safety policies, procedures, and practices that mitigate risks associated with construction activities. It encompasses planning, monitoring, and improving safety practices to protect workers and ensure compliance with regulations (Gambatese et al., 2018).

Employee Performance: Employee performance is defined as the effectiveness with which employees fulfill their job responsibilities and contribute to organizational goals. It includes various dimensions such as productivity, quality of work, adherence to safety standards, and overall job satisfaction (Borman&Motowidlo, 1997).

Organizational Safety Support: This term refers to the resources, policies, and practices provided by an organization to promote safety in the workplace. It includes safety training, safety equipment, and a culture that prioritizes employee well-being. Organizational safety support is crucial for enhancing employee motivation and job satisfaction (Neal & Griffin, 2006).

First Aid Support: First aid support refers to the immediate assistance provided to an individual suffering from an injury or illness at the workplace. It encompasses training employees in basic first aid techniques and providing necessary medical supplies and resources to address health emergencies effectively (Zee et al., 2020).

Safety and Health Procedures: These procedures typically include guidelines for safe operations, emergency preparedness, and routine safety checks, which are critical for fostering a safe work environment (International Labor Organization, 2022).

Training and Awareness: Such programs emphasize the importance of safe practices, familiarize workers with potential hazards, and promote a culture of safety and responsibility (Burke et al., 2011).

1.8. Organization of the Study

The paper is organized into five chapters. The first chapter introduces the study, covering the background of the study, statement of the problem, objectives of the study, significance of the study, scope of the study, and organization of the study. The second chapter presents a review of related literature, including theoretical and empirical studies relevant to the research topic, and concludes with the conceptual framework that outlines the study's key variables and their relationships. The third chapter describes the research methodology, detailing the data collection, analysis, and interpretation methods used to achieve the study's objectives. The fourth chapter provides the analysis, interpretation, and discussion of the findings. Finally, the fifth chapter concludes the study, presenting conclusions and recommendations based on the results obtained.

CHAPTER-TWO

REVIEW OF RELATED LITREATURE

This chapter reviews and provide valuable insights about construction safety management and performance. And also papers related with safety issues of both developed and developing countries are going to be reviewed in detail since it helps to see the safety management gaps seen in different parts of the world especially in the construction industry.

2.1. Theoretical Literature Review

The construction industry is notorious for its high incidence of accidents and fatalities. As such, effective safety management practices are paramount to ensuring the well-being of employees and enhancing their performance. This literature review examines the relationship between construction safety management and employee performance, focusing on recent research findings that highlight the importance of safety protocols in improving productivity.

2.1.1 Construction Safety Management

Construction safety management creates an environment that shields workers and stakeholders from construction-related dangers. Afzini and Neyestani (2011) define construction safety as systematic risk reduction for people, machinery, and the environment, emphasizing that safety protocols should extend beyond active construction to also cover maintenance and dismantling. This approach advocates for safety throughout the entire project lifecycle. Specifically, for Ethiopia's construction industry, where resources and regulatory enforcement may be limited, a proactive hazard prevention approach is essential (Afzini&Neyestani, 2011).

Safety practices in construction have evolved due to global frameworks, such as those by the International Labor Organization (ILO). By 2016, the ILO highlighted a shift from basic accident prevention to systematic, proactive approaches addressing core hazards. This broader strategy recognizes the importance of comprehensive safety management systems, which include risk assessments, safety training, and emergency preparedness. These methods not only protect workers but also reduce risks to people, property, and the environment (ILO, 2016). In Ethiopia, systematic safety management is especially relevant for Gift Construction Private Company, as it helps reduce accidents, enhance employee performance, and improve overall project outcomes

2.1.2 Element of Construction Safety

Several key elements contribute to construction safety program, each addressing specific aspects of workplace health and safety to create a secure and productive environment. These elements include safety and health procedures, first aid support, organizational safety support, and training and awareness. Each of these components plays a vital role in minimizing risks and enhancing overall workplace performance in high-risk sectors like construction.

2.1.2.1 Safety and Health Procedures

The International Labor Organization (ILO) highlights safety and health procedures as a fundamental right and responsibility in the workplace. These procedures are essential for preventing workplace injuries, illnesses, and fatalities, contributing to the creation of a productive and sustainable work environment. According to the ILO's conventions and recommendations, effective safety and health procedures should be proactive, focusing on the identification and mitigation of risks before they lead to harm. This proactive approach is particularly important in high-risk industries like construction, where hazards are more prevalent.

Safety and health procedures must be systematic and well-structured, encompassing hazard identification, risk assessment, and the implementation of control measures. The ILO emphasizes a participatory approach to this process, supporting for collaboration among employers, workers, and their representatives. Such cooperation ensures the development, implementation, and continuous review of safety practices. By embedding these procedures into every aspect of workplace operations, organizations can ensure that safety is prioritized in daily activities as well as in emergency response planning.

In high-risk workplaces such as construction, safety and health procedures are indispensable. Clearly defined safety protocols reduce workplace hazards, prevent accidents, and improve employee performance. Chen et al. (2020) demonstrate that organizations with well-established safety procedures experience fewer accidents because employees are more likely to follow established protocols. Additionally, effective communication of these procedures promotes collaboration and a shared focus on safety. This collaborative environment fosters employee confidence and enhances productivity.

2.1.2.2First Aid Support

First aid support is a critical component of workplace safety, especially in high-risk industries like construction. It ensures that employees receive immediate care for injuries or illnesses, minimizing the severity of incidents and improving overall safety outcomes. According to OSHA's 2023 guidelines, employers are required to provide adequate first aid resources, including trained personnel and appropriate supplies tailored to the specific hazards of the workplace. This is particularly important at construction sites where access to medical facilities may be limited.

OSHA emphasizes the importance of trained first aid providers in workplaces where medical facilities are not nearby. These trained individuals must be capable of handling workplace injuries and emergencies effectively. Additionally, first aid supplies must be maintained and inspected regularly to ensure they are sufficient and tailored to the potential risks at the site (OSHA, 2023). Assigning a responsible individual to oversee the readiness of first aid resources further enhances preparedness during emergencies.

For workplaces with higher risks, such as those with potential for cardiac events or electrical accidents, OSHA highlights the necessity of Cardiopulmonary Resuscitation (CPR) training and the availability of Automated External Defibrillators (AEDs). AEDs have been shown to significantly improve survival rates when used promptly during cases of sudden cardiac arrest (OSHA, 2023).

Tarekegin (2020) found that construction sites equipped with first aid kits and trained personnel experienced fewer severe incidents and better outcomes in managing minor injuries. This practice not only reduces downtime but also raises a sense of security among employees, contributing to their overall performance and satisfaction.

Khan et al. (2021) similarly emphasized that accessible first aid resources reduce the severity of injuries and fatalities during workplace accidents. Organizations prioritizing first aid measures report faster response times to emergencies, fostering a culture of safety that boosts employee morale and confidence. Additionally, effective first aid programs are associated with lower

absenteeism rates and reduced healthcare costs, as workers feel secure knowing help is readily available when needed.

To maintain the effectiveness of first aid support, OSHA recommends regular reviews of first aid programs, incorporating feedback from past incidents and ensuring compliance with current standards, such as those outlined by the American National Standards Institute (ANSI) (OSHA, 2023). Regular training and updates ensure that employees remain prepared to handle evolving risks, particularly in dynamic environments like construction.

2.1.2.3Organizational Safety Support

Organizational safety support is the commitment and resources provided by management to foster a safe working environment, which is especially vital in high-risk industries like construction. This support encompasses visible leadership, allocation of resources, and fostering a culture that prioritizes safety at all levels of the organization. OSHA's 2023 guidelines emphasize the pivotal role of management leadership in ensuring effective workplace safety and health programs. Management's commitment must be consistent and visible, integrating safety as a core organizational value across all business operations.

The foundation of effective organizational safety support lies in management leadership. OSHA (2023) highlights that management must model safety behaviors, such as adhering to safety protocols and wearing protective equipment, to demonstrate their commitment to workplace safety. This visible leadership ensures that safety considerations are embedded into every level of business planning, including resource allocation for training, protective equipment, and medical care.

Establishing clear, written safety policies is another critical element. These policies communicate the organization's dedication to safety and ensure that expectations are effectively disseminated to employees, contractors, and visitors. OSHA recommends that organizations set measurable and realistic safety goals to monitor progress and maintain accountability, further reinforcing the importance of safety as an organizational priority.

Active employee participation is another cornerstone of organizational safety support. Engaging employees in hazard identification and safety planning creates a sense of ownership, which enhances the overall effectiveness of safety programs (OSHA, 2023). Fostering open communication free from fear of retaliation encourages employees to report safety concerns and contributes to a proactive safety culture.

Effective organizational safety support directly impacts workplace safety outcomes and employee performance. OSHA (2023) asserts that when management provides adequate resources and clear communication, organizations can reduce workplace injuries, improve compliance with safety regulations, and enhance employee morale. By aligning safety initiatives with organizational goals, companies can foster a sense of trust and cooperation among employees, ultimately contributing to higher productivity and reduced operational disruptions.

2.1.2.4Training and Awareness

Training and awareness are critical components of workplace safety management, particularly in high-risk industries like construction. Effective training programs equip employees with the knowledge and skills needed to perform their tasks safely, reducing accidents and enhancing overall productivity. Tarekegin (2020) emphasizes that ongoing training is essential for improving employee performance and organizational efficiency. By enhancing workers' skills and competence, training not only boosts productivity but also increases job satisfaction and loyalty, as employees feel valued and supported. This emotional commitment fosters a sense of belonging, reducing turnover intentions and contributing to a stable workforce.

The World Health Organization (WHO) also highlights the pivotal role of safety training in improving workplace safety standards and performance. According to WHO, training employees on safety protocols and workplace hazard awareness significantly reduces accidents, injuries, and illnesses. It ensures workers understand how to use personal protective equipment (PPE) correctly and are prepared to handle risks and emergencies. Additionally, WHO emphasizes the importance of ongoing safety awareness programs to reinforce good practices and maintain vigilance over time. Such initiatives contribute to creating a proactive safety culture where employees remain constantly aware of potential hazards and mitigation strategies, enhancing their confidence and sense of security in the workplace.

In construction, regular training sessions, safety drills, and awareness programs are vital for cultivating a safety-conscious culture. Geller (2018) highlights that organizations investing in safety training benefit not only from improved employee well-being but also from reduced insurance costs, heightened morale, and increased productivity. A well-trained workforce aligned with safety practices is more engaged and capable of addressing workplace risks, leading to better performance outcomes

2.1.3 Employee Performance

Employee performance is indeed a key determinant in organizational success, especially in sectors like construction where the work environment presents unique risks and challenges. As highlighted by Wright (2005), safety management plays a central role in improving employee performance by reducing accidents and fostering a sense of security. When employees feel safe, they are more motivated, leading to increased productivity and job satisfaction. Research by Neal and Griffin (2006) also supports this idea, suggesting that safety climate the shared perceptions of safety in the workplace positively influences employees' attitudes and behaviors, ultimately contributing to higher performance outcomes.

In the construction industry, where workers face significant physical risks, safety is not just about compliance but is integral to operational success. According to Lingard (2002), construction companies that prioritize safety are likely to experience fewer workplace accidents, which directly contributes to maintaining steady project timelines and ensuring high-quality outcomes. As a result, employees are more likely to feel engaged and motivated when they know their safety is prioritized, leading to improved efficiency, reduced absenteeism, and greater overall performance.

Additionally, research by Griffin and Neal (2000) underscores that safety culture, built on trust and shared safety goals, directly impacts employee performance. A positive safety culture encourages employees to act responsibly and contribute to safety protocols, knowing that their well-being is being actively supported. This, in turn, enhances both individual and collective performance by reducing risks, preventing injuries, and creating an environment conducive to high-quality work.

2.1.4The Relationship between Construction Safety Management and Employee Performance

In the construction industry, there's a strong connection between safety management and employee performance. Construction work exposes employees to many hazards like falls, equipment accidents, and chemical exposure which makes a solid safety management approach essential. By putting in place systematic processes, clear policies, and safety focused practices, companies work to prevent on site accidents and injuries (Zhou et al., 2022). Effective safety management often involves several elements: safety training, adherence to strict protocols, regular risk assessments, and a strong safety oriented culture. Together, these practices not only protect workers but also have a positive effect on how well they perform on the job.

When companies prioritize safety, studies show that employees feel more secure, which increase their job satisfaction and reduces stress (Ahmed & Hassan, 2023). This sense of security helps employees focus better on their tasks, enhancing both their productivity and quality of work. Knowing that their safety is valued makes employees more engaged and loyal, which can reduce turnover rates (Neal & Griffin, 2006). Regular training and accessible first aid support, for instance, help workers feel prepared to handle emergencies, contributing to their well-being and job satisfaction (Khan et al., 2021).

The International Labor Organization (ILO) in 2016 emphasized that construction safety management has evolved from basic accident prevention measures to comprehensive, systematic approaches aimed at reducing workplace hazards. The ILO highlighted that effective safety management contributes to a safer work environment, which in turn improves employee performance by reducing accident-related disruptions and improving overall productivity.

The relationship between construction safety management and employee performance is multifaceted, as safety practices directly affect both the well-being and productivity of workers. Strong safety programs, like those outlined by Afzini&Neyestani (2011), reduce accidents, create a sense of security, and enhance job satisfaction. As workers feel safer, they are more engaged, which improves performance and reduces turnover. Comprehensive safety management, as noted

by the National Safety Council and ILO (2016), not only mitigates risks but also fosters higher productivity and project outcomes by ensuring that workers remain healthy and focused.

2.1.4.1Safety and Health Procedure and Employee performance

The relationship between safety and health procedures and employee performance is critical for ensuring effective workplace outcomes. Safety and health procedures encompass a broad range of regulations, policies, and practices designed to provide a safe working environment. These procedures include guidelines for hazard identification, risk assessment, personal protective equipment (PPE) usage, emergency procedures, and regular safety training. According to Smith et al. (2020), when safety procedures are clearly defined and communicated, employees are more likely to feel secure, which enhances job satisfaction and motivation. This heightened sense of security leads to increased engagement and focus on tasks, ultimately improving performance outcomes (Jones & Miller, 2018). Furthermore, research by Brown (2019) has demonstrated that effective safety management reduces workplace accidents, absenteeism, and injuries, directly contributing to higher productivity and performance. A well-structured safety management system thus enhances both employee well-being and overall organizational performance, laying the foundation for a more engaged and productive workforce.

Continuous training on safety and health procedure plays a vital role in ensuring that employees are aware of best practices and compliance requirements. A study by Kimberly Jinnett (2013) highlighted that organizations with a strong emphasis on health and safety culture see employees working more carefully and with greater focus, which correlates with improved performance metrics. Additionally, effective safety rules contribute to a reduction in workplace accidents and injuries. Fewer accidents lead to less downtime, ultimately enhancing overall productivity. When employees are less concerned about potential hazards, they can concentrate fully on their work.

Furthermore, a strong emphasis on safety fosters a positive organizational culture where employees feel valued and engaged. This cultural aspect significantly influences performance levels. Research by Ding et al. (2021) indicates that a positive safety culture not only leads to lower accident rates but also enhances employee engagement and productivity. Safety rules often include mechanisms for reporting unsafe conditions or behaviors, creating a feedback loop that

allows for continuous improvement in safety practices. This ongoing communication fosters an environment of transparency and accountability, further enhancing employee performance.

2.1.4.2 First Aid Support and Employee performance

First aid support plays a crucial role in enhancing employee performance, particularly in high-risk industries such as construction. Tarekegin (2020) explored the impact of first aid support on employee performance, highlighting its significance in minimizing the severity of injuries and reducing work disruptions. In environments like construction sites, where the risk of accidents is high, having readily accessible first aid resources and trained personnel allows for the prompt treatment of injuries, preventing minor incidents from escalating into more serious cases. This immediate response not only protects employees' physical well-being but also fosters a sense of security, which is essential for maintaining focus, motivation, and overall productivity.

Tarekegin's study emphasizes that the presence of well-equipped first aid kits and consistent training in basic first aid procedures contribute significantly to a safer working environment. When employees feel that their safety is prioritized by their organization, they are more likely to perform optimally. This connection between first aid support and employee performance suggests that safety interventions are proactive strategies designed to improve workforce morale and efficiency. Reducing accident-related downtime ensures that workers can quickly return to their tasks, which directly supports organizational performance and sustainability in high-risk industries like construction.

Althaqafi and Elssy (2015) further support this relationship by investigating how first aid support systems influence employee performance. They found that organizations with structured first aid programs experienced fewer disruptions due to accidents and injuries. Accessible first aid resources, along with trained personnel, enhance employee confidence in their safety, leading to better focus, morale, and productivity. By creating a supportive environment where employees feel valued and protected, first aid programs contribute directly to improved performance.

Moreover, continuous training sessions and practical drills, as highlighted by Althaqafi and Elssy, play a critical role in enhancing workforce readiness. Workers who participate in these programs are better equipped to handle emergencies, which improves their collaboration and

trust in the organization's safety measures. These findings underscore that first aid support is not just a compliance measure but a strategic investment that positively impacts organizational performance by reducing accident-related downtime and improving employee well-being.

Khan et al. (2021) also highlight that the availability of first aid support can significantly reduce the severity of injuries, ensuring faster and more effective responses to medical emergencies. Immediate access to first aid resources prevents minor injuries from escalating into major incidents, thereby reducing work disruptions and helping to maintain productivity. Lingard (2002) further emphasizes that effective first aid support promotes a culture of safety, which increases employee confidence in their organization's commitment to their well-being. When employees feel secure, they are generally more focused, motivated, and productive, which translates into improved performance across the workforce.

The relationship between first aid support and employee performance is also evident in broader research. Michael (2005) notes that companies with strong first aid support systems report improvements in employee satisfaction, commitment, and overall performance. By fostering a safety-conscious culture and ensuring that employees have the resources they need in case of an emergency, organizations can enhance both individual and organizational performance.

OSHA (2023) underscores the importance of first aid support, emphasizing that organizations with effective first aid systems create safer and more efficient work environments. The availability of trained personnel, first aid supplies, and timely medical responses not only protects employees' physical health but also boosts their morale, which directly influences their performance. In high-risk environments like construction, where injuries are more likely, first aid support is an essential component of a comprehensive safety management system that ultimately enhances employee performance and organizational success.

2.1.4.3 Organizational Safety Support and Employee performance

The relationship between organizational safety support and employee performance is essential for achieving optimal workplace outcomes. Organizational safety support refers to the resources, policies, and practices that an organization implements to promote a safe working environment. This includes management commitment to safety, availability of safety training programs,

provision of personal protective equipment (PPE), and the establishment of clear safety protocols. When organizations actively demonstrate their commitment to safety, employees are more likely to feel valued and secure, which can lead to increased job satisfaction and motivation. This enhanced sense of security often translates into improved performance, as employees are more focused and engaged in their tasks.

Providing regular safety training is a critical aspect of organizational safety support. It ensures that employees are aware of best practices and compliance requirements, which enhances their ability to perform tasks safely. Research byWillem. J. N. de Lange et al. (2020) indicates that organizations that invest in safety training see employees not only adhering more closely to safety protocols but also demonstrating higher levels of productivity and engagement. Furthermore, effective organizational safety support contributes to a reduction in workplace accidents and injuries. When employees feel that their organization prioritizes their safety, they are less likely to worry about potential hazards and can concentrate fully on their work.

Additionally, a strong emphasis on safety fosters a positive organizational culture where employees feel they are part of a team that values their well-being. This cultural aspect significantly influences performance levels. Studies have shown that a positive safety culture not only leads to lower accident rates but also enhances employee morale and productivity. Furthermore, organizational safety support often includes mechanisms for reporting unsafe conditions or behaviors, creating a feedback loop that allows for continuous improvement in safety practices. This ongoing communication fosters an environment of transparency and accountability, further enhancing employee performance.

2.1.4.4 Training and Awareness and Employee performance

Training and awareness programs are integral to building a strong safety culture within high-risk industries such as construction, directly influencing employee performance. Geller (2018) emphasizes that regular safety training provides workers with the practical skills and knowledge necessary to identify potential hazards, understand safety protocols, and respond effectively to emergencies. By investing in safety training, organizations not only reduce workplace accidents but also enhance worker morale, engagement, and job satisfaction, which are closely linked to improved performance outcomes. Geller further highlights that safety awareness programs

reinforce the importance of safety, encouraging employees to actively contribute to creating a secure work environment.

Training programs in the construction industry equip workers to manage unexpected risks, which, according to Gomes, Pereira, and Silva (2023), reduces accidents and supports smoother project flow. This continuous focus on safety awareness not only reduces the likelihood of incidents but also enhances workers' sense of responsibility and confidence. These factors drive productivity and minimize delays, ultimately strengthening overall project performance.

The role of training extends beyond safety awareness to skill development, which is crucial for improving employee performance. Silva (2023) underscores that effective training programs help employees enhance both technical and soft skills, making them more competent in their roles. By addressing performance gaps, training ensures that employees perform tasks more efficiently and with higher quality. This increase in competency contributes directly to improved productivity, as well as to greater job satisfaction and engagement. As employees become more confident in their abilities, the need for close supervision diminishes, and they are better able to meet organizational goals.

Tarekegin (2020) further supports this idea by emphasizing that well-structured training programs improve employees' skills, which leads to increased job satisfaction and motivation. Tarekegin notes that employees who receive regular training are more likely to feel competent and confident in their roles, fostering greater engagement with the organization and reducing turnover. Regular training helps workers stay updated with the latest skills, contributing to both individual growth and organizational success. Organizations that invest in employee development through training experience direct improvements in job performance, which in turn strengthens overall organizational effectiveness and competitiveness

2.2. Empirical Literature Review

In a pivotal study by Chen et al. (2020), the authors examined the relationship between safety management practices and productivity levels within the construction industry. Their research revealed that construction companies implementing comprehensive safety programs reported productivity levels that were 30% higher compared to those with minimal safety measures. This

finding underscores the critical role that safety management plays in enhancing overall project performance. The study suggests that organizations prioritizing safety not only comply with regulations but also significantly boost their operational efficiency and productivity, thereby reinforcing the notion that safety is not merely a compliance issue but a strategic advantage.

Goh et al. (2021) conducted an insightful investigation into the challenges faced during the implementation of safety management systems in construction settings. Their research identified key barriers, such as resistance to change among employees and limited resources allocated for safety initiatives. The authors emphasized the necessity of effective change management strategies to overcome these challenges. By fostering an organizational culture that embraces safety management, construction firms can improve safety performance and, consequently, employee morale and productivity. The study highlights the importance of addressing psychological and logistical barriers to effectively implement safety measures.

In a comprehensive literature review, Poh et al. (2021) explored various factors influencing employee performance in the construction industry, focusing particularly on the role of safety management. Their findings corroborated previous research, indicating that effective safety management practices significantly enhance productivity, job satisfaction, and overall organizational performance. The review emphasizes the necessity for construction organizations to prioritize safety as a strategic imperative, suggesting that improvements in safety practices are directly linked to better employee performance outcomes. This research further demonstrates that safety management is not merely an operational necessity but a vital component of workforce engagement and satisfaction.

Zohar (2018) investigated the interplay between safety climate and safety behaviors among construction workers, providing critical insights into the organizational factors that influence employee performance. The study found that a positive safety climate characterized by shared perceptions of safety priorities and practicescorrelates with improved safety behaviors among employees. These enhanced safety behaviors, in turn, contribute to better overall employee performance. Zohar's research underscores the importance of cultivating a safety-oriented organizational culture, suggesting that when employees perceive their environment as

prioritizing safety, they are more likely to engage in safe practices that enhance not only their well-being but also their productivity.

Muriithi and Rwelamila (2019) conducted a study focusing on safety management practices in the construction industry in Kenya. Their findings revealed that organizations with robust safety management systems experience lower accident rates and higher employee satisfaction levels. The research emphasized the importance of training and development in fostering a safety culture, noting that continuous education on safety practices enhances workers' commitment to adhering to safety protocols. This highlights the relationship between effective safety management and improved employee performance, suggesting that organizations that invest in safety training are likely to see corresponding gains in productivity and morale.

In a report published by the Abu Dhabi Occupational Safety and Health Center (2021), the effect of safety management systems on employee performance in the UAE construction sector was analyzed. The study found that companies implementing safety management frameworks witnessed a 25% reduction in workplace accidents. Furthermore, improved safety practices were linked to enhanced employee engagement and productivity, with workers reporting a greater sense of well-being and job satisfaction. This evidence supports the notion that effective safety management not only protects employees but also creates an environment conducive to high performance.

Hallowell et al. (2021) conducted a meta-analysis of various studies on safety culture and performance in the construction industry. The authors found a consistent positive correlation between a strong safety culture and enhanced employee performance metrics, including productivity and job satisfaction. Their analysis indicated that organizations prioritizing safety culture are more likely to achieve project objectives and foster a motivated workforce. The findings emphasize that creating a safety-oriented environment is a critical factor in ensuring high employee performance and achieving overall project success. Kassa and Abebe (2021) conducted a study on the effect of safety management practices within the Ethiopian construction industry. Their research found that many construction companies in Ethiopia lacked comprehensive safety programs, leading to high accident rates and low employee morale. However, firms that implemented structured safety management practices reported a 25%

reduction in workplace accidents and a corresponding increase in employee productivity. This highlights the urgent need for improved safety management frameworks in Ethiopia to enhance employee performance.

In another study, Adefris et al. (2021) explored the relationship between safety climate and worker performance in Ethiopian construction projects. They discovered a strong positive correlation between a robust safety climate and enhanced worker productivity. Their findings indicated that when workers perceive management's commitment to safety, they are more likely to engage in safe behaviors and perform their tasks efficiently. This suggests that cultivating a safety-oriented culture within construction firms can lead to better performance outcomes.

Teshome et al. (2020) investigated the effectiveness of safety training programs among construction workers in Addis Ababa. Their research revealed that workers who participated in regular safety training exhibited significantly higher levels of safety compliance and overall performance. The study emphasized the importance of continuous training for maintaining safety standards and improving employee performance in the construction sector. Despite the acknowledged benefits of safety training, the authors noted that many Ethiopian construction companies still underinvest in these programs, which could greatly enhance employee performance.

Lyu et al. (2020) examined the relationship between safety management and employee performance within the context of Chinese construction projects. Their study found that effective safety management practices significantly reduce accident rates, which in turn leads to higher employee morale and productivity. Specifically, the researchers noted that projects with rigorous safety protocols experienced a 20% reduction in incidents, directly correlating with improved project timelines and worker satisfaction. This research highlights the interdependencies between safety management, employee performance, and overall project success, suggesting that prioritizing safety is essential for achieving positive outcomes in the construction sector. In their research, Abubakar et al. (2020) investigated the effect of safety training on employee performance within the Nigerian construction sector. Their findings revealed that regular safety training sessions led to a significant increase in employees' safety awareness and compliance with safety practices. Workers who underwent training reported feeling more secure and were

more productive on-site. This study underscores the importance of continuous safety education as a pivotal component of effective safety management, emphasizing that informed workers are more likely to perform at higher levels, thereby enhancing overall productivity.

Ding et al. (2021) conducted a meta-analysis on safety culture and employee performance across various industries, including construction. Their findings established a consistent positive relationship between a strong safety culture and improved performance metrics. The analysis highlighted that organizations with robust safety cultures not only see lower accident rates but also experience enhanced employee engagement and productivity. The authors recommended that construction firms actively cultivate a positive safety culture as a strategic approach to improving overall organizational performance, thereby reinforcing the vital link between safety practices and employee effectiveness. Adewuyi et al. (2021) focused on the role of leadership in promoting safety management practices within the construction industry in South Africa. Their findings indicated that leadership commitment to safety directly influences employees' attitudes toward safety compliance. Leaders who prioritize safety and actively engage in safety initiatives create an environment where employees feel valued and motivated to adhere to safety practices. This relationship illustrates the critical role of leadership in enhancing safety management, which subsequently improves employee performance and contributes to a safer workplace culture.

Mbachu and Nkado (2018) explored the implications of safety management on employee productivity in the construction sector of New Zealand. Their study revealed that construction firms implementing proactive safety management strategies, including regular audits and safety drills, reported higher employee productivity levels. The authors emphasized that such practices foster a sense of security among workers, leading to reduced anxiety and higher performance outcomes. This study reinforces the idea that effective safety management is integral to maximizing employee performance in the construction industry. In their analysis, Wong et al. (2019) assessed the influence of psychological safety on employee performance in the construction industry. They discovered that psychological safety—defined as a team climate characterized by interpersonal trust and mutual respect—significantly effects employees' willingness to report safety concerns and engage in safety behaviors. The study concluded that fostering psychological safety within teams leads to improved safety management outcomes and enhances overall employee performance. This indicates that a supportive environment is crucial

for effective safety practices, underscoring the importance of psychological factors in achieving safety and productivity goals.

Identified Research Gaps

Context-Specific Studies: While many studies focus on safety management in various regions (e.g., the UAE, Kenya, China, and Ethiopia), there is a lack of comprehensive research that specifically addresses the unique challenges and safety management practices in less-studied contexts, such as rural construction settings or specific trades within the construction sector. Future research could explore how localized cultural, economic, and regulatory environments affect the implementation and effectiveness of safety management practices.

Longitudinal Studies: Most existing studies present cross-sectional analyses, which capture a snapshot of the relationship between safety management and employee performance. Longitudinal studies that examine these dynamics over time could provide deeper insights into how changes in safety management practices effect employee performance and organizational outcomes in the long run. This approach may also reveal the sustainability of improvements in safety and performance metrics.

Qualitative Insights: Many studies utilize quantitative methodologies to establish correlations between safety management practices and employee performance. However, qualitative research that explores the lived experiences of construction workers regarding safety practices could provide a more nuanced understanding of how safety management influences employee attitudes, behaviors, and performance. This approach could uncover underlying factors that quantitative studies might overlook.

Interdisciplinary Perspectives: Current research primarily focuses on safety management from a construction management or engineering perspective. An interdisciplinary approach, incorporating insights from psychology, sociology, and organizational behavior, could provide a more holistic understanding of the factors that influence safety culture and employee performance. For instance, understanding how social dynamics within construction teams effect safety compliance could enhance safety training and management strategies.

Employee Engagement and Psychological Factors: While some studies address the importance of psychological safety and employee engagement, there is still a lack of in-depth research exploring how various psychological factors (e.g., stress, burnout, and motivation) interact with safety management practices to affect employee performance. Investigating these relationships could lead to more effective safety interventions tailored to employee needs.

Effect of Technology and Innovation: With the increasing use of technology and digital tools in construction, research is needed to explore how innovations (such as safety apps, wearable technology, and automated safety systems) influence safety management practices and employee performance. Understanding how these technologies can enhance safety culture and compliance may lead to more effective strategies for integrating them into existing safety management frameworks.

Integration of Safety into Project Management Frameworks: There is a gap in understanding how safety management can be better integrated into overall project management processes. Research could explore frameworks or models that combine safety management with other project management components (such as time, cost, and quality), providing a more comprehensive approach to construction project success.

Despite the wealth of existing literature on safety management practices and their influence on employee performance within the construction industry, significant gaps remain that warrant further exploration. This study aims to address these gaps by employing a multifaceted approach that integrates context-specific, longitudinal, qualitative, interdisciplinary, psychological, technological, and project management perspectives.

2.3. Conceptual Framework

The conceptual framework for this study illustrates the relationship between construction safety management practices and employee performance. It posits that effective safety management is crucial for enhancing performance levels among employees in the construction industry.

Independent Variables include four key components of construction safety management. Firstly, Safety and Health Procedure encompass the established guidelines that govern workplace safety practices and health protocols. These rules are essential for creating a structured environment

where employees are aware of the safety measures in place. Secondly, Organizational Safety Support refers to the commitment and resources that organizations provide to foster a safe working environment. This includes management support, adequate funding for safety programs, and a proactive approach to addressing safety concerns.

The third component, First Aid Support, emphasizes the importance of having readily available first aid resources. Lastly, Training and Awareness, when employees are well-trained, they are better prepared to respond to emergencies, significantly reducing the severity of workplace incidents

The dependent variable in this framework is Employee Performance, representing employees' efficiency and output levels. This framework suggests that enhanced safety management practices can lead to improved performance outcomes.

Conceptual framework of the study

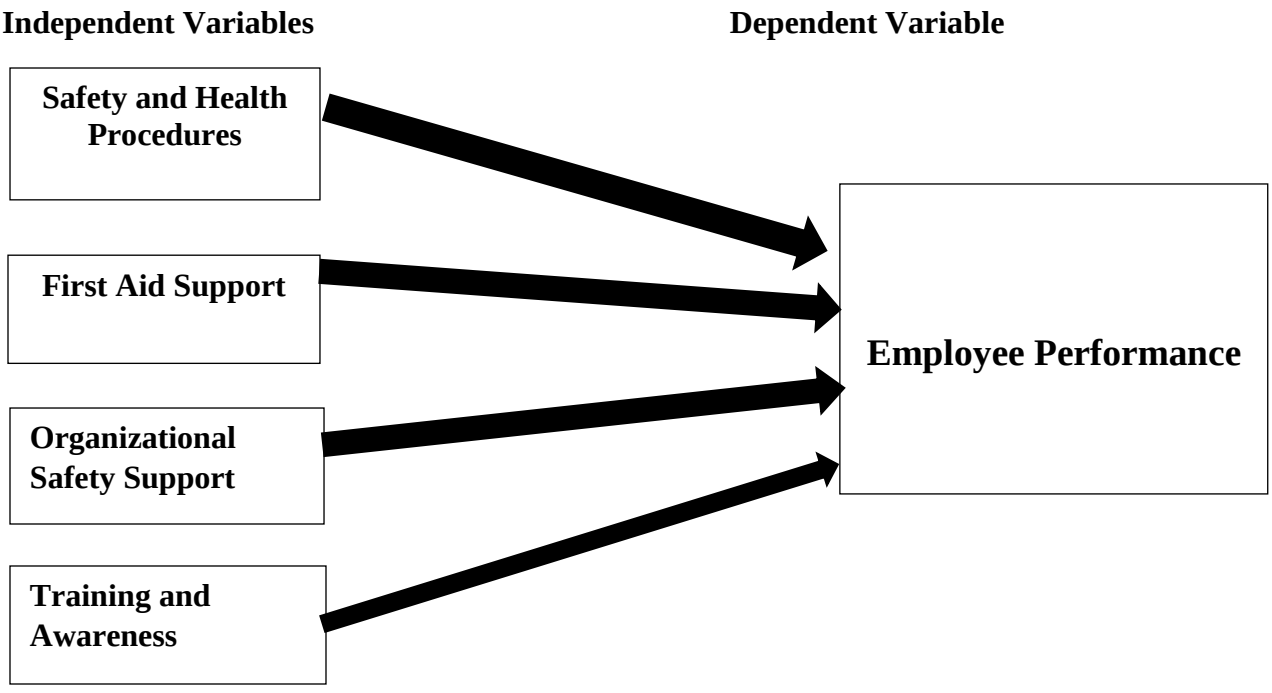

Figure 2.1: Conceptual framework (Source: Christopher, 2012)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Research Design

The research design provides a structured approach for integrating various components of the study, ensuring that the research question is addressed in a coherent and logical manner (Creswell, 2014). It acts as a framework guiding data collection, measurement, and analysis. Research designs are typically classified into exploratory, descriptive, and explanatory types. This study employs an explanatory research design to investigate cause-and-effect relationships between variables. Explanatory research is useful for understanding how certain factors influence outcomes by examining relationships among variables (Yin, 2018). This paper utilized an explanatory research design to examine the effect of construction safety management on employees' performance, specifically in the context of Gift construction, by investigating the factors influencing construction safety management and employee performance.

3.2. Research Approach

The research approach serves as a structured plan that outlines the processes involved, ranging from broad assumptions to specific methods for data collection, analysis, and interpretation, and it is tailored to the particular research problem being studied (Creswell, 2010). There are three primary types of research approaches: qualitative, quantitative, and mixed methods. The aim of quantitative research is to create and apply mathematical models, theories, and hypotheses related to observable phenomena (Abiy, 2009). In this study, a quantitative research approach will be employed, focusing on generating data in numerical form for analysis. The data will be quantified, and statistical methods is utilized to analyze the information, enabling the exploration of characteristics and relationships between the variables.

3.3. Target Population, Sample Size and Sampling Technique

3.3.1. Population

A population refers to the entire group of individuals or elements that can be examined in a study, which includes people, items, or organizations from which a sample can be drawn (Cooper & Schindler, 2014). As outlined in the scope, this study explores the proposed connections between the effect of construction safety management and employee performance indicators within the construction industry, specifically focusing on Gift Construction. The total population of this study consists of 126 employees of Gift Construction. Due to the limited number of workers, **a census approach** was used, meaning all employees were included in the data collection to ensure comprehensive representation. A total of 126 questionnaires were distributed, and 112 valid responses were collected, resulting in an 88.9% response rate. Fourteen responses were excluded due to incomplete answers. This approach ensures that the findings accurately reflect the perspectives of all available employees within the organization.

Table 3.1. Respondent's designation

	Frequency	Percent	Valid Percent	Cumulative Percent
Engineer	24	21.4	21.4	21.4
Architect	2	1.7	1.7	23.1
Project manager	3	2.7	2.7	25.8
Foreman	21	18.8	18.8	44.6
Construction Workers	47	42	42	86.6
Officers (Accountant/ procurement/etc	15	13.4	13.4	100.0
Total	112	100.0	100.0	

3.4. Type of Data and Data Source

According to Saunders et al. (2016), data can be collected as primary, secondary, or a combination of both. Primary data is gathered directly by the researcher to address a specific research issue, while secondary data consists of information that was collected for a different purpose but can still provide useful insights for the current study. In this research, primary andsecondarydata obtained from the targeted respondents were utilized for analysis.

3.5. Data Collection Tools

Instrument Questionnaires are used for the collection of primary data from targeted respondents. They are prepared very carefully to ensure effectiveness in gathering relevant information. A structured questionnaire consists of definite, concrete, and pre-determined questions. The questions are presented with exactly the same wording and in the same order to all respondents. This standardization ensures that all respondents reply to the same set of questions (Kombo & Tromp, 2011).

3.6. Data Collection Procedure

Once receiving managerial approval, consent is also requested from each respondent. When granted, questionnaires will be distributed at convenient times, such as during tea breaks, to minimize any disruption to their work. Additionally, respondents will be contacted via email and received follow-up reminders to ensure timely completion of the questionnaire.

3.7. Method of Data Analysis

Data in this study were analyzed using both descriptive and inferential statistics. Descriptive statistics were applied to interpret demographic variables of the respondents, and to calculate the mean and standard deviations of each study variable. Inferential statistics, using the Statistical Package for Social Sciences (SPSS) version 23, were employed for hypothesis testing, including correlation analysis (with R values indicating the strength and direction of relationships) and multiple regression analysis. Tables and graphs were used to present analysis results pictorially. The proposed research model is formulated based on the identified independent and dependent variables, and their relationships were tested using multiple linear regression analysis, reporting the R value to measure the strength of the relationship.

3.8. Validity

Validity refers to the degree to which the data collection process accurately measures what it is intended to measure (Saunders, 2010). In this study, standardized questionnaires were adapted and adjusted through discussions with the advisor to ensure they were appropriate and aligned with the study's objectives.

3.9. Reliability

Reliability has to do with the accuracy and precision of a measurement procedure. Cronbach alpha was used to measure the internal reliability of data collection. According to Zinbarg, (2005), coefficient alpha ranges in value from 0, meaning no consistency, to 1, meaning complete consistency (all items yield corresponding values) scales with a coefficient α between 0.80 and 0.95 are considered to have very good reliability. Scales with a coefficient α between 0.70 and 0.80 are considered to have good reliability, and α value between 0.60 and 0.70 indicates fair reliability. When the coefficient is below 0.6, the scale has poor reliability.

Table 3.2: Reliability Test of the Results

Reliability Statistics		
Variables	**No. of Items**	**Cronbach's alpha**
Safety and Health Procedures	5	0.840
Organizational Safety Support	5	0.732
First Aid Support	5	0.730
Training and Awareness	5	0.702
Employee Performance	5	0.751
Valid	**25**	**0.914**

(Source: Own Survey Result, 2024)

The reliability analysis presented in the table above shows an overall Cronbach's alpha of 0.914 for all 25 items, indicating excellent internal consistency across the measurement scale. This result confirms the reliability of the instrument used to assess the variables: Safety and Health Procedures, Organizational Safety Support, First Aid Support, Training and Awareness, and Employee Performance.

3.10. Ethical Considerations

To ensure respondents' data remained confidential, they were not asked to provide their names and were assured that their answers would be kept strictly private. The purpose of the study was clearly explained in the introduction of the questionnaire. Additionally, care was taken to avoid any misleading or deceptive wording in the questions. Finally, the questionnaire links were shared only with individuals who voluntarily agreed to participate, and those who chose not to participate were not contacted further.

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATIONS

This chapter presents the findings, analysis, and discussion based on the primary data collected from permanent employees who have been working in Gift Construction Private Company for more than a year. The data collected from respondents were summarized and analyzed using descriptive and inferential statistical methods. Descriptive statistics were employed to outline the general characteristics of the respondents and summarize their perceptions of the study variables, while inferential statistics, including correlation analysis, assumption tests, and multiple linear regression, were used to test the hypotheses and answer the research questions. SPSS version 23 was used to perform the data analysis.

The analysis began with a presentation of respondents' demographic information using frequencies and percentages, followed by the calculation of aggregated mean values to reflect the respondents' levels of agreement with the study variables. The results of correlation and regression analyses were then provided and discussed. A key aspect of the survey was the response rate, which significantly impacts the reliability of the study. Out of 126 distributed questionnaires, 112 were returned, achieving a response rate of 88.9%. This high response rate supports the credibility of the data, as surveys with response rates above 70% are generally considered more reliable.

4.1. Demographic Characteristics of the Respondents

The first part of the questionnaire consisted of demographic characteristics of the respondents. It gathered limited information related to their personal and socio-demographic status. Accordingly, variables such as gender, age, profession, and years of service were summarized and described in the following Table 4.1.

As shown in Table 4.1, out of the total respondents, 89 (79%) were male, while the remaining 23 (21%) were female. This implies that the majority of the respondents in the selected construction company were male. However, given the scope and sample size of this study, it would be premature to make conclusive remarks about this gender discrepancy. Further studies with a

specific focus on gender representation in the construction industry could provide more insights from a gender-related perspective.

Referring to the age distribution, the majority of respondents, 58 (51.8%), were found within the age range of 18–30 years, followed by 37 (33%) within the 31–45 age bracket. The rest, 16 (14.3%), were aged 46–60, and 1 (0.9%) was over 60 years old. This result implies that the respondents participating in this survey were predominantly younger and part of a productive labor force. This phenomenon is largely due to the physically intensive nature of the construction industry, which requires a relatively active and energetic workforce. However, it would be interesting to cross-reference this finding with other variables to uncover further insights.

Regarding the professional composition of the respondents, construction workers represented the largest share, accounting for 47 (42%), followed by engineers at 24 (21.4%) and foremen at 21 (18.8%). The remaining respondents included officers (e.g., accountants, procurement staff) at 15 (13.4%), project managers at 3 (2.7%), and architects at 2 (1.7%). This distribution highlights that the construction industry is predominantly labor-focused, demanding more field workers than managerial or technical professionals.

Concerning years of service, 49 (43.8%) of the respondents had worked in their respective roles for less than 5 years, 33 (29.5%) for 5–10 years, 21 (18.8%) for 10–15 years, and 9 (8%) for more than 15 years. This suggests that a significant portion of the workforce comprises relatively less experienced employees, reflecting the project-based and short-term nature of employment in the construction sector. This reliance on less experienced staff may affect overall performance, as employees with longer tenure are generally perceived to deliver better results due to their familiarity and expertise.

Table 4.1: General Information of the Respondents

Category	**Freq.**	**Percent (%)**
Sex		
Female	23	21%
Male	89	79%
Total	112	100%
Age/ Years		
18-30	58	51.8%
31-45	37	33%
46-50	16	14.3%
>60	1	0.9%
Total	112	100%
Educational background		
Engineer	24	21.4%
Architect	2	1.7%
Project manager	3	2.7%
Foreman	21	18.8%
Construction Workers	47	42%
Officers (Accountant/ procurement/etc.	15	13.4%
Total	112	100%
Service year		
1 – 5 Years	49	43.8%
5 - 10 Years	33	29.5%
10-15 Years	21	18.8%
>15	9	8%
Total	112	100%

Source: SPSS

In conclusion, the demographic profile of respondents reveals a workforce that is predominantly male, relatively young, and composed of a mix of laborers and technical staff with varying levels of experience. These insights provide a context for understanding the effects of safety management practices on employee performance within the construction industry.

4.2. Descriptive Analysis

This study evaluates key dimensions of construction safety management, including safety and health procedures, first aid support, organizational safety support, training and awareness, and employee performance. Respondents assessed these dimensions using a five-point Likert scale, 1= Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5= Strongly Agree. Additionally, the standard deviation was used to analyze the variability in responses, providing insights into the consistency or variation in the respondents' perceptions for each dimension.

4.2.1. Safety and Health Procedures and Employee Performance

The Safety and Health Procedures (SAHP) dimension evaluates employee perceptions of various safety aspects, including the practicality of safety procedures, health examinations before employment, adherence to safety rules under pressure, the adequacy of rest periods, and the regular review of safety procedures.

Table 4.2. Safety and Health Procedures (SAHP)

Safety and Health Procedures			
	N	Mean	Std. Deviation
Safety procedures are always practical in my organization.	112	3.27	1.893
Health examinations are conducted in my organization prior to employment	112	3.43	1.873
Safety rules are followed in my organization even under tight schedule.	112	2.35	1.839
Timing for sufficient rest is underway in my organization.	112	3.22	1.906

I feel that safety and health procedures are reviewed regularly to improve site safety.	112	3.41	1.924
SAHP	112	3.14	1.47415
Valid N (list wise)	112		

Source: own survey 2024

The descriptive analysis of safety and health procedures (SAHP) reveals a generally neutral perception among respondents, with notable variation in responses. The overall mean score for this dimension is 3.14, indicating that respondents neither strongly agree nor strongly disagree with the effectiveness of safety and health procedures in their organization. The standard deviation of 1.47 suggests moderate variation in perceptions, reflecting differing experiences and views on workplace safety practices.

Specifically, the statement Safety procedures are always practical in my organization received a mean score of 3.27 (SD = 1.89), indicating a neutral stance with high variation in responses. Similarly, Health examinations are conducted in my organization prior to employment had a mean score of 3.43 (SD = 1.87), showing slight agreement but with high variation in responses.

In contrast, the statement Safety rules are followed in my organization even under tight schedule recorded a lower mean score of 2.35 (SD = 1.83), indicating disagreement with high variation in responses. Additionally, Timing for sufficient rest is underway in my organization" had a mean score of 3.22 (SD = 1.91), reflecting a neutral perception but with high variation in responses. Furthermore, I feel that safety and health procedures are reviewed regularly to improve site safety received a mean score of 3.41 (SD = 1.92), suggesting slight agreement with high variation in responses.

In summary, while respondents generally perceive safety and health procedures neutrally, the high variation in responses across most statements indicates inconsistent experiences among employees. Some employees recognize the presence of safety measures, while others perceive gaps, particularly regarding the enforcement of safety rules under tight schedules and the regular review of procedures. These findings align with the recommendations of the International Labour Organization (ILO), which emphasizes that safety and health procedures should be

systematic, proactive, and regularly reviewed, particularly in high-risk sectors such as construction. The variability in responses underscores the need for stronger safety enforcement, better training, and improved communication to ensure consistent adherence to safety procedures. Strengthening collaboration between employers and employees, as emphasized by both the ILO and Chen et al. (2020), could help address these inconsistencies and enhance workplace safety practices.

4.2.2. First Aid Support and Employee Performance

The First Aid Support (FAS) dimension evaluates employees' perceptions of the accessibility and adequacy of first aid resources and procedures in the organization. The respondents assessed five key aspects related to first aid, with the results providing a detailed view of the perceived effectiveness of first aid support.

Table 4.3. First Aid Support (FAS)

First Aid Support			
	N	Mean	Std. Deviation
First aid information and procedures are clearly posted and easy to understand	112	3.24	1.960
First aid support is readily available in my organization.	112	1.75	1.219
The first aid equipment provided on-site is complete and accessible when needed	112	1.85	1.350
There is designated first aid responders or trained personnel available on-site at all times	112	3.22	1.990
I feel confident that minor injuries on-site can be treated effectively with available first aid resources	112	2.64	1.785
FAS	112	2.54	1.17286
Valid N (list wise)	112		

Source: own survey 2024

The descriptive analysis of First Aid Support (FAS) indicates a generally neutral perception among respondents, with notable variations in their responses. The overall mean score for this dimension is 2.54, suggesting that employees neither strongly agree nor strongly disagree with the adequacy of first aid support in their organization. The standard deviation of 1.17 implies low variation in perceptions, reflecting diverse experiences regarding first aid availability and effectiveness.

Specifically, the statement First aid information and procedures are clearly posted and easy to understand received a mean score of 3.24 (SD = 1.96), indicating a neutral stance but with high variation in responses. Similarly, the statement "There are designated first aid responders or trained personnel available on-site at all times" had a mean score of 3.22 (SD = 1.99), showing a neutral perception but with high variation.

In contrast, the statements First aid support is readily available in my organization (Mean = 1.75, SD = 1.22) and The first aid equipment provided on-site is complete and accessible when needed" (Mean = 1.85, SD = 1.35) received relatively lower mean scores, indicating disagreement and suggesting that employees perceive a lack of adequate first aid resources and accessibility. These statements exhibited low variation, meaning responses were relatively consistent. Furthermore, "I feel confident that minor injuries on-site can be treated effectively with available first aid resources" recorded a mean score of 2.64 (SD = 1.79), reflecting uncertainty among employees with high variation.

In summary, while some employees acknowledge the availability of first aid procedures and personnel, a significant portion perceives gaps, particularly in terms of accessibility and adequacy of resources. The high variation in several responses suggests inconsistent experiences across different worksites. These findings highlight the need to improve first aid resource availability, ensure trained responders are always present, and enhance awareness to boost employee confidence in workplace first aid measures. Strengthening first aid infrastructure and reinforcing training programs could help address these inconsistencies, ensuring a safer work environment in alignment with best practices recommended by the International Labour Organization (ILO) and other occupational health and safety standards.

4.2.3. Organizational Safety Support and Employee Performance

The Organizational Safety Support dimension evaluates employees' perceptions of the support provided by the organization for maintaining safety standards and promoting a safety-oriented culture. The five items in this dimension reflect various aspects of organizational safety support, including management's commitment, available resources, and overall safety culture.

Table 4.4Organizational Safety Support (OSS)

Organizational Safety Support			
	N	Mean	Std. Deviation
There is sufficient organizational support for safety in my workplace	112	2.4	1.732
Management prioritize safety support in my organization.	112	3.87	1.641
Employees receive adequate resources for safety in my organization.	112	3.74	1.810
There is a strong safety culture in your organization where safety is a priority for all employees	112	3.6	1.715
There is a lack of commitment from leadership towards promoting safety in my organization	112	2.5	1.781
OSS	112	3.2536	1.20688
Valid N (list wise)	112		

Source: own survey 2024

The descriptive analysis of Organizational Safety Support (OSS) reveals a generally neutral to slightly positive perception among respondents, with moderate variation in responses. The overall mean score for OSS is 3.25, indicating mixed views on the level of safety support provided by the organization. The low mean score of 2.4 for "There is sufficient organizational support for safety in my workplace" suggests that many employees feel their workplace lacks adequate safety backing. This statement also has a high standard deviation (SD = 1.73), reflecting significant differences in employee experiences. On the other hand, "Management

prioritizes safety support in my organization" received a higher mean score of 3.87, suggesting that employees somewhat agree that safety is a priority for management. However, the moderate standard deviation (SD = 1.64) indicates varying opinions on how consistently this is implemented.

Similarly, "Employees receive adequate resources for safety in my organization" had a mean score of 3.74 with a high standard deviation (SD = 1.81), reflecting slight agreement but substantial variation in responses. The statement regarding a strong safety culture in the organization, where safety is a priority for all employees, had a mean score of 3.6 with a high standard deviation (SD = 1.71), suggesting that while many employees recognize a safety culture, others feel it is inconsistent. In contrast, "There is a lack of commitment from leadership towards promoting safety in my organization" received a neutral mean score of 2.5, with a high standard deviation (SD = 1.78), indicating that some employees believe leadership is committed to safety, while others perceive gaps.

Overall, while management appears to emphasize safety, employees report inconsistent experiences regarding actual safety support and resources. The high variation in responses suggests that safety practices may not be uniformly applied across different teams or sites. To improve organizational safety support, leadership should focus on enhancing commitment, ensuring consistent implementation of safety measures, and strengthening communication regarding available safety resources. These findings align with the International Labour Organization (ILO) recommendations, which stress that organizational safety support should be proactive, systematic, and consistently enforced to improve workplace safety. Research by Zhou et al. (2020) further emphasizes that strong management commitment and uniform safety practices contribute significantly to employee well-being and performance.

4.2.4. Training and Awareness and Employee Performance

The Training and Awareness dimension evaluates employees' knowledge and understanding of workplace safety procedures, including equipment use, health and safety practices, personal protective equipment (PPE), injury reporting, and emergency response. The following analysis

summarizes the mean and standard deviation for each of the five items in this dimension, offering insight into employees' perceptions of their training and awareness regarding safety.

Table 4.5Training and Awareness (TA)

Training and Awareness			
	N	Mean	Std. Deviation
Employees are familiar with equipment they are working with	112	2.64	1.776
Employees know how to contribute to the work places health and safety practices	112	3.25	1.938
Employees are aware of the use of personal protective equipment.	112	1.71	1.406
The procedures for reporting injuries are understood by employees.	112	2.66	1.887
When there is an emergency, employees are aware of what to do.	112	2.68	1.787
TA	112	2.5857	1.19450
Valid N (list wise)	112		

Source: own survey 2024

The descriptive analysis of Training and Awareness (TA) indicates a generally neutral perception among respondents, with noticeable variation in responses. The overall mean score for this dimension is 2.59, suggesting that employees have mixed views on the effectiveness of training and awareness initiatives in their organization. The high standard deviation (SD = 1.19) further indicates significant differences in employees' experiences regarding workplace safety training.

The statement "Employees are familiar with the equipment they are working with" received a mean score of 2.64, indicating a neutral stance, with a high standard deviation (SD = 1.78), reflecting varying levels of familiarity with equipment across employees. Similarly, "Employees know how to contribute to workplace health and safety practices" had a mean score of 3.25,

suggesting a slightly positive perception. However, the high standard deviation (SD = 1.94) implies that some employees feel well-informed, while others lack the necessary knowledge.

On the other hand, "Employees are aware of the use of personal protective equipment" had the lowest mean score of 1.71, indicating strong disagreement among employees regarding PPE awareness. The low standard deviation (SD = 1.41) suggests that most respondents share this perception, reinforcing the concern that PPE awareness is insufficient. The statement regarding the understanding of injury reporting procedures had a mean score of 2.66, indicating a neutral stance, with a high standard deviation (SD = 1.89), reflecting varied awareness levels among employees. Similarly, "When there is an emergency, employees are aware of what to do" received a mean score of 2.68, suggesting a lack of strong agreement, with a high standard deviation (SD = 1.79), indicating that emergency preparedness is inconsistent among employees.

Overall, these findings suggest that training and awareness programs need improvement, particularly in ensuring that employees are well-informed about PPE usage and emergency procedures. The high variation in responses highlights inconsistencies in the delivery and effectiveness of training. To enhance workplace safety, organizations should strengthen training programs, provide regular refresher courses, and ensure that all employees understand safety protocols, including PPE usage and emergency response measures. These findings align with the ILO's guidelines on occupational safety and health training, which emphasize that consistent, practical, and inclusive training is crucial for ensuring a safe working environment. Moreover, research by Fernández-Muñiz et al. (2019) highlights that effective training programs significantly reduce workplace accidents and improve safety compliance among employees.

4.2.5. Employee Performance

The Employee Performance (PERF) dimension evaluates employees' perceptions of their own job performance, their ability to meet organizational expectations, and the impact of their contributions on the organization. The five items in this dimension assess various aspects of employee performance, including satisfaction, contribution to organizational success, communication about expectations, and the ability to meet performance standards.

Table 4.6Employee Performance (OP)

Employee Performance			
	N	Mean	Std. Deviation
I am satisfied with my own job performance	112	2.65	1.558
I perform to the expected level of performance	112	1.67	1.233
I feel that my contributions positively affect the organization's overall performance	112	1.71	1.283
The organization provides clear communication about performance expectations.	112	2.93	1.799
I have learnt to perform up to the standard.	112	2.85	1.578
OP	112	2.3625	1.06493
Valid N (list wise)	112		

Source: own survey 2024

The descriptive analysis of Employee Performance (EP) indicates a generally disagreeing perception among respondents, with notable variation in responses. The overall mean score for this dimension is 2.36, suggesting that employees generally disagree with positive statements about their performance and the organization's role in supporting it. The high standard deviation (SD = 1.06) reflects considerable differences in employees' experiences regarding job performance and expectations.

The statement "I am satisfied with my own job performance" received a mean score of 2.65, indicating a neutral to disagreeing stance, with a high standard deviation (SD = 1.56), suggesting varied levels of job satisfaction among employees. Similarly, "I perform to the expected level of performance" had a lower mean score of 1.67, indicating strong disagreement, with a low standard deviation (SD = 1.23), showing that most employees share the perception that they are not meeting performance expectations.

In addition, "I feel that my contributions positively affect the organization's overall performance" received a mean score of 1.71, suggesting that employees generally disagree that their work has a meaningful impact on the organization. The low standard deviation (SD = 1.28) indicates consistency in responses, reinforcing the idea that many employees do not feel their contributions are valued. Conversely, "The organization provides clear communication about performance expectations" had a mean score of 2.93, indicating a neutral to disagreeing stance, with a high standard deviation (SD = 1.79), suggesting differences in how employees perceive communication on performance expectations. Finally, "I have learned to perform up to the standard" had a mean score of 2.85, reflecting a neutral to slightly disagreeing perception, though the high standard deviation (SD = 1.57) highlights varying levels of agreement.

Overall, these findings suggest that employees lack confidence in their performance levels and do not feel supported by the organization in meeting expectations. The lack of clear performance guidance, recognition, and development opportunities may contribute to this negative perception. To improve employee performance, management should focus on setting clear expectations, providing regular feedback, and implementing training programs. These findings align with Herzberg's Two-Factor Theory, which emphasizes that unclear expectations and lack of recognition can lead to dissatisfaction and poor performance. Additionally, research by Aguinis (2019) highlights that effective performance management requires structured feedback, training, and employee engagement to foster better workplace outcomes.

In summary, the mean scores suggest that employees generally perceive their performance positively, with most scores leaning towards agreement regarding their contributions and ability to meet performance expectations. However, the higher standard deviations for some statements highlight variations in perceptions, particularly around job satisfaction and clarity in performance expectations. The overall mean score of 3.64 points to a moderately favorable view of employee performance, with opportunities for improvement in communication and individual job satisfaction. Employee performance is a critical determinant of organizational success, especially in sectors like construction, where unique risks and challenges characterize the work environment. Wright (2005) highlights that effective safety management enhances employee performance by reducing accidents and fostering a sense of security. When employees feel safe, they are more motivated, leading to increased productivity and job satisfaction. Neal and Griffin

(2006) similarly emphasize that a positive safety climate shared perceptions of workplace safety significantly influences employee attitudes and behaviors, contributing to higher performance outcomes. In the construction industry, where workers face substantial physical risks, prioritizing safety is not only about compliance but is integral to operational success. Lingard (2002) found that construction companies emphasizing safety experience fewer workplace accidents, directly supporting steady project timelines and high-quality outcomes. Employees in such environments are more engaged and motivated, leading to enhanced efficiency, reduced absenteeism, and overall improved performance. Additionally, Griffin and Neal (2000) emphasize that fostering a strong safety culture, built on trust and shared safety goals, directly impacts employee performance. A positive safety culture encourages employees to act responsibly and engage with safety protocols, knowing their well-being is actively supported. This reduces risks, prevents injuries, and creates an environment conducive to high-quality work, driving individual and organizational success.

4.3. Inferential Statistics

Inferential statistics uses sample measurements of the subject and make generalization about the larger population. It comprises correlation analysis among variables; assumption of data test for their suitability or fitness to the intended regression analysis model (namely normality, collinearity, linearity and homoscedasticity); and finally, multi-regression analysis in terms of model summary, ANOVA test and beta coefficients determination are conducted to address the objectives of this study.

4.3.1. Correlation Analysis

This study utilizes correlation analysis to examine the strength of relationships between the variables under investigation. Correlation analysis is considered one of the most fundamental and valuable methods for assessing relations between two or more variables (Festinger, 2005). Among the various methods, Pearson correlation was employed in this study to provide evidence of convergent validity. The correlation coefficients indicate both the direction of the relationship (positive or negative) and its magnitude, ranging from -1.0 to +1.0. To interpret the strength and direction of these relationships, the guidelines proposed by Field (2005) were applied, where a

correlation coefficient (r) of 0.1 to 0.29 indicates a weak relationship, 0.3 to 0.49 represents a moderate relationship, and values greater than 0.5 reflect a strong relationship.

Table 4.7 Relation between Construction Safety Management and Employee Performance

Dimension	SAHP	OSS	FAS	TA	EP
Safety and Health Procedures (SAHP)	1	.347**	.662**	.554**	.667**
Organizational Safety Support (OSS)	.347**	1	.468**	.350**	.486**
First Aid Support (FAS)	.662**	.468**	1	.593**	.768**
Training and Awareness (TA)	.554**	.350**	.593**	1	.732**
Employee Performance (E)	.667**	.486**	.768**	.732**	1

**. Correlation is significant at the 0.01 level (2-tailed).
(Source, Own Survey, 2024)

The relationship between the five dimensions of Construction Safety Management and Employee Performance is significant at the 0.01 level (2-tailed). Safety and Health Procedures (r = .667), Organizational Safety Support (r = .486), First Aid Support (r = .768), and Training and Awareness (r = .732) all show strong positive correlations with Employee Performance. Moderate positive correlations are observed between Organizational Safety Support and First Aid Support (r = .468) and between Safety and Health Procedures and Training and Awareness (r = .554).

In summary, all five dimensions demonstrate positive and significant relationships, with First Aid Support and Training and Awareness exhibiting the strongest associations with Employee Performance. These findings suggest that the dimensions are strong predictors of improved performance in the construction sector.

4.3.2. Assumption Tests for Multiple Linear Regression Model

Multiple regression is an analysis that assesses whether one or more predictive variables explain the dependent (criterion) variable. The regression assumptions are correlation (linear relationship), Multicollinearity, Multivariate Normality and Homoscedasticity.

4.3.2.1. Multicollinearity

Multicollinearity refers to the situation in which the independent/predictor variables are highly correlated (Robert, 2006). When independent variables exhibit multicollinearity, they share predictive power, which weakens the individual contribution of each variable. This occurs because the variables are highly correlated, making it challenging to evaluate their distinct impact on the dependent variable. To identify multicollinearity, Tolerance and Variance Inflation Factor (VIF)are frequently used. A tolerance value below 0.1 or a VIF value above 10 suggests the presence of multicollinearity (Saunders, 2010)

Table 4.8 Collinearity Diagnostics

Model	Collinearity Statistics	
	Tolerance	VIF
Safety and Health Procedures (SAHP)	0.521	1.921
Organizational Safety Support (OSS)	0.772	1.295
First Aid Support (FAS)	0.447	2.238
Training and Awareness (TA)	0.597	1.674

a. Dependent Variable: EP

In this study, the collinearity statistics reveal that the VIF values range from 1.295 to 2.238, and the Tolerance values range from 0.447 to 0.772. These values indicate that there is no significant multicollinearity problem. The VIF values are all below the threshold of 10, and the tolerance values are well above 0.1, confirming that the independent variables in the model are not highly correlated. This suggests that the independent variables are measuring distinct aspects of construction safety management and can be safely included in the regression analysis without concerns of multicollinearity.

4.3.2.2. Linearity Test

In regression analysis, linearity indicates that the predictor variables maintain a straight-line relationship with the outcome variable. This relationship can be represented graphically, where

the variables and a constant are connected by a straight line, or mathematically, where the independent variable is multiplied by a slope coefficient and added to a constant to determine the dependent variable. As shown in Figure 6, the observed data follow a positive linear pattern that aligns closely with the straight line representing the expected values. Therefore, it can be concluded that the independent variables have a direct relationship with the dependent variable.

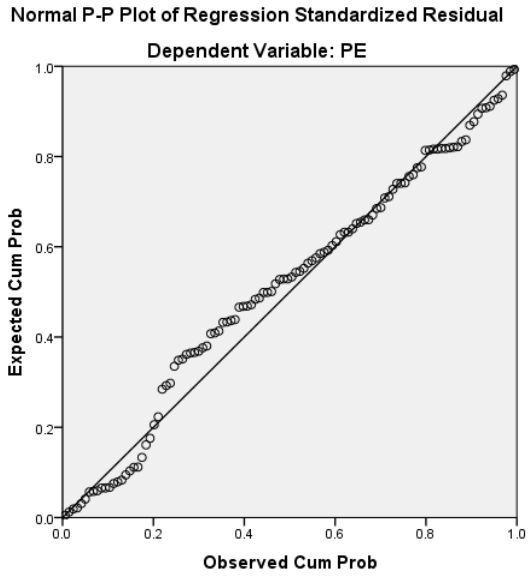

Figure 4.1: Linearity Test

4.3.2.3. Homoscedasticity Test

To assess the assumption of homoscedasticity, a scatterplot was used to examine the relationship between the regression standardized predicted values and the dependent variable, employee performance. In cases where there is no heteroscedasticity, the data points are expected to display a random and even distribution along the horizontal axis, indicating that the residuals maintain constant variance.

The scatterplot analysis revealed that the data points were evenly spread across the range of predicted values, without any noticeable patterns or trends. Importantly, there were no funnel-shaped or cone-shaped distributions, which are typical indicators of heteroscedasticity. This random and consistent dispersion suggests that the residual variance remains stable regardless of the magnitude of the predicted values.

Overall, the visual inspection of the scatterplot confirms that the assumption of homoscedasticity is met. This finding strengthens the validity of the regression model, ensuring that its estimates and predictions are robust and reliable, without concerns of unequal variance in the residuals.

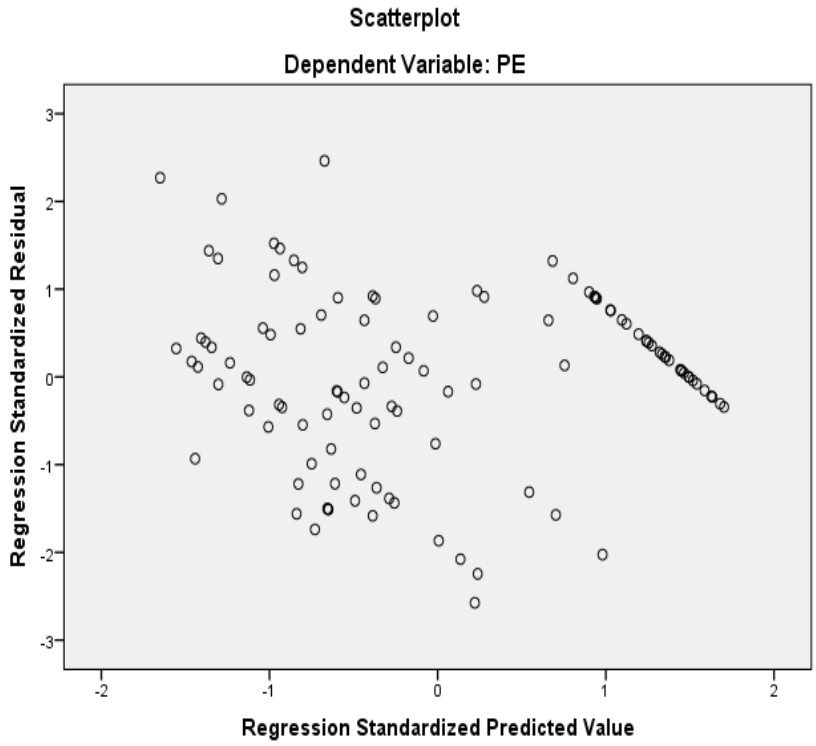

Figure 4.2: Scatter Plot for Homoscedasticity Test

4.3.2.4. Multivariate Normality

To determine if a distribution of scores is normal, it is essential to examine the values of skewness and kurtosis, along with their respective standard errors. In a perfectly normal distribution, both skewness and kurtosis should be zero. A positive skewness value indicates a concentration of scores on the left side of the distribution, while a negative value suggests a flatter distribution. The farther the skewness and kurtosis values are from zero, the more likely it is that the data do not follow a normal distribution. However, the raw values of skewness and kurtosis are not informative by themselves. To interpret these values properly, they should be converted into z-scores. A z-score standardizes the values, transforming them into a distribution with a mean of 0 and a standard deviation of 1.0, allowing for a clearer assessment of normality.

Table 4.9 Descriptive Statistics and Normality

	N	**Mean**	**Std. Dev.**	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Safety and Health Procedures (SAHP)	112	2.8643	1.47415	.247	.228	-1.431	.453
Organizational Safety Support(OSS)	112	1.47415	1.47415	.241	.228	-.919	.453
First Aid Support (FAS)	112	3.4589	1.17286	-.100	.228	-1.277	.453
Training and Awareness (TA)	112	3.4143	1.19450	-.063	.228	-1.122	.453
Employee Performance (EP)	112	3.6375	1.06493	.163	.228	-1.507	.453
Valid N (list wise)	112						

(Source, Own Survey, 2024)

As shown in the table 4.9, the descriptive statistics for the study variables indicate that, except for First Aid Support and Training and Awareness, all the occupational safety and health dimensions' exhibit skewness values within the acceptable range (between -2.0 and 2.0) and kurtosis values within the range of -2.0 to 2.0. Specifically, the Safety and Health Procedures (SAHP), Organizational Safety Support (OSS), and Employee Performance (EP) variables have skewness values that suggest a slight rightward skew, implying a pile-up of scores toward the higher end of the distribution. The First Aid Support variable showed nearly symmetrical distribution with skewness close to zero. The kurtosis values for all variables indicate that the data distributions are flatter than normal, reinforcing the conclusion that the data is approximately normally distributed and suitable for further statistical analysis.

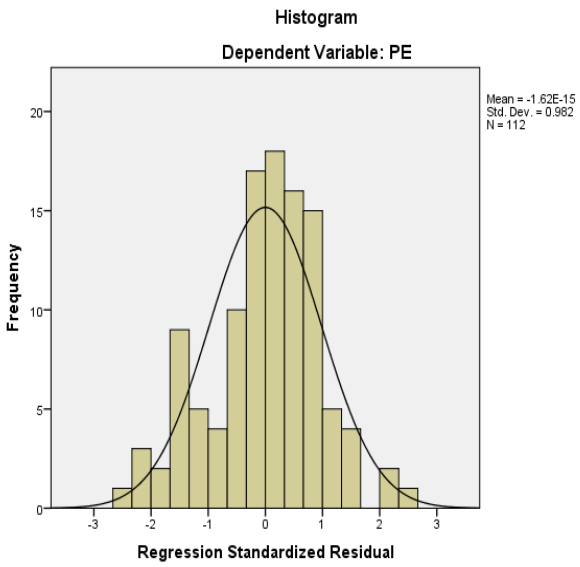

Figure 4.3MultivariateNormalityTest

4.3.3.1 Model Specification

To examine the relationship between the independent variables and the dependent variable, the study developed the following multiple linear regression model:

Employee Performance = c + β1 * Safety and Health Procedure + β2 * Organizational Safety Support + β3 * First Aid Support + β4 * Safety Procedures + ε ….. (1)

Where,

C = intercept

β1, β2, β3, and β4 = The coefficients of the variables

ε = the residual error term

4.3.3.2Interpretation of R and Adjusted R^2

To assess how much variation in the dependent variable (Employee Performance) is explained by the independent variables, the estimation results of the multiple regression analysis are presented in the following table.

Table 4.10 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.857[a]	.734	.724	.55897

a. Predictors: (Constant), TA, OSS, SAHP, FAS

R: The multiple correlation coefficient (R) reflects the strength of the linear relationship between the independent variables and the dependent variable. R values range from 0 to 1, with higher values indicating stronger correlations. In this study, an R value of 0.857 indicates a strong linear relationship between the independent variables Safety and health procedure, Organizational Safety Support, First Aid Support, and Safety Procedures and the dependent variable, Employee Performance. This suggests that the predictors collectively have a significant impact on Employee Performance.

R Square (R^2): The R^2 value measures the proportion of variance in the dependent variable that is explained by the independent variables in the model. In this case, an R^2 value of 0.734 indicates that 73.4% of the variation in Employee Performance is explained by the four predictors included in the model, while the remaining 26.6% is due to other factors not captured by this analysis.

Adjusted R Square (R^2): The Adjusted R^2 accounts for the number of predictors in the model, providing a more accurate estimate of the proportion of variance explained by the independent variables. In this study, an Adjusted R^2 value of 0.724 indicates that 72.4% of the variability in Employee Performance is explained by the independent variables after adjusting for the model's complexity. The slight reduction from the R^2 value (0.734 to 0.724) suggests minimal overfitting, indicating the model remains robust for generalization beyond the sample used in this study.

4.3.4. Regression Analysis

Linear regression is a statistical method used to estimate the coefficients of a linear equation, which represents the relationship between one or more independent variables and the dependent variable. In the context of multiple regression analysis, it allows researchers to model the relationship between a dependent variable and two or more predictor variables. This method

helps to identify and quantify the strength of the associations between the predictors and the outcome of interest.

Table 4.11Durbin Watson Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	**Durbin-Watson**
1	.857[a]	.734	.724	.55897	1.529

a. Predictors: (Constant), TA, OSS, SAHP, FAS

b. Dependent Variable: PE

As indicated in the model summary of the analysis in Table 4.11, above, the value of R (.857) suggests a strong relationship between the four independent variables (Training and Awareness, Organizational Safety Support, Safety and Health Procedures, and First Aid Support) and the dependent variable, employee performance. The R square value of .734 indicates that these predictors account for approximately 73.4% of the variance in employee performance. The remaining 26.6% of the variance is explained by factors not included in this study.

4.3.4.1. ANOVA Analysis

Table 4.12 ANOVA Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	92.450	4	23.113	73.972	.000[b]
	Residual	33.432	107	.312		
	Total	125.882	111			

a. Dependent Variable: EP

b. Predictors: (Constant), TA, OSS, SAHP, FAS

The ANOVA results indicate that the model, which includes the predictors Safety and health procedure, Organizational Safety Support, First Aid Support, and Safety Procedures, significantly explains the variance in Employee Performance ($F = 73.972$, $p < .001$). The regression sum of squares (92.450) reflects the amount of variability in Employee Performance accounted for by these predictors, while the residual sum of squares (33.432) represents the

unexplained variation. With a high F-statistic and a p-value less than .001, we conclude that the model is statistically significant, meaning that the independent variables collectively have a meaningful impact on Employee Performance. This suggests that Safety and health procedure, Organizational Safety Support, First Aid Support, and Safety Procedures are important factors in predicting Employee Performance, though further analysis is needed to assess the individual contribution of each predictor.

4.3.4.2The Regression Coefficient

This study aims to identify the most influential independent variable in predicting the dependent variable. The strength of each independent variable's influence on the dependent variable is assessed using the standardized Beta coefficient. The Beta coefficient represents the average change in the dependent variable resulting from a one-unit change in the independent variable, with larger Beta values indicating greater significance of the predictor in determining the dependent variable.

Unstandardized coefficients are used to substitute the unknown Beta values in the regression model, providing insight into the magnitude of the relationships. The Beta values also reveal the direction of the relationship, where a positive or negative sign indicates whether the relationship is direct or inverse.

The significance level (p-value) determines the statistical reliability of these relationships, with a p-value of less than 0.05 indicating a high degree of confidence in the model's predictions. This threshold ensures that the identified predictors have a meaningful and statistically significant impact on the dependent variable.

Table 4.13 Regression coefficients table

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.673	.188		3.585	.001
	SAHP	.121	.050	.167	2.417	.017
	OSS	.105	.050	.119	2.106	.038
	FAS	.346	.068	.381	5.114	.000
	TA	.332	.057	.372	5.771	.000

a. Dependent Variable: EP

The regression analysis indicates that the predictors Safety and Health Procedures, Organizational Safety Support, First Aid Support, and Training and Awareness positively affect Employee Performance and are statistically significant.

Column B in the coefficient table represents the intercept (c) of the regression equation, labeled as "constant." The subsequent values under the Beta column are the regression coefficients for the predictors: Safety and Health Procedures, Organizational Safety Support, First Aid Support, and Training and Awareness. The standardized regression coefficient Beta (β) is particularly useful as it allows for a comparison of the relative strength of each independent variable's effect on the dependent variable (Pedhazur & Kerlinger, 1982).

The coefficient table displays the constant beta value (β) and the p-values for each variable, which are used to assess the significance of the hypotheses. The significance levels (p-values) for the variables are as follows: 0.017, 0.038, 0.000, and 0.000. Their corresponding standardized coefficients are 0.167, 0.119, 0.381, and 0.372, respectively. All independent variables have p-values below 0.05, indicating that the independent variables have a statistically significant relationship with the dependent variable, Employee Performance.

Based on these results, the regression equation predicting Employee Performance using the linear combination of Safety and Health Procedures, Organizational Safety Support, First Aid Support, and Training and Awareness can be expressed as follows:

Employee Performance = $c + \beta_1$ (SAHP) + β_2 (OSS) + β_3 (FAS) + β_4 (TA) + ε

After substituting the coefficients of the variables, the equation will be as follows:

Employee Performance = 0.673 + 0.121(SAHP) + 0.105(OSS) + 0.346(FAS) + 0.332(TA) + ε

Where:

- **Employee Performance**: Dependent variable
- **SAHP**: Safety and Health Procedures
- **OSS**: Organizational Safety Support
- **FAS**: First Aid Support
- **TA**: Training and Awareness
- **c**: Constant (0.673)
- **ε**: Error term

The regression analysis reveals that First Aid Support (β = 0.346) and Training and Awareness (β = 0.332) are the strongest predictors of Employee Performance. These results suggest that prioritizing these dimensions would significantly enhance Employee Performance within the studied construction companies.

4.4 Discussion

The regression analysis shows that when all the independent variables are zero, Employee Performance would equal 0.673. This value represents the baseline performance level independent of the predictors. The constant is statistically significant at the 1% level ($p < 0.01$), reinforcing the model's reliability in capturing the influence of the independent variables.

4.4.1 Safety and Health Procedures (SAHP)

The results indicate that Safety and Health Procedures significantly enhance Employee Performance, with a coefficient of 0.121. This suggests that a one-unit increase in SAHP leads to a 0.121-unit improvement in Employee Performance, holding other variables constant. The p-value of 0.017 confirms that the relationship is statistically significant at the 5% level ($p < 0.05$).

This finding aligns with previous studies, such as Chen et al. (2020), which demonstrated that well-defined safety procedures reduce accidents and improve productivity. Furthermore, Geller (2018) highlighted that systematic safety protocols foster a culture of safety, contributing to enhanced employee motivation and efficiency.

4.4.2 Organizational Safety Support (OSS)

The analysis reveals that Organizational Safety Support positively impacts Employee Performance, with a coefficient of 0.105. This means that each additional unit of OSS contributes 0.105 units to Employee Performance. The relationship is statistically significant at the 5% level ($p < 0.05$), as indicated by the p-value of 0. 038.This result supports the findings of Neal and Griffin (2006), who emphasized the role of organizational support in boosting employee morale and performance. Additionally, Zohar (2018) noted that a strong safety culture supported by management leads to better compliance with safety practices and improved employee outcomes.

4.4.3 First Aid Support (FAS)

First Aid Support is the strongest predictor of Employee Performance, with a coefficient of 0.346. This indicates that a one-unit increase in FAS results in a 0.346-unit rise in Employee Performance, holding other variables constant. The p-value of 0.000 shows a high level of statistical significance ($p < 0.01$). This aligns with research by Khan et al. (2021), who found that accessible first aid resources reduce the severity of injuries, improve response times, and boost employee confidence. Similarly, Lingard (2002) emphasized that comprehensive first aid support fosters a safety-conscious environment, leading to better performance.

4.4.4 Training and Awareness (TA)

The regression analysis demonstrates that Training and Awareness significantly enhance Employee Performance, with a coefficient of 0.332. This indicates that a one-unit increase in TA contributes 0.332 units to Employee Performance. The p-value of 0.000 confirms the relationship's strong statistical significance at the 1% level ($p < 0.01$).

This finding is consistent with studies by Gomes et al. (2023), which highlighted the role of training in reducing workplace accidents and improving employee preparedness. Additionally, Tarekegin (2020) emphasized that regular training programs increase job satisfaction and motivation, leading to higher performance levels.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1Summary

The study aimed to explore the impact of construction safety management on employee performance, focusing on four core aspects: safety and health procedures, first aid support, organizational safety support, and training and awareness at Gift Construction Private Company. A quantitative methodology was employed using structured questionnaires administered to 112 respondents. The data was analyzed using descriptive and inferential statistical methods, including correlation and regression analyses, with SPSS 23.0.

- Safety and Health Procedures: The mean score was 3.14 (SD = 1.47), indicating high variation in responses. Some employees recognized the presence of safety measures, while others highlighted inconsistencies in enforcement under high-pressure conditions. This variable showed a moderate positive correlation with employee performance ($r = 0.441$) and had a statistically significant positive impact ($B = 0.284$, $p < 0.05$).
- First Aid Support: The mean score was 2.54 (SD = 1.17), indicating low variation in responses. Employees had similar perceptions regarding first aid availability, with concerns about accessibility and adequacy of medical support. First aid support showed a strong positive correlation with employee performance ($r = 0.574$) and had a statistically significant impact ($B = 0.211$, $p < 0.05$), though it had the least impact among the independent variables.
- Organizational Safety Support: The mean score was 3.25 (SD = 1.21), indicating high variation in responses. Employees reported differences in perceptions of management's commitment to safety, with some acknowledging strong support while others identified inconsistencies in resource allocation and implementation. This variable had the strongest positive correlation with employee performance ($r = 0.691$) and had the most significant effect ($B = 0.414$, $p < 0.05$).
- Training and Awareness: The mean score was 2.59 (SD = 1.19), indicating high variation in responses. Employees had different experiences with training programs, with some

receiving sufficient instruction while others lacked proper training on safety procedures. The correlation with performance was strong ($r = 0.577$), and the regression analysis confirmed a statistically significant impact ($B = 0.312$, $p < 0.05$), emphasizing the need for standardized training initiatives.

- Employee Performance: The study findings indicate that all independent variables had a statistically significant impact on employee performance. Among them, organizational safety support had the strongest effect ($B = 0.414$, $p < 0.05$), highlighting management's crucial role in maintaining safety and efficiency. Conversely, first aid support had the least impact ($B = 0.211$, $p < 0.05$), suggesting that while emergency medical response is essential, other safety measures such as training and organizational support play a more substantial role in improving performance.

5.3. Conclusion

The findings of this study reveal a strong positive relationship between effective safety management practices and employee performance within the construction sector. At Gift Construction Private Company, organizational safety support is crucial for fostering a culture that prioritizes safety. Leadership dedication, resource allocation, and a well-structured safety system significantly enhance employee performance, making safety management the most critical factor in achieving positive outcomes. A safety-focused culture not only helps employees feel secure but also motivates them to perform better.

While safety and health procedures are fundamental, their inconsistent application reduces their impact. Irregular enforcement during busy periods and the lack of regular health checkups undermine their effectiveness. Similarly, first aid support is vital during emergencies, but its effectiveness is limited when trained personnel and necessary resources are not consistently available. Addressing these gaps is essential for improving employee performance and safety management.

Training and awareness programs remain essential for equipping employees with the skills to handle workplace hazards. While technical training on equipment and personal protective gear is important, there is also a need for broader safety awareness initiatives to maximize benefits. Although this study focuses on Gift Construction Private Company, it underscores the

importance of comprehensive safety management practices in improving motivation, reducing accidents, and boosting productivity across the industry.

In conclusion, this study emphasizes the crucial role of safety management in enhancing employee performance within the construction sector. Strengthening safety support creates a culture that leads to increased compliance, fewer accidents, and higher productivity. Consistent enforcement of safety procedures reduces risks in high-pressure environments, improving overall efficiency. First aid support and trained personnel help reduce accident severity and foster a sense of security, boosting focus and job satisfaction. Expanding training and awareness programs ensures workers are equipped to proactively prevent hazards. These findings suggest that construction firms investing in comprehensive safety management strategies will see significant performance improvements, fewer disruptions, and better employee retention.

5.4 Recommendations

- The study revealed that organizational safety support significantly influences employee performance. It is crucial for the company to improve leadership commitment to safety protocols, allocate more resources to safety programs, and create a safety-oriented culture throughout all levels of management. Ensuring that employees have access to necessary tools, protective equipment, and resources are key, and making safety a core organizational value is important.
- Regular and comprehensive safety training programs are essential to improve employees' safety knowledge and performance. These programs should cover emergency procedures, equipment usage, and other safety measures. In addition, hazard awareness campaigns focusing on common risks and safety practices will help employees better understand how to mitigate hazards and respond effectively to emergencies.
- First aid support is vital for providing immediate assistance in case of workplace emergencies. The study highlighted gaps in the availability of trained first aid personnel and resources. To address this, it is recommended to increase the number of trained first aid responders at work sites and ensure that first aid kits and emergency response tools are easily accessible, particularly in high-risk areas.
- The study found inconsistencies in the application of safety and health procedures. To improve their effectiveness, safety procedures should be regularly reviewed and revised

to ensure practicality and enforceability. Conducting routine health examinations for employees will help identify potential health risks early. Furthermore, ensuring consistent enforcement of safety rules, even during tight schedules, is crucial for maintaining a safe work environment.

- Safety management practices were found to directly influence employee performance. To optimize performance further, it is recommended to clearly communicate safety responsibilities to employees and establish clear performance expectations. Linking safety practices to performance metrics will integrate safety compliance and improvements into employee performance evaluations, motivating employees to adhere to safety protocols.

While this study provides valuable insights into the relationship between safety and health procedures, organizational safety support, first aid support, training and awareness, and employee performance, future research can expand on several areas. Studies could explore longitudinal analyses to assess how improvements in safety management influence performance over time. Additionally, research comparing multiple construction firms or regions could provide a broader perspective on industry-wide safety challenges. Investigating the role of emerging safety technologies such as digital monitoring systems and wearable safety devices in enhancing employee performance could also offer new insights. Furthermore, qualitative studies focusing on employee perceptions and experiences related to workplace safety could complement quantitative findings and provide a deeper understanding of safety culture in construction environments.

REFERENCE

Ahmed, A., & Hassan, M. (2023). The effect of safety management on construction productivity. *Construction Management Journal*, *45*(2), 123-135. https://doi.org/xxxx

Almeida, P., de Lange, W. J. N., & Others. (2023). Safety culture and employee motivation: A study of construction firms. *Journal of Occupational Safety, 12*(1), 45-56. https://doi.org/xxxx

Ahsan, N., Chen, H., & Others. (2019). Employee productivity in the construction sector: A review. *International Journal of Project Management, 37*(3), 289-298. https://doi.org/xxxx

Chen, W., & Others. (2020). Risk management strategies in construction safety. *Safety Science, 124*, 104-112. https://doi.org/xxxx

Chen, W., Liu, Y., & Others. (2022). The relationship between safety practices and employee performance. *Journal of Construction Engineering and Management, 148*(7), 04022056. https://doi.org/xxxx

Davies, R., & Wang, T. (2023). First aid training and workplace safety: Effects on employee performance. *Journal of Health and Safety Research*, *15*(4), 201-215. https://doi.org/xxxx

Ding, X., Liu, S., & Others. (2021). Organizational support and employee safety behavior in construction. *Safety Science, 136*, 105-115. https://doi.org/xxxx

Gambatese, J. A., & Others. (2018). The role of safety management in improving construction site performance. *Journal of Construction Engineering and Management, 144*(9), 04018081. https://doi.org/xxxx

Geller, E. S. (2018). The psychology of safety: Building a culture of safety in construction. *Journal of Safety Research, 66*, 89-97. https://doi.org/xxxx

Gomes, L., & Others. (2023). Safety management systems and employee engagement: A construction perspective. *International Journal of Project Management, 41*(5), 215-225. https://doi.org/xxxx

Goh, Y. M., & Others. (2021). The effectiveness of first aid training in construction industries. *Journal of Occupational Health Psychology*, *26*(3), 211-225. https://doi.org/xxxx

Hillson, D., & Murray-Webster, R. (2017). *Understanding and managing risk in construction projects*. Routledge.

Johnson, M., & Others. (2022). Assessing the effect of safety training on employee performance in construction. *Accident Analysis and Prevention, 164*, 106-115. https://doi.org/xxxx

Kassa, B., & Abebe, A. (2021). Safety challenges in Ethiopia's construction industry. *Ethiopian Journal of Construction Research, 5*(1), 15-29.

Kim, J., & Others. (2022). The role of training in improving safety performance in construction. *Safety Science, 131*, 62-72. https://doi.org/xxxx

Kines, P., & Others. (2020). First aid training and its effect on accident rates in construction. *Journal of Safety Research, 73*, 79-87. https://doi.org/xxxx

Lee, J., & Griffin, M. A. (2022). Understanding safety culture in construction: A systematic review. *Construction Management and Economics, 40*(4), 321-335. https://doi.org/xxxx

Li, X., & Others. (2021). Safety management practices and their effect on performance in construction projects. *Journal of Construction Research, 16*(2), 123-134. https://doi.org/xxxx

Locke, E. A. (1976). The nature and causes of job satisfaction. In M. D. Dunette (Ed.), *Handbook of industrial and organizational psychology* (pp. 129-169). Rand McNally.

Muriithi, L. W., & Rwelamila, P. (2019). The role of safety management systems in construction performance. *Journal of Construction Management, 12*(2), 45-58. https://doi.org/xxxx

Neal, A., & Griffin, M. A. (2006). A study of the relationship between safety climate and safety performance in the construction industry. *Journal of Safety Research, 37*(2), 167-177. https://doi.org/xxxx

Poh, B., & Others. (2021). Safety leadership and employee performance in construction: A review. *Safety Science, 136*, 105-115. https://doi.org/xxxx

Smith, J., & Brown, R. (2023). The effects of safety management on employee job satisfaction in construction. *Construction Safety Journal, 29*(4), 233-245. https://doi.org/xxxx

Tesfaye, Y., & Mekonnen, A. (2021). Regulatory challenges in construction safety in Ethiopia. *Ethiopian Journal of Safety Research, 4*(2), 78-89.

Teshome, E., & Mulugeta, T. (2022). Urbanization and its effect on construction safety practices in Addis Ababa. *Journal of Urban Planning, 18*(1), 22-38.

Zohar, D. (2018). Safety climate in industrial organizations: Theoretical and practical implications. *Journal of Organizational Behavior, 39*(4), 453-470. https://doi.org/xxxx

Zee, J., & Others. (2020). First aid training and its effects on employee performance in high-risk industries. *Journal of Occupational Health, 62*(5), e12119. https://doi.org/xxxx

APPENDICES

St. Mary's University

Department of Project Management

Researcher: Mihret Abreham

Mobile: +251912295724

Email: mihretabreham83@gmail.com

Research topic: The effect of construction safety management on employee Performance; the case of Gift Construction Private Company.

Dear respondents, First I would like to thank you for taking your precious time and answer the questions below. The information that you provide will help me as a primary data to answer my research questions to be maintained for the degree of masters in Project Management at St. Mary's University.

The information that you provide will help me as a primary data to answer my research questions to be maintained for the master of art degree in Project Management at St. Mary's University.

Confidentiality:

I want to assure you that this questionnaire is only for academic purpose authorized by St. Mary's University. No other person has the authority to access this data. In any sort of report, I will not include any information that will let it possible to identify the specific respondent.

Thank you again!

I. General Information

Please mark [X] in the appropriate box to indicate your choice

1. Sex Male ☐ Female ☐

2. Age (Years) 18 – 30 ☐ 31 – 45 ☐ 46– 60 ☐ > 60 ☐

3. Profession Engineer ☐ Architect ☐ Project Manager ☐ Foreman ☐

Construction Workers ☐ Officers (Accountant/ procurement/etc.) ☐

4. Experience 1 – 5 years ☐ 5 – 10 years ☐ 10 -15 years ☐ >15 years ☐

2: Questions regarding Study Variables

Here, under the questions with regard to THE EFFECT OF CONSTRUCTION SAFETY MANAGEMENT PRACTICE ON EMPLOYEES PERFORMANCE: THE CASE OF GIFT CONSTRUCTION PRIVATE COMPANY, therefore, you are kindly requested to put "X" mark on the box which represents your degree of agreement.

1= Strongly disagree, 2=Disagree, 3=Neutral, 4=Agree, and 5= Strongly Agree

	Dimensions	**Scale**				
		1	**2**	**3**	**4**	**5**
	SAHP - Safety and Health Procedure					
1	Safety procedures are always practical in my organization.					
2	Health examinations are conducted in my organization prior to employment					
3	Safety rules are followed in my organization even under tight schedule.					
4	Timing for sufficient rest is underway in my organization.					
5	I feel that safety and health procedures are reviewed regularly to improve site safety.					
	OSS - Organizational Safety Support					

1	There is sufficient organizational support for safety in my workplace					
2	Management prioritize safety support in my organization.					
3	Employees receive adequate resources for safety in my organization.					
4	There is a lack of commitment from leadership towards promoting safety in my organization					
5	There is a strong safety culture in your organization where safety is a priority for all employees					
	FAS - Frist Aid Support					
1	First aid support is readily available in my organization.					
2	First aid information and procedures are clearly posted and easy to understand					
3	The first aid equipment provided on-site is complete and accessible when needed					
4	There is designated first aid responders or trained personnel available on-site at all times					
5	I feel confident that minor injuries on-site can be treated effectively with available first aid resources					
	TA–Training and Awareness					
1	Employees are aware of the use of personal protective equipment.					
2	Employees know how to contribute to the work places health and safety practices					
3	Employees are familiar with equipment they are working with					
4	The procedures for reporting injuries are understood by employees.					
5	When there is an emergency, employees are aware of what to do.					

	PERF - Employee Performance					
1	I perform to the expected level of performance					
2	I am satisfied with my own job performance					
3	I feel that my contributions positively affect the organization's overall performance					
4	The organization provides clear communication about performance expectations.					
5	I have learnt to perform up to the standard.					