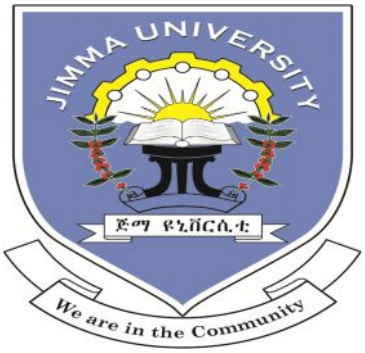

Jimma University

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By

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A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE STUDIES OF JIMMA UNIVERSITY IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTEROF PUBLIC MANAGEMENT (MPM

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FACTORS AFFECTING OCCUPATIONAL SAFETY AND HEALTH MANAGEMENT PRACTICE: CASE OF ETHIOPIAN ELECTRIC UTILITY JIMMA BRANCH.

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ABSTRACT

This study aimed to assess the factors affecting occupational safety and health management practice on Ethiopian electrical utility case of Jimma branch. Organizations with positive safety culture are likely to have employees with good safety practice. Globally peoples die as result of occupational accidents and work related disease while they are not applying organizational occupational health and safety practice according to WHO guidelines. The total sample size was 151 out of 472 employees. And the data were collected using a simple random sampling technique .Statistical Package for Social Science (SPSS) version 20.Correlations and regression analysis were applied to determine the effect and impact between variables. Safety communication score is low This necessitates the strengthening of good means of communication between employees and the managementthe factors associated with poor occupational safety conditions, occupational safety practice score is low. Occupational safety and health management practice in EEU requires advanced safety and healthy working situation, organizational commitment score is low, training and education and preventive and control score is low preventive and protective control measures are all that independently affect occupational safety health management practice.The results of this study revealed Organizational commitment the management team we suggest that improve workers commitment through managing effectively the health and safety practices in workplace. Therefore, In order to improve employee safety practice maintaining positive safety culture in the company is advisable.

Key words: Safety culture, management commitment, employee involvement, communication, training, Accident prevention, Safety practice.

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List of Acronyms

EEPCO- Ethiopian Electric Power Company

EEU-Ethiopian Electric Utility

ESAW- European Statistics on Accidents at Work HR –Human Resource

HRM- Human Resource Management

HSC- Health and Safety Commission

HSE- Health and safety executives

IAEA- International Atomic Energy Agency

ICS- Inter Connected Systems

ILO- International Labor Organization

Kms-Kilometers

Kv- Kilovolt

OHS-Occupational Health and Safety

OPM-Organizational performance metrics

PPE-Personal protective equipment

SCS -Self Connected Systems

SPSS-Statistical Product for Social Science

UK- United Kingdom

VIF- Variance Inflation Factor

WHO- World health Organization

CHAPTER ONE: INTRODUCTION

This chapter deals with the background of the study, statement of the problem, objectives of the study, basic questions, significance of the study scope and limitation and organization of the study.

1.1. BACKGROUND OF THE STUDY

According International Labor Organization (ILO) estimation (2019) globally, poor occupational health and safety results every day, people die as a result of occupational accidents or work-related diseases – more than 2.78 million deaths per year. Additionally, there are some 374 million non-fatal work-related injuries and illnesses each year, many of these resulting in extended absences from work. In developing countries, the risk of having work-related injury is 10 to 20 times higher than that of developed counties. This is because in developing countries, majority of the workforce is employed in small and medium scale industries that do not meet the minimum standards and guidelines set by the World Health Organization (WHO) and the ILO for occupational health, safety and social protection.

Muchiri, (2009) stated that decent living and working conditions are a basic right for workers, whereas occupational accidents and diseases can cause economic devastation to families, businesses and communities. Safeguarding workers' safety and health is paramount and an integral part of our social and economic development. Despite the improved economic outlook for Africa, many challenges compromise real growth. Poor economies have poor working conditions and environment, which are also a symptom of poor occupational safety and health services.

During the industrial revolution more injuries, illnesses and deaths occurred due to work place accidents which in turn led to formation of labor unions to protect the workers. According to Charles D. Reese (2003), it was in 1900 workers' compensation became reality holding the employers responsible for every bodily injury. Then, employers became interested in the matter and started to count deaths and injuries. But, prior to that, employers were blaming workers for negligence and rules were in their favor. Considering the evolution and awareness aspect of the OS&H, in 3000 B.C. Egyptians provided first aid materials to protect workers from gold and

silver fumes. Hammurabi stated compensation for permanent injury in 2000 B.C. Hippocrates, history's most famous physician, discovered that stone cutters had breathing problems.

In times past, employers were not concern with the health and safety of their employees at work. An employee was not provided with safety and health equipment and s/he risked getting hurt at work anytime s/he goes about his/her duties. An injured employee in countries like U.S for example had to litigate to obtain compensation which in most cases was not successful and the cost of doing so even prevented employees from going to court. However, the International Labor Organization made some recommendations in 1959 which provided that "occupational health services should be established in or near a place of employment for the purpose of: Protecting the workers against any health hazards arising out of work or conditions in which it is carried on, Contributing towards workers physical and mental adjustment , Contributing to the establishment and maintenance of the highest possible degree of physical and mental wellbeing of the workers. The employer has responsibility to protect the employees from all health hazards that may pose threat to their safety and health (International Labor Organization 1959).

Safety hazards are those aspects of the work environment that have the potential of immediate and sometimes violent harm to an employee; for example, loss of hearing, eyesight or body parts, arts, sprains, brushes, bruises, broken bones, burns and electric shock. In organizations, occupational accidents may arise from three dimensions: the task to be done, for instance malfunctioning machines, lack of protective equipment like working conditions which arise from inadequate lighting, fatigue that comes out of excessive working hours and the employee himself/herself (B.L Rout, 2017).

According to Constitution of Federal Democratic Republic of Ethiopia, under its Human Right section, article 14 & 16, every person has a right to life and the security of person's right to protection against bodily harm. This implies that Ethiopia has ratified, besides fundamental ones, C155 - Occupational Safety and Health Convention, 1981 (No. 155). Following the same, this has been embodied in the country's Labor and Public Civil Servants proclamations. Consequently, employers are duty bound to comply with a legal and moral obligation and provide a healthy and safe working environment for their employees. Thus, concerns about occupational health and safety are unavoidable (Singh GP et al. 2015).

In March 2013 ILO conducted labor inspection services in Ethiopia upon the request of the Ministry of Labor and Social Affairs (MOLSA) in order to improve the effectiveness and efficiency of its labor inspection services. Not letting aside other factors, MOLSA is currently updating the Labor Proclamation taking into consideration necessary improvements in the workers safety and health areas.

Ethiopian electric utility is the only one of electric power generating and giving serves to the society complex machineries in its day to day activities. In this connection, there have been accidents in the past resulting in employees' bodily injury (AberaKumie 2016). "Accidents and absences through ill-health or injuries result in losses and damage to the organization; and this 'business' reason is much less significant than the 'human' one", (Armstrong, 2006). This calls for improved safety and health practices that involve every employee and the management and owners.

Considering all these, the researcher is interested in assessing the implementation and practices of safety and health management of the Ethiopian electric utility case of Jimma town, icon for the nation's electricity industry. The ultimate interest in this study is to develop a shared attitude and perceptions about work place safety that affect business objectives of the entire Ethiopian electric utility.

1.2 BACKGROUND OF THE ORGANIZATION

Ethiopian Electric Utility (EEU) is newly established by Regulation no. 303/2013 on Nov/2013. The Former name for this company was Ethiopian electric power company (EEPCO). EEU the Central Government Power Service Company of the country with the mandate to operate and maintain the Generation plants & dams, Transmission and Distribution regional and National networks to facilitate Generation, Transmission &Distribution of power within and across the regions with reliability, security and economy on sound commercial principles. EEU wheels 100% of the total power generated in the country on its transmission & distribution networks. EEU transmission lines are operated at 400 kV, 230 kV and 132 kV depending on the power transported and distance involved. This company's distribution network consists of 55 Substations and approx. 126,038 Km of lines. EEU currently operates two power supply system - Main Inter Connected Systems (ICS) and Self-Contained Systems (SCS). The main ICS serves

the major towns and industrial centers. About 90% of the generation capacity is hydropower and remaining generation is based on Wind, Geo-Thermal and Diesel. EEU has 12 hydro, 12 diesel, 1 geo-thermal and 2 wind power plants. Major part of load is concentrated around the Capital City of Addis Ababa, while generation resources are distributed throughout the country. The generation capacity which is (ICS +SCS) approx. 2,275.1(Sourced from EEU's safety policy document, 2014). EEU has 2,000,000 customers and 13,000-man powers with different experience and educational back ground. This company is operating and Maintaining Distribution network of 126,038 km and 26,000 Distribution Transformers with 15 regional offices and 403 customer service centers spread across the country. The wide range of activities in the Operation & maintenance of Distribution system involving complex techniques have led to many new problems on safety and in such cases even minor lapses directly result in occurrence of accidents. This study draws attention to Western region office which is the one among the 15regional offices. Western region office has Sales, distribution and transmission units with 14 substations spreading over the western part of the country (EEU western branch annual performance report 2016).

1.3. STATEMENT OF THE PROBLEM

Improving worker productivity, occupational health and safety (OHS) are major concerns of industries. Some of the common features of these industries are improper workplace design, ill-structured jobs, mismatch between worker abilities and job demands, adverse environment, poor human-machine system design and inappropriate management programs. This leads to workplace hazards, poor worker health, mechanical equipment injuries, disabilities, and in turn this reduces worker productivity and product/work quality and increases cost (Ashraf A, 2003).

Being labor intensive, in particular, in Ethiopian electric utility involves significant employment in the electric power. The employees deserve to work in an accident-free, safe and healthy environment. However, according to International Labor Organization, Global and inclusive of all sectors, there are more than 2.78 million deaths and 374 million non-fatal work-related injuries and illnesses each year, as per ILO, Resources Platform, Health and Safety at the Workplace section's current report. Over two million people worldwide die of occupational injuries and work-related diseases as per WHO world Health Report, 2002. The above-mentioned risk is elevated to 10-20 times in developing countries (WHO, 2002).

There is no doubt that the human resource that an organization has is one of its versatile resources. Therefore, an effective and efficient use of the human resource will translate in to the overall effectiveness and efficiency of the organization. Though many organizations accept this to be true, they fail to realize that as part of their human resource management practices, there is the need for management to ensure that personnel in the organization work in safe and healthy environment that will promote their optimum utilization. It should be emphasized that accidents are costly both to the affected worker and the organization. Therefore, every effort should be made by management and employees in order to avoid them from happening at the work place. Therefore, failure to institute adequate health and safety measures in place by management to protect employees from these hazards and risks will lead to avoidable deaths and ultimately lead to loss of staff. Inadequate training on acceptance and compliance to safety and health measures also hinder it effectiveness. In fact, safety and health in the organization have to be everybody's concern. On the contrary, this is not the case in most organizations. There is lack of cooperation between management and employees in making health and safety issues effective. And also ensuring that regular monitoring and review of these measures are important to examine their effectiveness. Nonexistence of these measures hinders job performance and the employee suffers the ultimate consequence (Das and Sengupta, 1996).

Employee attitudes play a significant part in health and safety. Most employees are not committed to the idea of safety and fail to cooperate with safety initiatives, hence making safety measures become ineffective. Indeed, any safety measure or action on the part of government or employer may prove futile if the employees are not committed to the idea of safety. Employers also fail to see occupational health and safety as a process. It is not enough to institute safety measures and fail to provide adequate training and education on these measures and rules. Employees of EEU continue to experience occupational injuries and illnesses. Consequently, the company bears additional costs with regards to performing accident (Sue Cox & Tom, 2007).

Investigation, training to replace the injured employees, lost work time, administrative costs and loss of productivity. Furthermore, the victims of the accident lead employers to extensive worker compensation costs. Most utility workers perform their duties in a variety of environments, and as a result, they tend to incur diverse occupational injuries and illnesses. Ethiopian electric utility company engages workers in electric operation and maintenance works which are very

hazardous and risky. More so, Employees working in this organization perform diverse physical activities such as heavy lifting, working in extreme weather conditions, manual excavation, working at heights, and in close proximity to energized power lines. Due to the strain of the work and the risk involved workers kept victimized of frequent workplace accidents (John & Anthony 2001).

If Occupational safety and health is an important strategy but theoretical concept through its occupational safety practice, training and education, organizational commitment, preventive and control, management communication are lower minimal due to different factors, which may have detrimental effects on the overall performance of the employee, then more must be known about occupational safety and health of employees especially in the EEU Jimma. Many researches were made on effect of occupational safety and health management practice. But research on employee health and safety is still very limited which requires further analysis. There were very few studies related to the issue in general and even the existing studies show the existence of low level of practice of occupational safety and health and surprisingly there was no such scientific research study on the issue yet in the study area which really made this study demanding. This research will fill the gap through theoretical discussion and empirical findings and try to seek the answers for the effect of occupational safety and health management practice.

Although the personal, economic and social problems of accidents are wider no research on safety has been conducted in this company. This is because organizations usually blame accidents on the victim of an injury. They assume that human error is the major cause of accidents. Unlike those assumption literatures indicate that accidents are caused by factors, which can generally be classified as physical incidents posing hazardous situations, and incidents caused by unsafe acts. The underlying belief is that careless workers do not cause the majority of accidents but by failures in control or by organizational factors (Mullen, 2004), which ultimately are the responsibility of management. Therefore, this study aims to assess the effect of occupational safety and health management practice on organizational commitment of employees of Ethiopian electric utility, Jimma branch.

1.4 OBJECTIVE OF THE STUDY

To assess Factors affecting occupational safety and health management practice: case of Ethiopian electric utility Jimma branch.

1.4.1 Specific objective

- To evaluate the level of occupational safety practice ion EEU.
- To determine the relationship between management commitment level towards safety and safety practice in EEU Jimma
- To determine the relationship between safety communication level and safety practice in EEU Jimma.
- To determine the relationship between preventive and protective measures and safety practice in EEU Jimma
- To determine the relationship between organizational commitment level and safety practice in EEU Jimma
- To determine the relationship between employee training level and safety practice in EEU Jimma.

1.5 RESEARCH QUESTION

- What is the level of occupational safety practice in EEU Jimma?
- Is there a relationship between management commitment towards safety and safety practice in EEU?
- Is there a relationship between safety communication and safety practice in EEU Jimma?
- Is there a relationship between preventive and protective measures safety and safety practice EEU Jimma?
- Is there a relationship between organizational commitment and safety practice in EEU Jimma?
- Is there a relationship between training and safety practice in EEU Jimma?

1.6 SIGNIFICANCE OF THE STUDY

The importance of this study will be in diverse ways. The study could provide insight on the level of occupational safety and health management practice in the coordinating office of EEU of Jimma branch. The piece of work will also provide the opportunity for employees, employers to identify their specific respective roles in health and safety issues towards organizational commitment. It will also provide bases for other related companies in the industry to create a safe work environment that is critical to their success by retaining staffs and maximize productivity. The Ethiopian electric utility case of Jimma town will adopt the recommendations forwarded from this research finding in the formation of effective health and safety measures towards organizational commitment in their institutions as well. The work will be used as reference material for policy makers in making decisions concerning health and safety practices and policies on organizational commitment.

1.7 SCOPE OF THE STUDY

The scope of this study is limited to examining the influence of the five safety culture dimensions that influence the safety practice of employees at western region office of EEU, the work units considered in this study were Retail business office and Distribution office.

1.8 LIMITATIONS OF THE STUDY

As with any study, there were limitations that should be recognized. First, the results from the survey are employees' perceptions, and are hence subject to possible biases. Participants may not have responded accurately as they were concerned with what the organization would think of their answers. Second, this study was conducted at only one of the regional office of EEU. Therefore, a sample taken from only western region population might not give reliable generalization of the result to the whole company.

1.9 ORGANIZATION OF THE STUDY

This study is outlaid in five chapters. The first chapter consists of introduction part where the background of the study, background of the organization, statement of the problem, research questions and objective, significance of the study, the scope and limitations of the study. The literature works relevant to this study are detailed under the second chapter. Chapter three is

dedicated to description of methodology applied in this study. Study design, population, sampling size, variables, data collection procedures, data analysis are also parts of this chapter. While findings of the study are presented in chapter four; summary, conclusion and recommendation are considered in the last chapter.

CHAPTER TWO

LITERATURE REVIEW

INTRODUCTION

For the purpose of making any meaningful and realistic conclusion on the data drawn from the study, it is important that a closer look is taken at similar works done on occupational health and safety with reference to organizational commitment and review some of the literatures pertinent to the study, in order for comparison, confirmation and differences to be laid bare. Due to this, this chapter reviews related literatures in two sections as theoretical and empirical as follows.

2.1 THEORETICAL FRAMEWORK

Theoretical framework is the structure that can hold or support a theory of a research study. The theoretical framework introduces and describes the theory that explains why the research problem under study exists. Therefore, here in the following section, the researcher presented the theoretical framework for this study.

2.1. 1 WHAT IS OCCUPATIONAL HEALTH AND SAFETY

The Cambridge Advanced Learner's Dictionary defines "welfare' as "well-being". Therefore, health and safety are strictly aspects of employee welfare, which have been separately identified as being significant areas of welfare provision for sometimes. Cascio ,Wayne (1986) defines safety hazards as those aspects of the work environment that have the potential of immediate and sometimes violent harm to an employee; for example, loss of hearing, eye sight, or body parts, cuts, sprains, bruises, broken bones, burns and electric shock.

Health hazards as those aspects of work environment that slowly and cumulatively (and often irreversibly) lead to deterioration of an employee's health; for example: cancer, poisoning and respiratory diseases. Typical causes include physical and biological hazards, toxic and carcinogenic dusts and chemicals and stressful working conditions (Cole, 1991).

Occupational health and safety (OH&S), as developed by the WHO and the International Labor Organization (ILO), is "the promotion and maintenance of the highest degree of physical, mental and social well-being of workers in all occupations" (WHO, 2002). According to these

organizations, health and safety at work is aimed at: the prevention among workers of leaving work due to health problems caused by their working conditions; the protection of workers in their employment from risks resulting from factors adverse to health; the placing and maintenance of the worker in an occupational environment adapted to his or her physiological and psychological capabilities; and, to summarize, the adaptation of work to the person and of each person to their job. From the literature of Abddllah et al (2009) Occupational health is explained as sound state of the body and mind of people from illness resulting from the materials, processes or procedures used in the workplace, whilst occupational safety is the protection of people from physical injury. According to these authors, occupational health refers to a general state of physical, mental, and emotional well-being of a worker. They argue that this physical, mental and social well-being can be improved by implementing human resource management (HRM)

Strategies that focus on employee health and safety in the workplace (known as OH&S management). OHS management is related to the improvement and maintenance of health and safety and the prevention and reduction of potential hazards and risks to workers in the workplace.

2.1.2 TYPES OF ELECTRICAL ACCIDENTS

2.1.2.1 ELECTROCUTIONS

Electrocution is an electric hazard involved when electric current flows through abode of a person and is believed to be the most dangerous of all electrical injuries (John et al, 2006). More than half of all electrocutions are caused by direct worker contact with energized power lines. Today, most electrocutions involving overhead power lines are caused by failure to maintain proper work distances. Power line workers must be especially aware of the dangers of overhead lines. In the past, 80% of all lineman deaths were caused by contacting a live wire with aware hand. Shocks and electrocutions occur where physical barriers are not in place to prevent contact with the wires. When dump trucks, cranes, work platforms, or other conductive materials (such as pipes and ladders) contact overhead wires, the equipment operator or other workers can be killed. The degree of injury in these instances depends on the path the current takes through the body and the duration of contact. If vital organs are involved, these burns maybe fatal; if not, they can still result in extensive muscle damage (John et al, 2006).

2.1.2.2 BURNS

The most common shock-related, nonfatal injury is a burn. Burns caused by electricity may be of three types: electrical burns, arc burns, and thermal contact burns. Electrical burns can result when a person touches electrical wiring or equipment that is used or maintained improperly. Typically, such burns occur on the hands. Electrical burns are one of the most serious injuries one can receive. They need to be given immediate attention. Additionally, clothing may catch fire and a thermal burn may result from the heat of the fire (Electrical safety prevention control manual 2016).

2.1.2.3 ARC BLASTS

In addition to an electrical shock and burns, another danger to employees is the blast effect that can result from arcing. Arc-blasts occur when powerful, high-amperage currents arc flows through the air. Arcing is the luminous electrical discharge that occurs when high voltages exist across a gap between conductors and current travels through the air. This situation is mostly caused by failure of equipment due to misuse or fatigue. Temperatures as high as 35,000°F have been reached in arc-blasts. A common example of arcing is the flash that we sometimes see when we turn a light switch on or off. This is not dangerous because of the low voltage (Electrical safety prevention control manual 2016).

2.1.2.4 WORKING AT HEIGHTS

Transmission and distribution works involve working on high towers and poles. Electricians are usually required to climb up to higher heights with all the necessary engineering and personal equipment to reach their working area. The risk exposure of working at height is higher due to physical fatigue which impairs human attention and concentration. Electricians when working at height may also pose hazard to their supporting lineman on the ground. Equipment such as insulator, hook and other electrical tools may fall down and can potentially cause accident on the coworker. Salentine (2011) found that a tool falling from any height is a problem as personnel below are in a considerable danger.

2.1.3 CAUSES OF ELECTRICAL ACCIDENTS

Electrical accidents, when initially studied, often appear to be caused by circumstances that are varied and peculiar to the particular incidents involved. However, further consideration usually reveals the underlying cause to be a combination of three possible factors: work involving unsafe equipment and installations; workplaces made unsafe by the environment; and unsafe work practice. The first two factors are some time considered together and simply referred to as unsafe conditions. Thus, electrical accidents can be generally considered as being caused by unsafe conditions, unsafe work performance or, mixture of the two (Reason 1990).

2.1.3.1 HUMAN ERROR

Organizations usually blame accidents on the victim of an injury. They assume that human error is the major cause of accidents. However, this view of organizations are often contested by the scientific community that human error is not as much a cause as it is a consequence of underlying organizational problems (Reason 1990). Human error is a consequence of organizational factors. Human error is wide and can include a great variety of human behavior. The distinction between worker errors and those made by other aspects of the organization has been thoroughly explained by Reason (1990) as 'active' and 'latent' failures. Active Failures are those immediate consequences and are usually made by front-line people such as drivers, control room and machine operators. The so immediately precede and are the direct cause, of the accident. Latent Failures are those aspects of the organization which can immediately predispose active failures. Common examples of latent failures include (HSE2005): Poor design of plant and equipment; Ineffective training; inadequate supervision; Ineffective communications; and Uncertainties in roles and responsibilities and others. Such as; overload: Occurs when a person is loaded with excessive tasks or responsibilities. For example, the employee must not only perform his or her job but may need to accomplish other person tasks and at the same token he must also handle excessive noise, stress, personal problems, and unclear instructions. Inappropriate Activities: Is another term for human error. When individuals undertake a task without proper training, or misjudge the risks involved, they are acting inappropriately. Inappropriate Response: Occurs, for example, employee face a hazardous condition but does not attempt to correct it, ignoring safety or removes a safeguard from a machine to increase productivity. Reason (1990) has classified active failures in to intentional and unintentional error.

Intentional errors are described as violations, whilst unintentional errors are classified as either slips/lapses or mistakes. According to Reason violations are any deliberate deviation from the rules, procedures, instructions and regulations, which are deemed necessary for the safe or efficient operation and maintenance of plant or equipment. Violations of these rules could be accidental/unintentional or deliberate. Violations are divided into three categories: routine, situational and exceptional (HSE 2005). Slips and lapses are unintended skill-based errors, which are either attention or memory failures. Reason (1990) grouped error and violation together and called them as unsafe acts or human failure.

2.1.4 SAFETY CULTURE

The issue of safety culture was first came in to picture when the International Atomic Energy Agency introduced it to the world following the accident that had occurred on Chernobyl nuclear power plant in 1986. During this time, some view the disaster was because of the poor health and safety culture in the company. Most of all, Human Errors and violations of operating procedures are the elements that contributed to the causation of the accident (HSE 2005).

Safety culture is an essential issue for managers in high-hazard industries. It is a component of the overall organizational culture that significantly affects the attitudes and beliefs of workers in terms of their health and safety performance (Cooper 2000). Safety culture is a priority and group value placed on worker to the extent in which individuals and groups will commit to personal responsibility for safety, act to preserve, enhance and communicate safety concerns, strive to actively learn, adapt and modify (both individual land organizational) behavior based on lessons obtained from errors or mistakes, and be rewarded in relation to these values. In this regard, the definition involves that culture of organization exists on a continuum so that organizations can have either a good or poor safety culture. Safety culture cannot just be instilled at once, but it is a result of long-term process of improvement (IAEA, 1986, as cited in Cox &Flin, 1998).

Given the definitions safety culture that have been proposed in the literature, yet researchers have not reached an agreement on the dimensions that constitute a safety culture. In fact, various studies have shown a number of organizational indicators that is from “2 to 19 safety culture dimensions ranging from management to risk awareness” (Flin et al., 2000) and attitudes and

perceptions of the safety climate. The commonly cited dimensions of a positive safety culture presented in literatures on predictors of work-related injuries (Flin et al, 2000) include management commitment, employee involvement, safety training, safety communication and reporting systems. Suggestion by the Australian Institute of Petroleum (as cited in Industry Commission, 1995) indicate that safety culture is of paramount benefit to better change workplace safety performance than the mere OHS legislations imposed by government. According to Industry Commission (1995) important attributes of achieving an effective safety culture are identified as top management commitment; Workplace participation and consultation and Training for competence and confidence and communicating the right message up and down the organization. These important attributes are elements of the effective safety management practices. Safety management refers to the tangible practices, responsibility and performance related to safety (Mearns, Whitaker &Flin, 2003). They illustrated some common themes of safety management practices: namely, management commitment to safety, safety communication, health and safety objectives, training needs, rewarding performance, and worker involvement. They also maintained the associations between safety management, safety climate, and safety culture. Safety climate is considered to be the precise indicator of overall safety culture while safety management practices display the safety culture of top management and as a result, good safety management practices are reflected in the enhanced safety climate of all employees. When management shows in practice that safety is an important value in the organization, the workers will adopt safety as a dominant value in their work as well. Perception of active commitment by management on safety issues have a positive effect on the rate of injuries in organizations by shaping behavior of workers to act in safe ways (O´Toole2002). The importance of management commitment, involvement and communication in reducing accidents are also indicated in many literatures and studies (Smith et al. 1978). In fact, it has been well said, that "employee safety behavior is a function of management systems operating within the organizational culture". Positive safety culture involves the following key elements (Flin et al 2000).

2.1.4.1 MANAGEMENT COMMITMENT

A key element of safety management is senior management leadership and commitment. For a safety management practice to be successful in an organization, it must be driven by senior management. This is the level of management responsible for making critical decisions in terms of organizational values, priorities and future directions. Safety management is most effective when it is integrated into the initial stages of business and strategic planning.

Within the context of safety culture, "management commitment and involvement" refers to the extent to which both upper- and middle-level managers get personally involved in critical safety activities within the organization. Management involvement in safety, therefore, is reflected, by managers' presence and contribution to safety seminars and training, their active oversight of safety critical operations, their ability to "stay in touch" with the risks involved in everyday operations and the extent to which there is good communications about safety issues, both up and down the organizational hierarchy. Through participation in the day to day operations, both upper- and middle-level management communicate to their employees an attitude of concern for safety that subsequently influences the degree to which employees comply with operating rules and with safe operating practices. Management commitment too occupational health and safety may also be demonstrated in various ways, such as: allocating sufficient resources (financial and human) for the proper functioning of the occupational health and safety program; Designating a senior management representative to be responsible for overseeing the proper functioning of occupational health and safety management and establishing organizational structures to support managers and employees in their occupational health and safety duties; Enhancing safety performance is important to the success of health and safety management at work. Critical to this is the reciprocal relationship between safety management and safety behavior within the safety culture in the organization (Cooper, 2000).

2.1.4.1.1 OCCUPATIONAL HEALTH AND SAFETY POLICIES:

Organizations that are committed to health and safety have policies that guide both management and employees in ensuring that the working environment is injury free for their workers. In order for the policies to be fully implemented and proven successful, from the literature of Armstrong (2006) it is necessary for the organization to involve its employees in the development. The

policies are usually developed to protect employee lives and ensure healthy work environment so that employees can take pleasure in fine working conditions. The three major curses that still are major in developing countries are poverty, ignorance and disease. To fight these problems and promote health policies are developed. The issue of governing safety and health at work on legal basis in Ethiopia dates back to 1940s when the first legal instrument Proclamation No.58/1945 was promulgated. The origin of this legislation was a result of the advent of industrialization that took place in the country. This legislation and other recent laws specify the minimum requirements for OHS and therefore employers are expected to; minimize occupational accidents, diseases and disabilities, promote good safety culture at the work place, promote a good work environment for workers and those in proximity (Dawit, 2006). All safety programs should be underwritten by accompany and/or departmental safety policy. Although specific policy statements must vary from industry to industry, all policies should contain the following key statements (John et al, 2006).

The company is committed to safe work practices, at a minimum, all company safety policies and procedures shall comply with applicable federal, state, and local standards as well as recognized consensus standards, safety is the premier consideration in performing work, employees will be required to follow all company safety procedures, if a job cannot be safely done, it need not be done, each individual employee is uniquely responsible for his or her own personal safety, and the cooperation of all personnel will be required to sustain the safety program.

2.1.4.2 EMPLOYEE INVOLVEMENT

The active involvement of each employee in the workplace is essential for the success of safety management practices and helps to develop a 'safety culture' in the workplace. Consultation between management and employees assists in encouraging support and involvement in safety activities. Employees are an important source of safety information as they are in the immediate area of, identified hazards. They can offer valuable information about risks and advice on possible solutions. Employees who work on the ground level actually have firsthand knowledge of: problems with work practices and procedures (work systems); faults with machinery, plant or furniture; difficulties caused by the design and/or layout of work equipment; the type, frequency and seriousness of incidents or near-misses occurring; the safety implications of any short cuts

taken in work systems in order to save time; and safety management programs after their introduction (Michael Asiedu, 2018).

2.1.4.3 SAFETY COMMUNICATION

Safety communication is another important component of positive safety culture which is achieved by fostering a co-operative and consultative relationship between employers and employees on the health, safety and welfare of employees at work". Safety consultation requires more than an exchange of information, it requires employers and employees to contribute to the pool of knowledge that can give a rise to quality decision making and improving health and safety at the workplace. Safety communication and feedback is a key factor to employee's safety performance. Safety feedback and communication is important for the worker's performance. When safety operations rely on efficient communication and feedback the management can track the hazards to prevent accidents and injuries (Arboleda et al., 2003).

Regular feedback on performance can be good to communicate to employees through sign boards, caution signs, and other indications. The information which is collected as a feedback will not only help the organization but it will also help the organization to have the behavioral data in maintaining safety. In order to encourage communication, it is very necessary not to blame worker for the accidents which occur as management will gain experience with the techniques utilized to increase the quality of safety (Arboleda et al., 2003).

2.1.4.4 SAFETY TRAINING

Cole (2008) defined Training as any learning activity that is undertaken to obtain specific knowledge and skills for the aim of doing a task. Training may be needed for having efficiency in safety in the operation of a particular machines or equipment; to have an effective sales force; to have competent management in the organization. Training helps people acquire the skills, knowledge and attitudes to make them competent in the safety and health aspects of their work. It includes formal off-the-job training, instruction to individuals and groups, and on the-job coaching and counseling. It is helpful to integrate the safety and health requirements of each job into the individual job specifications. Part of this duty into ensures that employees are adequately instructed and trained in safe systems of work. This includes safe methods for carrying out tasks; use of equipment or substances; use of health and safety control measures and personal

Protective equipment; reporting and emergency procedures; and their responsibilities for health and safety. Workers and new recruits in particular, need to be instructed in the safety aspects of their work and kept under close supervision to ensure that they have fully understood the dangers and how to avoid them.

2.1.4.5 PREVENTIVE AND PROTECTIVE TOOLS

The identification and elimination of occupational accident or hazards – potential causes of accidents – is the key to accident prevention. When elimination of the risk entirely is not possible, a secondary option is to reduce the risk as much as possible. According to Rasmussen (1997), occupational accident prevention is usually based on investigation of occurred accidents and eradication of accident causes. Still, accident investigation should not be limited merely to the identification of the direct (or apparent) causes of occurred accidents but should consider what are the underlying causes of accidents, incidents and deviations, that is, what has led to the accident-triggering event, behavior or error (Rasmussen 1997).

The analysis of human error and especially the surrounding conditions that provoke error is an essential part of accident prevention. The measures are; Provision of safe premises, safe procedures, safe machines for workers by the employers; provide workers with adequate training on the importance and proper use of safety devices such as eye goggle, booths, ear plugs, hoes, cutlasses, hand gloves, face mask as the case may be according to company rules; provide workers with information regarding the inherent risks of any occupation before he/she is allowed to work alone on the job; effective training and encouragement of workers on proper use of safety knowledge, skill and various work procedures; there should be well defined policy guidelines on safety precautions in each plant; Prepare and display at strategic positions within the work environment bill boards, posters, sign posters indicating danger zones, safety measures, unsafe danger zones, safety measures, unsafe acts in work place, the need for compliance(Katrina Witt et al. 2007).

2.1.4.5.1 SAFETY AUDIT

Safety audit constitutes the "feedback loop" which enables the relevant industrial Undertakings to reinforce, maintain and develop its ability to reduce risks to the fullest extent and to ensure the continued effectiveness of the safety management system. It includes interviewing individual's

together information about the Operation of the safety management system and the perceptions, knowledge, understanding, management practices, skills and competence of managers and employees at various levels in the organization. It also includes Examining documents to check and assess the industrial undertaking's risk control systems, performance standards, safe type procedures and safety instructions and to verify the information obtained through interviews (Bunn 2004).

2.1.4.5.2 PERSONAL PROTECTIVE EQUIPMENT

Personal protective equipment is important tool to protect workers from hazards. So companies should consult workers or their representatives' on proper personal protective equipment and clothing, having regard to the type of work and risks. Moreover, when hazards cannot be otherwise prevented or controlled, employers should provide and maintain such equipment and clothing as are reasonably necessary, without cost to the workers. The employer should provide the workers with the appropriate

Means to enable them to use the individual protective equipment. Indeed, the employer has a duty to ensure its proper use. Protective equipment and loathing should comply with the standards set by the competent authority and take ergonomic principles into account. Workers have the obligation

to make proper use of and take good care of the personal protective equipment and protective Clothing provided for their use (Benjamin,2008). Personal protective equipment (PPE) includes the following:

Gloves, safety footwear, safety helmets, high visibility waistcoats, aprons, protective clothing for adverse weather conditions, eye protectors, hearing protectors, life-jackets, respirators, breathing apparatus including those used underwater, and safety harness(Laura M 2009).

2.1.4.5.3 HAZARD IDENTIFICATION

Hazard identification is the process of identifying all situations or even that could give rise to the potential for injury, illness or damage to plant or property. Hazard identification should take into account how things are being done, where they are done and who is doing them, and should also consider how many people are exposed to each hazard identified and for how long. The

following should be accorded top priority in the hazard identification process. High Frequency Accidents or Near Misses Jobs with a high frequency of accidents or near misses pose a significant threat to the safety and health of workers and should therefore be given to apriority. History of Serious Accidents Causing Fatalities Jobs that have already produced fatalities, disabling injuries or illnesses, regardless of the frequency, should have a high priority in the hazard identification process. Existence of a Potential for Serious Harm Jobs that have the potential to cause serious injury or harm need hazard analysis, even if they have never produced an injury or illness. Introduction of New Jobs Whenever a new job is introduced, a hazard identification process should be conducted before any worker is assigned to it. Recent Changes in Procedures, Standards or Legislation Jobs that have undergone a change in procedure, equipment or materials, and work affected by new regulations or standards will need risk assessment. Major methods for identification of hazards include (Sijie Zhang 2014).

Direct Observation Method This involves observing an experienced worker with good safety awareness carrying out the work several times. The job steps and the hazards in each of these are recorded.

Recall Method

This should be done for jobs that are rarely performed. The method involves inviting the engineers, supervisors and workers involved in the jobs to attend a brainstorming session, during which they would look into the materials, machines and equipment used, and the job steps to identify the hazards inherent in such jobs(Sijie Zhang 2014).

2.1.5 SAFETY CLIMATE

Safety climate is clearly a sub-part of safety culture related to individual and group attitudes and behaviors related to engagement in safety practices (Cooper, 2000).Safety climate has been one of the most frequently studied backgrounds of safety performance.

Although originally conceived the concept of safety climate did not receive much attention in the academic research literature until recently (Zohar, 1980). In general, safety climate can be defined as the perceptions of the events, practices, and procedures as wells the kind of behaviors that get rewarded, supported and expected in a particular organizational setting. Thus, employees

might perceive organizations in ways that its safety policies and procedures signal strong or weak commitment to safety. Likewise, employee perceptions of how supervisors react to safety violations or how seriously they regard these violations of safety policy will indicate whether safety is valued or not. These perceptions are likely to induce positive safety performance and reduce the occurrence of accidents and injuries. An empirical research conducted on marble workers in turkey by sealantin (2013) investigates the relationships among the safety culture, working conditions and safety behaviors, occupational accidents and injuries. Study conducted in four marble factories in Border city of Turkey, Based on the findings, significant relationships have been observed between safety climate and safety behaviors. Moreover, safety climate perceptions, working conditions perceptions and safety behavior levels of the marble workers differ depending on whether they have had occupational accident & injuries in organization or not.

2.1.6 EMPLOYEE SAFETY PRACTICE

Employee safety practice refers to a behavior or habit of an employee to perform a job safely. Safety behavior requires knowledge, skills, motivation and a possibility to act safely (Jorgensen 1998). Worker Safety behavior refers to an employee motivation to engage in safety performance improvements. The safety behavior base refers to the behaviors which lead to reduction of unsafe act and as a result reduce accidents and injuries. Unsafe act may be said to include "the extent to which the personnel ignore safety regulations in order to get a job done, carry out activities which are forbidden, perform their duties incorrectly, do not use personal protective equipment, and break procedures to carry out jobs quickly" (Rundmo, 1996). Since unsafe behavior is the immediate cause of most occupational accidents, companies strive for ways to promote safe behaviors.

Safety practice encompasses all the activities undertaken by individuals in their workplace to ensure their personal safety, the safety of their co-workers and the safety of their organization at large. Referring to such activities as safety performance, Burke et al (2002) in two studies identified four components of safety behavior. These components concerned with workers'; use of personal protective equipment's (PPE), engagement in workplace practices to reduce risk, dissemination or communication of health and safety information and lastly exercise of their rights and responsibilities.

Neal et al (2000) conceptualized safety practice as comprising of two components which they termed safety compliance and safety participation (or initiatives). Safety compliance according to these models refers to the mandatory activities that workers need to perform to bring about workplace safety. Usually such activities offer direct personal protection for the worker. It includes activities like following safety standards and using the correct PPE. Safety participation on the other hand, involves 'activities that may not directly apply to an individual's personal safety, but which do assist to develop an environment that supports safety' (Neal & Griffin, 2000). Such activities are usually not mandatory within a workplace and individuals perform them at their own judgment. They can thus be considered as 'safety specific citizenship' behaviors with examples being; identifying and reporting hazards, making suggestions to improve safety and correcting colleagues who engage in unsafe acts.

Mullen (2004) explored the factors that affects individual tendency to act unsafely. Seven interviews were carried out with employees from different occupations (e.g. police officer, power company technician, healthcare provider). Factors that appeared as influencing individual unsafe behavior included: Role overload: not having enough time or resources to carry out the work safely, Performance over safety: coercive pressure room co-workers and/or management to behave unsafely i.e. rushing or not wearing PPE for example, and Safety attitudes: lack of concern and overall commitment to safety from management and co-workers.

2.2 EMPIRICAL REVIEWS RELATED TO SAFETY CULTURE AND SAFETY PRACTICE

Practice Beginning with Zohar's (1980) studies on safety climate, safety climate and safety performance were positively related. Research cites evidence to support the influence of safety climate on safety performance indicators (Clarke, 2006)

Additionally empirical evidence concerning safety culture and safety performance is from the findings of Varonen and Markku (2002) that these authors assessed 22 safety variables associated with organizational practices and the work environment in eight wood-processing companies between 1990 and 1993. According to their study three factors of safety climate were studied in relation to accident rates. These variables were a) safety activities of management and safety personnel, b) anticipation of hazards, and c) safety training. Their study confirmed the

hypothesized relationship that higher scores on safety climate correlated with lower accident rates. The results of the Varonen et al. study were also in agreement with Neal and Griffin's (2006) research, which established the "connection between safety climate/culture and employee safe working practices" Further study from Silva, Lima, and Baptista (2004) established measures of safety climate according to the four culture orientations of the Competing Values Framework. The instrument was administered in 15 industries to 930 employees. Their result showed Strong correlations between the following safety-related practices and accident frequency and severity rates: a) safety as an organizational value, b) management safety activities, c) communication related to safety d) learning from accidents, and e) employee involvement in promoting safety.

Another research by Mearns et al. (2003) determined the relationship between safety climate, safety management practices (i.e. actual practices used to maintain safety) and safety performance (using both self-report and company accident data) among 14 offshore installations. Survey data was gathered in two separate years (the sample size was N=682 and N=806 respectively) with a total of nine offshore installations providing data across both years. The finding of this analysis disclosed that safety management practices relating to management commitment were associated with lower levels of self- report accidents.

2.2.1 MANAGEMENT COMMITMENT TO SAFETY AND EMPLOYEE SAFETY PRACTICE

In order to develop a successful safety practice, it is essential that there be strong management commitment in the effort to create and maintain a safe and healthy work place. An effective management addresses all work-related hazards, not only those covered by government standards. All levels of management must make safety a priority. They must communicate this by going out into the worksite to talk with workers about their concerns and to observe work procedures and equipment. In each workplace, the lines of responsibility from top to bottom need to be clear, and workers should know who is responsible for different health and safety issues. A result of a study conducted by Zohar and his co-workers also suggest that, based on shared perceptions of management safety commitment, the employees infer the relative value of safety performance in the organization. This informs employees' behavior-outcome expectancies, and

safety behavior is contingent on beliefs that such behavior is expected and will be rewarded (Zohar & Erev 2007).

Lin and Mills (2001) survey findings also implied that safety performance was influenced by management and employee commitment to safety and health. The involvement of management and workers showed positive results in enhancing safety performance as per their findings. The key to excellence in health and safety performance is the involvement of senior management. Their findings indicated that safety awareness among all workers is crucial to improve health and safety performance of a company. Management practices concerning the safety culture including management commitment help organizations to create safety culture. Zohar (1980) also discussed that management‘s commitment to safety is a vital factor influencing the success of an organization‘s safety programs. In management commitment, management gives values to safety measures expressed in its way to give importance to the risk. These safety measures are undertaken to motivate employees to remain committed to perform a job is a safe manner. Another research by Judd H Michael et al (2015) indicated that increasing employee perceptions of management's personal concern for employee well-being through a dedication to safety will result in positive outcomes beyond improved safety performance. According to them one method for demonstrating an increased commitment in a manufacturing organization may be for management to know and understand the manufacturing processes of the organization.

Knowing the manufacturing process should help management to identify unsafe working conditions, unsafe equipment machinery, and unsafe acts/behaviors in order to take corrective actions for the issue at hand. Such actions by management reflect personal commitment and involvement, which in turn appears to influence employee level of safety outcomes.

Judd H Michael et al (2015) result confirms the relevance of management commitment to safety in the wood products manufacturing industry. These results provide empirical evidence to accrue benefits to organizations when management is involved in and committed to maintaining a safe work environment for their employees. This can be accomplished in a variety of ways, including showing personal concern for the health and safety of employees, implementing job- training programs, participating in the management of safety committees, considering safety in job design, and reviewing the pace of work.

2.2.2 SAFETY TRAINING AND EMPLOYEE SAFETY PRACTICE

As Armstrong (2006) put it, Health and safety training is a key part of the preventative program. He asserts that training is another way of reducing unsafe and unhealthy acts, especially for new employees. New employees should be instructed in safe practices and procedures, warn them of potential hazards, and work on developing a safety- conscious attitude. Training should start as part of the induction course when employees are first hired. It should also be noted that training must follow a transfer of an employee to another position or place.

Certain types of works, different from others, require a more critical and different set of safety and care while performing as workers may engage in more hazards and risky work situations as in factories, power generation or transmission plants and so on.

According to a study conducted at Kaisugu Tea Factory in Kenya by Rotich and Kwasira (2015) the level of regulation and enforcement of occupational safety and health (OSH) in Kenya was inadequate especially when compared to developed countries. It was difficult to effectively implement OHS Program in Kenya tea factory. The study had aimed at identifying strategies that could be put in place to ensure effective implementation of OSH programs. Their findings established that there exists a positive, strong and statistically significant relationship between

Employee safety training and effective implementation of Safety programs in Kaisugu Tea Factory. Another study conducted among textile workers in Adwa city of Ethiopia by Dessalegn T et al (2014) randomly taken 500 workers who were studied to see if safety training and knowledge about safety information have any effect on employees' safety practice. According to their analysis the result showed that generally more than two-third of respondents knew about safety information however, practice towards safety information was inadequate. Safety training was the common factor to increase knowledge and practicing habits which needs to be encouraged. Regular supervision is also recommended to ensure and promote work place safety.

2.2.3 SAFETY INVOLVEMENT AND EMPLOYEE SAFETY PRACTICE

Increasing levels of employee engagement can lead to improved safety outcomes is also supported by a study into the Molson Coors beverage company which claimed the business saved $1.7 million in safety costs by improving their levels of employee engagement; it was found that engaged employees were five times less likely than non-engaged employees to have a

safety incident and seven times less likely to have a safety incident that resulted in a loss of time. Further, it was claimed that the average cost of a safety incident for non-engaged employees was $392 whereas for engaged employees the average cost was $63 (Raines, 2011).

He asserts that employee involvement is a key topic for discussion in enhancing organizational safety". Raines took the top and bottom quartile in employee engagement measures and compared measured safety outcomes. He found that "engaged" business units experienced fewer safety incidents than those units with lower levels of employee engagement. Lower accidents go along with higher safety practices as higher safety practice come from engagement in safety matters Another advantage of worker participation as described by HSE (1997) is that it supports risk control by encouraging workers' ownership of health and safety policies. It creates an understanding that the organization as a whole, and people working in it, benefit from good health and safety performance. Pooling knowledge and experience through participation, commitment and involvement means that health and safety becomes everybody's concern.

Workforce participation needs an open environment in which people can offer ideas, including when something had gone badly, without the possibility of blame. Support on taking a much more active stance in involving employees in discussions and decision-making around safety can enhance adoption of safer behaviors, is provided by Meldrum et al. (2009). They conducted a 13 month investigation within a large construction firm in order to test a model of worker engagement using a series of one to one interviews with system stakeholders. Their paper stated: "Four key attributes that emerged during the study were found to support worker engagement in the project organization under study. These were: knowledge and capability to engage, perceptions (of what was expected), attitudes and behaviors (what they actually thought and did) and actual involvement in H & S risk management." According to a published report in 2001 by the UK Health and Safety Commission (HSC) and the Health and Safety Executive (HSE), an increase in employee involvement with health and safety issues actually helped to reduce accident rates from 1.2 to 0.1 per 100,000 man hours.

In conclusion, good management of health and safety can only be achieved with the co-operation of the workforce. It is vital that the employees know what is expected of them and are aware of any risks to their health and safety that may arise at work and any safe systems of work that are applied.

2.2.4 SAFETY COMMUNICATION AND EMPLOYEE SAFETY PRACTICE

A study conducted by Cabrera et al (2007) shows that communication and feed back is an important variable to control the work place hazards. Efficient communication and feedback helps the upper management to take decision towards any possible hazards. Similarly, communication and feedback encourages the workplace safety behavior and through proper reporting the management and the workers can interpret to improve safety performance. Mutual communication and relations between management and workers, creating open communication of safety as well as other work-related matters, have been linked with good safety performance records in Construction companies (Smith et al, 1978). According to them, construction companies which had good safety performance records had more recurrent and more positive contacts between management and employees, while management with poor safety records had inclined to use the health and safety committee meetings as their only means of interacting with employees. A research conducted on road construction safety by Keffane S. (2015) pointed out that communication in organizations could play an important role to increase road safety. To better know its role, this study measured managers' and employees' perceptions about the communication's role in six antecedents' safety

management and performance of road safety practice, self-reported safety knowledge, safety motivation, safety compliance and safety participation, by conducting a survey using a questionnaire among 165 employees and 135 managers. This study showed that some of the safety management of road safety practices has effects associated with the safety performance determinants. Safety training and safety promotion have effects related to safety motivation, and only safety commitment, safety communication and feedback have effects related to safety knowledge. Safety behavior compliance was found to be the key mediator in explaining these effects and relationships, and only safety feedback has effects related to safety participation. Safety feedback was identified as the most important safety management factor to road safety practices that predicts safety knowledge, safety motivation, safety compliance and safety participation. In companies where there were opportunities for workers to participate, to be involved in the consultation process and who were able to be involved in negotiations on health and safety issues were more likely to have good safety performance records.

2.2.5 ACCIDENT PREVENTION MEASURES AND EMPLOYEE SAFETY PRACTICE

According to a study by Nazia M et al (2010) conducted In Pakistan, thousands of workers are routinely exposed to hazards in textile industry. There are different hazards faced by the workers of textile industry. There are different factors, which are responsible to create the hazards in the working environment. These are Physical, Biological, Chemical and Ergonomic (personal) factors. There are some other aspects, which are responsible to create hazards in the work place environment i.e. shift work, smoking at work place, job strained, proper use of personal protective equipments etc. The introduction of hazards technologies in industry has resulted in high accident rates, occupational diseases, and unhealthy working environments. Most workers are illiterate and do not know what protective measures should be adopted for their jobs. Their study proposed that awareness about hazards should improve occupational health and safety.

According to the authors the effect of these hazards can be minimized by using the hazards control measures. Majority (83.5%) of the respondents reported that hazardous warning signs are available in the vicinity of the industries furthermore; about eighty percent of the respondents were of the view that warning signs are placed at suitable place in the vicinity of the industries but in the language they don't understand and this has influenced the workers negatively, use of personal protective equipment was also correlated positively to impact on their safety performance. Furthermore a cross-sectional study which was conducted by Daniel et al (2014)

Among 876 respondents sampled from 92 unions used structured questionnaire and observation check list to collect data. Crude odds ratio with 95% CI was computed to see the presence of association between selected independent variables and occupational injury. Multivariate logistic regression analysis was made to see the relative effect of independent variable on the dependent variable. The extent of occupational injuries among Addis Ababa city solid waste collectors is present in a level that needs immediate public health action. According to their findings Personal protective equipment utilization is the determinant factor for occupational injuries that arise in this sector. Therefore, implementation of basic occupational health and safety services including the provision of personal protective devices and ensuring utilization are highly advisable.

Osman and Abera (2010) also in their effort to determine the magnitude of occupational injury and describe factors affecting its happening among workers of Tendaho State Farm located in Afar Region they conducted a cross-sectional study design to assess occupational injuries among

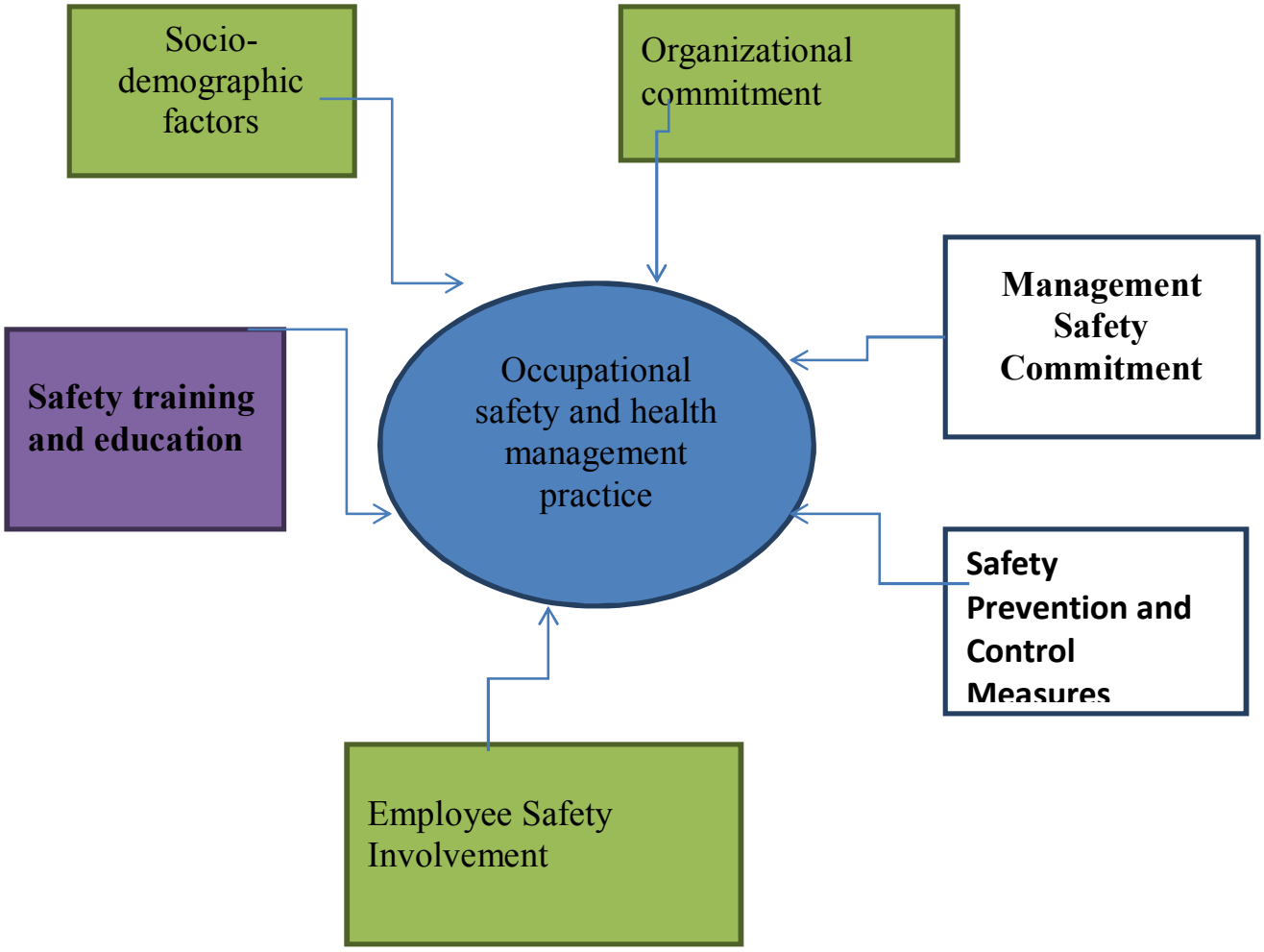
randomly selected 810 workers in August, 2006. A structured questionnaire based interviews, work environment observation, physical examination of study subjects for injury, and reviewing medical records for injury were used to collect the data. Their result shows that the overall occupational injury prevalence rate was 783 per 1000 exposed workers per year. They found that a total of 6153 work-days were lost, at an average of 11.4 days per an injured worker per year. They determined that absence of health and safety training and lack of protective devices were among the determinants causing an injury.

2.3 RESEARCH FRAMEWORK

This study was conducted to investigate the factors affecting occupational safety and health management practice: This research paper has proposed management safety commitment, safety communication, safety training and education, employee safety involvement and accident prevention and control measures as independent variable and safety practice of employees as dependent variable.

All those independent variables was measured based on the perception of workplace safety culture towards compliance of safety practice (dependent variable). Figure 1 provide on the relationship of the dependent and independent variables measured in the study.

2.5 CONCEPTUAL MODEL OF THE RESEARCH



Source: Developed for the study

Figure 1: Conceptual framework for factors affecting occupational safety and health management practice.

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter covers about how the research has been carried out. It contains description of the study area, research design, research approach, population and sample size, source of data, data collection instrument, data collection procedures, validity and reliability test, ethical considerations In general, the study was to assess effect of occupational safety and health management practice on organizational commitment using Ethiopian electric utility Jimma town as a case of study. Responses on each item are arranged on a five point Liker pre-determined scale data analysis. Occupational safety & health management practices are measured with self-developed questionnaires to be answered in the same manner with occupation safety practice.

3.1 STUDY AREA AND STUDY PERIOD

This study was carried out in Jimm a town at western regional office, which is one of the regional offices of Ethiopian electric utility company is located 357 k/m away from Addis Ababa. EEU Jimma is engaged with power distribution, expansion, new connection, sale of energy and minting the line .the study has been conducted from October 2019 to August 20, 2020.

3.2 STUDY DESIGN

An institution based cross sectional study has been conducted to determine the effect of occupational safety and health management practice on organizational commitment. This study design was capture information based on data gathered for a specific point in time. The data gathered is from a pool of participants with varied characteristics and demographics known as variables. It has the advantage of containing multiple variables at the time of the data snapshot and not costly to perform and does not require a lot of time (Francis, 2000).

3.3 SOURCES OF DATA

Both primary and secondary sources of data have been used. Production teams, safety officer and administration staffs are considered as primary sources of the study and the primary target population for the study as well. The reason for selecting the target population is to get relevant data and genuine information. Other essential secondary sources included in this study was

relevant books, periodic performance report of EEU, academic journals, proceedings, articles contributed by different authors, internet based information which contains relevant information related to the subject under the study.

3.4 POPULATIONS AND SAMPLE SIZE DETERMINATION

The target population of this study was included management and non management staffs who were working under three work units of the western region, Ethiopian electric utility case o f Jimma town. The work units under study were Retail business office, Wire business office and Transmission substation office. According to the data collected from the office of record officer and head manager these three work units have a total work force of 472 employees who appeared on the (HRM).

The sample size is determined using the formula for a single population proportion formula considering Zα/2 value as 1.96, confidence interval of 95%, margin of error as 0.05 and proportion of occupational safety from previous similar study as 10% and adding a 10% for non-response rate the sample size accordingly become 151 employees at EEU.

$$n = \frac{Z*Z(p)(q)}{e2} = \frac{1.96*1.96(0.1)(0.9)}{(0.05)(0.05)} = 151$$

To examine the challenges related to occupational safety and health management using qualitative study .A structured checklist and in-depth interview to capture the practice of occupational safety and health management on organizational commitment has been included.

3.5 SAMPLING PROCEDURE

The researcher applied simple random sampling techniques to size based on the relative number of employees in each level to be able to get a representative sample for the Employees as Middle managers, junior managers, supervisors and workers. After determining the representative sample for the population, questionnaires then were carefully distributed to participants within each category using availability sampling based on the allocated numbers to the strata as could be observed from Accordingly, out of the total 151 questionnaires were returned5 questionnaires that were allocated to middle managers were fully filled and received. Similarly 25 questionnaires given to junior managers were also fully complete and returned. However out of

121 questionnaires that were distributed among workers and supervisors only 121 were filled complete and returned.

3.6. VARIABLES

3.6.1. DEPENDENT VARIABLE

Occupational safety and health management practice

3.6.2. INDEPENDENT VARIABLE

So-ciodemographic variables (age, sex, income, educational level)

Management safety commitment,

Safety communication,

Safety training and education,

Accident prevention and control measures

Organizational commitment

3.7 DATA COLLECTION METHOD

Questionnaire, interview, and observation were employed to collect data. The data was collected from primary sources through questionnaire, interview, and observation which enable the researcher to gain genuine information

3.7.1 QUESTIONNAIRE

The most basic form of measurement might be questionnaire because questionnaires are easily distributed, have less room for bias, have increased likelihood of confidentiality and require much less time and money (Bourdon et al, 2005). It is also more comfortable for some respondents who prefer to fill questionnaire than participate in the interview. When the researcher decided to make questionnaire as data gathering tool, the researcher taken into consideration all the advantage of the tool and its easiness to manage with the short time that the researcher has to conduct this research. Questionnaires were collected from 151 Supply Chain and Demand staff. The reason why a questionnaire used is easier to handle and is simpler for the respondents to answer within a short period of time (Koul, 2008).The items of the questionnaires

were mainly close-ended questions and accompanied by some open ended ones. The closed ended questionnaires aid the coding and analysis of responses whilst the open ended facilitate richness and intensity of responses. The questionnaire first prepared in English and then interpreted into Amharic to ensure clarity of understanding by respondents and administered by the researcher.

3.7.2 INTERVIEW

Additionally, out of the total 30 employees interview were conducted which are 3 middle level manger,5 junior manager and 22 worker /supervise staff by using census because as the researcher deem they are relevant bodies to provide appropriate information for the study due to their intimacy with production workers in their day to day activities. Semi structured interview which is the most common type of interview in social research (Dawson, 2002). It was used to collect data because this process allows the researcher to gain insights into others perspectives about the phenomenon under study and it is particularly useful for ascertaining respondent's thoughts, perceptions, feelings, and retrospectives account of events. Marriam (1996) further explained that "interviewing is necessary when we cannot observe behavior, feelings, or how people interpret the word around them.

3.7.3 OBSERVATION

Observation checklist was another data gathering tool that helps the researcher as an eye witnesses to the situation. The major points observed by the researcher during the survey period were cleanliness of the EEU company, Space for staff refreshing center, availability of different services, availability of notice board, laboratories with adequate equipment's, libraries with adequate reference materials, first aid facilities, staff rooms. In addition, observation can help to consolidate the research with different techniques and to know what the situations look like in real life practices of the EEU.

3.8 VALIDITY AND RELIABILITY

Checking the validity and reliability of data collecting instruments before providing to the actual study subject is the core to assure the quality of the data (Creswell 2009).

3.8.1 VALIDITY TEST

Validity is the extent to which difference found with measuring instrument reflecting true differences among those being tested. As of John (2007), in order to ensure the quality of the research design content and construct validity of the research was checked. Construct validity establishing correct operational measures for the concepts being studied. The literature review were conducted and thoroughly examined to make sure that the content of measuring is relevant to the study.

3.8.2 RELIABILITY TEST

As it is vital to obtain a reliable measure pretest were done for selected population at Varnero construction Jimma branch in Ethiopia for the purpose of deriving a scale score coefficient alpha was Achenbach (2004) indicated that Cranach's alpha gives the proportion of the total variation of the scale scores that is not attributable to random error and its values of 0.70 or greater are considered adequate for a scale that to be used to analyze associations as below table 3.2 were indicated. The purpose of deriving a scale score by having multiple items is to get a more reliable measure of the construct than is possible from a single item.

Table 3.1 Results of reliability analysis

No	Variable	Number of Items	Cronbach's α coefficient
1	Management communication	7	.798
2	Training and education	5	.770
3	Management commitment	6	.764
4	Safety involvement	7	.875
5	Management safety	7	.727
6	Privation and control measure	8	.753
7	Employee Safety Practice	11	.793

On the over all, the reliability of all the measures was comfortably above 0.70, ranging from 0.753 to 0.882. The measurement and the corresponding alphas of the study were Management safety commitment ($\alpha = 0.764$), Safety Communication ($\alpha = 0.798$), Safety Training ($\alpha = 0.770$),

Safety Involvement (α = 0.875), Accident Prevention and control measures (α = 0.753) and finally, Employee safety Behavior (α = 0.793). Based on the output of the analysis, the Cronbach's alpha acquired indicates that all the items are positively correlated to one another and it is internally consistent. For that purpose, the Cronbachs alpha has been used to measure reliability among variables. In summary, the instrument used to measure each variable in this study is reliable

3.9 DATA ANALYSIS

The data collected through questionnaire and semi structured interview from the study representative sample was processed and subjected to a variety of statistical analysis techniques. The researcher used both qualitative and quantitative analysis in this study. The quantitative data was organized and analyzed using SPSS for windows version 20.0. Thus, descriptive statistics such as frequency counts, percentage, mean value and SD was suitably employed for analysis. A binary and multivariable regression analysis was conducted using a cutoff value of 0.25 for the binary regression. A statistically significant association was declared at a P-value of 0.05 of a 95% CI. Besides, the data gathered through interview has been analyzed in the form of narration or storytelling. Finally, the researcher was enhancing the reliability of the findings.

3. 10 ETHICAL CONSIDERATIONS

An official letter was written form Jimma University Business and Economics College SRP which describes the objectivity of the study. All officials at EEU in all levels were communicated about the objectives of the study. The purpose of study was explained to study participants and their participation is on voluntary basis. They have the right to discontinue their participation without prior notice to the researchers. Confidentiality of the study participants was maintained and only summary measures have been used without any personal level identifiers. Information from this study was used only for research purpose.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND DISCUSSION

4. INTRODUCTION

This Chapter deals with the data analysis, presentation, and interpretation of the study on effect of occupational safety and health management practice on organizational commitmentof Ethiopian electric utility the case of Jimma.The chapter begins with summary of the demographic characteristics of respondents and subsequently assesses the effect of occupational safety and health management practice on organizational commitment dimensions with respect to employee safety practice and ends with discussions on the findings.

4.1 SOCIO-DEMOGRAPHIC CHARACTERISTICS

Table 4.1: frequency distribution of socio-demographic characteristics of study participants

Respondent Characteristics		Frequency	Precent
Sex	Male	120	79.47
	Female	31	20.53
	Total	151	100
Age	20-30	29	19.21
	31-40	92	60.93
	41-50	22	14.57
	>51	8	5.30
	Total	151	100
Education	Secondary school	16	10.60
	Vocational	35	23.18
	Bachelor's degree	74	49.01
	Postgraduate degree	26	17.22
	Total	151	100
Marital Status	Single	38	25.17
	Married	110	72.85
	Total	151	100
Experience	1-3 years	42	27.81
	4-7 years	47	31.13

	8 and above	62	41.06
	Total	151	100
Department	Technical /supervisor	121	59.60
	Administrative	30	40.40
	Total	151	100
Income	1000-2000	8	5.30
	2001-4000	39	25.83
	4001-6000	55	36.42
	>6001	49	32.45
	Total	151	100
Use of safety and protective material	Yes	119	78.81
	No	32	21.19
	Total	151	100

Source – Own Survey 2020

In this study a total of 151 employees are participated. The male participants are 120(79.47%) while the rest 31(20.53%) are females. Majority of the employees who are in the age group of 31-40 years 92(60.93%) followed by 29(19.21%) in the 20-30 years of age group. Furthermore, the table also indicates the educational status of study participants and nearly half of them around 74(49.01%) are bachelor's degree holders and 35(23.18%) hold a vocational training certificate. Regarding their marital status, the majority 110(72.85%) are married while 38(25.17%) are single at the time of study survey. In terms of years of service, of the respondents, 62(41.06%) have spent 8 and more years with the company in which they are working in and 47(31.13%) with 4-7 years of work experience. Majority of them 90(59.60%) are working as a technical staff while the rest 61(40.40%) is held on with administrative position. The use of safety material in their occupation is practiced by 119(78.81%) of the employee. As it is inferred from the data most of the employee 55(36.42%) earn a monthly income between 4001-6000 Ethiopian birr (Table 1).

4.2 DESCRIPTIVE ANALYSIS ON SELECTED OSHMP MEASURES

In order to measure the perception of employees participated in the survey regarding the OSHMP in the subject organization; the researcher made a summary of the survey measures with their respective mean (M) and standard deviation (SD). The mean (M) shows the agreement or disagreement level of respondents to the given statements in the survey questionnaire. Consequently, lower mean exhibits more disagreement of respondents while higher mean represents respondent's agreement towards the given statement.

A one-sample t-test was run to determine whether the management commitment score of 151 study participants was different from normal, defined as a commitment score of a means should be 3.0. it is considered as normal Mean test commitment (3.62, 95% CI, 3.28 to 3.61) is lower than the normal management commitment score of 3.0, a statistically significant difference, t (150) = 5.276, p = .000.

Table 4.2: Management commitment

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test Value N= 151 D_f =150					
										95%CI	
	No. (%)	No. (%)	No (%)	No. (%)	No. (%)	Mean(SD)	t-value	P-Value	Mean Difference	Lower	Upper
Health and safety of workers is of high priority to the management	23 (5.7)	58 (38.4)	39 (25.8)	26 (17.21)	5 (3.31)	3.45 (1.05)	5.27	0.01	0.45	3.28	3.61
My immediate supervisor shows me the safe way to perform my job duties when I act in an unsafe manner	3 (2)	76 (50.3)	31 (20.5)	26 (17.21)	11 (7.39)	3.41 (0.95)	5.28	0.01	0.41	3.25	3.56
The safety manager (or the person in charge of health & safety) receives support from top management	9 (6)	20 (13.2)	82 (54.3)	26 (17.21)	14 (9.3)	3.47 (1.03)	5.67	0.01	0.47	3.31	3.64
The management is committed to the well-being of the workers through its safety policies along with other HR policies	9 (6)	21 (13.9)	32 (21.2)	78 (51.7)	11 (7.3)	3.40 (1.01)	4.89	0.01	0.40	3.24	3.56
There is of safety department in the regional office	7 (4.6)	18 (11.9)	30 (19.9)	78 (51.7)	18 (11.9)	3.54 (1.00)	6.64	0.01	0.54	3.38	3.70
Top management provides the essential resources of establishing OH&S System	6 (4)	81 (53.6)	33 (21.9)	17 (11.25)	14 (9.3)	3.52 (0.95)	6.84	0.01	0.52	3.37	3.68

Source – Own Survey 2020

Tables 4.2 indicate the agreements of respondents to set out questions regarding the commitment of management towards safety. In this regard to the first statement "Health and safety of workers are of high priority to the management". The Majority of them (44.1%) responded negatively with the mean of 3.45. whilst 25.8 % of workers were not sure to indicate either their agreement or disagreement. But only 17.21 % provide a positive response.

With regard to the second statement more than half of the participants responded negatively with a mean of 3.41 (50.3 %). whilst 20.5 % of workers were not sure to indicate either their agreement or disagreement but only17.21 % provide positive response. About their supervisors' commitment to safety in those immediate supervisors themselves do not show employees a way of safely doing tasks and do not even correct them when doing a job unsafely.

Likewise, respondents reply to the statement that "safety managers/representatives were supported by the top management" is replied with the mean of 3.47% implying a negative response by half of the respondents (19.2 %) and still 54 % also not sure to agree or disagree. but only 17.21 % showed their positive response. This means that the majority participants feel that the department of safety does not exist in the regional office.

Additionally, 19.9 % of respondents agreed that there are a written safety policy and other HR polices in the company that demonstrate the commitment of management to keeping the health and safety of workers. Nearly half (51.7%) of them were not sure about this and the remaining 22.2% responded negatively with the statement. A mean value of 3.40 indicates that most employees are not sure if these policies (whether the HR policy or the safety policy) do reflect the commitment of management to safety. From this it may be possible to assume that the safety policy document is neither accessible nor communicated to workers and hence they have limited or no knowledge about the policy statement.

The Presence of the safety department in the regional office was a concern to be known. To this question then more than half of respondents (62.9 %) responded negatively with the mean of mean of 3.54 implies that the majority agree that there is no department of safety in the regional office while 19.9% of respondents are not sure whether there is a safety department or not.

Consistently large number of respondents (59.6%) responded positive with a mean value of 3.48 that EEU-Jimma management does not provide essential resources necessary to safety. Provision of essential safety resources, as discussed in the literature, it is a means by which management demonstrates its commitment to safety.Designating a senior management representative to be responsible for overseeing the proper functioning of occupational health and safety management and establishing organizational structures to support managers and employees in their occupational health and safety duties; Enhancing safety performance is important to the success of health and safety management at work. Critical to this is the reciprocal relationship between safety management and safety behavior within the safety culture in the organization (Cooper, 2000).

Nevertheless, the respondents' response stresses that safety resource availability was unsatisfactory and this in turn explains poor safety commitment by the management.

Table 4.3: Safety communication

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test Value N= 151 D_f =150					
										95%CI	
	No. (%)	No. (%)	No (%)	No. (%)	No. (%)	Mean(SD)	t-value	P-Value	Mean Difference	Lower	Upper
OHS instruction manuals	7 (4.6)	72 (47.7)	48 (31.8)	17 (11.25)	7 (4.6)	3.36 (0.91)	4.90	0.01	0.36	3.21	3.51
work procedures are available	5 (3.3)	90 (59.6)	31 (20.5)	20 (13.2)	5 (3.3)	3.47 (0.87)	6.58	0.01	0.47	3.32	3.61
At this company, there is usually formal communication of safety policies and procedures that employees are to follow	8 (5.3)	22 (14.6)	47 (31.1)	69 (45.7)	5 (3.3)	3.27 (0.93)	3.55	0.005	0.27	3.12	3.42
This company, there is usually communication among employees to identify solutions to improve safety	8 (5.3)	23 (15.2)	41 (27.2)	74 (49)	5 (3.3)	3.29 (0.95)	3.85	0.002	0.29	3.14	3.45
At this company, the managers and employees communicate regularly about issues related to safe working conditions	9 (6)	39 (25.8)	44 (29.1)	50 (33.1)	9 (6)	3.07 (1.03)	0.86	0.38	0.07	2.90	3.23
At this company employees communicate with each other regularly about issues related to safe working conditions	7 (4.6)	28 (18.5)	43 (23.5)	69 (45.7)	4 (2.6)	3.23 (0.94)	3.02	0.02	0.23	3.08	3.38
Workers are informed about OHS hazards through written materials	7 (4.6)	74 (49)	41 (27.2)	25 (16.6)	4 (2.6)	3.20 (0.95)	2.64	0.09	0.20	3.05	3.35
Workers are informed about OHS hazards through written meetings	3 (2)	77 (51)	35 (23.2)	32 (21.19)	4 (2.6)	3.31 (0.90)	4.23	0.01	0.31	3.16	3.45

Source – Own Survey 2020

As it is presented in table 4.3 safety communication show that (52.3%) of the study participants responded negatively (with a mean value of 3.36 (SD=0.91) to the statement "Safety instruction manual or work procedures are available" and conversely (11.25%) have provide a positive response while 31.8 % were unsure/indifferent. From this response, it is clear that majority of workers have no access to safety instruction manuals or work procedures.

With respect to formal communication of safety policy and procedures 62.9% of respondents responded negatively with mean value of 3.47 and 20.5& of them were indifferent on the availability of work procedures. In addition, 49% of respondents responded negatively towards the presence of communications of safety policies while 19.9% and 31.1% of them were responded negatively and indifferent respectively. This implied that there is no communication among or between employees to improve safety conditions

Likewise, responses to the statement "Workers are informed about workplace Safety hazards through written materials and meetings" indicates that more than half (53.6 %,) of the respondents responded negatively with mean value of 2.52 where as 27.4% of them were indifferent. This infers that safety documents and manuals are not available. Workers have the right to access records relevant to their working environment and health since significant OHS hazards/risks arise from the organization's activities.

Regarding at this company employees communicate with each other regularly about issues related to safe working conditions about45.7 %.of the respondents responded negatively (with mean value of 3.20) and 23.5% of the respondents are indifferent and the rest 23.1% of the respondents responded positively.Workers informed about OHS hazard through materials with regarding workers occupational safety and health management practice hazard through materials about 53% respondents responded negative response(with mean value of 3.20) while 27.2% of them where indifferent .

Workers informed about OHS hazard through meetings with regarding workers occupational safety and health management practice about 53% respondents provide a negative response (with a mean value of 3.31) and about 23.2% of the respondents said that they are indifferent for

workers informed about OHS hazard through meetings and the rest of them (21.9%) responded positively for workers to be informed about OHS hazard through meetings.

Likewise, 53% of respondents responded negatively (with mean value of 3.31) towards Workers informed about OHS hazard through meetings with regarding to workers occupational safety and health management practice hazard through meetings and 23.2% of them were indifferent.

In general, Safety communication was regarded as insufficient by most of the respondents. Most of the respondents (61%) believe that there are not any safety communication activities in the company. Moreover, among the rest of the respondents 28% are also not sure about any safety communication being underway by the EEU. From this it is possible to say that safety communication is perceived negatively by many workers in the company.

Table 4.4: Safety training and education

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test value =3 N=151 Df=150					
										95% CI	
	N (%)	N (%)	N (%)	N (%)	N (%)	Mean (SD)	t-value	P-value	Mean difference	Lower	Upper
EEU company organizes workshop, seminar and lecturers on safety precaution	30 (19.86)	53 (35.09)	45 (29.8)	20 (13.24)	3 (2)	2.72 1.08	-3.15	150	-0.028	2.54	2.89
Workers are given sufficient OHS training when joining your company, changing	9 (5.9)	56 (37.08)	43 (28.47)	38 (25.16)	5 (3.3)	3. 1.0910	1.19	150	0.10	2.93	3.28
Your company supports OHS training opportunities for workers (e.g. leave,	4 (2.64)	79 (52.31)	34 (22.51)	29 (19.20)	5 (3.3)	31.091 6	1.85	150	0.16	2.98	3.34
Training is provided on the use of new equipment or	13 (8.6)	65 (43.09)	37 (24.05)	28 (18.54)	8 (5.3)	3.141. 09	1.63	150	0.14	2.97	3.32
OHS training is ongoing and based on a training plan	3 (2)	78 (51.65)	25 (16.5)	38 (25.16)	7 (5.3)	3.051. 05	0.61	150	0.05	2.88	3.22

Source – Own Survey 2020

According to Table 4.4 shows that the analysis the majority of the respondents (54.95%) responded negatively that the company has not been organizing any workshops, seminar and lectures on safety precautions for its employees. Contrary to this, only 13.24% of study participants provide a positive response while the rest 29.80% of respondents have remained indifferent to the statement. A mean value of 2.72 (SD=1.08) is a sign that the majority responded negatively to the statement (table 4.4).In addition a reply to a statement "the company supports Safety training opportunities for workers (leave, scholarships). Results from this question indicated that 54.95 % of the respondents were responded negatively (mean value of 3.10 (SD=.1.09) while 22.3% were responded positively. This explains that EEU does not support safety training opportunities.

Regarding "Workers are given sufficient OHS training when using new equipment or new technologies" Majority of respondents (54.95 %) of them were responded negatively (mean value of 3.16 (SD=1.09)), while 22.51 % of respondent's responded indifferent.EEU is undergoing changes as a result of changes in technology. This could be due to the company is importing variety of new materials and products with new technologies that require the employees to have training on how to work with it safely.

Moreover above half (51.69 %) of respondents responded negatively (with a mean value of 3.14 (SD=.1.09)) to the idea that OHS training is ongoing and based on plan and even, 24.05% of them were indifferent. This implies that safety training is not ongoing in the company.

In conclusion the findings with regard to safety training and education provided by the company are thatthe majority of respondents 53.65% have a negative perception. About the safety issue implemented by the study organization. This is confirmed by a low average mean of 3.05on safety training and education. Therefore, from this finding it can be inferred that there a fundamental problem with OHS training in the company. Nevertheless, as Armstrong (2006) put it, Health and safety training is a key part of the preventive program. It is also believed that if employees are making the maximum contribution to safety and health, adequate arrangements must be in place to ensure that they have the necessary skills to do their work safely. This means more than simply training; experience of applying skills and knowledge in the organization with regards to safety issues is an important ingredient.

Table 4.5: Employee involvement

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test Value N= 151 D_f =150					
										95%CI	
	No. (%)	No. (%)	No (%)	No. (%)	No. (%)	Mean(SD)	t-value	P-Value	Mean Difference	Lower	Upper
Incentives are frequently offered to encourage workers to comply with OHS policies and procedures (e.g. correct use of protective equipment).	43 (28.47)	74 (49)	20 (13.24)	11 (7.28)	3 (2)	2.56 1.12	-4.75	0.000	-0.44	2.38	2.74
Staff suggestions are readily acted upon by management	27 (17.88)	89 (58.94)	12 (7.94)	20 (13.24)	3 (2)	2.94 1.00	-0.73	0.465	-0.06	2.77	3.10
I know fully what is expected of me at work regarding safety.	35 (23.17)	68 (45.03)	28 (18.5)	13 (8.60)	7 (4.63)	3.55 0.94	7.25	0.000	0.55	3.40	3.70
I regularly receive recognition for doing a safe job	11 (7.28)	65 (43.05)	48 (31.78)	22 (14.56)	5 (3.3)	3.01 1.00	0.24	0.808	0.01	2.85	3.18
OHS decisions are frequently based on consultations with, or suggestions from, workers.	10 (6.6)	59 (39.07)	31 (20.52)	44 (29.1)	7 (4.6)	3.14 1.01	1.76	0.080	0.14	2.98	3.30
Periodic meetings are held between workers and supervisors/managers to make decisions that affect the organization of work.	19 (12.58)	69 (45.69)	46 (30.5)	10 (6.62)	7 (4.6)	3.18 0.96	2.63	0.019	0.18	3.03	3.34
Teams of workers from various parts of your company are frequently used to solve problems about working conditions	37 (24.5)	76 (50.33)	23 (15.25)	6 (3.97)	9 (5.96)	3.37 0.99	4.59	0.00	0.37	3.21	3.53
Employee involvement											

Source – Own Survey 2020

With regarding to table 4.5shows on the above Participation of employees in the implementation of occupational health and safety management practice (OSHMP) system and its audits of the efficiency and effectiveness contributes to the success of the health and safety system. Considering such fact, similarly, employees of EEU-Jimma were requested to put forward their opinion on the same matter during the survey. Seven items were included on the survey questionnaire to measure their involvement in regard to OSHMP. The table below is illustrated to address the respondents view and the average level of agreement to each question is considered as moderate or three (3). Test value from the table with regarding to employee involvement, the majority of the respondents said that about 77.47% of them responded negatively thatincentives are frequently offered to encourage workers to comply with OHS policies and procedures and the mean is 2.56. About 13.24% of the respondents said that they are indifferent to decide on such notion and the rest of the respondents provide a positive response. Therefore, from this we can conclude that the way of incentives is not encouraging to employee.

Regarding the notion that "staff suggestions are readily acted upon by management" about 76.82% of the respondents provide a negative response and the mean value is 2.94, about 7.94% are indifferent to decide and about 13.24 % of them responded positively that suggestion from the staff are acceptable.

With regard safety, about 68.2% responded negatively and the mean value is 3.55% and about 18.5 % of the respondents are indifferent to decide and about 8.60 % of the respondents provide a positive response.

With regard to receive recognition for doing a safe job, majority of the respondents about 50.33 % provide a negative response with a mean value is 3.01 and about 31.78% of the respondents are indifferent to the idea about receiving recognition for doing a safe job and the rest of the respondents (14.56%) responded positively. Therefore, it can be inferred that the majority of the employee believe that the organization is not giving recognition for doing a safe job.

About OHS decisions are frequently based on consultations with or suggestions, the majority of the respondents (45.67%) responded negatively and the mean value 3.14. About 20.52% of the

respondents are indifferent and the rest of the respondents (29.1%) provide a positive statement on OHS decisions are frequently based on consultations with, or suggestions.

With regard to Periodic meetings are held between workers and supervisors/managers to make decisions that affect, about 58.27% of the respondents provided a negative response and mean value 3.18. About 30.5 % of the respondents are indifferent to decide and the rest of them (6.2 %) responded positively.

Respondents were also asked that whether teams of workers from various parts of your company are frequently used to solve problems about working conditions. From this about 74.83% of the them responded negatively with a mean value 3.37% and about 15.25 % of the respondents are indifferent and about 3.97% of the respondent provide a positive response.

Generally, from this it can easily be understand that the way that the procedure EEU-Jimma follows regarding the employee involvement is weak so the organization should evaluate the way of employee involvement.

Table 4.6: Preventive and protective actions

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test value =3 N=151 Df=150					
										95% CI	
	N (%)	N (%)	N (%)	N (%)	N (%)	Mean (SD)	t-value	P-value	Mean difference	Lower	Upper
The working equipment and tools in my workplace are safe	28 (18.5)	75 (49.7)	33 (21.9)	10 (6.62)	5 (3.3)	3.24 1.01	2.97	0.034	0.24	3.08	3.40
Employees are provided with personal protective equipment	33 (21.85)	82 (54.3)	27 (17.9)	5 (3.31)	4 (2.6)	3.310. 95	4.01	0.001	0.31	3.15	3.46
Safety audits and inspections are carried out to identify risks & hazards at my workplace	24 (15.89)	78 (51.6 5)	36 (23.8)	33 (21.85)	7 (4.6)	3.250. 98	3.15	0.020	0.25	3.09	3.40
Action is taken when safety rules are broken	37 (24.50)	66 (43.7	23 (15.23)	11 (7.28)	14 (9.3)	3.191. 10	2.13	0.345	0.19	3.01	3.36
Portable fire extinguishers are distributed based on the classes of anticipated fires& degree of hazard	46 (30.46)	68 (45)	23 (15.23)	21 (13.90	7 (4.6)	3.280. 96	3.61	0.004	0.28	3.12	3.44
All accidents occurring at the workplace are investigated within specified timelines	9 (5.96)	52 (30.5)	46 (30.46)	36 (23.84	8 (5.3)	3.021. 05	0.30	0.757	0.02	2.85	3.19
Your company use warning signs and posters prevent employees from hazard.	9 (5.96)	74 (49)	41 (27.2)	19 (12.58)	8 (5.3)	3.350. 97	4.42	0.000	0.035	3.19	3.50
The hazards and risks associated with goods are controlled	12 (7.9)	75 (49.7)	40 (26.5)	20 (13.24)	4 (2.6)	3.250. 99	3.18	0.018	0.025	3.09	3.41
Your company analyzes injury and illness data .(ex . claims data, first aid logs) to identify causes and target solutions	47 (31.1)	67 (44.4)	24 (15.89)	6 (3.97)	7 (4.6)	3.290. 92	3.93	0.001	0.29	3.14	3.44

According to Table 4.6 the safety of tools and equipment that workers must use to carry out their job was one of the major instruments for the researcher to find about. Since the company in the study is an electric utility company, its workers are mainly electrical engineers, electricians, lineman and technicians who require different tools and equipments to work with. In this regard a large portion of respondents answered the question "The working equipment and tools in my workplace are safe" particularly 68.2% of respondents disclose a negative response with a mean of 3.24. (Table 4.6). From this result, it can be possible to assume that the safety performance of an employee is poor due to the condition that employees are not offered safe working equipment and tools when going out to work.

In relation to the statement asking if employees are provided with personal protective equipment. The results indicated that a great large number 76.15 % of respondents provide a negative response with a mean value of 3.31. This means that the employees have witnessed the fact that there is really a lack of equipment and protective clothing that employees use to safely perform their duties. With regard to safety audits and inspections three fourth of respondents (67.54%) of them responded negatively with a mean of 3.25 showing that they do not perceive any safety audit and inspection of an accident being undertaken by the company. The mean value further stressed that there is a significant negative perception towards the statement. Safety rules are important precaution measures and help to reduce accident that the researcher has taken an interest to know whether the action is taken whenever an employee broke the equipment. However, to the fourth question as well about 68.2 % of the respondents explained that no action is taken up on those who violate safety rules. A mean value of 3.19.implies disagreement with the statement in question.

Considering the safety device, it was realized that (75.46%) responded negatively and only (3.28 %) provide a positive response and (13.90 %) were indifferent with regard to the inquiry "Portable fire extinguishers are distributed based on the classes of anticipated fires and degree of hazard". A mean value of 3.28 (SD=0.96) for this, indicated that employees are certainly witnessed that there are no first aid kit and fire extinguishers at workplaces.

Respondents were asked of the accidents that are occurring at the workplace are investigated within specified timelines. They replied 36.46% that they do not believe such investigations

are carried out under the designated schedule, while 30.46 % of respondents themselves are not aware of or come across to such activity by the management. Response of the mean value of 3.02 for this statement shows a lower perception of employees towards this activity.

Consistently, large share of respondents almost three fourth of participants in the questionnaire 54.96%, with a mean of 3.35 replied to the statement "your company use warning signs and posters prevent employees from hazard" that they responded negatively. However, only 27.2 % of participants provide a positive response and the rest 12.58 % of them kept unsure of the presence of signs or posters of safety warnings.

Whether hazard and risk associated with good in use are controlled or not by the management was presented by the researcher to the respondents to show their level of agreement. According to the result, therefore, over half of the respondents 57.6%provide a negative response and about 26.5% of the respondents are indifferent to the idea that the hazards and risks associated with goods are controlled.

Finally the researcher has sought to investigate if there is an experience of injury and illness data analysis. According to the findings above three fourth (75.5%) of respondents responded negatively with a mean value of 3.29, while 15.89% were indifferent.

Table 4.7: Employee safety practice/performance

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test value =3 N=151 Df=150					
										95% CI	
	No (%)	No (%)	No (%)	No (%)	No (%)	Mean (SD)	t-value	P-value	Mean difference	Lower	Upper
I ignore safety procedures in order to get job done more quickly	30 (19.9)	42 (27.8)	30 (19.9)	42 (27.8)	7 (4.6)	2.69 1.20	-3.10	0.023	-0.31	2.50	2.88
I follow all safety procedures regardless of the situation I am in	16 (10.6)	103 (68.2)	13 (8.6)	10 (10.6)	3 (2)	2.250. 86	-10.7	0.00	-0.75	-0.88	-0.61
I handle all situations as if there is a possibility of having an Accident	31 (20.5)	97 (64.2)	19 (12.6)	0	4 (2.6)	2.000. 75	-16.2	0.00	-1.00	-1.12	-.87
I wear safety equipment required by practice	33 (21.9)	93 (61.6)	16 (10.6)	3 (2)	6 (4)	2.040. 87	-13.4	0.00	-0.95	-1.09	-0.81
I keep my work area clean.	25 (16.6)	110 (72.8)	6 (4)	1 (7)	9 (6)	2.061. 08	-13.1	0.00	-0.93	-1.07	-0.79
I encourage co-workers to be safe	50 (33.1)	66 (43.7)	12 (7.9)	18 (11.9)	5 (3.3)	2.081. 06	-10.3	0.00	-0.91	-1.08	-0.74
I keep my work equipment in safe working condition	39 (25.8)	63 (41.7)	29 (19.2)	14 (9.3)	6 (4)	2.230. 87	-8.8	0.00	-0.76	-0.93	-0.59
I take shortcuts to safe working behaviors in order to get the job done faster	63 (41.7)	57 (37.7)	18 (11.9)	11 (7.3)	2 (1.3)	1.880. 97	-14.1	0.00	-1.11	-1.26	-0.95
I do not follow safety rules that I think are unnecessary	19 (12.6)	82 (54.3)	27 (17.9)	20 13.2 ()	3 (2)	2.370. 94	-8.17	0.00	-0.62	-0.77	-0.47
I report safety problems to my supervisor when I see safety Problem	37 (24.5)	56 (37.1)	24 (15.9)	29 (19.2)	5 (3.3)	2.391. 14	-6.4	0.00	-0.60	-0.78	-0.41
I correct safety problems to ensure accidents will not occur	24 (15.9)	94 (62.3)	21 (13.9)	7 (4.6)	5 (3.3)	2.170. 87	-11.7	0.00	-0.83	-0.97	-0.68

Source – Own Survey 2020

Table 4.7 the statement presented by the researcher to the study participants about ignorance of safety procedure in order to perform a job quickly, below half (47.7%) of respondents provide appositively response and further to this, still 27.8 % of participants indicated that they responded positively in complying with safety procedures. For the convenience of analysis, the input was reversed. From this it can be inferred that most of the workers in the company do not follow safety rules. This was put in the descriptive statistics table as a mean value of 2.69 and this falls under a negative response at the average level.

Similarly, the second statement was meant to investigate if workers at all situations comply with safety procedures 78.8 % of the study participants responded negatively (The average mean of 2.25 also strengthen this finding). That they follow all safety procedures regardless of the situation. Consequently, over half of the participants provide negative response with the statement while a significantly large number of respondents kept unsure about following safety rules in all the situations. The average mean of 2.25 also strengthen this finding.

Large proportion of participants (84.7 %) responded negatively to the statement "I handle all situations as if there is a possibility of having an Accident" and 12.6 % of participants are indifferent while low number of respondents with a mean value of 2.00 explains disagreement in general conditions to the matter put in front.

In the same way most respondents (83%) witnessed with a negative response that they do not wear any personal protective equipment or clothing while they are at job and 10.6% of respondents to this question replied they are not sure to wear or not. Mean values of 2.04 also indicate there is a low perception of wearing PPE. From this it is possible to understand that employees in this company (electricians, technicians and others) who may be highly exposed to hazards of electricity are not wearing personal protective clothing hence they are put to great danger and perhaps loss of life.

With respect to keeping a work area clean (89%) of respondents suggested that they do not clean their work area. A below average mean score of 2.06 indicates thatthe majority of workers here do not keep their work area clean.

Relating to co -worker safety, respondents were asked if they encourage co-worker to be safe. Based on the responses from participants in the questionnaire (76.8 %) of respondents opposed to the statement while (7.9%) of them replied indifferent. Nevertheless, only (11.9 %) of the participants responded positively that they encourage co-workers to be safe. However, a mean value of 2.08 is clearly seen to be below the average score. From this it is clear that employees' perception of coworkers' safety is comparatively lower than other items next to the corresponding item above it.

Pertaining to keeping tools and equipments in safe working condition almost three fourth of respondents (67.5 %) were responded negatively with a mean of 2. 33 , which is far below the average mean suggesting vigorously that working tools and equipments are not put in safe working condition and this for sure contribute to the incidents of worker injuries at workplace.

In order for accomplishing a task faster if shortcuts are chosen over safety behavior by an employee was interested to be known. This item was reversed to make the analysis realistic and in agreement with the other items. According to the finding majority (79.4 %) of respondents responded positively taking shortcuts in an attempt to do tasks faster. Whereas (19%) of the respondents were indifferent.

Compliance to safety rules and procedures contribute positively to ensure a safe work environment. The researcher sought to know if employees do not follow safety rules that they think are unnecessary. Since this item appears negatively it was necessary that it should be reversed for the purpose of analysis. Pertaining to the result obtained about three fourth of respondents (66.9%) of them responded positively (the mean value 2.37) towards trespassing safety rules at times when they assume unnecessary. About 17.9 % of the respondents were indifferent.

Likewise, respondents were asked a question concerning reporting safety problems to a supervisor and according to the finding (61.6%) of respondents have said they do not report any safety incident to a supervisor, while 19.2 % of the respondents provide a positive response. This result is further explained by a mean value of 2.39 which is far less than the average mean, explains the safety reporting activity in the company is very poor.

Finally the statement “I correct safety problems to ensure accidents will not occur” was forwarded to participants in the sample. To this end also in the same way as the above item large portion of respondents (79.2 %) were responded negatively with mean value of 2.17 to correcting safety problems. On the contrary, only (13.9 %) said they correct safety problems when it occurred.

Table 4.8: Organizational commitment

Statements	Strongly Disagree	Disagree	Indifferent	Agree	Strongly Agree	Test Value N= 151 D_f =150					
										95%CI	
	No. (%)	No. (%)	No (%)	No. (%)	No. (%)	Mean(SD)	t-value	P-Value	Mean Difference	Lower	Upper
I do feel a strong sense of belonging to my organization.	57 (37.7)	24 (15.9)	42 (27.8)	22 (14.6)	6 (4)	2.31 1.23	-6.88	0.00	-0.68	-.886	-0.49
I really feel as if this organization's problems are my own	40 (26.5)	50 (33.1)	46 (30.5)	10 (6.6)	5 (3.3)	2.27 1.03	-8.671	0.00	-0.73	-0.89	-0.56
I feel that I have too few options to consider leaving this organization	28 (18.5)	72 (47.7)	42 (27.8)	8 (5.3)	1 (0.7)	2.22 0.83	-11.544	.000	-.78146	-.9152	-0.65
Too much in my life would be disrupted if I decided I wanted to leave my organization now.	43 (28.5)	62 (41.1)	29 (19.2)	16 (10.6)	1 (0.7)	2.13 0.97	-10.8	0.00	-0.86	-1.01	-0.70
I think that people these days move from company to company too often.	46 (30.1)	51 (33.3)	25 (16.3)	21 13.7 ()	8 (5.3)	2.29 1.19	-7.23	0.00	-0.70	-0.89	-0.51
I do believe that a person must always be loyal to his or her organization.	40 (26.5)	30 (19.9)	34 (22.5)	33 (21.9)	14 (9.3)	2.67 1.32	-3.01	0.003	-0.32	-0.54	-.11
If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization.	27 (17.9)	83 (5.5)	18 (11.9)	18 (18.90)	5 (3.3)	2.27 1.00	-8.86	0.00	-0.72	-0.88	-0.56

Source – Own Survey 2020

According to Table 4. 8show that about the organizational commitment. To the question "I do feel a strong sense of belonging to my organization", 53.6% of the respondents provide a negative response with a mean value 2.31and about 27.8% of the respondents are indifferent and about 14.6 % of them responded positively.

Regarding to the second statement on organizational commitment above half (53%) of them responded negatively with mean value of 2.31towards I do feel a strong sense of belonging to my organization, whereas 27.8 % of the respondents were indifferent.

Likewise, with regarding to really feel as if this organization's problems are my own, most of the respondents (59. 6 %) were responded negatively(with mean value of 2.27), while 30.5% of the respondents were indifferent.

Statement with regarding I feel that I have too few options to consider leaving these organizations, the majority of the respondents (66.2 %) were responded negatively the mean value 2.22. About 27.8 % of the respondents' were indifferent.

The fifth point with regarding to Too much in my life would be disrupted if I decided I wanted to leave my organization the majority of the respondents(69.1%)responded negatively, mean value 2.13 while 19 % of the respondents were indifferent.

Likewise respondents were asked a question concerning "I think that people these days move from company to company too often", about 63.4% of respondents have responded negatively that they do not think these days people move too often and about 16.3% of the respondents are indifferent and about 19% of the respondents provide a positive response to such notion. This result is further explained by a mean value of 2.29 which is far less than the average mean which explains the organizational commitment reporting activity in the company is very poor.

With respect to the question "I do believe that a person must always be loyal to his/her organization", 46.4 % of respondents provide a negative response. A below average mean score of 2.67indicate that the majority of workers here that they do not believe the person must always be loyal to the organization. Finally, the researcher presented a question to the respondents on their stand to leave the company as "If I got another offer for a better job elsewhere, I would not feel it was right to move". Accordingly, 23.4% respondents provide a negative response with a

mean value 0.77. This indicates that there is not such experience in the organization. Generally, the findings show that most of the workers (72.9%) responded negatively and about 11.9% of the respondents are indifferent.

Correlation Analysis

In this study, Pearson correlation analysis was used show the strength of the association between the variables involved. Inter-correlations coefficients (r) were calculated by the means of Pearson's Correlation Coefficients Analysis

4.9 Pearson Correlation Coefficients Analysis Results

Variables		management commitment towards safety	Safety communication	Safety training	Employee Involvement	Preventive & protective	performance at their place of work	Organizational Commitment
management commitment towards safety	Pearson Correlation	**1**	**.672***	**.372***	**.317***	**.143**	**.373***	**.362***
	Sig. (2-tailed)		**.000**	**.000**	**.000**	**.080**	**.000**	**.000**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Safety communication	Pearson Correlation	**.672**	**1**	**.350***	**.309***	**.136**	**.278***	**.198**
	Sig. (2-tailed)	**.000**		**.000**	**.000**	**.095**	**.001**	**.015**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Safety training	Pearson Correlation	**.372**	**.350**	**1**	**.344***	**.422***	**.323***	**.282***
	Sig. (2-tailed)	**.000**	**.000**		**.000**	**.000**	**.000**	**.000**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Employee Involvement	Pearson Correlation	**.317**	**.309**	**.344**	**1**	**.497***	**.272***	**.013**
	Sig. (2-tailed)	**.000**	**.000**	**.000**		**.000**	**.001**	**.876**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Preventive and protective	Pearson Correlation	**.143**	**.136**	**.422**	**.497**	**1**	**.359***	**-.057**
	Sig. (2-tailed)	**.080**	**.095**	**.000**	**.000**		**.000**	**.488**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
performance at their place of work	Pearson Correlation	**.373**	**.278**	**.323**	**.272**	**.359**	**1**	**.378***
	Sig. (2-tailed)	**.000**	**.001**	**.000**	**.001**	**.000**		**.000**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Organizational Commitment	Pearson Correlation	**.362**	**.198**	**.282**	**.013**	**-.057**	**.378**	**1**
	Sig. (2-tailed)	**.000**	**.015**	**.000**	**.876**	**.488**	**.000**	
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**
Occupation safety practice	Pearson Correlation	**-.147**	**-.194**	**-.146**	**-.031**	**-.064**	**-.082**	**.041**
	Sig. (2-tailed)	**.071**	**.017**	**.075**	**.702**	**.437**	**.319**	**.617**
	N	**151**	**151**	**151**	**151**	**151**	**151**	**151**

*correlation is significant at the 0.05 level (2-tailed).

Source: SPSS output

4.3 INFERENTIAL STATISTICS

To establish the degree of association between the different variables in OSH and organizational commitment, the study used a two-tailed, Pearson correlation coefficient analysis at p-value of 0.05 significant levels. As cited in Wong and Hiew (2005), the correlation coefficient value (r) ranges from -1(perfect negative correlation) to 1 (perfect positive correlation). The correlation coefficient which ranges from 0.10 to 0.29 is considered as weak, from 0.30 to 0.49 is considered medium and from 0.5 to 1.0 is a strong correlation.

There is a positive relationship in between management commitment towards safety and safety communication ($r=0.672$, $N=151$, $P<0.001$), safety training($r=0.372$, $N=151$, $p<0.0001$), employee involvement($r=0.317$, $N=151$, $p<0.001$), performance at their place of work($r=0.373$, $N=151$, $p<0.001$), and organizational commitment ($r=0.362$, $N=151$, $p<0.001$). Here the strength of correlation is moderate. There also exists a positive but non-significant correlation between management commitment towards safety and preventive & protective measures ($r=0.143$, $N=151$. There is a negative relationship between management commitment towards safety and occupation safety practice ($r=-0.147$, $N=151$, $P=0.071$). The strength of correlation is lower.

There is a positive relationship between safety communication and organizational commitment ($r=0.198$, $N=151$, $p<0.05$). Here the strength of correlation is weak. There is a positive relationship between safety training and organizational commitment ($r=0.013$, $N=151$) with a weak strength of correlation. Conversely, there is a negative relationship between preventive and protective practice and organizational commitment ($r=-0.057$, $N=151$) with a weak strength of correlation.

There is a positive relationship between performance at their place of work and organizational commitment ($r=0.378$, $N=151$, $p<0.001$). Here the strength of correlation is moderate. There is a positive relationship between safety communication and organizational commitment ($r=0.198$, $N=151$, $p<0.05$). Here the strength of correlation is weak. There is a positive relationship between safety communication and organizational commitment ($r=0.198$, $N=151$, $p<0.05$) with a weak strength of correlation.

4.4.2 Liner Regression Results

Model fitting information

Model fitting section provides results of logistic regression versus reduced model (intercept) with complimentary log-log link function. The presence of a relationship between the dependent variable (occupational safety and health management practice in this study) and combination of independent variables (predictors included in this study) is based on the statistical significance of the final model. The regression analysis as part of inferential statistics is concerned with the distribution of the average value of one random variable as the other variables which need not be random are allowed to take different values. In this study a multivariable (Many predictors variables included) regression model was applied. The regression model specifically connects the average values of y (occupational safety and health management practice) for different values of the x-variables (the many predictor variables). The regression model was developed as follows

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + E$$

Where:

y = occupational safety and health management practice

β_0=constant term

β_s=Beta coefficients for each predictor variables (x of 1-6)

X1=Management commitment, X2=Safety communication, X3=Training on safety, X4= Employee involvement, X5=Prevention& protective actions, X6=Performance,

ε=Error term

Table 4.10: Beta under standardized coefficients.

Predictor Variables	Coef.	Std.Error.	t-value	p-value	[95% Confidence Interval]		Sig
Sex	3.436	2.168	1.96	**0.050***	0.997	11.835	**
Management commitment	-0.16	0.08	-1.99	0.048*	-0.33	0.002	
Training on safety	-0.162	0.071	-2.00	0.047*	-.281	-0.002	
Employee involvement	0.308	0.447	-0.81	0.417	0.018	5.293	
Prevention & protective	0.07	0.17	2.10	0.037*	0.01	0.312	
Organizational commitment	0.082	-0.16	-2.05	0.042*	-0.33	-0.006	**
Mean dependent var	0.149	SD dependent var				0.357	
Pseudo r-squared	0.251	Number of observations				141.000	
Chi-squared	29.751	Pro>chi^2				0.019	
AIC	122.931	BIC				173.060	
**p<0.05							

Source – Own Survey 2020

From the analysis in the above table the PseudoR^2=0.251 i.e. 25.1% of the variation in model is explained by the predictor variables included in the model and this means the rest 74.90% variation is unexplained by the model is due to other factors not in the regression model.

Occupational safety and health management practice(y) = $0.020+3.436x1+3.769X_{12}+-0.16X_2+-0.162X_3+0.07X_4$

$+0.082X_{x5}$

Where the p-value of a regression are less than 0.05 then the regression coefficient is termed significant and the corresponding predictors is considered as a good predictor and can be used in the model. There are fives significant from the variables the regression coefficient participant's sex, n influencing Occupational safety and health management practice are significant variables

were and performance are significant since the p-value is less than 0.05Management commitment P –value <0.048, Training on safety P –value <0.047, Prevention & protective P – value <0.037 and Organizational commitment P –value <0.042.) .

Generally, the larger the t-values in the table the more significant the regression coefficient is. From the t-values in the above regression output table there are no marked changes in the t-values for the regression coefficient and hence these values are in agreement with the p-values.

4.5 QUALITATIVE RESULT

Regarding the qualitative research, the response of respondents collected through face to face interview was presented below in generalized form. The researcher conducted in depth interview with 25 purposely selected technical workers of the EEU. With respect to the participant most of them have more than 5 years of working experience. Occupational safety and health management practice

- With regarding the question "**is their occupational health and safety practice on your organization**". The majority of the respondents said that no occupational health and safety practice on your organization. Most employees ignore safety regulations in order to get a job done, carry out activities which are forbidden, do not encourage co-workers to be safe, perform their duties incorrectly, do not correct safety problems, do not use personal protective equipment, and break procedures to carry out jobs quickly.
- With regarding to the question "**is there formal safety communication between employ and organization"** the majority of the respondents said that no formal safety communication between employ and organization. In general, Safety communication was regarded as insufficient by most of the respondents. From this it is possible to say that safety communication is perceived negatively by many workers in the company.
- With regarding to the question "**Are you taken training on OHS, policy and procedure where provided by you organization"**? The majority of the respondents said that no adequate training to employee. In conclusion the findings with regard to safety training and education provided by the company is that majority of respondents (66.2%) had a negative perception. Therefore from this finding it can be inferred that there is fundamental problem on OHS training in the company. Nevertheless, as Armstrong

(2006) put it, Health and safety training is a key part of the preventative program. It is also believed that if employees are to make the maximum contribution to safety and health, adequate arrangements must be in place to ensure that they have the necessary skills to do their work safely. This means more than simply training. Experience of applying skills and knowledge is an important ingredient.

- With regarding to the question **"Dose employ participate or involve in any activity of organizing relegated with his/her work"?** The majority of the respondents said that no participation, safety suggestion EEU. With regard to involving employees in workplace safety matters, the finding indicated that large portions of workers under the interview disclosed that workers are not participating in making safety related decisions that do really affect their work and their life. From this evidence, it is therefore possible to conclude that EEU has a limited interest to receive suggestions, comments or improvements from the workers who definitely are the ultimate and right source of important safety in formations.
- With regarding to the question **"do you use PPE while working the majority of the respondents said that no EEU not working on PPE"?** According to the finding respondents negative response with a mean value generally the findings show that most workers are unsatisfied with accident prevention and control measures and they rather believe that accident prevention measures in the company are unsatisfactory.

4.5. 1 OBESERVATION

In this section, the researcher observations are presented and analyzed to support the findings identified by the primary data. This analysis was done from the data collected by observation checklist. It was an important data gathering tool in this study that helps the researcher as an eye witnesses to the situation.

Table 4.11 Data collected by observation checklist

No.	Item	Yes	No
1.	Are there any records of all individual workers?	X	
2.	Is there any occupational health and safety board?	X	
3.	Any availability of accident and incident records?	X	
4.	Availability of occupational health inspection reports?		X
5.	Does the in EEU have of health & safety personnel?	X	
6.	Is there any First Aid Kit with necessary facilities in various	X	
7.	Is there any firefighting equipment?	X	
8.	Any emergency exit provided?	X	
9.	Do the employees use the necessary Personal Protective	X	
10	Is there excessive dust in the workplace?		X
11	Is there any facilities for employees (like, Cleanliness of the EEU First aid facilities, Staff rooms, staff launch and meeting hall, Latrines based on sex placement and so on)	Various Responses	

The major points observed by the researcher during the survey period were organized as follows .The occupational health inspection records of all individual workers not clearly recorded, occupational health and safety board were not compiled properly, the occupational health inspection reports were not compiled properly and there was any compiled surprise or monthly report in this regard. There were various First Aid Kit materials with necessary facilities in various work sites. But some were expired and others occupied empty alcohol materials and small medical equipment like plaster and cotton. There was complete firefighting equipment in this EEU. At time of visiting, almost all employees not using the necessary Personal Protective Equipment, the working area not clean, the occupational safety department not well organized manure.

4.6 DISCUSSION

4.1. Regarding Occupational safety and health management practice, the findings of 1.27; 95%CI [1.24, 1.310] in this study was significantly lower compared to score of study done in the Brazilian organization which was 2.58 and was significant at p < .01 [Organizational Commitment & Job Satisfaction. BAR, Rio de Janeiro, Oct. 2014].

4.2. Concerning the Safety training and education, score in our study which shows 2.66; 95%CI [2.55, 2.77]. On the final regression training on safety had significantly negative impact on OHS (p=0.047) reflected in lower mean score. This mean score was lower as compared to study done in Turkey which was 3.53. (TURKEY) This result is parallel to the result of a study conducted in Adwa city by Dessalegn et al (2010) which was Many studies have suggested the importance of training. The sense of being supported for training is also significantly related to organizational commitment, in other words, employees will feel more attached to the organization if they receive support for training from their supervisors or seniors. As a parallel to our findings, previous studies (Ahmad &Bakar, 2003; Bartlett, 2001; Bartlett & Kang, 2004; Birdi et al., 1997; Sabuncuoglu, 2007) have reported that super- visionary support for training and organizational commitment is significantly related. Previous studies reported that support for training has various relations with some other organizational factors, such as it is positively related with organizational development activities (Kozlowski &Hults, 1987; Noe&Wilk, 1993), training effectiveness and application rate (Baldwin & Ford, 1988), on-the-job learning activities.

4.3. Safety Prevention and Control Measures: - The overall Prevention and Control Measures score was 2.465, 95%CI [2.37, 2.56]. On regression β= 0.07, p=0.037. This mean score namely 2.465 is low compared to study at which is =4.25 among 161 participants. The result indicated that safety prevention and control measures are significant contributing element in predicting variance in employee safety practice. Have negative response to the provided questions in this scale showing lower perception to the preventive actions taken by the management of EEU.This result is consistently similar to study conducted by Nazia M et al (2010) who found that employee safety performance was affected due to lack of personal protective equipment and use of warning signs in a language workers do not understand.

4.4. Safety communication, score in our study was 3.00; 95%CI [2.90, 3.10]. This was the study of Hamdan and Saleem (2012) which show a lack of openness in regards to communication

amongst patients, nurses and physicians at Palestinian public hospitals as compared to studies The mean of the field “Communication among Employees” equals 3.16 (63.23%), Test- value = 2.86, and P-value=0.002 which is smaller than the level of significance . The sign of the test is positive, so the mean of this field is significantly greater than the hypothesized value 3. It can be concluded that the respondents agreed to field of “Communication among Employees ".

Positive relations between management and workers will encourage open communication of safety related matters, which in turn will have a positive influence on employee safety performance (Smith et al, 1978). According to them, construction companies which had good safety performance records had more persistent and more positive contacts between management and employees, whereas management with poor safety records had inclined to use the health and safety committee meetings as their only means of interacting with employees. Similarly, Pertaining to this study, safety communication result in a strong contribution to the variance in employee safety practice holding a beta value

4.5. Our study result for Organizational Commitment showed score of 3.23; 95%CI [3.13, 3.33]. Regression analysis showed (β= 0.082; p=0.042) this mean score of organizational commitment was significantly lower as compared to the study done in Turkey which was 3.84. (TURKEY). The result of study done in 2010 on management safety commitment had similar result to our study which is score of 3.04; 95%CI [2.94, 3.13].

In our study there is a positive relationship in between management commitment towards safety and organizational commitment (r=0.362, N=151, p<0.001). According to the study [International Journal of Business and Management; Vol. 11, No. 5; 2016 ISSN 1833-3850 E-ISSN 1833-8119 Published by Canadian Center of Science and Education] on the impact of OHS on organizational commitment, SPRM Safety procedures and risk man. (SPRM) had a significant and positive effect on organizational commitment (β = 0.26; p < 0.01). Organizational and R2 value for the organizational commitment was 0.3

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This section presents summary of the major findings, conclusions and there by forward relevant recommendations mainly based on the gaps identified in the survey results, which have been discussed in previous chapter. This study sought to assess the Effect of occupational safety and health practice and organizational commitment in the case of EEU-Jimma.

5.1 SUMMARY OF FINDINGS AND MAJOR FINDING

A one-sample t-test was run to determine whether the management commitment score of the total study participants was different to normal, defined as the mean of a commitment score 3.0.Consistently large number of respondents EEU-Jimma management does not provide essential resources necessary to safety. Provision of essential safety resources, as discussed in the literature, is a means by which management demonstrate its commitment to safety. Nevertheless, the respondents' response stresses that safety resource availability was unsatisfactory and this in turn explains poor safety commitment by the management. With regarding to training, majority of workers do not feel EEU Jimma is providing safety trainings when new employees join the company, change worksite, operate new equipments/or use new technologies. But, Safety training had significant the regression coefficient as the result of Safety training was perceived to be lower by many employees. Similarly, the Safety Prevention and Control Measures score had negative response to the provided questions showing lower perception to the preventive actions taken by the management of EEU.

Finally, the safety communication finding is low this might be employees are experiencing lack of regular updates on their safety matters. Updating employees with regular safety reports and information (oral or visual) are essential to keep employees. Management commitment to safety is plays a role for improving safety practice of employees. However, on the part of EEU management commitment to safety is perceived by employees to be lower.The numbers of female's workers are lower than that of males; females had significantly lower organizational commitment and communication scores than males.

MAJORE FINDING OF THE STUDY

1. Occupational safety and health management practice: The overall occupational safety score was 1.27; 95%CI[1.24, 1.310] The minimum 1 and maximum 2.6. The occupational safety score among males was 1.29; 95%CI [1.25, 1.32].the minimum 1 and maximum2. The occupational safety score among females was 1.22; 95%CI [1.17, 1.27].the minimum 1 and maximum1.5. There was no statistically significant difference in mean score of occupational safety practice between males and females $t_{0.05,\,150}$ =1.637, p=0.104

2. Organizational Commitment: The overall organizational commitment score was 3.23; 95%CI [3.13, 3.33]. The minimum 1 and maximum 4.57. The overall organizational commitment score among males was 3.28; 95%CI [3.17,3.39] The minimum 1.71 and maximum 4.57. The overall organizational commitment score among females was 3.02; 95%CI [2.77, 3.37] the minimum 1.0 and maximum 4.0. There was statistically significant difference in mean score of organizational commitment between males and females $t_{0.05,\,150}$ =2.047, p=0.042*and β=0.082

3. Management safety commitment: The overall management commitment score is 3.04; 95%CI [2.94, 3.13]. The minimum 1 and maximum 4.57. The overall management commitment score among males was 3.07; 95%CI[2.963.17]. The minimum 1.14 and maximum 4.57. The overall management commitment score among females was 2.91; 95%CI[2.67,3.16]. theminimum 1.00 and maximum 4.00. There was no statistically significant difference in mean score of management commitment between males and females $t_{0.05,\,149}$ =1.280, p=0.202significant the regression coefficient is. From the t-values p<0.048$*$ β=-0.16

4. Safety communication,: The overall communication score was 3.00; 95%CI [2.90, 3.10]. The minimum 1 and maximum 4.0. The overall communication score among males was 3.03; 95% CI[2.92,3.14]. The minimum 1 and maximum 4.0. The overall communication score among females was 2.90; 95%CI[2.64,3.16]. The minimum 1.16 and maximum 4.0.There was statistically significant difference in mean score of communication between males and females $t_{0.05,\,149}$ =2.047, p=0.042*

5. Safety training and education, The overall training score was 2.66 95%CI[2.55, 2.77].the minimum 1 and maximum 4.33. The mean score of training among males was 2.64; 95%CI [2.52, 2.76]. The minimum was 1 and maximum 4.33. The mean score of training among

females was 2.75; 95%CI [2.49, 3.00. The minimum was 1 and maximum 4.00. There was no statistically significant difference in mean score of training between males and females $t_{0.05, 149}$ =-0.771, p=0.442.significant the regression coefficient is. From the t-values β=-0.162 and p <valu0.047

6. Safety Prevention and Control Measures: -The overall Prevention and Control Measures was 2.465, 95%CI[2.37, 2.56].].the minimum 1 and maximum 4.00. The mean score of Prevention and Control Measures among males was 2.41; 95%CI [2.31, 2.51]. The minimum was 1 and maximum 3.89. The mean score of Prevention and Control Measures among females was 2.66; 95%CI [2.48, 2.84]. The minimum was 1.89 and maximum 4.0. There was statistically significant difference in mean score of Prevention and Control Measures between males and females $t_{0.05, 149}$ =2.339, p=0.021*significant the regression coefficient isβ=-0.07 and p <valu0.037

5.2. CONCLUSIONS

From this study finding and based on the study objectives the researcher draws the following conclusions.

According to this study finding lower score were observed in some variables like OSH**,**

Safety training and education experience of applying skills and knowledge in the organization with regards to safety issues is an important ingredient, Safety Prevention and Control Measures and Organizational commitment as compared to other studies. Safety Prevention and Control Measures had negative response to the provided questions in this scale showing lower perception to the preventive actions taken by the management of EEU. Safety prevention and control tools such as provision of Personal protective equipment, warning signs and posters, safety tools and equipment's to work with, are not adequately available in the company. Safety communication was brought the strengthening of good means of communication between employees and the management. Organizational commitment EEU management commitment to safety is should be maintained.

In addition, the core findings of this paper the number of females are lower than males; females had significantly lower on organizational commitment and communication scores than males. However, females had significantly higher mean score of prevention and control measures than males although the score for both males and females is generally low. These factors had contributed to the significant difference between females and males in the regression analysis. The factors associated with poor occupational safety conditions were seen along with sex, organizational commitment, training, organizational communication, preventive and protective control measures.Generally, based onregression model gender issue /sex; organizational commitment, training, organizational communication, preventive and protective control measures are all that independently affect occupational safety health management practice

5.3. RECOMMENDATIONS

Having analyzed, discussed and interpreted the data collected in this study, the researcher therefore recommends the following points as workable solutions to those gaps identified in the study:

Radical improvement it is advisable to the organization on OSH practice by EEU Jimma district is recommended. Occupational safety and health management practice n this organization requires advanced safety and healthy working situation. The training opportunities minted and strengthened provided as evidenced by the low mean score. Safety Prevention and Control Measures score is low needing to changes or updated the system of safety Prevention and Control Measures in the company. Therefore, it is essential that EEU need to work hard on accident prevention and control measures by follow who guideline and properly resource allocated mainly safety materials.

The establishment of good means of communication between employees and the management of this organization should be strengthened. Organizational commitment the management team we suggest that improve worker's commitment through managing effectively the health and safety practices in workplace. Thus, it can easily be achieved the sector to recognize the fact that workers who committed can perform better and will have an emotional attachment towards their organization.

The gender issue /sex; should be considered in the organization's agenda and organizational commitment, training, organizational communication, preventive and protective control measures are all that independently affect occupational safety health management practice. Therefore, we suggest that all of these incorporated in the organizations plan.

REFERENCES

1. **Abdullah, N. A., Jeffery, T., & Spickett, K. (2009).** International review Business research, Assessing Employees Perception on Health and Safety Management in Public Hospitals. Managing Change, Safety Climate, OHS Management **, 5 (4), 54-72**
2. **AberaKumie, TadesseAmera, Kiros Berhane (2016),** A review of Situational Analysis and Needs Assessment, Occupational Health and Safety in Ethiopia:. Ethiopian Journal of Health Development**. Pp 17-17**
3. **Arboleda, A., Morrow, P. C., Crum, M. R., & Shelley, M. C. (2003).** Management practices as antecedents of safety culture within the trucking industry: similarities and differences by hierarchical level. Journal of safety research**, 34 (2).**
4. **Armstrong, M. (2006).** Performance Management-Key Strategies and Practical Guidelines **(3rded.). London: Kogan Page.**
5. **Ashraf A (2003)** Worker productivity, and occupational health and safety issues in selected industries**. Computer & Industrial Engineering Vol 45 issue 4 pp 563-572.**
6. **Benjamin, O. A. (2008).** Fundamental Principles of Occupational health and safety. Geneva: International Labor Organization**.**
7. **Bob, E. H., Jill, P., Tara, S., & Jennifer, T. (1998).** Measuring Perceptions of Workplace Safety: Development and Validation of the Work Safety Scale**. 29.**
8. **Bunn, William B (2004)** Health, Safety, and Productivity in a manufacturing Environment. Journal of Occupational and Environmental Medicine **pp 47-55.**
9. **Burke, M. J., Sarpy, S. A., Tesluk, P. E., & Smith. (2002).** General safety performance: A test of a grounded theoretical model**. Personnel Psychology, 55.**
10. **Cabrera, D., Isla-Díaz, R., Rolo-Gonzalex, G., Villegas-Velasquez, Ramos-Sapena, Y., &Henandez- Fernaud, E. (2007).** Organizational health and safety from an integrative perspective**. 29 (1).**
11. **Cascio, W.F. (1986).** Managing Human Resources Productivity, Quality of Life**, Profit: New York: MC Graw-Hill.**
12. **Charles D. Reese (2003), '**Occupational Health & Safety Management'**, A Practical approach**

13. **Clarke, S. (2006).** The Relationship between Safety Climate and Safety Performance**: A Meta-Analytic Review. Journal of Occupational Health Psychology, 11 (4).**
14. **Cole, G. A. (2008).** Personnel and human resource management**. London: Tower Building, page, 213-231**
15. **Cooper, M. D. (2000).** Towards a model of safety culture. Safety Science**, 36, 111-136.**
16. **Cox, S., &Cheyne, J. (2000).** Assessing safety culture in offshore environments**. Safety science, 34.**
17. **Cox, S., &Flin, R. (1998).** Safety culture: philosopher's stone or man of straw**? Work & Stress. Safety Science, 12 (3), 189-201.**
18. **Cronbach, L. J. (1990).** Essentials of Psychological Testing **(5th ed.). New York: Harper and Row.**
19. **Daniel, B., Abera, k., &Worku, T. (2014).** Assessment of occupational injuries among Addis Ababa city municipal solid waste collectors**: across-sectional study. 14.**
20. **Das and Sengupta, (1996)** Industrial workstation design: **a systematic ergonomic approach. Applied Ergonomics, 27(3), pp 157-163**
21. **Dawit, S. (2006).** Occupational safety and health profile for Ethiopia**. Ethiopia: Ministry of labor and social affair.**
22. **Dessalegn, T., Alemu, K., Tefera, Y., Sharma, H., & Worku, W. (2014).** Knowledge and practices regarding safety information among textile workers in Adwa Town**. Ethiopia science postprint , 1.(2010). Europe in figures. Eurostat.**
23. **Everon, C. C. (2010). Assessing Safety Culture, Values, Practices, and Outcomes. Dissertation: Colorado State University.**
24. **Federal Government of Ethiopia, 1994, The Constitution of the Federal Democratic Republic of Ethiopia**
25. **Flin, R., Mearns, K., O'Connor, P., &Bryden, R. (2000). Measuring safety climate: Identifying the common features. Safety Science, 34.**
26. **Francis Revves (2000). Effects of Education and Intervention on Business Students' Ethical Cognition: A Cross Sectional and Longitudinal Study, Teaching Business Ethics Vol 4, Issue 3 pp 269-284**
27. **Geller, E. S. (2001).** The Psychology of Safety Handbook. Boca Raton**: Lewis Publishers.**

28. **Gizaw, Z., Gebrehiwot, M., Teka, Z., &Molla, M. (2014).** Assessment of occupational injury and associated factors among municipal solid waste management workers in Gondar town and Bahir Dar City**, northwest Ethiopia. Med. Sci, 5 (9).**
29. **Health and safety executives' (HSE) (1999)** the cost to Britain of workplace accidents and work-related ill health **in 1995/96.**
30. **Health and safety executives. (2005)** the role and effectiveness of safety representatives in influencing workplace health and safety**. Cardiff University. Glamorgan Building.**
31. **Institute for Work& Health. (2015) (n.d.).** Benchmarking-organizational-leading-indicators. Retrieved **May 24, from htpp://www.iwh.on.ca.**
32. **John, C., Mary, C., & Dennis, N. (2006).** Electrical safety handbook **(3rd ed.). McGraw hill.**
33. **John Lin, Anthony Mills (2001)** Measuring the occupational health and safety performance of construction companies in Australia**. Facilities Vol 19 No ¾ pp 131-139**
34. **Judd, H. M., Demetrice, D. E., & Karen, J. J. (20O5).** Management commitment to safety as organizational support: Relationships with non-safety outcomes in wood Manufacturing employees**. Journal of safety research, 36 (2), 171-179.**
35. **Katrina Witt, Allison Milner, Amanda Allisy, Lauren Dave (2007).** Effective of suicide prevention program for emergency and protective services employees**: A systematic review and meta-analysis. American Journal of Industrial Medicine.**
36. **Keffane, S. (2015).** Communication's Role in Safety Management and Performance of the Road Safety Practices**. Journal of Civil Engineering, 9 (2).**
37. **Krejcie, R. V., & Morgan, D. W. (1970).** Determining Sample Size for Research Activities. **Educational and Psychological Measurement.**
38. **Laura M. Visenting, Suasn J. Bondy (2009)** Use of personal protective equipment during infections disease outbreak and no outbreak conditions; a survey of emergency medical technicians. **Canadian Journal of Emergency medicine. Pp 44-56**
39. **ILO (2014)** Safety and Health at work, Geneva**: Report for 2014 World Congress on Safety and Health at Work**
40. **Lin, J., & Mills, A. (2001).** Measuring the Occupational Health and Safety Performance of Construction Companies in Australia**. Facilities (19).83**

41. **Mearns, K., Whitaker, S. M., &Flin, R. (2003).** Safety climate, safety management practice and safety performance in offshore environments**. Safety science, 41 (8).**
42. **Meldrum, A., Hare, B., & Cameron, I. (2009). Road testing a health and safety worker engagement tool-kit in the construction industry. Engineering, Construction and Architectural Management, 16 (6).**
43. **Michael AsieduGyensare, Olivia Anku-Tsede, Kwame OwnsuBoakye (2018).** Occupational Health and Safety and Employee Engagement: Evidence from SMEs Sector in Gnana, International Conference on Applied Human Factors and Ergonomics, **pp202-216.**
44. **Mullen, J. (2004).** Investigating factors that influence individual safety behavior at work. **Journal of Safety Research, 35.**
45. **Nazia, M., Ashfaq, A. M., & Tariq, S. P. (2010).** Role of Hazard control measures in occupational health and safety in t**he textile industry of Pakistan. 47 (1).**
46. **Neal, A., & Griffin, M. A. (2006).** A study of the lagged relationships among safety climate, safety motivation, safety behavior, and accidents at the individual and group levels. **Journal of Applied Psychology, 91 (4).**
47. **Neal, A., Griffin, M. A., & Hart, P. M. (2000).** The impact of organizational climate on safety climate and individual behavior. **Safety Science, 34 (1).**
48. **Osman, Y., &Abera, K. (2010).** Assessment of occupational injuries in Tendaho Agricultural Development S.C, Afar Regional State, Ethiop**. J. Health Dev, 24 (3).**
49. **OsmanCulha,(2017).**ResearchAssistant,TourismandHotelManagementDepartment,Facultyof Econom- ics and Administrative Sciences, Yasar University**, KazimDirikMah. 364 Sok. No. 5, 35100 Bornova, Izmir, Turkey**
50. **O'Toole, M. (2002).** The relationship between employees' perceptions of safety and organizational culture. **Journal of Safety Research, 33 (2).**
51. **Prevention** Aglobal strategy promoting safety and health at work**. (2005). International labor organization (ILO).**
52. **Raines, M. S. (2011).** Engaging Employees – another step in improving safety. Professional safety**.**
53. **Rasmussen, J. (1997).** Risk management in a dynamic society: A modeling problem. Safety Science**, 27**

54. **RamazanKaynak. (2016)** Effects of Occupational Health and Safety Practices on Organizational Commitment, Work Alienation, and Job Performance**: Using the PLS-SEM Approach**
55. **Reason, J. (1990).** Human Error. Cambridge: Cambridge **University Press.**
56. **WHO. Reducing risk promoting life. World health organization. (2002).**
57. **Rotich, L. C., &wasira, J. K. (2015).** Assessment of Success Factors in the implementation of occupational Health and Safety Program In Tea Firms In Kenya: A Case of Kaisugu Tea Factory International. **Journal of Economics, Commerce and Management, 3 (5).**
58. **Rundmo, T. (1996).** Association between risk perception and safety. safety science **, 24, 197-209.84**
59. **RuaAngélica (2014)** Organizational Commitment and Job Satisfaction: **What Are the Potential Relationships?**
60. **Safety Policy and Procedure for Distribution system (O&M). (2014). Ethiopian electric utility.**
61. **Safety Policy and Procedure for Transmission. Ethiopian electric utility (2014).**
62. **Salentine, J. (2015).** Workplace Safety: Corporate training materials. **Retrieved June 6, www.allbusiness.com/labor-employement/...safety./ 16681290-1.html.**
63. **Selahattin, K. (2013).** The Relationships among Working Conditions, Safety Climate, Safe Behaviors and Occupational Accidents**: An Empirical Research on the Marble Workers. Them acrotheme Review, 2 (4).**
64. **Sijie Zhang (2014).** BIM-based fall hazard identification and prevention in construction safety planning. **Safety Science pp 31-45**
65. **Silva, S., Lima, M., & Baptista, C. (2004). Organizational and safety climate inventory. Safety science, 42, 205-220.**
66. **Smith, M. J., Cohen, H. H., Cohen, A., & Cleveland. (1978**). Characteristics of successful safety programs**. Journal of Safety Research, 10 (1).**
67. **Sue Cox and Tom Cox (2007)** the structure of employee attitude to safety: **a European example. Journal of work and stress Vol 5 issue 2**
68. **Total quality management and the management of health and safety (2002). Health and safety executives. University of Bradford.**

69. **Varonen, U., &Markku, M. (2002).** Effects of the work environment and safety activities on occupational accidents in eight wood-processing companies**. Human Factors and Ergonomics in Manufacturing. 12 (1), 1-15.**
70. **WHO (2002)** Work, Health and Safety,Vols I and II. Industry Commission, **Geneva**
71. **Zohar, D. (1980).** Safety Climate in Industrial Organizations**: Theoretical and applied Implications. Journal of Applied Psychology, 65, 96-102.**
72. **Zohar, D., &Erev, I. (2007).** On the difficulty of promoting workers' safety behavior: overcoming the underweighting of routine risks**. Int. J. Risk Assessment and Management, 7 (2).**
73. **Zohar, D., & Luria, G. (2003).** The use of supervisory practices as leverage to improve safety behavior: **A cross-cultural intervention model. Journal of safety research, 34, 567-577.**

Accident record of employee for ten years

Year	Number of accidents
2010	5
2011	10
2012	17
2013	12
2014	12
2015	18
2016	44
2017	27
2018	22
2019	10

Source; compensation claims files in HR dept of regional office

Jimma University

Business and Economics College

Department of Management

MPM Program

QUESTIONNAIRE.

Please provide your responses for this questionnaire for the study entitled effect of occupational safety and health management practice on organizational commitment one the case of Ethiopian electric utility. Please, since this research is for academic purpose any information provided would be treated with utmost confidentiality.

Biographical Information:

Your Answers will not be disclosed to any one and so there is no need to write your name on the questionnaire.
A tick mark (X) for closed question and give clear description for open-ended questions

Thank you in advance for your cooperation

SECTION A: Personal Information

1. Sex: Male☐ Female ☐
2. Age _____

20-30☐31-40☐41-50☐51 and above☐

3. Educational Status

   A. Secondary School or its equivalent☐

   B. Vocational school education☐

   C. University education/First Degree or its equivalent☐

   D. Postgraduate Degree☐

   E. Others _____

4. How many years have you worked in this organization?

A. 1-3 years☐

B. 4-7years ☐

C. 8 and above years ☐

5. Marital Status?

A. Single☐

B. Married☐

C. Widowed☐

D. Others☐

6. In which department are you working in? Please explain.....

7. Income A Monthly Salary

A. 1000-2000 Birr☐

B. 2001-4000 Birr☐

C. 40001-6000 Birr☐

D. 6001 Birr and Above ☐

8. What factors affect occupational safety and health management practice on organizational commitment?

A. Work related factors Personal factors (type of work, lack of protective material &accident☐

B. personal factors (work experience and problem) ☐

C. Use of safety and protective material and physical factors ☐

D. Management safety commitment ☐

E. All ☐

9. Use of safety and protective material?

A. Yes ☐ B. No ☐

SECTION B: elements of effective occupational health and safety practice

To what extent do you agree with the following statements concerning occupational health and safety management in your company?

	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
	Management commitment					
1	Health and safety of workers is of high priority to the management					
2	My immediate supervisor shows me the safe way to perform my job duties when I act in an unsafe manner					
3	The safety manager (or the person in charge of health & safety)receives support from top management					
4	The management is committed to well-being of the workers through its safety policies along with other HR policies					
5	There is safety department in the regional office					
6	Your company considers safety to be equally important as production and quality in the way work is done					
7	Top management provides the essential resources of establishing OH&S System					
	Safety Communication	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	OHS instruction manuals					
2	Work procedures are available					
3	At this company, there is usually formal communication of safety policies and procedures that employees to follow					
4	At this company, there is usually communication among employees to identify solutions to improve safety					

5	At this company, the managers communicate regularly about issues related to safe working conditions					
6	At this company employees communicate with each other regularly about issues related to safe working conditions					
7	Workers are informed about OHS hazards through written materials					
8	Workers informed about OHS hazard through meetings					
	Safety Training and Education	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	EEU Jimma branch organizes workshop, seminar					
2	EEU Jimma branch provides lectures on safety precaution measures					
3	Workers are given sufficient OHS training when joining the company, changing worksites					
4	Your company supports OHS training opportunities for workers (e.g. leave, scholarships					
5	Training is provided on the use of new technology in the work place					
6	OHS training is ongoing with a training plan					
	Employee involvement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	Incentives are frequently offered to encourage workers to comply with OHS policies and procedures (e.g. correct use of protective equipment).					
2	Staff suggestions are readily acted upon by management					
3	I know fully what is expected of me at work regarding safety.					
4	I regularly receive recognition for doing a safe job					

5	OHS decisions are frequently based on consultations with, or suggestions from, workers.					
6	Periodic meetings are held between workers and supervisors/managers to make decisions that affect the organization of work.					
7	Teams of workers from various parts of your company are frequently used to solve problems about working conditions					
	Preventive and protective actions	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	The working equipment and tools in my workplace are safe					
2	Employees are provided with personal protective equipment					
3	Safety audits and inspections are carried out to identify risks and hazards at my workplace					
4	Action is taken when safety rules are broken					
5	Portable fire extinguishers are distributed based on the classes of anticipated fires and degree of hazard					
6	All accidents occurring at the workplace are investigated within specified timelines					
7	Your company use warning signs and posters prevent employees from hazard.					
8	The hazards and risks associated with goods are controlled					
9	Your company analyzes injury and illness data (e.g. claims data, first aid logs) to identify causes and target solutions					

SECTION C: Employee safety practice/performance at their place of work in this section you are requested to put the symbol (X) that you think is the right choice against the scale with regard to the statements provided. Please Put the symbol (X) that you think is the right choice.

To what extent do you agree with the following statements concerning the kind of health and safety problems encountered by employees at their place of work?

	Statement	Strongly disagree	Disagree	Indifferent	Agree	Strongly agree
1	I ignore safety procedures in order to get job done more quickly					
2	I follow all safety procedures regardless of the situation I am in					
3	I handle all situations as if there is a possibility of having an Accident					
4	I wear safety equipment required by practice					
5	I keep my work area clean.					
6	I encourage co-workers to be safe					
7	I keep my work equipment in safe working condition					
8	I take shortcuts to safe working behaviors in order to get the job done faster					
9	I do not follow safety rules that I think are unnecessary					
10	I report safety problems to my supervisor when I see safety Problem					
11	I correct safety problems to ensure accidents will not occur					
12	Do you think effective workplace safety have any impact on employee safety practice					

13. Indicate how satisfied you are with the current safety measures put in place

A. Very satisfied ☐ B. Satisfied ☐

C. Dissatisfied☐ D. Very Dissatisfied ☐

14. If yes, what benefits will the company and employees derive from effective occupational safety practice?

A. Reduces accident☐

B. Reduces cost of compensation to injured employees☐

C. Loss or death of staff ☐

D. labor turnover is reduced ☐

E. Corporate image of the company is enhanced ☐

F All the above ☐

G. Others, please state……

SECTION D: organizational commitment factors in this section you are requested to put the symbol (X) that you think is the right choice against the scale with regard to the statements provided. Please Put the symbol (X) that you think is the right choice.

	ORGANIZATIONAL COMMITMENT FACTORS	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1	I do feel a strong sense of belonging to my organization.					
2	I really feel as if this organization's problems are my own					
3	I feel that I have too few options to consider leaving this organization					
4	Too much in my life would be disrupted if I decided I wanted to leave my organization now.					
5	I think that people these days move from company to company too often.					
6	I do believe that a person must always be loyal to his or her organization.					
7	If I got another offer for a better job elsewhere, I would not feel it was right to leave my organization.					

APPENDIX D - INTERVIEW GUDIE FOR KEY INFORMANTS

Occupational safety and health management practice

1. Is their occupational health and safety practice on your organization?
   A. Yes B. No
2. is there formal safety communication between employ and organization
   Yes B. No

3. Are you taken training on OHS, policy and procedure where provided by you organization?
   A. Yes B. No
4. Dose employ participate or involve in any activity of organizing relegated with his/her work?
   A. Yes B. No

5. do you use PPE while working
   A. Yes B. No

6. Do you perform safety practice while working?

   A. Yes B. No

Thank you for your cooperation

APPENDIX .B ጅማ ዩኒቨርሲቲ

ቢዝነስ እና ኢኮኖሚክስ ኮሌጅ

የአስተዳደር ክፍል

MPM **ፕሮግራም**

ጥያቄ.

የድርጅት ደህንነት እና የጤና አያያዝ ልምምድ በኢትዮጵያ ኤሌክትሪክ ሀይል ጉዳይ አንድ ጉዳይ ላለው ጥናት ለዚህ መጠይቅ መልስዎን ያቅርቡ ፡፡ እባክዎን ፣ ይህ ምርምር ለአካዴሚያዊ ዓላማ ስለሆነ ማንኛውም የቀረበው መረጃ በከፍተኛ ሚስጥር ይያዛል፡፡

የባዮግራፊክ መረጃ

መልስዎ ለማንም አይገለጽም ስለሆነም ስለሆነም ስምዎን መጻፍ አያስፈልግም

በመጠይቁ ላይ።

ለተዘጋ ጥያቄ ምልክት የሚሆን ምልክት (X) **እና ለክፍት ጥያቄዎች ግልጽ መግለጫ ይስጡ**

ለትብብርዎ በቅድሚያ እና መሰግናለን

ክፍል ሀየግልመረጃ

1. **ጾታ-ወንድ□ሴት□**

2. **ዕድሜ** _____

ከ20-30 □ 31-40 □ 41-50 □ 51 **እናከዚያበላይ□**

3. **የትምህርትሁኔታ**

ሀ. ሁለተኛ ደረጃ ትምህርት ቤት ወይም ተመጣጣኝ□

ለ / የሙያት / ቤትትምህርት□

ሐ. የዩኒቨርሲቲ ትምህርት / የመጀመሪያ ዲግሪ ወይም ተመጣጣኝ□

መድግሪድግሪ

ሠሌሎች _____

4. በዚህድርጅትውስጥስንትዓመታትንሰርተዋል?

ሀ / 1-3 ዓመታት□

ለ/ 4-7 ዓመት□

ሐ/ እናከዛበላይዓመታት

5. የጋብቻሁኔታ?

ሀ/ ነጠላ□

ለ / ያገባ□

ሐ / ባሏየሞተ□

መ. ሌሎች□

6. በየትኛውክፍልውስጥነውየሚሰሩት? እባክዎንያብራሩ ……

7. ገቢበየወሩደመወዝ

ሀ/ 1000-2000 ብር□

ለ /2001 - 4000 ብር□

ሐ/ 40001-6000 ብር□

መ/6001 ብርእናከዚያበላይ□

8. በድርጅታዊቁርጠኝነትረገድየሥራደህንነትእናየጤናአያያዝልምምድላይምንተጽዕኖያሳድራሉ?

ሀ.ከሥራጋርተያያዥነትያላቸውጉዳዮችየግልሁኔታዎች (የሥራዓይነት፣የመከላከያቁሳቁሶችእጥረትእናአደጋ□)

ለ. ግልምክንያቶች (የሥራልምዱእናችግር) □

ሐ. የደህንነትእናየመከላከያቁሳቁስእናአካላዊሁኔታ Use

መ / ደህንነትደህንነትቁርጠኝነት□

ሠሁሉ□

9. **የደህንነትእናየመከላከያቁሳቁስአጠቃቀም**?

ሀ/ መልስ-አዎ□***ለ/የለም***□

በዚህከፍልስርለሚገኙትመጠይቆችከጎንከተቀመጡትሳቦችትይዩባለውባዶሳጥንውስጥእንደተገቢነቱሳብዎንበሚገልጸ ውየስምምነትአማራጭ(√) ምልክትያድርጉበት

መለኪያ	በጽኑአልስማማም	አልስማማም	እርግጠኛአይደለሁም	እስማማለሁ	በጽኑእስማማለሁ
የድርጅቱአመራርለሠራተኞችጤናናደህንነትቅድምያይሠጣል፡፡					
የቫርብየስራተቆጣጣሪዬ(አለቃዬ) ያለጥንቃቄስራዬንስፈጽምካየያርመኛል					
የሴፍቲቢሮተጠሪስራተኛውከበላይአመራርድጋፍይሰጠዋል፡፡					
የድርጅቱሴፍቲናየሠውሀይልፖሊሲድርጅቱለሰራተኞችጤናናደህንነትያለ ውንቁርጠኝነትያሳያሉ፡፡					
በሪጅኑየሴፍቲዲፓርትምንትቢሮአለ፡፡					
ድርጅቱየስራላይደህንነትንናሴፍቲንከሚያቀርበውምርትናምርትጥራትእኩ ልይመለከታል፡፡					
የበላይአመራሩለሴፍቲየሚያስፈልጉቁሳቁሶችንአሟልቶያቀርባል					
ተግባቦት					
የሴፍቲመመሪያጥራዝለሠራተኛውቀርቦለታል፡፡					
በዚህድርጅትውስጥበሴፍቲፖሊሲናደንብዙሪያመደበኛውይይትያደርጋል፡ ፡					
በዚህድርጅትውስጥሠራተኞችሴፍቲንለማሻሻልእርስበእርስይወያያሉ፡፡					
በዚህጅርጅትውስጥሠራተኞናችናኃላፊዎችበሴፍቲኡሪያመፍትሔለመስጠ ትይወወያያሉ፡፡					
ሠራተኞስለሥራላይአደጋበጹሁፍእንዲያውቁይደረጋል፡፡					
የስፍቲስልጠና					

የድርጅቱየስራላይሴፍቲንበተመለከተወርክሾፕ፤ሴሚናር፤ትምህርትያዘጋጃል።					
ሠራተኞችሲቀጠሩ፤የስራቦታሲቀይሩእናአዲስመሳሪያመጠቀምሲኖርባቸው በድርጅቱየደህንነትናሴፍቲሥልጠናይሰጣቸዋል።					
ድርጅቱየስፍቲስልጠናወይምትምህርትእድል(እረፍት፤ስኮላርሺፕ) ይሰጣል።					
ድርጅቱአዲስየስራመሳሪያወይምቴክኖሎጂሲያስመጣለሰራተኞችተገቢውን ስልጠናይሰጣል					
የሴፍቲስልጠናበዕቅድእየተያዘበተከታታይይሰጣል።					
የሴፍቲተሳፍትፎ					
ድርጅቱሠራተኞችየሴፍቲንደንብናፖሊሲእንዲያከብሩማበረታቻይደረግላቸዋል።					

በዚህ ድርጅት የሠራተኞ ሐሳብ በማኔጅመንቱ ምላሽ ይሠጠዋል ።					
የስራ ላይ ሴፍቲን በተመለከተ የሚጠበቅብኝን ሁሉ አውቃለሁ።					
ስራዬን በጥንቃቄ ከተወጣሁ በድርጅቱ እውቅና ይሠጠኛል።					
በዚህ ድርጅት ውስጥ የሴፍቲ ውሳኔዎች መሰረታቸው ከሠራተኛው በሚወሰድ ሃሳብና ምክር ነው።					
በዚህ ድርጅት ስለሴፍቲ ውሳኔዎችን ለመወሰን በሠራተኞችና በኃላፊዎች መካከል ውይይቶች በመደበኛነት ይደረጋሉ።					
በዚህ ድርጅት ሠራተኞ በህብረት (በቡድን) ሆነው የሴፍቲ ችግሮችን እንዲፈቱ ይደረጋል።					
አደጋን የመከላከልና የመቆጣጠር እርምጃዎች					
በስራ ቦታዬ ላይ የሚገኙ የስራ ቁሳቁሶች ደህንነታቸው የተጠበቀ ነው					
ሰራተኞች በስራ ላይ ሲሰማሩ ራሳቸውን ከ አደጋ አንዲከላከሉ አደጋ መከናከያ ቁሳቁሶች ይቀርቡላቸዋል					
የአደጋዎችን መንስኤ ለማወቅ እንዲቻል የሴፍቲ ኦዲትና ምርመራ ይደረጋል።					
የሴፍቲ ህግና ደንብ ተጥሶ ሲገኝ ድርግቱ ዕርምጃዎችን ይወስዳል።					
ተንቀሳቃሽ የእሳት ማጥፊያዎች ሰራተኞች ለስራ ሲንቀናቀሱ ይቀርብላቸዋል።					
አደጋዎች በስራ ቦታ ላይ ሲደርሱ በአደጋው ዙሪያ ተገቢው የምርመራ በተደቢው ጊዜ ይደረጋል።					
ድርጅቱ ሰራተኞችን ከ አደጋ ለመከናከል የማስጠንቀቂያ ምልክቶችንና ፖስተሮችን ይጠጠማል።					
በዚህ ድርጅት ውስጥ ዕቃዎች ተገዝተው ሲገቡ በሰራተኞች ላይ ሊያስከትሉ የሚችሉትም ጉዳትና አደጋ አንጻር የማጣራት ስራ ይደረጋል።					
ድርጅቱ የአደጋ መረጃን በመመርመር የአደጋን መንስዔ ለይቶ መፍትሄ ይሰጣል።					

ክፍል ሐ: የሠራተኞችስራንበጥንቃቄየመፈጸምሁኔታ

በዚህክፍልስርለሚገኙትመጠይቆችከጎንከተቀመጡትሳቦችትይዩባለውባዶሳጥንውስጥእንደተገቢነቱሳብዎንበሚገ
ልጸውየስምምነትአማራጭ(√)
ምልክትያድርጉበትስራንበጥንቃቄየመፈጸምሁኔታንበተመለከተበሚከተሉትንሀሳቦችምንያህልይስማማሉ;

መለኪያ		በጽኑአልስማም	አልስማም	አርግጠኛአይደለሁም	አስማማሁ	በጽኑአስማማሁ
1	ስራንለማፍጠንስልየሴፍቲህግናደንቦችንችላእላለው፡፡					
2	በየትኛውሁኔታውስጥብሆንየሴፍቲንደንብእከተላለሁ፡፡					
3	አደጋሊፈጠርእንደሚችልበማሰብስራዬንበጥንቃቄፈፅማለሁ፡፡					
4	የሴፍቲመመሪያውእንደሚያዘውየሴፍቲልብስናቁሳቁሶችንእጠቀማለሁ፣					
5	የስራቦታዬንበጥራትናበንጽህናእጠብቃለሁ፡፡					
6	የስራባልደረባዬበጥንቃቄእንዲሰራአበረታታለሁ፡፡					
7	የስራቁሳቁሶቼንበጥንቃቄእይዛለሁ፡፡					
8	ስራዬንበፍጥነትለመጨረስስልከጥንቃቄይልቅበአቋራጭያለጥንቃቄመ ጨረስንእመርጣለሁ፡፡					
9	አያስፈልጉምብዬማስባቸውንየሴፍቲህግናደንቦችንእጥሳለሁ፡፡					
10	የሴፍቲነክችግሮችሲያጋጥሙኝለአለቃዬሪፖርትአደርጋለሁ፡፡					
11	የሴፍቲችግሮችባጋጠሙኝጊዜአደጋዎችእንዳይከሰቱለማድረግ ችግሮችንበራሴአርማለሁ፡፡					

12. **በተቀመጠውየአሁኑየደህንነትእርምጃዎችምንያህልእንደተደሰቱይግለጹ**

ሀ/ በጣምረክቻለሁ□ለ/ ረክቼያለሁ□

ሐ/ አልተረካሁም□መ. በጣምአልተረኩም□

13. **አዎከሆነ፣ከባንያውእናሰራተኞቹውጤታማ**

የሙያደህንነትከማግኘትምንጥቅሞችያገኛሉ?ልምምድ?

ሀ) አደጋንይቀንሰ□

ለ/ደረሰባቸውሰራተኞችየማካካሻወጪንይቀንሳል□

ሐ/ የሠራተኞችማጣትወይምሞት□

መ/የጉልበትለውጥቀንሷል□

ሠ/የኩባንያውየድርጅትምስልተሻሽሏል□

ረ/ከዚህበላይ

ሰ/ ሌሎች፣እባክዎንሁኔታ ……

ተጨማሪክፍልመ - ለዝርዝርመረጃቃለ-መጠይቅ

1. **የሥራቸውየጤናእናደህንነትልምምድበድርጅትዎላይነው?**

ሀ) አዎለ/የለም

2. **በሥራተኛእናበድርጅትመካከልመደበኛየደህንነትግንኙነትአለ?**

ሀ) አዎለ/የለም

3. **እርስዎበድርጅትዎበሚሰጡትየኦኤችኤሰፖሊሲእናአሰራርላይስልጠናወሰደዋል?**

ሀ) አዎለ/የለም

4. **ተቀጥረዋልወይምበሥራውደረጃየተሰረቀሥራንበማንኛውምመልኩይሳተፋል?**

ሀ) አዎለ/የለም

5. **በሚሰሩበትጊዜ**(PPE)**ይጠቀማሉ?**

ሀ) አዎለ/የለም

6. **በሚሰሩበትጊዜየደህንነትልምምድያካሂዳሉ?**

ሀ) አዎለ/የለም

ለትብብርዎ እናመሰግናለን