



SAINT MARY'S UNIVERSITY SCHOOL OF GRADUATE
STUDIES SCHOOL OF BUSINESS

ASSESSMENT OF SAFETY MANAGEMENT ON BUILDING
CONSTRUCTION SECTOR IN THE CASE OF YOHANNES HAILE
BUILDING CONTRACTOR

By: REDIT TEGEGNE ID: SGS/0491/2012A

JULY 2021

ADDIS ABEBA, ETHIOPIA

St. Mary's University
School of Graduate Studies

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BUILDING CONSTRUCTION**

By: REDIT TEGEGNE ID- SGS/4091/2012A

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY COLLEGE, SCHOOL
OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTERS OF BUSINESS
ADMINISTRATION (MBA)

July, 2021

Addis Ababa, Ethiopia

**ASSESSMENT OF SAFETY MANAGEMENT ON BUILDING
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DECLARATION

I, the undersigned, declare that the study entitled “**Assessment on Safety Management on Building Construction Sector**” is the result of my own effort and study that all sources of materials used for the study have been acknowledged. I have conducted the study independently with the guidance, support and comments of the research advisor Solomon Markos (PHD). This study has not been submitted for any degree or diploma in this or any other higher education institution. It is conducted for the partial fulfillment of the Master of Business Administration.

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July 2021

ENDORSEMENT

I attest that the works contained in the thesis entitled “**Assessment of Safety Management on Building Construction in the case of Yohannes Haile Building Construction**” are the original research works of Redit Tegegne and conducted under my supervision.

Name the Advisor

Signature

Date

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Acknowledgements

First and for most I would like to extend my deepest gratitude to the almighty God for his kindness and blessings of me with the courage and endurance to successfully complete this Master's Program as well as the thesis and keeping us from Covid 19. Next, I would like to express my gratitude to my advisor Solomon Markos (PHD), for his fruitful support, expert guidance, helpful criticism and encouragement at every stage during the completion of this work. It was pleasant and inspiring experience for me to work under his guidance. So, I always remain grateful and thankful. My special thanks also go to my families and friends for their admirable encouragement and unforgettable support. Furthermore, I would like to express my appreciation to all participants and individuals who directly or indirectly provided the necessary materials and support for the realization of this thesis.

Abstract

The purpose of the study deals with assessment safety management in the case of Yohannes Haile building Construction Company. The main objectives of this research were to assess safety management performance in building construction projects. Different literatures were assessed to show how safety is very important process in making projects successful. The study used both qualitative and quantitative approach with the aid of descriptive and explanatory designs in order to achieve the research objectives. The study used both primary and secondary data sources to gather relevant data for the study. Primary data were collected through questionnaire, interview, site visit and observation while secondary data were collected from Contract documents, Progress report & Medical report. Convenient sampling techniques is used to select representatives samples for the study. Descriptive statistics Microsoft Excel & SPSS were used for the analysis of the data. The findings shows that the study result that the safety management of projects is not up to expectation. The challenges in implementing construction safety management Yohannes building construction projects include falling from the height hit by falling objects, cause of electrocutions, nail piercing and caused by machinery accidents in loading and unloading are frequently occurring accidents that respondents identified in Yohannes Haile Construction Projects. The study recommends Government organizations like the Ministry of Labor and Social Affairs should develop occupational safety rules and regulations and implement legal rights for workers safety.

Key words: *Safety management, occupational health, safety equipment*

Acronyms

HS Health and safety

OHS Occupational health and safety

OSHA Occupational Safety and Health Administration

PPE Personal Protective Equipment

CSFs Critical Success Factors

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CHAPTER ONE: INTRODUCTION

1.1. Background of the Study

The construction industry contributes to a large proportion of industrial injury and mortality, while construction is the backbone of the world's economy in general and Ethiopia in particular; mobilizing an enormous amount of various resources and budgets and embracing huge manpower by creating a large job opportunity. Therefore effectiveness of the Safety Management has to be considered.

Safety management is essential knowledge in a project management area which recognized in The Guide to the Project Management Body of Knowledge (PMBOK Guide, cited by Cretu et al., 2011). Safety management is expected to take account of all risks and accidents that may possibly be expected that put project employees at risk. The health and safety (H&S) of any workplace is very important to diminish such risks, legally and ethically, but in mainly dangerous contexts such as the construction industry HS takes on perilous importance as daily activities of the industry are highly unsafe. It is thus important to identify suitable safety activities and strategy, accommodating potential serious H&S problems (Twort and Rees, 2011).

Past research in the area show clearly that construction projects create frequent possible threats to the lives of employees, and serious injuries and mortalities are frequent in the construction industry. Thus, the consideration and management of safety, along with consideration to health and safety generally, is undeniably fundamental to any construction project. By proper H&S planning many of the myriad H&S risks in construction can be prevented.

Accordingly, accidents on the construction sites are principally attributable to hazardous human behavior (i.e. individual factors) and/or unsafe working conditions (i.e. system factors). Moreover, it is obvious that there is a serious problem with falls, which Problem is common throughout the global construction industry.

Safety management is the procedure used to recognize H&S risks and implement actions to decrease the possibility of a risk materializing and to diminish or eliminate the potential consequences of identified project H&S risks. This research focused on principle type of risks in construction projects: risk of construction on health and safety (H&S) of employees.

Injuries and fatalities resulted in accidents in the construction industry still an obstacle clings construction industry to its infamous position as the industrial sector responsible for more occupation accidents, than any other. Consequently, the improvement of H&S in construction is still an essential goal for all contributors in the construction processes.

Safety management is likely to take account of all risks and accidents that may believably be expected that put project employees at risk, to minimize such risks. It is thus important to identify appropriate safety actions and strategies to accommodate potential serious safety problems. Therefore, to move the construction industry closer to its goal of zero accidents it is important to improve the efficiency of safety management in the construction.

1.2. Statement of the problem

The building industry is characterized by continual changes, the bombardment of varying technologies, poor working conditions, and the involvement and the need for coordination of different interdependent trades and operations. Due to the hazardous nature of work, safety is a serious problem in the industry. In recent years, safety records in the construction industry are so worse that safety has become a matter of grave concern to the government. The major causes of accidents have been identified and can be directly attributed to unsafe design and site practices. Accidents arise from different causes that can generally be classified as physical incidents posing hazardous situations and behavioral incidents caused by unsafe acts' (Kartam 1997). Unfortunately many companies do not follow strict health and safety guidelines as construction workers are more likely to be killed by construction accident than any other type of employment. Limitations on the part of supervisory authority in the construction industry means such guide lines exist but only on paper leaving the safety and well being of construction workers in Kenya at the mercy of employers. While other sectors of the economy have development policies to guide them, Building construction industry does not have a comprehensive policy frame work, in fact the Housing laws are fragmented and need harmonizing to enforce and monitor construction work to effectively cub malpractices in the construction sector. (Ministry of Public Works, 2011).

1.3. Research Question

1. What are the current safety management performance in Yohannes Haile Building Construction Projects?
2. What are the challenges in implementing construction safety management in Yohannes Haile Building Construction Projects?
3. What are frequently occurring accidents in Yohannes Haile Building Construction Projects?
4. What are the major causes of accident in Yohannes Haile Building Construction Projects?

1.4. Objectives of the study

1.4.1 General Objective

The main objective of the study is to assess safety management in Yohannes Haile Building construction projects.

1.4.2 Specific Objectives

1. Investigate the safety measures used on Yohannes Haile construction sites
2. Examine the challenges in the implementation of safety management in Yohannes Haile construction sites
3. To identify frequently occurring accidents in Yohannes Haile Construction Projects.
4. To find out the major causes of accident in Yohannes Haile Construction Projects.

1.5. Definition of Terms

Safety management is essential knowledge in a project management area which recognized in the Guide to the Project Management Body of Knowledge (PMBOK Guide, cited by Cretu et al., 2011).

Construction safety management

Construction safety management a method which is used to control safety activities in order to ensure a safe working environment in the construction site. Safety during the construction project is also influenced to a great part by decisions made during planning and design process.

Health and Safety Information: A worker who have got any kind of information in-one-year period through any kind of media about health and safety of construction workers

Personal Protective Equipment (PPE): Utilization of the worker-specialized clothing or equipment worn by employees for protection against health and safety hazards at the time of interview.

1.6. Significance of the Study

The subject of the study widens knowledge on the assessment and importance of safety management in building construction sectors for the successful of projects. This study contributes to the literature of safety management for other researcher and it serves as a spring board for future researchers in the area. The study help employees and management of Yohannes Haile building construction and other construction company to better understanding in safety management how to hold employees, labors and other stuffs from different accidents and injuries by satisfying their overall needs with expectation that they will advocate for the company and hold their trust upon the company which result in good profit and enhance reputations as well. In addition the construction companies, consultants, worker in construction companies and the general public are among the beneficiaries of the research outcome.

1.7. Scope of the Study

The scope of the study covers theoretical, geographical, and methodological aspects. In theoretical aspects, assessment of safety management on building construction can be conducted with many construction companies but only Yohannes Haile building construction company were considered for this case study because Yohannes Haile is one of the leading companies capable of handling complex and challenging projects ranging from residential, warehouse, office, complex buildings, In geographical aspect, the study could also be conducted at a country level but the researcher focus were in Addis Ababa administrative city. In methodological aspect the study could conduct by using different methodology, but the researcher would use mixed method research approach design.

1.8. Organization of the Report

The study is organized in five chapters. The first chapter deals with the introduction, background of the study, statement of the problem, objectives of the study, definition of terms, significance and scope of the study. The second chapter provides literature review about construction safety

management .The third chapter explains the methodology of the study with research design approaches used throughout the data collection and analysis process. The fourth chapter presents the analysis, presentation and interpretation of data collected from respondents. The final chapter discussed the summary of findings, conclusion, and recommendation of the study.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter the researcher emphasizes the importance of safety management the construction industry. The literature review attempts to highlight the common risks and hazards that construction workers encounter in their day to day job activities in the building construction sites. It also focuses on the need to understand the factors affecting effective implementation of safety measures and procedures so that appropriate actions may be instituted to make improvements in this area and safeguard the welfare of construction personnel.

2.2 Review of Theoretical Literature

2.2.1 Safety in Construction

Safety can be defined as the absence of danger from which harm or loss could result (Jacques 1996) or "freedom from hazards." However, it is practically impossible to eliminate all hazards completely. Also, an accident is defined as sudden and unexpected events taking place without an expectation that causes injury, damages, or death. (Mwombeki, 2005).

Safety in the context of construction management is defined as the Discipline of preserving the health of those who build, operate, maintain and demolish Engineering works, and of those affected by those work (V.J.DAVIES 1990). These can apply equally to danger of physical injury and to the risk of damage to health over a period of Time.

2.2.2 Management in Construction

Safety Management is managing business activities and applying principles, framework, process to help prevent accidents, injuries and to minimize other risk. On the whole, construction contractors have been slow in applying proper management methods to the conduct of their business (Clough and Sears, 1994). Management in construction industry have been characterized as being weak, insufficient, nebulous, backward and slow to react to changing conditions. Nevertheless, in the overall picture, the construction industry is at or near the top in the annual rate of business failures and resulting liabilities (Clough and Sears, 1994). Explanations are given for why the construction has been slow in applying management procedures that have proven effective in other industries. The reasons are (Raftery, 1997):

- Construction projects are unique
- Projects are constructed under local conditions of weather, location, transportation and labor that are more or less beyond the contractor's control.
- Construction firms, in main, are small operations, with the management decisions being made by one or two persons (Clough and Sears, 1994)
- There are special problems in construction
- The future cannot be forecasted
- Construction is a high-risk business.

2.2.3 Significance of Construction Safety Management

The construction industry is one of the most dangerous in terms of workplace facilities. As a manager in this line of work, we have an obligation to understand the risks and keep workers safe on the job. Construction safety is also important due to the occupational Safety and health Act of 1970(OSHA). OSHA also requires employers to provide sufficient training, as well, to ensure worksite safety.

Mohammed Shamsul Bakri et al. (2017) identified that safety management is related with the arrangements, targets, techniques, strategies, parts and capacities that go for controlling peril and hazard in socio-specialized systems. The mindfulness and impression of workers toward safety, wellbeing and their workplace are essential perspective to upgrade the building construction to the better condition to the workers. Knowledge or attention to safety management framework is an imperative thought to viable safety management framework on location as high safety and wellbeing execution could enhance the association picture through less mishap, less truants of workers from work, less doctor's visit expenses, etc.

2.3 Empirical Review

2.3.1 The Nature of the Construction Industry

The construction industry is characteristically one in which most of its products are unique with respect to form, size, and purpose (Berger 1998). Whereas they are not unique, work operations, which are similar and repetitive, are often executed in work environments which change from hour to hour due to several factors such as weather conditions, locations, and height.

Construction workers are constantly expected, therefore, to familiarize themselves with new situations that may be potentially hazardous.

Construction is often severely affected by natural phenomena such as changing weather and climatic conditions. The working environment that not constant and varies may produces several hazardous situations. The construction industry has often been described as an industry characterized by fragmentation.

This description has arisen due to the number of stakeholder and participants in the construction process from project inception through to final project completion. Fragmentation, for instance, result in:

- i. Increased costs
- ii. Low productivity
- iii. Poor communication
- iv. Increased and often unnecessary documentation
- v. Ineffective and inefficient project management
- vi. Unnecessary delays
- vii. Unsatisfactory quality performance
- viii. Poor safety performance

The construction industry has been described as one with poor health and safety culture.

2.3.2 Health and Safety in the Work Place

Occupational health and safety has been defined by the International Labor Organization (ILO), 2001 as: “The prevention and maintenance of the highest degree of physical, mental and social well-being, the prevention of ill-health among workers caused by their working conditions, The protection of workers from factors adverse to their health in their employment, and the placing and maintaining workers in occupational environments adapted to their individual and psychological conditions.” Health refers to the protection of bodies and minds of people from illness resulting from materials, processes or proceeding used in the work place whereas safety is

protection of people from physical injury (Hughes and Ferret, 2008). Safety means a state in which no danger of a damage causing accident exists.

2.3.3 Challenges in safety management implementation

Challenges are defined as a constraining condition, agency, or force that limits the systems' performance in a given context/environment (Mayer, Painter and Lingineni 1995, Whelton, Penneanen and Ballard 2004). Every production system will have at least one constraint (Chua, Shen and Bok, 2003). Constraint describes the relationships between objects and processes (Whelton, Penneanen, and Ballard 2004; Tam, 2006). It is whatever impedes progress toward an objective or a goal (Mcmullen 1998).

Constraints may cause undesirable consequences or are not supportive of the organizational goals. It is the environment and the limitations of the system which dictates the solutions (Stein 1997). These constraints should be reduced or eliminated in order to minimize waste and make the flow more efficient. Constraints have to be managed. Practically, in all cases, the constraints' limiting impact can be reduced or eliminated. Constraints management contributes to two major project functions, planning, and control (Chua et al. 2005). Planning functions emphasize developing optimal schedules using simple or complicated algorithms to fulfill project goals such as duration, cost, and quality. Control functions focus on plan and implementation, such as work assignment and resource allocation, and supply chain management, such as material delivery and inventory control.

Identifying and removing constraints (Chua et al. 2003) from bottleneck activities help to reduce uncertainties in construction processes and increases the transparency of project management. Yates (2002) suggests that avoidance measures can be taken if they understand the cause of conflicts and disputes. They proposed a framework to identify the caustic factors of the conflict and disputes in the construction industry.

Some of the factors that challenge safety management implementation are listed below,

- I. Ineffectiveness of current safety rules and policies
- II. Lack of monitoring the compliance of safety measures
- III. Lack of safety standards
- IV. Lack of skilled labor, Excessive overtime work

V. Lack of training

VI. Putting safety as a lower priority are some of the challenges for safety management implementation

2.4 Accidents on Construction Projects

Accidents are defined as “an undesired event that results in physical harm to people or damage to property” (Peyton and Rubio, 1991, 162). Accidents could occur during construction and destruction activities, resulting in injury, mostly incurred by workers on the work site. Accidents might occur during site investigation and survey of a project, project items implementation. Accidents are unplanned events that often result in injuries or damage that interrupt the routine operation of an activity. Accidents are always preceded by the unsafe act of employees or hazardous conditions in the workplace.

Kumar Vishnu et al. (2014) discovered that Jobsite safety management alludes to the cyclic procedure of planning, executing and looking into, control of work and manpower to decrease the accidents. The accidents happening in India is high compared to the remote nations with strong planning, successful implementation and continual training with centered safety management a decent safety record could be achieved comparable to international level. Therefore all the necessary factors which affect the jobsite safety management in constructional projects and factors affecting safety conditions of labors are formulated.

2.4.1 Causes of Construction Accidents

Unsafe work site conditions were main reason of arising 10% of accidents on the construction site arise as Schaufelberger and Lin (2014) stated, and 90% were resulted in unsafe behavior. Likewise, the HSE declared that about 80% of accidents in the UK are due to human behavior (cited by Li and Poon, 2013). Furthermore, Peyton and Rubio (1991) acknowledged that work accidents in sites occur through two main mechanisms: unsafe conditions and unsafe acts.

In addition, unsafe behavior may arise due to a worker’s state of mind, tiredness, stress, or physical condition (Schaufelberger and Lin, 2014). Also, many factors such as insufficient and poor communication, sub-contracting to negligent firms, lack of H&S training and low educational level of construction staff members leads to accidents as affirmed by Cheng et al. (2004). Schaufelberger and Lin (2014) recognized some examples of accident causes, such as: A

worker notices a dangerous condition but he/she does not do anything to correct it (e.g. use of defective equipment such as a ladder). An individual performing the work in faulty way or unsafe manner due to lack proper training. A worker may disregard the safety conditions then an accident may occur.

2.4.2 Falls accidents and injuries

Janicak, 1998 stated that construction employees are a high-risk population for falls from height. Derr et al. (2001) identified that the number of fatal accidents has increased because of falls on the construction site in different subsectors. Also, in the US most accidents are falls from height (Huang and Hinze, 2003; Schaufelberger and Lin, 2014). In addition, in the UK the highest rate of injures is that of falls (Table 1) (HSE, 2013c). Furthermore, many fall from height accidents in the Spain construction industry, consisting half of all work-related accidents that in the Spain as underlined by Rubio-Romero et al. (2013). They reported that about 40% of fatal accidents occur due to falls from structures. Moreover, about 30% of these are falls from temporary devices on structures assembled to labor at height (i.e. scaffolding).

Table 1 -The main causes of worker’s fatalities in the UK

<u>Proportion of fatalities in</u>			
	Construction	Construction	All industries
Injury kind	2012/13 p	(2008/09-2012/13 p)	
Falls	59%	49%	25%
Being struck by falling/moving object	3%	10%	16%
A collapse/overturn	5%	11%	10%
Being hit by a moving vehicle	10%	15%	11%
Electricity	5%	7%	4%

(Source: HSE (2013c))

According to Griffith and Howarth, 2001, the main causes of fatal accidents during the erection and dismantling of scaffolding are due to platforms lacking edge protection. Therefore, more investigations of scaffolding are demanding to minimize and control the height number of accidents were due to unsafe scaffolding Rubio Romero et al. (2013).An appropriate scaffolding frame should be considered for the task BS OHSAS (2009).

2.5 Protective Clothing and Safety Equipment

OSHA regulates employers to provide construction employees with proper personal protective equipment (PPE) to supplement administrative and engineering safety controls. OSHA standards provide criteria for personal protective equipment, including protection for the head, feet, eyes, face, hearing, and respiration. It could be the last defense between a worker and a possible injury.

However, to reduce the risk of on-site accidents, protective clothing wearing and personal protective equipment are essential. The employers must (by law) provide safety equipment and protective clothing for all employees; likewise, Employees have a duty to protect their own H&S (Davies and Tomasin, 1990). Additionally, employees on the construction site must (by law) be supervised by a qualified H&S supervisor to ensure that the employees follow the safety instruction to wear protective clothing to keep workers safer (Zin and Ismail :2012).

2.5.1 Standards of personal protective equipment

Davies and Tomasin (1990) highlighted that the protective clothing should be chosen according to the effect of its material to resist penetration, the ability of its design, and the condition of the environment in which it should be worn. Joyston Bechal and Grice (2004) reported that employers must ensure that they provide suitable clothing/equipment for the employees, and safety clothing must be appropriate for the H&S risks involved. Davies and Tomasin (1990) claimed that in providing protective clothing and safety equipment, employers should:

1. Identify hazards before starting any construction work,
2. Inform and consult with employees,
3. Remove hazards where possible, and
4. Provide instruction and training on how to use the equipment.

2.5.2 Compulsory Protective Clothing and Equipment

Davies and Tomasin (1990) pointed out that in the UK, every employer must (by law) provide: Sufficient and preferable protective clothing and equipment for employees (Construction (Health and Welfare) Regulation, 1966).

Protective clothing and protective breathing equipment for the workers where dust presents in the atmosphere (Asbestos Regulations, 1969). Insulation boots and special gloves for electricians (Electricity Regulations, 1944). Safety belt, lines, etc. (Construction (Working Places)

Regulation, 1966). Ear protectors (Noise at Work Regulation, 1989).Safety helmets (Construction (Head Protection) Regulation, 1989).

Tam et al. (2004) showed that the only personal protection equipment universally provided to workers on construction sites by employers in China are eye goggles, gloves and hard hats (helmet); however, many workers are dissatisfied with such provisions, and they believe that these items of protective clothing are insufficient for protection.

2.5.3 Medical Services and First Aids

First aid and medical facilities should be made readily available in sites according to the size of site and number of workers in the site. The employer must be responsible for this and should ensure the availability of medicines and first aids in the sites.

2.6 Conceptual Frame Work

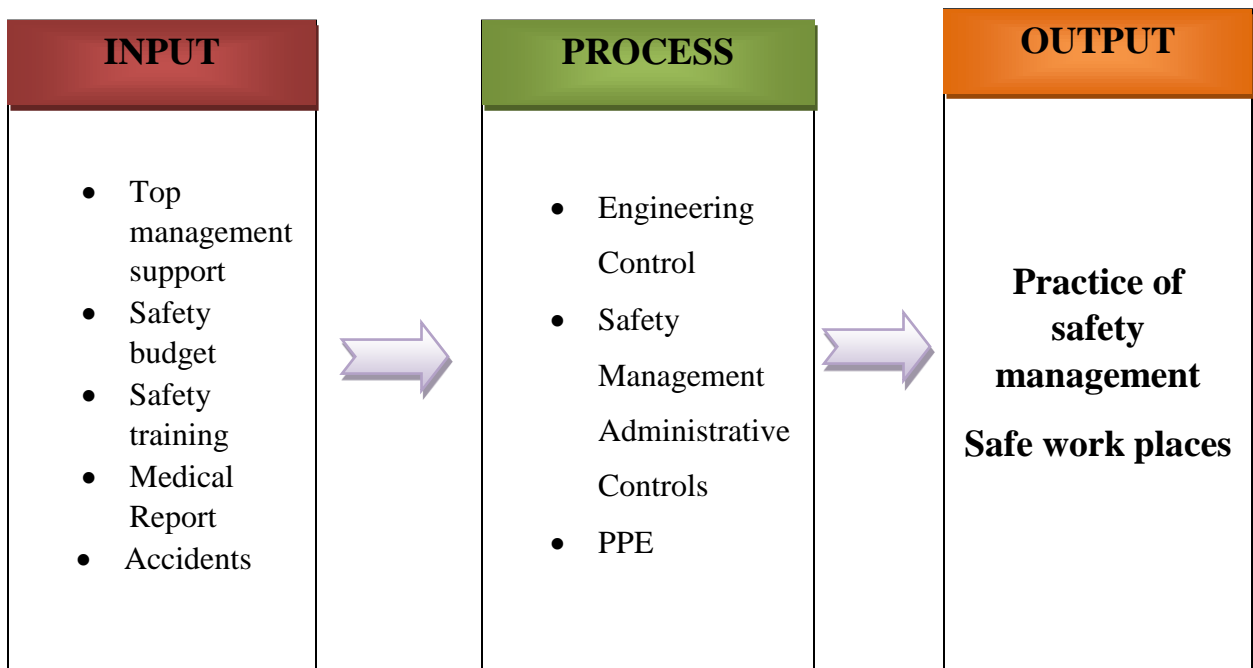


Figure1-Conceptual frame work

CHAPTER-THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter includes research design, population and sampling method, sources and tools/instruments of data collection, data analysis methods and ethical consideration in general the study procedures and the method used to conduct the study related to its objective that discussed in chapter -1.

3.2 Research Approach

Data used for this study were mixed type (secondary and primary) for primary data; the research instruments used Questionnaire (skilled worker, Forman & engineers) of the selected projects, Interview and discussion with daily labors, consultant & project managers of the projects. Site visit and observation also used as primary data. Secondary data were collected from Contract documents, Progress report & Medical report.

The goal of mixed methods research in this research is to draw from the strengths and minimize the weaknesses of both qualitative and quantitative methods in single studies (Creswell, 2009). As for mixed method research, quantitative and qualitative methods complement each other. Results from one method are used to elaborate on results from the other method (Cresswell et al., 2008 quoted in Migiro & Magangi, 2011). Creswell (2014) acknowledged that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone. In addition, mixed methods research offers greater promise for researchers to see methodological describe and develop techniques that are closer to what researchers actually use in practice (Johnson & Onwuegbuzie).

3.3 Research Design

The study designed as both descriptive and explanatory research design. Because descriptive research method were used to describe data and characteristics about the population or phenomena of the study and explanatory study design were used to explaining, understand predicting and controlling the relationship between variables.

3.3.1 Target Population

Burns and Grove (2003) describe population as all the elements that meet the criteria for inclusion in a study. Parahoo (1997) describes population as the total number of units from which data can be collected such as individuals, artifacts, events or organizations. The selected samples in the construction site were considered as the study population and all the required information were collected from project population.

This study targeted Yohannes Haile Grade One Building construction company which is one of the upcoming companies in Ethiopia capable of handling complex and challenging projects ranging from residential, schools, warehouse and office complex buildings. The company currently has 9 active sites in Ethiopia, in which 2 sites are in Addis Ababa & the rest 7 projects are outside of Addis. Hence two active sites are located in 40/60 Beshale site- Arabsa and Lideta police commission -Goma kuteba in Addis Ababa were selected for the case study.

3.3.2 Sampling Techniques

According to Oso and Onen (2005), sampling refers to the process of selecting subsets from a population of research interest to enable detailed study for further generalization of research results. Convenience sampling technique was used to select the respondents under the representative building construction projects. Yin (2005) posits that convenient sampling is a non-probability sampling technique where subjects are selected because of their convenient accessibility and proximity to the researcher. Since past employees who used to work in this company may quit or work in diverse places and it could be hard to reach, the study adopted convenient sampling techniques to enable sampling of employees. Employees who work within a month had been taken as a grand population to select the sample size.

3.3.3 Sample Size

The position is held by Britton & Garmo (2002) that a research sample size constitutes a selection of a small researchable unit of a given population using methods that enable representation and generalization. Among 172 population who had been working on the company 120 employees were sampled to respond to the data collection instrument.

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

Where n=Sample size

N- Total population

e- Level of precision with 0.05 Con.

Adapted from: Yamane' (1967)

$$N = \frac{172}{1+172(0.05)^2} \quad N = \underline{\underline{120}}$$

3.4 Source of Data

Data used for this study were mixed type (primary and secondary) sources. According to Naresh (2010), primary data will be organized for the specific purpose of addressing the problem on hand.

The data sources for the research are both primary and secondary sources. Data used for this study were mixed type (secondary and primary) for primary data; the research instruments used Questionnaire (daily labor, skilled worker, Forman & engineers) of the selected projects, Interview and discussion with consultant & project managers of the projects. Site visit and observation also used as primary data. Secondary data were collected from Contract documents, Progress report & Medical report.

3.4.1 Primary source

The primary data that was used is questionnaire and interview. While distributing the questionnaire, the researchers see cooperation and clarification from the respondents. Besides that, primary data refers to first-hand information or data obtained originally by the researcher on the variables of interest for the specific purpose of the study (Sekaran & Bougie, 2009). In this context thus, the primary data was collected from site visit and observation.

3.4.2 Secondary

Secondary data was collected from Contract documents, Progress report & Medical report and other sources were reviewed. In addition to this, as the research objectives invite a mixed method research, collection and analysis of both qualitative and quantitative data was a necessity. Hence, the researcher collected both types of data through various data collection instruments.

3.5 Data Collection Methods

There are different data collection tools in gathering data source: interview, questioner document analysis of the text. The tool to collect data for this study were developed and taken from different source in order to assess the impact of safety management in Yohannes Haile building construction. Questioners were used to obtain both object and subject information about a certain topics. Detailed information about awareness and practice towards safety management among construction workers and episodes of injuries were collected.

3.6 Procedure of data collection

The data collection was regarded based on the interest and willingness of respondent and permission of the customer. To make questions under questionnaire and interview clear a researcher planned to translate English questionnaires to Amharic equivalent. This made respondent to understand the entailer message of questions and answered questions appropriately. When the respondent needed further clarification about the questions under questionnaires and interviews explanation were given. The entire Questioners were addressed once for all respondents. This helped the researcher to get clear self-answered information from all of the respondents.

3.7 Data collection tools and research instrument

Data collection instrument is the item used to collect data for research project (Agbor, 2011). This could be questioner or personal interview. In this case data were collected from primary source using questioner.

Data was collect from both primary and secondary source. Primary source was obtained from skilled labor, foreman and engineers. Secondary source data was obtained from Contract documents, progress report & medical report that helped the researcher to increase the knowledge in the topic under study. So as to decrease invalided response questioner was distributed for the employee working on the two projects.

3.8 Data analysis & interpretation

The study tried to analyze implementation of safety management in the case of Yohannes Haile Building Construction. Therefore both the primary and secondary data's gathered analyzed by using SPSS and Microsoft Excel spreadsheet, and interpret using descriptive statistics.

Descriptive statistics like frequency distribution, mean and Percentage calculation was made for most of the variables.

3.9 Ethical Consideration

The data were collected from the employees by the researcher; data had been collected accordingly to their willingness. The study was free from bias, the employees were not invite to write their name and address, to keep and assure their confidentiality. According to (Saundrs, Lawis and Thornhill, (2001:130), “ethics refers to the appropriateness for our behavior in relation to the right of those who become the subject of our work or are affected by it”. The data were collected from those of willingness employees without any unethical behavior or forcefully action. The subject in a Researcher must be aware that their participation in this study is voluntary. The study consider ethical issues, when collecting questionnaires form from employees their permission would be the first thing that were asked and also the questionnaires explain that the purpose of the Research was for academic purposes and finally the respondent would be include based on their willingness.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND INTERPRATON

4.1 Introduction

This chapter presents the data analysis and discussion made concerning with the targeted population.

The data were gathered through questionnaire, interview, site observation, discussion, document analysis and review of related literature. Descriptive statistics including frequency distribution, mean, and standard deviation analysis have been made to determine the demographics characteristics of the respondents and study variables.

As mentioned above the analysis consists different sub topics, in which at first it deals with the background of the respondents and then it deals with the safety policy, and management, safety practice and workplace policies and procedures at workplaces were analyzed. In addition safety awareness and the challenges regarding with safety implementing in building construction projects would be analyzed. And the last part deals with the cause and the frequency of accidents .This is to reorganize the data in a systematic manner so that they are clear and unambiguous to be understood and hence to be analyzed. In data presentation tables were used because this method of data presentation is much more preferred among others, as it provides easier understanding and clearer picture of information delivered. In order to conduct the analysis, Statistical Package for Social Sciences (SPSS) version-20 software was used for data analysis, where it is found relevant, the data analysis and discussion is supported by relevant literatures and researcher's own opinion.

The data were collected from sampled employees and the study has selected 120 respondents (as the target population). Following this, the researcher has distributed 120 questionnaires prepared for this purpose to the selected respondents. Accordingly, out of the total number of questionnaire distributed, 106 complete questionnaires are received, translating into 88% response rate. The response rate was considered appropriate since Nulty, (2008) argues that any response rate above 75% is classified as appropriate. The remaining questionnaires are discarded for their incompleteness or respondents did not return them at all.

4.2 General Information of the respondents

Demographic Data Analysis

In these section respondents demographic information would be assessed. Gender, age, educational level and total work experience were the major demographic characteristics which are assumed to be high relationship with respondents' loyalty.

Table 2: Demographic characteristics of respondents

Variable	Measurement	Frequency	Percentage
Gender of Respondents	Male	68	64.2
	Female	38	35.8
	Total	106	100
Age of Respondents	25-30	39	36.8
	31-35	49	46.2
	36-40	17	16.2
	41 and above	1	9
	Total	106	100
Education Level of Respondents	Masters	12	11.3
	Degree	52	49.1
	Diploma	19	17.9
	Other	23	21.7
	Total	106	100
Work Experience of Respondents	1-5 years	53	50
	6-10years	46	43.4
	11-15 years	7	6.6

Source: Field Survey, 2021

As stated in data, majority of the respondents were male 68(64.2%) as compared with 38(35.8%) of remaining respondents being females.

The age of respondents between 31 and 35 years were 46.2%; followed by 25-30 years contributing 36.8% and between 36-40 were 16.2% and 9% which were between 41 and above years respectively.

The education level of respondents were first degree holders forming 49.1%; followed by employees who have completed diploma 11.3%; respondents who have masters and 21.7% of them had other education level.. Regarding their experience, (53%) of respondents have 1to 5 years 'experience in construction, 46%of the respondents have 6-10 years and, 6.6% of them have 11-15 years of experience. The results show that the majority of the workers have a moderate education level of experience.

4.3 Safety Policy and management of the Company

Table 3: Company policy concerning with safety management

No.	Measurement Items	Percentage Distribution of Respondents' Rating				Mean	SD
		Yes		No			
		Fr.	%	Fr.	%		
1	Documented safety policy	33	31.1	73	68.9	1.69	0.465
2	Clear understanding of safety management at all staff member	29	27.4	79	74.5	1.73	0.448
3	Company safe operating procedures	27	25.5	64	60.4	1.75	0.438
4	Managers support in safety program	42	39.6	64	60.4	1.60	0.491
5	Regular health and safety inspection	10	9.4	96	90.6	1.91	0.294
6	Standard workplaces inspection checklist	20	18.9	85	80.2	1.82	0.409

Source: Field Survey, 2021

Table 3 shows that 73% of workers witnessed that the company doesn't have a documented safety policy. Among 27.4% member have a clear understanding of safety management, 27.4% have clear understanding of safety management, 25.5% from safe operating procedures, 9.4% safety inspection and 18.9% inspection checklist. This finding shows that the company have a lower concern regarding with safety polices.

4.4 Safety Practice and performance

4.4.1 How injuries can be prevented

Table 4: How injuries will be prevented

No.	Measurement Items	Percentage Distribution of Respondents' Rating						Mean	SD
		Many can be prevented		Some can be prevented		Few can be prevented			
		Fr.	%	Fr.	%	Fr.	%		
1	Extent of injuries preventing	31	29.2	37	34.9	38	35.8	4.07	0.808

Source: Field Survey, 2021

The above data shows that in the case of injuries/accidents, 35.8% of them said few can be prevented and 34.9% of them said some can be prevented, which shows that many injuries are not prevented as urgent situation.

4.4.2 Training Taken with Regard to Safety Management

Table 5 : Training taken with respect to safety management

No.	Measurement Items	Percentage Distribution of Respondents' Rating						Mean	SD
		Some training		Little training		No training			
		Fr.	%	Fr.	%	Fr.	%		
1	Safety Training	29	27.4	43	40.6	34	32.1	3.05	0.773

Source: Field Survey,2021

From the total of respondents 40.6% of them said they taken little training with respect to safety management, 32.1% of them said they didn't take trainings and 27.4 % of them said they taken some trainings regarding with safety management.

4.4.3 Safety rules of the organization

Table 6- Safety Rules

No.	Measurement Items	Percentage Distribution of Respondents' Rating						Mean	SD
		People generally obey the safety rules		Sometimes followed, sometimes not		People pay little attention			
		Fr.	%	Fr.	%	Fr.	%		
1	Rules obeyed in the organization	4	3.8	62	58.5	40	37.7	3.34	0.550

Source: Field Survey, 2021

Table 6: shows to what extent safety rules obeyed in their organization. The respondents asks how they will obey this rules, only 3.8% of them said they obey the safety rules ,58.5% of them said sometimes they followed and sometimes not, and the rest 37.7% of the respondents said they pay little attention for the safety rules and regulations

4.4.4 Effectiveness of Safety Management and Physical Facilities

Table 7- Effectiveness

No.	Measurement Items	Percentage Distribution of Respondents' Rating						Mean	SD
		Satisfactory		Poor		Very poor			
		Fr.	%	Fr.	%	Fr.	%		
1	Safety of physical facilities	38	35.8	53	50	15	14.2	3.78	0.676
2	Safety management department	11	10.4	26	24.5	69	65.1	4.55	0.678

Source: Field Survey, 2021

Respondents were asked about the effectiveness of safety management department in their company, and from the total respondents 10.4 % of them said the departments are satisfactory, 24.5% of them said poor and the remaining 65.1% of them said the departments are very poor in safety management.

4.4.5 Employee satisfaction with safety performance on the organization

Table 8: Employee satisfaction

No.	Measurement Items	Percentage Distribution of Respondents' Rating								Mean	SD
		Moderately Satisfied		Neither satisfied nor dissatisfied		Moderately dissatisfied		Very dissatisfied			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Safety performance	7	6.6	43	40.6	43	40.6	13	12.3	3.58	0.791

Source: Field Survey, 2021

From the below Figure, respondents asks to answer their satisfaction level in terms of safety performance on their organization 6.6% of the respondents says they are moderately satisfied, 40.6% of them said neither satisfied nor dissatisfied and also moderately dissatisfied and the remaining 12.3% of them said they are very dissatisfied regardless of safety performance at workplaces.

4.5 Workplace policies and procedures

Table 9-Workplace procedures

No.	Measurement Items	Percentage Distribution of Respondents' Rating										Mean	SD
		Strongly Agree		Agree		Neutral		Disagree		Strongly disagree			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Safety trainings			12	11.3	54	50.9	40	37.7			3.26	0.652
2	Regular communication considering safety issues			14	13.2	50	47.2	35	33.0	7	6.6	3.33	0.789
3	Safety consideration as important as production			3	2.8	61	57.5	37	34.9	5	4.7	3.42	0.630
4	Active safety committee			13	12.3	54	50.9	30	28.3	9	8.5	3.33	0.801
5	Accidents investigated quickly			39	36.8	44	41.5	13	12.3	10	9.4	2.94	0.934

Source: Field Survey, 2021

In the above Table 9: respondents were asked about the workplace polices and how it practically exercised at their building construction company. As it shown in the above respondents asks with this five categories regarding the current situation practiced on their workplaces. According to the above questions the respondents answer will be described respectively.

From total respondents, 11.3% agree, 37.7 % disagree and 50.9% were neutral with respect to everyone receives the necessary safety trainings at their workplaces, 13.2% of them agree and 33% of them disagree with respect to regular communication between employees and management about safety issues. From total respondents 34.9% of them disagree with respect to considering workplace safety regulation as important as production. Concerning with active and effective safety committee, 12.3% of them agree, 28.3% of then disagree and the rest 50.9% of them were neutral in the existence of safety committee. At last regarding with incidents and accidents if they are investigated quickly for safe workplaces, 36.8% of them said they will agree with it and the remaining 12.3% of the respondents disagree with quick responses for accidents.

4.6 Safety Awareness

Table 10: Safety awareness

No.	Measure Items	Percentage Distribution of Respondents' Rating										Mean	SD
		Strongly Agree		Agree		Neutral		Disagree		Strongly disagree			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Right and responsibilities			69	65.1	37	34.9					2.35	0.479
2	Perform job in safe manner	1	0.9	36	34.0	42	39.6	13	12.3	14	13.2	3.03	1.018
3	Safety concerns	6	5.7	22	20.8	30	28.3	29	27.4	19	17.9	3.31	1.158
4	Using PPE			51	48.1	28	26.4	15	14.2	12	11.3	2.89	1.036

Source: Field Survey, 2021

The above Table shows that, 65.1% of them agree about knowing their rights and responsibilities regarding with workplace health and safety and 34.9% of the respondents were neutral. 34% of the respondents agree that they know how to perform their job in a safe manner but the 12...3% of the respondents disagree with this. Regarding with safety concerns 20.8% of them agree, 27.4% of them disagree and 28.3% were neutral. In addition respondents were asked about using personal protective equipment hence 48.1% of them agree and 14.2% of the respondents disagree with the practically using personal protective equipment.

4.7 Challenges in safety management implementation

Table 11-Challenges in safety management implementation

NO	Measurement Items	Percentage Distribution of Respondents' Rating								Mean	SD
		Very likely		Likely		Somewhat Unlikely		Un likely			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Ineffectiveness of current safety rules and policies	26	24.5	31	29.2	36	34	13	12.3	2.34	0.985
2	Lack of safety standards	28	26.4	51	48.1	25	23.6	2	1.9	2.01	0.762
3	Lack of monitoring the compliance of safety measures	25	23.6	45	42.5	36	34	36		2.1	0.755
4	Lack of skilled labor	26	24.5	44	41.5	36	34			2.36	0.665
5	Lack of training	24	22.6	44	41.5	38	35.8			2.13	0.757
6	Putting safety as a lower priority	37	34.9	43	40.6	26	24.5			1.9	0.768
7	Insufficient safety budget	44	41.5	43	40.6	19	17.9			1.76	0.737
8	Lack of personal protective equipment	45	42.5	41	38.7	20	18.9			1.76	0.75
9	Lack of safety supervisor on site	32	30.2	46	43.4	28	26.4			1.96	0.755
10	Lack of top management commitment to safety programs	43	40.6	44	41.5	19	17.9			1.77	0.734
11	Poor safety awareness among top management	39	36.8	43	40.6	24	22.6			1.86	0.761

Source: Field Survey, 2021

The below figure respondents were asked to differentiate the factors that affecting the implementation of safety, how likely it affects and then the result ranked. Among the factors the first chosen by respondents of own force is lack of skilled labor. Second lack of ineffectiveness

of current safety rules and policies, third lack of trainings, fourth lack of lack of monitoring the compliance of safety measures and lack of safety standards in fifth.

4.8 Causes of accidents

Table 12: Causes of accidents

No.	Measurement Items	Percentage Distribution of Respondents' Rating										Mean	SD
		Improperly guarded areas		Lack of safety trainings		Ineffectiveness of current safety management policy		Unavailability of PPE and inappropriate design		Hazardous procedures around machines			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Cause of accidents	13	12.3	13	12.3	16	15.1	29	27.4	13	12.3	3.75	1.572

Source: Field Survey, 2021

In the above figure respondents were asked to list the factors they think contribute for accidents occurring on building construction projects. Among the factors that are contribute for accidents the first chosen by respondents are improperly guarded areas and lack of trainings, the second one by unavailability of PPE and inappropriate PPE design, ineffectiveness of current safety policy comes third ,andhazardous procedures around machines are the last cause of accidents.

4.9 Frequently Occurring Accidents

Table 13-Frequently occurring accidents

No.	Measurement Items	Percentage Distribution of Respondents' Rating										Mean	SD
		Falling from height		Being hit by falling objects		Electrocutions		Machinery accidents in loading and unloading		Nail piercing			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	Accidents	42	39.6	21	19.8	17	16.0	12	11.3	14	13.2	2.39	1.438

Source: Field Survey, 2021

The above table shows frequently occurring accidents in workplaces. From the total respondents 39.6% of them said falling from the height, 19.8% of them said being hit by falling objects, 16% of them said cause of electrocutions, 13.2% of them said nail piercing and the rest 11.3% of them said machinery accidents in loading and unloading.

4.10 Personal Protective Equipment that Seen in Building Construction Projects

Table 14: Relevant PPE

No.	Measurement Items	Percentage Distribution of Respondents' Rating										Mean	SD
		Reflector		Gloves		Helmet		Safety glass		Safety shoes			
		Fr.	%	Fr.	%	Fr.	%	Fr.	%	Fr.	%		
1	PPE	33	31.1	28	26.4	20	18.9	12	11.3	13	12.3	2.47	1.361

The table below shows the respondents were asked about personal protective equipment that seen in building construction projects mostly. From the total of respondents that works 31.1% of them said they see reflector jackets, 26.4% of them said they see gloves, 18.9 % of them said they see helmet, 12.3 % of them said they see safety shoes and 11.3% of them said they see safety glass in their workplaces.

4.11 Outcome of Site observation

In this section observations made during site visit are presented below

The following majors are taken in project sites.

- Workers had no body protection
- They provide enough working space for the whole excavation and while excavating pit
- Steel scaffoldings are being used which more safe than using timber is scaffolding
- For huge materials lifting they use a crane so as to avoid workers from back injuries

- The batching plant is not located far away from the working area so as the workers are exposed to dusts
- Workers are not wearing their safety clothes properly

4.12 Interview Results

In the research interviews were held with project managers & consultants and daily labors on the nature and management of safety management at Yohannes Haile building construction. The responses obtained from are summarized in the following sections.

A. Project Managers-

They accept that there is a huge safety issues in their organization, they have all the polices but the main issue is not practical in the workplaces. This issues are caused by cause of low safety budges and giving a lower priority for safety by the company.

I. Measures Taken for the Prevention of Accidents in the Future

The prevention method will be providing billboard size notice, which is fixed at the main gate of the site to attract the attention of workers on the need to care for safety. This notice consists different rules and regulations to the workers while they are working. So, that they will get awareness about safety.

II. Accident Prevention Mechanism in Construction Sites

On construction areas, different activities concerning safety should be performed and giving priority while the work is in progress. Out of these accident prevention methods, checking while the workers are using the available body protection materials or not, checking the workplace is safe from different hazardous substances etc. are the major ones. Applying appropriate safety program, for example, a training program can minimize accident.

III. Safety management system in construction site

In construction site safety have to be recorded and reported for company admin with regard to safety. And safety budget have to be considered.

B. From consultant

The reason why safety management is not appropriately practiced are cause of insufficient safety equipment, lower quality of PPE, lack of trainings, lack of safety inspections etc.

Response by the Consultant

I. Measures Taken To Prevent Such Accidents in the Future

➤ The consultant advised the company to:

- Follow appropriate safety procedure
- Give trainings
- Proper safety inspection on site

II .Accident Prevention Mechanism Exercised at the Work Area

- Always Safety First
- Keeping the workplace safe
- First Aid
- Personal Protective Equipment

C. Daily Labor

Regarding with safety management labors are highly exposed to the accidents at the work places. They complain the lack of PPE, lack of safety measurements, lack of trainings and poor quality of safety materials.

➤ The Daily labors advised the company to:

- Give priority for safety measures
- Safe and clean the workplaces
- To provide good quality safety protective equipment's
- To prevent injuries quickly

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMENDATION

5.1 Summary of Major Finding

The present study investigated the assessment of safety management on Yohannes Haile Building Construction Company. Accordingly, the followings are the major findings of the study.

1. Safety policy and management are provided as a document in the company but above 70% of the respondents witnessed they don't have information in the existence of this safety management policy.
2. Around 80% of staff at all management levels has a poor awareness of safety.
3. Concerning safe operating procedures, the company has not prepared any such processes or specific safety guidelines for its operations.
4. Managers do not encourage and support worker Safety programs in both two projects, a little encouragement and support of worker in Safety programs seen at workplaces. Also, more than 60% of respondents witnessed Managers do not encourage and support safety trainings for new employees in all of the two project sites.
5. Regular health and safety inspections at worksites are not properly undertake
6. About 29.2% of the injuries are prevented whereas the 34.9% of the injuries are somehow prevented and 35.8% of the respondents said few injuries are prevented at the workplaces.
7. The results shows that 40.6% of them receive little trainings and 32.1% Of them didn't receive any trainings concerning with safety management.
8. The above analysis shows that above 50%of the respondents in two sites said that safety rules and guidelines are sometimes followed, sometimes not.
9. Above 60% of the respondents said that the company have a very poor effective safety management department.
10. The analysis shows that regarding with employee satisfaction only 6.6% of them are moderately satisfied and the 40.6% of the respondents said they are neither satisfied nor dissatisfied and moderately dissatisfied respectively.
11. Regarding with workplace policies and procedures above 50% of the respondents are neutral,

above 30% of them disagree and the few of them agree with this company procedures.

12. The findings shows that above 50% of respondents disagree with regular communication between employee and management, 60% of them don't have the information or does not know if the construction firms they are working have safety policy.
13. About 79% of them agree about knowing their rights and responsibilities in their workplaces.
14. The result shows that lack of skilled labor, lack of ineffectiveness of current safety rules and policies, lack of training, lack of monitoring the compliance of safety measures and lack of safety standards are the top five constraints in the implementation of safety programs.
15. The findings indicated that 12.3% of accidents occur in building construction are cause of improper guarded areas and lack of trainings, 15% of them are being hit by falling objects, 11% of them are cause of electrocutions, 27.4% cause of unavailability of PPE and inappropriate design, 15.1% cause of ineffectiveness of current safety policy and 12.3% cause of hazardous procedures around machines are cause of accidents in building construction projects top to bottom.
16. Falling from height, hit by falling objects, electrocutions, nail piercing and machinery accidents in loading and unloading are frequently occurring accidents in descending order.
17. More relevant PPE in building construction projects are reflector jacket, gloves, helmet, safety shoes and safety glass are most seen PPE in the workplaces.
18. As shown in the results, different accidents occurred in site due to many reason. These causes were unawareness and negligence of workers, not strict follow up supervision on safety issues, absence of PPE are the most cause of accidents shown from site observation
19. From the discussion findings shows as cause of accidents were frequently occurring cause of giving a lower priority from management department, lower enforcement of safety measure at workplace from consultants and ignorance and carelessness from laborers on wearing protective equipment

5.2 Conclusion

The purpose of this study was to assess safety management in Yohannes Haile building Construction Company. Qualitative and quantitative approach was monitored to undertake this research project. Both primary and secondary data were collected from 106 sampled of employees from both selected sites. The data was analyzed by SPSS and Microsoft excel spreadsheet and interpreted using descriptive statistics like frequency distribution, mean and percentage calculation was made for most of the variables.

The standard of safety and health in the construction sector is very poor. The companies do not have written safety policy; similarly, attention is not given by the construction companies regarding safety officer and safety committee.

The study also reveals that poor provision and use of safety equipment. Even though proper reporting and correction of safety hazards is necessary for better safety. On the other hand, workers are not urged to follow safety procedures while working. Little training and orientation is given to employees regarding health and safety by the companies, which seriously requires the provision of regular health and safety training to employees of the construction company. Again with regard to site safety inspections, this is not in agreement with the principle —safety comes first. Because of the fact that there is weak safety and health condition in the construction industry, the project managers suggest strong government regulation for the implementation of safety and health standards. Therefore, more attention should be given for the implementation of safety and health standards by the Ministry Of Labor and Social Affairs and other concerned government bodies in Ethiopia. Supervisors as well as management of the companies have relatively lower knowledge and implementation compared to what supposed to be attributes poor construction H&S performance.

Insufficient provision of PPEs, discomfort to wear/ use and lack of awareness for not continuously applying PPE, lack of enforcement of safety policy, lack of appointment of safety personnel, lack of top management commitment & involvement in safety programs and they are not providing safety training for new employee, poor accident record keeping and reporting system. These shows that they are not up to expectation in both two building construction projects.

The constraints in successful safety program implementation in building construction projects are lack of skilled labor, ineffectiveness of safety rules and policies, lack of training, lack of monitoring and lack of safety measures equipment are the top five challenges in the implementation of safety management.

Major cause of accidents in building construction projects in descending order are falling from height, hit by falling objects, electrocutions, nail piercing and machinery accidents in loading and unloading are frequently occurring accident.

Relevant personal protective equipment seen in the workplaces were reflector jacket, gloves, helmet, safety shoes and safety glass.

5.3 Recommendation

In light of the above analysis, finding and conclusion based on the assessment of safety management in building construction site, the following recommendations are made for action:

1. Management must fully and actively give details ideas into safety actions managers should have to encourage and support worker in safety programs, safety trainings for new employees and must be a role model for works by wearing PPE and by following standard procedures.
2. That role that top management plays a very important for efficient and effective safety program. Construction professionals (top management) should take more responsibilities for further improvements in safety performance on building construction project sites.
3. Building construction safety needs to be treated as obligation rather than an option on building construction site.
4. Sufficient budgets should be allocated in the contract to stop struggle for the lack of personal protective equipment's. High priority for safety should have to be provided as they give for Time, cost, and quality.
5. Encourage the wearing of safety clothing (e.g. safety boots, goggles and gloves). All relevant PPE needs to be provided for workers after they trained how to properly care & use them. Also PPE provided on the building construction sites needs to be good quality, fitting size.
6. Government organizations, like the Ministry of Labor and Social Affairs should develop occupational safety rules and regulations, and implement legal rights for workers safety.

7. Providing personal protective equipment's ,giving training for works on job and by using warning sign/ boards, using safety barriers and reflector cones repeatedly occurring injuries/accidents in building construction sites will be avoided.
8. Building construction firms should have to improve accident record keeping and reporting system because information on accidents and incidents can be used as an aid to risk assessment, helping to develop solutions to potential risks.
9. Some penalties such as a warning letter and dismissed from sites were issued to workers to make sure they adhered to the safety rules.
10. Supervisors seem to focus more on production and ignore health and safety aspects. In some cases, supervisors allow workers to work without any PPE so the company should organize safety committee for communicating with workers.

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St. marry University

MBA Thesis Questionnaire

A Survey on Assessment of Safety Management in Yohannes Haile Building Construction Projects

General Instructions & Information

Dear Sir/Madam,

This questionnaire is intended to help assess the state of safety management in your organization. The questioner includes two sections.

- The first section is expected to be filled by the Safety Management Administrator /Professionals/Contractors.
- The second section is expected to be filled by Employees/workers/daily laborers.

Your answers will be kept completely confidential. They will not be reported individually but will be combined with the answers of others. Please do not sign your name.

Thank you very much for taking your time and fill this Questionnaire.

Please:

1. Answer all the questions honestly and objectively so that the answers will help reveal the true state of safety.
2. Unless otherwise indicated, do not mark more than one answer to a multiple choice question, or the answer will not be usable.
3. When asked to rank items, do not give items equal rank, even though they may seem to be close to you in their meaning. If you do, the answer will not be useable.

If you have comments, please write them on the page provided at the end of the questionnaire.

With Kind Regards (Redit Tegegne)

Mobile Number (0912976414)

The background information of the respondents

- Dear respondents questions raised in this section are related to the background of the respondents (you). Therefore, please encircle your appropriate response.

I. Gender

A/ Male B/Female

II. Age

A/ 25-30 B /31-35 C/36-40 D/41 and above

III. Education Level

A/ PhD B/ Masters C/ Degree D/ Diploma E/ Other

IV. Your total work experience in year

A/1-5 year's B/6-10 year's C/11-15 years D/above 16 years

SECTION ONE: For Safety Management Administrator /Professionals/Contractors.

PART One: Safety Policy and Management

Direction one: Dear respondents questions raised in this section are related to Health and Safety Policy and Management. Please put “X” sign for your appropriate response and also provide information for the questions that need details.

1. Is there a documented Company Health and Safety Policy?

YES	NO

2. Are health and safety responsibilities clearly identified for all levels of staff? If yes, provide details:

Direction Two: Safe Work Practices and Procedures

2.1. Has the company prepared safe operating procedures, or specific safety instructions relevant to its operations?

YES	NO

2.2. Does the company managers encourage and support in safety program

YES	NO

Direction Three: Health and Safety Workplace Inspection

3.1. Are regular health and safety inspections at worksites undertaken?

YES	NO

3.2. Are standard workplace inspection checklists used to conduct health and safety inspections?

YES	NO

SECTION TWO: For Employees/workers/daily laborers.

PART Two: - Safety Practice and Performance

Direction Four: Dear respondents questions raised in this section are related to the safety practices in your work experience please put “X” sign for your appropriate response.

1. To what extent can injuries be prevented?

Check the answer that represents your personal belief.

- All can be prevented
- Almost all can be prevented
- Many can be prevented
- Some can be prevented
- Few can be prevented

2. Indicate the extent to which you have received training in safety and safety management. Training includes formal training courses away from the job and organized on-the job training. Check only one answer.

Thorough & extensive training

- Considerable training
- Some training
- Little training
- No training

3. To what extent are the safety rules of your organization obeyed? Check only one answer.
- All safety rules are obeyed without exception.
 - People generally obey the safety rules.
 - The safety rules are guidelines, sometimes followed, sometimes not.
 - The safety rules are often not obeyed.
 - People pay little attention to the safety rules.
4. How do you rate the safety of the physical facilities in your workplace (machinery, equipment, etc.)?
Check the one answer that describes your assessment.
- Excellent
 - Good
 - Satisfactory
 - Poor
 - Very poor
5. How do you rate the effectiveness of the safety management department in your organization (the safety supervisor, the safety advisors, safety specialists, etc.)? Check only one answer.
- Excellent
 - Good
 - Satisfactory
 - Poor
 - Very poor
6. To what extent are you personally satisfied with the safety performance of your organization? Check only one answer.
- Very satisfied
 - Moderately satisfied
 - Neither satisfied nor dissatisfied
 - Moderately dissatisfied
 - Very dissatisfied

PART Three: Workplace policies and procedures

Direction Five: Dear respondents questions raised in this section are related to the kinds of policies and systems in place to make the workplace safe. For each item below, please put an X under the heading that best describes how much you agree or disagree with the statement

	At my workplace	Strongly agree	Agree	Disagree	Strongly disagree	DK/NA
1	Everyone receives the necessary workplace health and safety training when starting a job, changing jobs or using new techniques					
2	There is regular communication between employees and management about safety issues					
3	Workplace health and safety regulations are considered to be at least as important as production and quality					
4	There is an active and effective health and safety committee and/or worker health and safety representative.					
5	Incidents and accidents are investigated quickly in order to improve workplace health and safety					

Part Four: Safety awareness

Direction Six: Dear respondents questions raised in this section are related to explore your awareness of safety for each item below, please put an X under the heading that best describes how much you agree or disagree with the statement.

	At my workplace	Strongly agree	Agree	Disagree	Strongly disagree	DK/NA
1	I am clear about my rights and responsibilities in relation to workplace health and safety					
2	I know how to perform my job in a safe manner					
3	I have the knowledge to assist in responding to any health and safety concerns at my workplace					
4	I will use personal protective equipment at the workplace					

PART Five: - Challenges in safety management implementation

Direction Seven: Dear respondents questions raised in this section are related to the constraints in safety management implementation please put “X” sign for your appropriate response.

1. How likely do you think these factors affect the implementation of safety management in Yohannes Hail construction sites

Factor	Very likely	likely	somewhat likely	Unlikely	Very unlikely
Ineffectiveness of current safety rules and policies					
Lack of safety standards					
Lack of skilled labor					
Lack of training					
Putting safety as a lower priority					
Lack of monitoring the compliance of safety measures					
Insufficient safety budget					

Lack of personal protective equipment					
Lack of safety supervisor on site					
Lack of top management commitment to safety programs					
Poor safety awareness among top management					

PART Six: - Causes of Accidents

Direction Eight: Dear respondents questions raised in this section are related to the Causes of accidents; please encircle your appropriate response.

1. Which factors do you think majorly contribute for accidents occurring on building construction projects?

Rank them in order _____

- A. Improperly guarded areas
- B. Lack of safety training
- C. Lack of safety plan/ risk identification
- D. Ineffectiveness of current safety management policy
- E. Unavailability of PPE and inappropriate PPE design
- F. Hazardous procedures, on or around machines or equipment's

2. What do you want to see improved in relation to building construction safety management?

PART Seven: - Frequently Occurring Accidents

Direction Nine: Dear respondents questions raised in this section are related to the frequently occurring accidents in Yohannes Haile Construction Projects; please write your appropriate answers in the space provided.

Frequently occurring accidents

1. What are frequently occurring accidents in Yohannes Haile Construction Projects?
 - A. Falling from height
 - B. Being hit by falling objects
 - C. Electrocutions
 - D. Machinery accidents in loading and unloading
 - E. Nail piercing

 2. Are most the frequently occurring accidents in Yohannes Haile Construction Projects preventable? (Yes/No)

 3. For Yohannes Haile Construction projects, what are the most critical safety precautions for you?
-

PART Eight:-Personal Protective Equipment

Direction Ten: Dear respondents questions raised in this section are related with the type of equipment do you see in your workplace. Please encircle your appropriate response.

Reflector Jacket	Gloves	Helmet	Safety Shoes	Safety glass	Other(specify)

COMMENTS

“Thank you for your collaboration”!