



ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

**ASSESSMENT ON OCCUPATIONAL SAFETY AND HEALTH
MANAGEMENT PRACTICES: THE CASE OF CHEMICAL INDUSTRY
CORPORATION**

BY

YIMENASHU ANBESSIE

JUNE, 2019

ADDIS ABABA, ETHIOPIA

**ASSESSMENT ON OCCUPATIONAL SAFETY AND HEALTH
MANAGEMENT PRACTICES**

THE CASE OF CHEMICAL INDUSTRY CORPORATION

BY

YIMENASHU ANBESSIE

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

JUNE, 2019

ADDIS ABABA, ETHIOPIA

ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

**ASSESSMENT ON OCCUPATIONAL SAFETY AND HEALTH
MANAGEMENT PRACTICES: THE CASE OF THE CASE OF
CHEMICAL INDUSTRY CORPORATION**

BY

YIMENASHU ANBESSIE

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature

Advisor

Signature

External Examiner

Signature

Internal Examiner

Signature

DECLARATION

I, the undersigned, declare that the thesis entitled “Assessment on occupational safety and health management practices, the case of chemical industry corporation” is my original work prepared under the guidance of Solomon Markos (PhD). All sources of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree Program in this St. Mary or any other educational Institutions.

Yimenashu Anbessie

St. Mary's University

Addis Ababa

Signature

June, 2019

ENDORCEMENT

This investigation, entitled “Assessment on occupational safety and health management practices, the case of chemical industry corporation” was carried out by Yimenashu Anbessie, so as to obtain her second degree from St. Mary University. She conducted her original thesis under my guidance and supervision. I certify that, the study is her own original work and suitable for submission of the award of MA in Business Administration.

Advisor
St. Mary's University, Addis Ababa

Signature
June, 2019

Table of Contents

<i>ABSTRACT</i>	ii
LIST OF TABLES.....	iv
ACRONYMS/ABBREVIATIONS.....	v
ACKNOWLEDGEMENTS.....	vi
CHAPTER ONE:.....	1
INTRODUCTION.....	1
1.1. Background of the Study.....	1
1.2. Definition of Terms.....	3
1.3. Statement of the problem.....	4
1.4. Research Questions.....	6
1.5. Objectives of the study.....	6
1.6. Significance of the Study.....	7
1.7. Scope of the study.....	7
1.8. Limitations of the study.....	8
1.9. Organization of the Study Report.....	8
CHAPTER TWO:.....	9
LITERATURE REVIEW.....	9
2.1. Occupational Safety and Health (OSH).....	9
2.2. Key principles in occupational safety and health.....	11
2.3. Benefits and Costs of Occupational Safety and Health Management.....	14
2.4. Occupational Safety and Health Management Practices.....	17
2.5. Global status of workplace safety and health.....	18
2.6. Occupational Safety, Health and the Law.....	21
2.7. Basic elements of an effective safety and health management practice.....	22
2.8. Challenges of good Health and Safety Practices in Business.....	28
CHAPTER THREE:.....	32
RESEARCH DESIGN AND METHODOLOGY.....	32
3.1. Research Design and Approach.....	32
3.2. Data Type.....	32
3.3. Sources data.....	32
3.4. Method of data Collection.....	33

3.5.	Target Population and Sample Design.....	33
3.6.	Sample Size Determination.....	34
3.7.	Data Reliability and Validity	34
3.8.	Data Analysis and Method.....	35
CHAPTER FOUR:.....		37
RESULTS & DISCUSSIONS		37
4.1.	Response Rate.....	37
4.2.	Analysis of Collected Data	37
4.1.1.	Demographic Data	38
4.1.2.	Occupational Safety Practices.....	39
4.1.3.	Occupational Health Practices	45
4.1.4.	Effectiveness of OSH Practices	49
4.1.5.	Challenges of OSH for the Company.....	52
CHAPTER FIVE:		56
SUMMARY, CONCLUSION AND RECOMMENDATIONS		56
5.1.	Summary of major finding.....	56
5.2.	Conclusion	57
5.3.	Recommendations.....	59
REFERENCES		60
APPENDIXES		64
Appendix A:Questionnaires(Type One: For Production workers)		64
Appendix B:InterviewQuestionsto Managers.....		70

ABSTRACT

Occupational safety and health management practices are activities regarding in protecting the life of employees and safeguarding working machineries from hazards arising in their working areas. Chemical processing sites are seen to be very hazardous areas because of the products, inputs materials and machines they are using for operation. Companies most often downplay on the safety and health of workers at the workplace. Occupational safety and health is one issues of concern in manufacturing factories. The study aims to assess OSH practices of CIC based on its four chemical processing factories, which all are located in Oromia region. To undertake this research the researcher used convenient random sampling technique, the data was analyzed using descriptive statistics and scale ranking. Delegates of company OSH department and general managers in each factory were interviewed and 247 workers from the target of 300 employees in the production department responded to questionnaires with regard to safety and health practices of the company. The study findings are mainly of the company occupational safety practices, occupational health practices, effectiveness of OSH practice and challenges of OSH practices. The findings indicate the studied company is not effective in properly implementing both occupational safety and health activities. That is the current occupational safety and health practices at the company were not adequate. Mainly, training to create awareness on policies and procedures of OSH, absence in first-aid and emergency equipment's in worksites, inadequate and unsuited or under quality provision of personal protection equipment (PPE), absence of regular workplace and worker safety monitoring and controlling, lack in proper inspection of working machineries, minimal level of management commitment to OSH issues are identified. Absence of effective OSH implementation have a negative effect on the organization and workforce performance, so, it is recommended tothe company to give proper attention for both occupational safety and health issues, OSH should be the top agenda of the company, also management of the company should develop & make effective OSH committee & make them more functional to accelerate the practice, so as to maintain regular monitoring, inspection, evaluation and conduct reviews the implementation of OSH practices.

Keywords: Occupational safety, Occupational health, Effectiveness of OSH, Challenges of OSH.

LIST OF TABLES

Table.4.2. Respondent Profile	-----35-36
Table.5. Result of Occupational Safety practices	----- 38-40
Table.6. Result of Occupational Health Practices	----- 44-45
Table.7. Result of Effectiveness of OSH Practices	----- 48
Table.8. Result of Challenges of OSH Practices	----- 51-52

ACRONYMS/ABBREVIATIONS

CIC ----- Chemical Industry Corporation

FDRE----- Federal Democratic Republic of Ethiopia

HPR----- House of People's Representative

ILC ----- International Labour Conference

ILO----- International Labor Organization

MOLSA----- Ministry of Labour and Social Affairs

OSH----- Occupational Safety and Health

PPE----- Personal Protective Equipment

WHO ----- World Health Organization

ACKNOWLEDGEMENTS

First, may all wonder be to God for giving me the wish to move forward and surpass each obstacle. For showing me the good amidst so much evil and for always being present all this time. Next to this, I would like to express my sincerely appreciation to my advisor Dr. Solomon Markos, for his dedicated guidance and helpful comments offered throughout the study. My indebtedness to him cannot be over emphasized and I thank a lot.

Secondly, thanks to St. Mary University to its attractive and delighted education program and my heartfelt appreciate goes to those who have great competence & committed instructors of this University.

In the top of my life, there is a great wish of ever great peace and worldly riches to a great woman, my mother, Fiker Seyum, for everything and myriad support in taking care of my child within this my onerous time, you are so sympathetic and you deserves every special things in every minutes of your life, etiy, all my successful end is because of you and thanks again & again. The next secret thanks goes to my son Naol. Babaye, you sacrificed a lot in the last two, three years, thanks for your kiddy patience in lacking of a mother care, I am always in heart touched feeling, very sorry for all, next is your and be blessed my life gift.

Last but not least, my special thanks goes to Chemical Industry Corporation for giving me this chance of MA degree and all supportive encouragement, and great appreciation to all branch factory heads and staffs for their readiness to every information and generous cooperation.

CHAPTER ONE:

INTRODUCTION

This chapter gives highlight on the background of the study, defines important terms and concepts, discuss the research problems & research questions, objectives, significance, scope and limitation of the study.

1.1. Background of the Study

Occupational health and safety management is an inter-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment. Occupational health and safety management practices are those practices that aim at preserving and protecting human and capital resources in the workplace (Reynolds, 2011). Occupational safety and health is one of the most important issues in every organization and every employee deserves to work under conditions which do not expose workers to any injury or health problems. To make sure that employees are working with safe working conditions, the management and employees should work together to make that happen and the government is also doing its part by legal enforcement.

The concept of occupational health is gaining increasing public awareness because health hazard is difficult to detect and can result in the inherent development of the disease. In the early stages, the disease may be relatively minute and cannot be easily detected, but the severity of the disease can cause permanent disability realized after working for a few years. The ideal way to improve workers' protection is to totally remove the occupational health hazard. Some hazards cannot be removed, so a more practical way is to control or managed the risks that the hazards posed. Maintaining a healthy and safe work environment helps to facilitate employee's commitment to quality and improve industrial relations and results in improved financial and social responsibility performance (Crimmins, 2009). Employee and union-management relations improve when employers satisfy their employees' health and safety needs. When employers take a greater responsibility for occupational health and safety it can change employee behavior and employees might take a less aggressive attitude during wage bargaining if management pay attention to housekeeping (Steve E. 2003). Attention to

workplace health and safety can have a strong, positive effect on employee commitment (Armstrong, 2004).

Protective devices when performing risky activities and maintenance of safe place of work are necessary preventive measures against accidents (Steve, 2003). An employer should provide employees with appropriate personal protective equipment and clothing that is suitable for the work performed. Safety equipment at the workplace includes hard hats, safety glasses and goggles, rain gear, safety vests, work gloves, sensors for gas detectors, safety boots and shoes, flashlight and lanterns, first aid kit, sanitizes and cleaners, storm equipment cases and non-flammable safety cabinets.

Continuous assessment should be done on organizations to monitor the extent to which conditions of occupational safety and health (OSH) management system is in place. For this study, all of chemical processing companies in the chemical industry corporation will be selected without considering their different products but only based on the practice of OSH activities because of the hazardous working conditions in the production department of these companies as indicated in the inspection reports of the labor and social affairs ministry.

Ethiopia's labor proclamation No, 377/96 aims at regulating employee- employer relationship working conditions and various issues. The issues of occupational safety and health and the requirements are embodied in Article 91 to 112. Even if the proclamation clearly states the entire requirement that need to be fulfilled by employers, there are various companies has problems implementing it accordingly. Although the target of this research area also has related problems.

Chemical Industry Corporation is managing state-owned chemical manufacturing companies namely, Muger Cement Enterprise, Natural Rubber Tree Development and production project and Urea Complex project, Adami Tulu Pesticide Processing Factory, Awash Melkasa Chemical Factory and Batu Caustic Soda Factory. These chemical processing companies of the corporation are legally as well morally have an obligation to implement OSH activities according to the standard of the country regulation and corporation collective agreement because of their hazardous working condition they have. So, the study focuses on the corporation OSH management practice, how its OSH implementation is effective and the challenges that the company is hindering when undertaking its OSH activities.

1.2. Definition of Terms

Some important terms definition and concepts are placed as follows:

Occupational Safety and Health Management Practices

Occupational safety and health management practices are those practices that aim at preserving and protecting human and capital resources in the workplace (Reynolds, 2011).

OSH /Occupational Safety and Health

It is a discipline dealing with the prevention of work related damages and diseases as well as the protection and promotion of the health of workers. It aims at the improvement of working conditions and environment. (OSH- ILO 2011)

Occupational safety

It is the protection of employee from damages due to work related accidents (Benjamin, 2001).

Occupational Health

It is an employee's freedom from physical or emotional illness at the workplace (kariuki, 2007). It is the protection of the health of workers by preventing and controlling occupational disease and accidents, eliminating conditions hazards to health at work and the development and promotion of health and safe work environment and work organizations (Berkowitz, 1979)

1.3. Statement of the problem

The state of health and safety needs on chemical industry corporation in its branch factories shown poor practices of occupational safety and health needed. The working environment is dusty, gaseous, poisonous, not neat and safe for smooth and delighted operational movement. Mainly Personal and Protective Equipment (PPE) in every working site must be properly used by a person at work and which protects him against one or more risks. Those typical chemical site may require workers to wear gas and air masks, a helmet, coveralls, safety footwear, gloves, eye protection and high visibility vest – these, workers often wear to be safe and healthy were absent.

Specifically, the Labour Act mandates all employers to establish best practice that promotes among others, positive safety, health and environmental outcomes. Safety practices deal with the prevention of accidents and with minimizing the resulting loss and damage to persons and property. They relate more to systems of work than the working environment, but both health and safety practices are concerned with protection against hazards and their aims and methods are clearly interlinked(Armstrong, M 2006). Work-related accidents or diseases are very costly and can have many serious direct and indirect effects on the lives of workers and their families. An occupational illness or accident can have so many indirect costs to workers that it is often difficult to measure them. One of the most obvious indirect costs is the human suffering caused to workers' families, which cannot be compensated with money. Overall, the costs of most work-related accidents or illnesses to workers and their families and to employers are very high. On a national scale, the estimated costs of occupational accidents and illnesses can be as high as three to four percent of a country's gross national product. In reality, no one really knows the total costs of work-related accidents or diseases because there are a multitude of indirect costs which are difficult to measure besides the more obvious direct costs. There is no doubt that the company human resource is one of its versatile resources.

Therefore, an effective and efficient use of the human resource will translate into 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. As a chemical processing company the employees are exposed to varied kinds of hazards. 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 its 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. Also, ensuring that regular monitoring and review of these measures are important to examine their effectiveness. Indeed, any safety measure or action on the part of government or employer may prove fruitless if the employees are not committed to the idea of safety. Employers also fail to see occupational health and safety as a process.

Chemical Industry Corporation is a state owned corporation, managing four chemical processing factories and two projects that produce different finished and semi-finished chemical products i.e. cement, aluminum sulfate, pesticides, rubber milk and dry rubber sheet, and caustic soda. In processing these chemical contained products an issue that needs big attention is occupational safety and health of its employees. Protecting workers and workplace safety and effective rehabilitation practice must be given top consideration. As chemicals have huge impacts on elongated internal and external human body properly and effectively maintaining OSH practice is obligatory. Thus company practices of OSH is under many problems; lack of awareness on the issue, inadequate and under quality provision of PPE, absence of regular inspection, monitoring, evaluation and taking corrective action on the OSH practices, null performance of OSH committees and less commitment of management in giving quick response to OSH issue. So, this research assessed the occupational safety and health management practices of CIC.

1.4. Research Questions

The researcher aims to set the following research questions which answered by the finding of this study are;

- How employees of the corporation see their company OSH practices?
- How is the effectiveness of OSH management practices according to Labor Law?
- What are the challenges and future needs in practicing OSH management?

1.5. Objectives of the study

1.5.1. General Objective

The study has assessed the occupational safety and health management practice of chemical industry corporation.

1.5.2. Specific objectives

The study has the following specific objectives:

- To assess occupational OSH management practices of the corporation.
- To evaluate the effectiveness of OSH management practices according to Labor Law.
- To investigate challenges and future needs in practicing OSH management.

1.6. Significance of the Study

Assessing the practices of occupational safety and health management in factories of CIC is significant for the researched company, for future researchers as well to academics.

To the corporation: It enables a company to analyze the gap between the current working conditions and the desired safe and healthier working environment.

To the manager: it enables them to focus primarily on the use of existing problems to develop solutions and to have a clear insight and understanding of the occupational safety and health requirements. And also, help to implement, maintain, and improve occupational health and safety management practices.

To the researchers: the study will be a source of reference material for future studies on the related topics.

To the academics and theory, it contributes for better understanding of the practices of OSH in manufacturing sector, and hence, contributes to the cumulative learning and knowledge building process in the area.

1.7. Scope of the study

The study was delimited to the OSH management practices, specifically considering how the company is practicing occupational safety health management activities, its implementation effectiveness according to the labour & company Law, the challenges hindering the company in undertaking OSH practices are identified and lastly future needs are recommended for only the research year time.

Convenience sampling used to select respondents from the target, quantitative approach and descriptive type of data analysis methods applied. Target population from each factory is proportionately taken.

Geographically, the study was conducted on four chemical industry corporation factories i.e. Mughher Cement and Awash Melkasa Aluminum Sulfate, Adami Tulu Pesticides and Batu Caustic Soda Processing factories production departments which are located in Oromia Region.

1.8. Limitations of the study

While studying the management practices on occupational safety and health management of the CIC some limitations had occurred and these are stressed as follows;

- Questionnaires that were given to the workers were not responded at a time that take more time than expected and some of them were discarded because of not filled properly which minimized the number of data for the analysis.
- Some of the managers were too busy to be available for the interview which forces the data collection to take more time again.
- The study result concluded generally as a corporation is not show the equal result to each factory.

Even though there were the limitations, additional time and effort was given so as to overcome the limitations and accomplish the study on required time.

1.9. Organization of the Study Report

The research work is divided into five chapters. Chapter one concerns itself with the general introduction grouped under the following headings; Background to the study, Statement of the problem, Objectives of the study, Significance of the study, Research questions, Scope of the study and Organization of the study. Chapter two involves the review of various related literatures on the relevant subject under the study. Chapter three includes the various methods used for collecting data for the research work. These methods include administration of questionnaires, interviews, observation etc. Chapter four presents results, discussions and provides analysis of the data gathered for the study. Finally, the fifth chapter provides conclusions and recommendations

CHAPTER TWO:

LITERATURE REVIEW

This chapter gives detail review on the researched issue, explains OSH management practices in manufacturing companies, benefits and costs of OSH practices, elements of effective OSH practices, challenges of OSH practices and OSH practices states from the world to Ethiopia.

2.1. Occupational Safety and Health (OSH)

In 1950's, a common definition of occupational health was adopted by the Joint ILO/ World Health Organization (WHO) Committee on Occupational Health as its first session was revised at its twelfth session in 1995 with the goal of all OSH programs is to foster a safe work environment. OSH is a basically standard which is set in legislation that aims to eliminate and reduce hazards at workplace.

Occupational health and safety is an inter-disciplinary area concerned with protecting the safety, health and welfare of people engaged in work or employment (Reynolds, 2011). Occupational health and safety places and maintains workers in an occupational environment adapted to their physiological and psychological capabilities (International Labour Organization, 1950; World Health Organization, 1950). The purpose of occupational health and safety program in an organizational context is to upgrade the competency of work force (Brewer et al, 2010). The goal of occupational health and safety management programs is to promote and maintain the highest degree of physical, mental, and social well-being of workers in all occupations (Archer, 2001). It aims at protecting workers in their employment from risks resulting from factors adverse to health. The best way to reduce levels of occupational accidents and disease relies on the cooperation of both employers and employees. The employer has a duty to maintain a healthy and safe workplace (Robens, 1972).

2.1.1. Occupational Safety

Occupational Safety is the protection of employees from damages due to work-related accidents (Benjamin, 2001). Safety Management is about protecting against undesired outcomes and helps to prevent not just incidents and accidents, but financial inefficiencies and losses too. These accidents are unplanned and uncontrolled events, which can result in damage to both human beings and property (Berkowitz, 1979). Since organizations provide the work and the physical plant, office or establishment, it should be committed to doing everything within reason to protect employee from risks associated to work.

2.1.2. Occupational Health

According to, Kariuki, (2007), Occupational Health is an employee's freedom from physical or emotional illness at the workplace. It is the protection of the health of workers by preventing and controlling occupational diseases and accidents, eliminating conditions hazardous to health at work and the development and promotion of healthy and safe work environment and work organizations. Health programs may include first aid and emergency dispensary, a registered nurse and doctor or part-time services of a doctor, medical consulting facilities, and periodic medical examination of all employees exposed to health hazards, facilities for voluntary periodic physical examination for all employees, in and out patient schemes, full or subsidized medical insurance cover, and medical insurance cover for immediate dependents.

The focus in occupational health is on the maintenance and promotion of workers health and working capacity, the improvement of working environment and work to become conducive to health and the development of work organizations and working cultures in a direction that supports health and safety at work (International Labour Organization, 1950; World Health Organization, 1950). In doing so, it promotes a positive social climate and smooth operation and may enhance productivity of the undertakings (Reynolds, 2001). Since organizations provide the work and the physical plant, office or establishment, it should be committed to doing everything within reason to protect employee from risks associated with spending their working days to those premises.

2.2. Key principles in occupational safety and health

ILO declared, Occupational safety and health is an extensive multidisciplinary field, invariably touching on issues related to scientific areas such as medicine including physiology and toxicology – ergonomics, physics and chemistry, as well as technology, economics, law and other areas specific to various industries and activities. Despite this variety of concerns and interests, certain basic principles can be identified, including the following:

All workers have rights. Workers, as well as employers and governments, must ensure that these rights are protected and must strive to establish and maintain decent working conditions and a decent working environment. More specifically:

- ✓ work should take place in a safe and healthy working environment;
- ✓ conditions of work should be consistent with workers' well-being and human dignity;
- ✓ work should offer real possibilities for personal achievement, self-fulfillment and service to society

Occupational safety and health policies must be established. Such policies must be implemented at both the national (governmental) and enterprise levels. They must be effectively communicated to all parties concerned.

A national system for occupational safety and health must be established. Such a system must include all the mechanisms and elements necessary to build and maintain a preventive safety and health culture. The national system must be maintained, progressively developed and periodically reviewed.

A national program on occupational safety and health must be formulated. Once formulated, it must be implemented, monitored, evaluated and periodically reviewed. Social partners (that is, employers and workers) and other stakeholders must be consulted. This should be done during formulation, implementation and review of all policies, systems and programs.

Occupational safety and health programs and policies must aim at both prevention and protection. Efforts must be focused above all on primary prevention at the workplace level. Workplaces and working environments should be planned and designed to be safe and healthy.

Continuous improvement of occupational safety and health must be promoted. This is necessary to ensure that national laws, regulations and technical standards to prevent occupational injuries, diseases and deaths are adapted periodically to social, technical and scientific progress and other changes in the world of work. It is best done by the development and implementation of a national policy, national system and national program.

Information is vital for the development and implementation of effective programs and policies. The collection and dissemination of accurate information on hazards and hazardous materials, surveillance of workplaces, monitoring of compliance with policies and good practice, and other related activities are central to the establishment and enforcement of effective policies.

Health promotion is a central element of occupational health practice. Efforts must be made to enhance workers' physical, mental and social well-being. Occupational health services covering all workers should be established. Ideally, all workers in all categories of economic activity should have access to such services, which aim to protect and promote workers' health and improve working conditions. Compensation, rehabilitation and curative services must be made available to workers who suffer occupational injuries, accidents and work related diseases. Action must be taken to minimize the consequences of occupational hazards.

Education and training are vital components of safe, healthy working environments. Workers and employers must be made aware of the importance of establishing safe working procedures and of how to do so. Trainers must be trained in areas of special relevance to particular industries, so that they can address the specific occupational safety and health concerns. Workers, employers and competent authorities have certain responsibilities, duties and obligations. For example, workers must follow established safety procedures; employers must provide safe workplaces and ensure access to first aid; and the competent authorities must devise, communicate and periodically review and update occupational safety and health policies. Policies must be enforced. A system of inspection must be in place to secure compliance with occupational safety and health measures and other labour legislation.

Rights and duties

The responsibilities of governments, employers and workers should be seen as complementary and mutually reinforcing in the common task of promoting occupational safety and health to the greatest extent possible within the constraints of national conditions and practice.

Workers' rights

It is increasingly recognized that the protection of life and health at work is a fundamental workers' right. In other words, decent work implies safe work. Furthermore, workers have a duty to take care of their own safety as well as the safety of anyone who might be affected by what they do or fail to do. This implies a right to adequate knowledge, and a right to stop work in the case of imminent danger to safety or health. In order to take care of their own safety and health, workers need to understand occupational risks and dangers. They should therefore be properly informed of hazards and adequately trained to carry out their tasks safely. To make progress in occupational safety and health within enterprises, workers and their representatives have to cooperate with employers, for example by participating in elaborating and implementing preventive programs.

Employers' responsibilities

Because occupational hazards arise at the workplace, it is the responsibility of employers to ensure that the working environment is safe and healthy. This means that they must prevent, and protect workers from, occupational risks. But employers' responsibility goes further, entailing knowledge of occupational hazards and a commitment to ensure that management processes promote safety and health at work. For example, an awareness of safety and health implications should guide decisions on the choice of technology and on how work is organized. Training is one of the most important tasks to be carried out by employers. Workers need to know not only how to do their jobs, but also how to protect their lives and health and those of their co-workers while working. Within enterprises, managers and supervisors are responsible for ensuring that workers are adequately trained for the work that they are expected to undertake. Such training should include information on the safety and health aspects of the work, and on ways to prevent or minimize exposure to hazards. On a larger scale, employers' organizations should instigate

training and information programs on the prevention and control of hazards, and protection against risks. Where necessary, employers must be in a position to deal with accidents and emergencies, including providing first-aid facilities. Adequate arrangements should also be made for compensation of work-related injuries and diseases, as well as for rehabilitation and to facilitate a prompt return to work. In short, the objective of preventive programs should be to provide a safe and healthy environment that protects and promotes workers' health and their working capacity.

2.3. Benefits and Costs of Occupational Safety and Health Management

The role of management and involvement of all employees are very important in order to cultivate the positive beliefs, norms, practices and attitudes are the important keys that play in safety and health cultures. According to Gardner et al. (1999), the promotion of OSH cannot be achieved without the employees' full co-operation and commitment.

With OSH in the workplace, it means there are some benefits; (1) reductions of unnecessary costs in corrective procedures by focusing on preventive measures, (2) increasing work productivities and (3) avoiding any injuries. The perceptions of connection between effective OSH and resulting financial benefits should be improved and OSH is not usually viewed as a contributory factor to the economic viability of an organization Robson et al., (2007). The focus of OSH is to have a healthy and productive workforce for the good of the people and the nation (Abdul Rahman, 2006). By having an efficient OSH program, it will make employees feel secure and comfortable working at workplace.

Maintaining a healthy and safe work environment helps to facilitate employees' commitment to quality and improve industrial relations (Crimmins, 2009). Employee and union-management relations improve when employers satisfy their employees' health and safety needs (Collard, 1989). When employers take a greater responsibility for occupational health and safety it can change employee behavior and employees might take a less militant stance during wage bargaining if management pay attention to housekeeping (Steve, 2010). Attention to workplace health and safety can have a strong, positive effect on employee commitment (Armstrong, 2004).

A healthy and safe work environment helps to reduce costs and improve organizational effectiveness (Robens, 1972; Williams, 1997). Maintaining a healthy and safe work environment helps to facilitate employees' commitment to quality and improve industrial relations and results in improved financial and social responsibility performance (Crimmins, 2009). Organizations vary greatly in health and safety programs they offer. These programs increase employee's loyalty to organizations and decrease absenteeism and high employee turnover (Carrel, 1995). For an organization to thrive, it needs to invest on its main asset, the employee (Rono, 2011).

Failure to manage occupational risk competently, or comply with occupational health and safety legislation, can jeopardize the attainment of business objectives, limit or negate profits, and inhibit business sustainability (Oughton, 2007). Enterprises and individuals failing to manage occupational risk appropriately may also incur financial or custodial penalties. Some businesses may even be may fail to achieve their objectives because of enforced closure or costly ongoing litigation. As organizations engage in a fiercely competitive global marketplace, the development of a flourishing occupational health and safety culture and high levels of workplace morale will deliver valuable competitive advantages to an industry (Chelule, 2010). Effective safety policies can improve the performance of employees and the organization, by reducing costs associated with accidents, disabilities, absenteeism, or illness (Robens, 1972).

The application of occupational safety and health regulations affect employee outcomes such as job satisfaction, motivation, involvement and performance (Chelule, 2010). The use of an occupational health and safety management program is a practical way of ensuring occupational health and well-being at work (Kariuki, 2007).

Wayne,Cacio(1992) states that employers frequently complain that there is no systematic method of quantifying costs and benefits when dealing with employees' safety and health conditions. Technically that is true, but there is a behavior costing model that may provide a useful start. It is important to distinguish nondiscretionary from discretionary safety and health expenditures. Some states and local agencies require firms to comply with safety and health regulations. To comply, firms may have to purchase and install special equipment, such as machine guards, safety switch interlocks, and nonslip flooring. These costs are nondiscretionary. To do otherwise is to risk heavy fines and losses from liability and damage suits. Cacio, Wayne.(1992) again emphasized that, beyond mere compliance, however, companies have a number of options

regarding the degree to which they invest in employee safety and health. A motivational poster program (e.g. “think safety”) is a token effort that requires minimal expenses. Creation of a safety committee to encourage active employee complaints is more expensive. The highest-cost option includes regular safety training for all employees. The training may involve films, lectures by safety experts or hands-on drills and demonstrations with safety and emergency apparatus. Boyd.(2003) states that for each of these levels of safety and health programs, investment costs are measurable. They include the salaries and wages of employees participating in the program, the costs of outside services used and the costs to implement the programs. Unfortunately, the benefits to be derived from such programs cannot be traced as easily to the bottom line. Certainly, the most quantifiable benefit resulting from the successful introduction of a safety and health program is a reduction in casualty and workers’ compensation insurance rates. Less measurable benefits involve the avoidance of the “indirect “cost of an accident, including;

- Cost of wages paid for time lost
- Cost of damage to material or equipment
- Cost of overtime work required by the accident
- Cost of wages paid to supervisors while time is required for activities resulting from the accident
- Costs of decreased output of the injured worker after she or he returns to work
- Un insured medical costs allowed by the company
- Cost of time spent by higher management and clerical workers to investigate or to process worker’s compensation forms.
- Costs associated with the time it takes for a new worker to learn the job.
- Cost of labour spent on the employee engaged to replace the injured Prediction of these costs and identification of trends in them is very difficult. It must be done on the basis of historical information (to gauge trend) and judgment by managers (to assess the seriousness of the accidents avoided).This makes economic sense for firms to ensure that there should be no limit to efforts to eliminate accidents and health hazards.

2.4. Occupational Safety and Health Management Practices

Occupational health and safety management practices are those practices that aim at preserving and protecting human and capital resources in the workplace (Reynolds, 2011). The goal of all occupational safety and health practices is to foster a safe work environment and protect co-workers, family members, employers, customers, suppliers, nearby communities, and other members of the public who are impacted by the workplace environment (Occupational Health and Safety Act No. 154, Kenya). Provision of occupational health and safety services means carrying out activities in the workplace with the aim of protecting and promoting workers safety, health and well-being, as well as improving their working conditions and the working environment (Reynolds, 2011; Kariuki, 2007).

2.4.1. Occupational Safety Management Practices

Occupational safety management practices are those activities that aim at creating an accident free working environment by identifying, investigating, controlling and eliminating risks and hazards which cause accidents (Health and Safety Executive, 2006). Aspects of safety at the workplace include fire safety, machinery safeguarding, and electrical safety, and personal protective equipment, manual handling of risky substances, working in confined space, accidents reporting, Investigations, and analysis.

The traditional approach to safety in the workplace used the careless worker model. It was assumed by most employer and the accident prevention bodies that most of the accidents were due to an employee's failure to take safety seriously or to protect herself or himself (Paton and Nic, 2008; Christian, 2009). Work can be safe simply by changing the behavior of employees by poster campaigns and accident prevention training. For both humanitarian and economic reasons, no society can accept with complacency that high levels of death, injury, disease, and waste must be the inevitable price of meeting its needs for goods and services (Robens, 1972). According to International Labour Organization, Workplace accidents and errors cost organizations hundreds of billions of 21 dollars each year, and the injured workers and their families endure considerable financial and emotional suffering.

2.4.2. Occupational Health Management Practices

Occupational health management practices are those programs and activities that aim at the promotion and maintenance of physical, mental, and social wellbeing of workers of all occupations (International Labour Organization, 1950; World Health Organization, 1950). Occupational health practice is a multidisciplinary activity. It involves occupational health professionals and other specialists both in the enterprises and outside, as well as the competent authorities, the employers, workers and their representatives. Exposure to environmental conditions associated with employment, for example, inhalation, and absorption cause Occupational illnesses. Health hazards may be biological, chemical, physical, ergonomic, or psychological in nature.

2.5. Global status of workplace safety and health

Nowadays, work place safety is considered by World Health Organization (WHO) a priority setting for health promotion in the 21st century (Takala, 1999; WHO, 2010). International Labour Organization (ILO) and WHO reports indicated that in manufacturing industries many employees suffer from workplace injuries and property damage resulted in economic crisis (ILO, 2010; WHO, 2010). Every 15 seconds, a worker dies from a work-related accident or disease. Every 15 seconds, 153 workers have 283 a work-related accident. Every day, 6,300 people die as a result of occupational accidents or work-related diseases – more than 2.3 million deaths per year. Annually, 317 million accidents occur on the job; many of these resulting in extended absences from work.

2.5.1. Developed countries status of workplace safety and health

As a result of the ever-increasing pace of worldwide liberalization of trade and economies, as well technological progress, the problem of occupational accidents and diseases are becoming more and more global concern, particularly in developing countries. In recent years, occupational health and safety of the workers has improved and is relatively satisfactory in developed countries, whereas in developing countries, occupational health receives little

attention and comes at low level in the list of national priorities. Risk never be eliminated but minimized. However, it is difficult to minimize OSH, its practices focus is less than 1% of organizational and national researches issues. Promoting occupational health and safety practices such as OSH promotion, OSH awareness, OSH research and OSH education requires a broader platform. Although in a survey among International Commission on Occupational Health members from 47 industrialized and industrializing countries, 70% reported OSH being in place and 80% noted the existence of a national institute for OSH, the estimated coverage of workers with OSH services was only 18%. WHO and ILO have elaborated programs to foster the development of international occupational health, but the real effect of this effort is still not optimal likely due to insufficient funding. This lack of funding is not alone the reason but also globalization and industrialization has a strong impact in development of OSH hazards development. There are many varieties of workplace safety hazards causing factors. Developed countries like North American, European, and Australia are planning and budgeting for workplace safety and health prevention better than the rest of the world. In total, nearly 1million workers will suffer a workplace accident and every year a total of 2.4 million people die as a result of unsafe or unhealthy workplace conditions. Worldwide, this situation causes an economic loss of 4% of global GDP (ILO, 2010; ILO, 2014).

2.5.2. Developing countries status of workplace safety and health

According to Perrow, (1984), in developing countries the risk of having work-related injury is 10 to 20 times higher than that of developed counties. Tadesse and Kumie, (2007), 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 WHO and the ILO for occupational health, safety and social protection. Occupational health and safety laws cover only about 10% of the population in developing countries, omitting many major hazardous industries and occupations. Occupational health remains neglected in most developing countries under the pressure of devastating social, economic, and political challenges. A striking characteristic of occupational health in the industrialized world, and a message frequently disseminated in developing countries, is the contribution of science to progress in occupational health through data collection, ongoing assessment of problems, and innovative

technological solutions. The traditional workplace-oriented occupational health has proven to be insufficient in the developing world, and tangible progress in occupational health can be achieved only by linking occupational health to the broader context of social justice and national development. The fatality rate in Sub-Saharan African countries is 21/100, 000 workers and the accident rate is 16,000/100,000 workers. In Sub-Saharan African countries about 54,000 fatal and approximately 42 million occupational accidents happen annually that results at least 3 days absence from work of every workers.

2.5.3. Ethiopian status of workplace safety and health

Ethiopia has been a member of international labor organization (ILO) since 1923 and has ratified 19 conventions. The issue of governing safety and health at work on legal basis in Ethiopia dates back to 1940s when the first legal instrument proclamation number 58/1945 was promulgated. Since then, the country adopted several international agreements and conventions as part of national legal framework. This historical event opened the new chapter of practicing occupational safety in this country. In Ethiopia, the fatal occupational accident rate is 5596/year with a fatality rate of 21.5/100,000 workers and an accident rate of 16426/100,000 workers. Literatures indicate only 5-10% of workers in developing countries and 20-50% of those in industrialized countries have access to adequate occupational health services. Occupational health and safety laws cover only 10% of the population in developing countries including Ethiopia. Other than, institutional based studies done in different parts of the country and on different industries up-to date and comprehensive assessment of the evidences concerning occupational health and safety practices in Ethiopia is lacking. The levels of occupational health and safety practices also varied largely across different institutions. Workplace based studies done among different industries and service providers reported different findings of OSH practices for several professions. Data obtained from Ethiopian ministry of labor and social affairs (MOLSA) showed that workplace accident is a very serious issue in the country. Manufacturing sectors comprises 2723 organizations in Ethiopia and 5.3% of them have established OSH committee in their own industries. About 95% of the manufacturing sectors have no OSH committee that carries out follow up activities of their workplace safety conditions. For instance, data obtained from MOLSA produced 0.075 accident severity for manufacturing industries. In the country, health and safety practice received little attention and

comes at low levels in the lists of national priorities. In spite of the apparent increase in the burden of occupational accidents and disease across various regions of the world, including Ethiopia appear not to be sufficiently addressing the challenges of health and safety problems. In addition, specific strategies or guidelines to tackle these issues have not been put in place.

In summery developing and developed countries have commonality and differences in OSH execution philosophy. Developed countries pretense of political mechanisms mediates scientific findings to policies & regulations and economic, technological, and socio-political feasibility of intervention is valid and strong. Whereas in developing countries without similar parliamentary or democratic political mechanism(s) and risk assessment processes, the industrialized model cannot be imported to developing countries to perform critical OSH improvements. There is also lack of governmental interest in occupational health, poor data and data collection systems, and weak enforcement of health and safety regulations (O'Neill, 2000) improvement system development. It has been considered as a routine job and time consuming as well as liable to cost.

2.6. Occupational Safety, Health and the Law

The General Conference of the International Labour Organization,(Adoption: Geneva, 77th ILC session (25 Jun 1990)),

Article 12, Exposure

Employers shall:

- a) Ensure that workers are not exposed to chemicals to an extent which exceeds exposure limits or other exposure criteria for the evaluation and control of the working environment established by the competent authority, or by a body approved or recognized by the competent authority, in accordance with national or international standards;
- b) Assess the exposure of workers to hazardous chemicals;
- c) Monitor and record the exposure of workers to hazardous chemicals when this is necessary to safeguard their safety and health or as may be prescribed by the competent authority;

- d) Ensure that the records of the monitoring of the working environment and of the exposure of workers using hazardous chemicals are kept for a period prescribed by the competent authority and are accessible to the workers and their representatives.

Article 13, Operational control,

Employers shall make an assessment of the risks arising from the use of chemicals at work, and shall protect workers against such risks by appropriate means, such as:

- (a) The choice of chemicals that eliminate or minimize the risk;
- (b) The choice of technology that eliminates or minimizes the risk;
- (c) The use of adequate engineering control measures;
- (d) The adoption of working systems and practices that eliminate or minimize the risk;
- (e) The adoption of adequate occupational hygiene measures;
- (f) Where recourse to the above measures does not suffice, the provision and proper maintenance of personal protective equipment and clothing at no cost to the worker, and the implementation of measures to ensure their use.

Employers shall:

- a) Limit exposure to hazardous chemicals so as to protect the safety and health of workers;
- b) Provide first aid;
- c) Make arrangements to deal with emergencies.

2.7. Basic elements of an effective safety and health management practice

2.7.1. Management Commitment to Occupational Safety and Health

According to Peyton et al. (1991), OSH effort without the full support of the company's top management will meet with only limited success. A company should have a written safety and health policy that is clear and easy to understand. That policy should outline the company's belief that safety and health takes precedence over other job-site considerations. One accident

can turn a small gain into a large loss through increased medical costs, insurance costs and litigation.

Effective safety management requires an organizational commitment to safe working conditions. But more importantly, well designed and managed safety programs can pay dividends for associated costs such as worker's compensation and possible fines. Furthermore, accidents and other safety concerns usually decline as a result of management efforts emphasizing safety (Salon, 2001).

Nishgaki (1994) defined "human ware" as a function composed of leadership, fellowship, and the interaction between them. His research suggested that the major causes of OHS failures are; inadequate safety education, inadequate instruction, poor housekeeping and willful transgression. Employers and employees attitudes play a major part in safety on site. Management commitment is responsible for the majority of the "human-ware" problem. Jaselskis (1996) commented that management needs to be more active in the safety program and where possible, administrators should also play a significant role in determining the safety performances on their projects.

Dejoy (1985), showed that safety records reflect how upper management perceives the causes of safety performance. The safety and health program is most effective when it involves two-way communication between workers and managers. However, high level management often has little firsthand experience on site; it is therefore difficult for them to relate to the needs of the workers. The wearing of protective clothing and the use of safety equipment is crucial in reducing the effects of accidents on construction sites. However, both Harper (1998) and Holmes (1999) suggested that management commitment is required to enforce the wearing of safety equipment. It is often the case that safety equipment is provided, but employees are reluctant, or neglect, to wear it. Consequently, the provision of safety equipment alone does not improve construction site safety, there also needs to be a corporate culture that encourages its use.

2.7.2. Safety and Health Training

According to Peyton et al. (1991), safety and health training and orientation are necessary elements of an effective safety and health program. Supervisors and workers must understand the company's safety policy and procedures and the hazards associated with the work. When employees first arrive on site, a safety orientation training program should be provided. This training session can cover the company and project safety and health policies, safety and health regulations, site orientation, personal protective equipment and OSHA required training.

Periodic safety training sessions held with crew introduces new procedures and re-emphasizes safety training. Supervisors need a periodic safety training to reinforce safety procedures. Additional training reaffirms the company's commitment to safety and allows a review and discussion of specific job site problems and concerns. Whenever possible, management should make use of outside sources for additional training programs and sessions. Tsui and Gomez-Mejia.(1988) state that one way to encourage employee safety is to involve all employees at various times in safety training. Safety training can be done in various ways.

This includes;

- Regular sessions with supervisors, managers, and employees often are coordinated by HR staff members.
- Showing videos, television broadcasts and internet-based resources all are means used to conduct safety training. To reinforce safety training, continuous communication to develop safety consciousness is necessary. Merely sending safety memos is not enough. Producing newsletters, changing safety posters, continually updating bulletin boards and posting information in visible areas also are recommended.(Tsui and Gomez-Mejia.1988)

2.7.3. Periodic Safety and Health Performance Review

A monthly review of the project safety record including accident statistics, reports of injuries and results of safety inspections is a valuable safety tool. Such a review focuses attention on the safety effort and can pinpoint those problem areas that need further safety attention. It is important to know the causes of accidents so that attention can be directed at controlling them.

2.7.4. Safety committees

Regulations relating to safety representatives also include obligations regarding the establishment and operation of safety committees at the workplace. The overall objective of a safety committee is the promotion of co-operation between employers and employees in investigating, developing and carrying out measures to ensure the health and safety of the employees at work. Cole.(2002) identifies key functions of safety committees. These include:

- Studying trends in accidents, etc, with the view to making suggestions for corrective actions.
- Examining safety reports and making proposals for avoiding accidents, etc.
- Examining and discussing reports from safety representatives.
- Making proposals for new or revised safety procedures
- Acting as a link between the organization and the enforcement agency (the health and safety inspectorate).
- Monitoring and evaluating the organization's safety policies, and making proposals for changes, if necessary.

Employees tend to be more aware of hazards in the work place than employers and therefore should be involved in the safety program. They can relate more easily to the safety program if they are involved. It has been shown that regular meetings held on site help to find OHS problems and solutions and improve accident prevention (Hinze, 1988). A safety and health committee often consists of representatives of the employer, worker and subcontractor. This encourages interaction between the parties and helps improve trust and communication and the expertise of each party can be put to use. Safety and health committees have proved to be effective in discovering unsafe practices and problems. Nishgaki (1994) suggested that regular inspection of the site by safety patrols promotes good job safety. Similarly, Hinze (1988) found the more site visits by the upper managers the better the site safety. A safety and health committee helps to promote accident prevention and safe working habits by the employees. Nishgaki (1994) revealed that management commitment should be backed up with means such as hardware (safety equipment) and the continued enforcement by software (standard work procedures, safety regulations). Lingard and Rowlinson (1994) found that more sophisticated

scheduling methods improve OHS standards, but often they can only be carried out with larger companies because of their expertise and resources.

Michael,(2006) also states that employees frequently participate in safety planning through safety committees, often composed of workers from a variety of levels and departments. A safety committee generally meets at regular scheduled times and has specific responsibilities for conducting safety reviews, and makes recommendations for changes necessary to avoid future accidents.

2.7.5. Separate Safety and Health Budgets and Accident Costs

Companies with good safety efforts allocated safety expenditure at the corporate level and assess accident costs at the project level.

Assessing accident costs at the project level places the responsibility for safety performance with project management, those individuals with direct day-to-day impact on safety performance. It also serves to keep top management informed and to help pinpoint potential safety problems.

2.7.6. Worker – management participation group

According to Peyton et al. (1991), worker management safety participation groups encourage employees to report unsafe conditions. Employers who encourage worker participation in the safety process and provide a forum for workers to express their concerns to top management are viewed as more safety conscious and more concerned with their employees. When employers take the time to tap worker creativity and harness worker energy in solving safety problems, they make safety a collective team and concern.

Participative management is a method of involving every member of the organization in the decision making process. Participative management in the safety realm is a wonderful idea. The intent of participative management in the safety area is to have the employees, most affected by the dangers to suggest corrective measures. The workers are exposed to many risks and dangers; therefore they should be able to best describe what the hazards are and how they will best be abated. Involving the line workers in the decision making process will develop, in these individuals, a sense of ownership for the system. Management will be receptive any time they are presented with an alternative that will improve safety without a loss in production. (Delle et al. 1961)

2.7.7. Organizational Commitment

Robert and John.(2004) state that at the heart of safety management is an organizational commitment to a comprehensive safety effort. This effort should be coordinated from the top level of management to include all members of the organization. It should also be reflected in managerial actions. Employers can prevent some accidents by having machines, equipment and work areas so that workers who daydream periodically or who perform potentially dangerous jobs cannot injure themselves or others. Providing safety equipment and guards on machinery, installing emergency switches, installing adequate ventilation, installing emergency switches, installing safety rails, keeping aisles clear, lighting, heating and air conditioning can all help make work environment safer. Designing safety policies and rules and disciplining violators are important components of safety efforts. Frequently reinforcing the need for safe behavior and supplying feedback on positive safety practices also are effective in improving worker safety. Such efforts must involve employees, supervisors and managers.

2.7.8. Promoting job safety and health

Wayne. (1992) outline four approaches in promoting job safety and health.

These are;

- Technical responses-this involves replacing or redesigning equipment, modifying physical work places and providing worker protection (engineering controls).
- Information responses-which refers to changes in the way that health and safety information is transmitted within the organization.
- Administrative responses include changes in the authority structure or in policies and procedures with respect to safety and health (e.g. upgrading the safety function and shifting it from engineering to the human resource department)
- External responses refer to legal or political actions to change the enforcement of safety and health regulations. Byars and Rue (2008) suggest the following as things which can be done to promote safety and health of the organization.

These include;

- a. Establishing a safety committee composed of operative employees and representatives of management. The safety committee provides a means of getting employees directly involved in the operation of the safety programs.
- b. Feature employees' safety contests Give prizes to the work groups or employees having the best safety record for a given time period. Contests can also be held to test safety knowledge. Prizes can be awarded periodically to employees who submit good accident prevention ideas.
- c. Publicize safety statistics Monthly accidents reports should be posted. Ideas as to how accidents can be avoided should be solicited.
- d. Use bulletins boards throughout the organization. Pictures, sketches, and cartoons can be effective.
- e. Encourage employees including supervisors and managers to have high expectations for safety.
- f. Periodically hold safety training programs and meetings. Have employees attend and participate in these meetings as role players or instructors.

2.8. Challenges of good Health and Safety Practices in Business

According to Gavin and Matherly (1997), challenges associated with Health and Safety practices are classified into three main and overlapping aspects; people, process and technology.

The 'people' problems ranged from the risk of employees' emotional or psychological stress, reduction of loyalty to loss of internal expertise and the fact that there is lack of commitment among employees to provide and be brother's keeper to minimized industrial injury. Malhorta (2004) agreed to this by adding that the lack of cooperation; among workers themselves contribute among others to industrial accidents.

The 'process' meanwhile comprises of two classifications; incompatibilities between the authority (government safety department in charge of health and safety in organizations) and the organization itself, and the inability of organization to sufficiently implement their decision to comply with health and safety standards. Among others, authorities' in industrial health and

safety programs only implement general health and safety programs applicable to all industries and companies but do not take into recognition specific company demand.

Mansfield (2001) has found that many companies have embarked on health and safety practices without any formal methodology or guidance. There is lack of progressive and innovative human resource management (HRM) philosophies, policies and processes, (including a proactive and collaborative approach) thereby practicing health and safety on ad hoc basis.

Ingalls, (2002) a work done on 'measures on safety performance' identify that there is also a high cost of providing health and safety materials at work places which deters management from fully executing health and safety standards in companies thereby leaving employees at the mercy of unsafe work environment.

Further, unqualified safety officers employed to manage the health and safety issues in many companies has been the bane of industrial accidents thereby causing needless industrial injuries and loss of life. There is lack of routine, regular and seasoned training courses on safety management for workers to appreciate the need for occupational health and safety precautions.

Finally, there is lack of governmental control and monitoring program to visit business organizations particularly mining companies to unravel whether these companies comply with certain minimum safety standard. (DeJoy, et al. 2000)

2.8.1. Are Developing Countries Any Better In Providing Health And Safety For Workers?

Health and safety management is a challenge to governments as well as owners of businesses. The business environment is one which may be described as harsh and unpredictable such that any attempt at implementing management interventions without taking it into account is bound to fail. Regulatory systems and institutions in many developing countries have been inherited from developed countries. Furthermore, in many of these countries, such regulations have not been updated to reflect their current level of development and cultural milieus. Health and safety regulations are incomprehensive and limited in coverage (Suazo and Jaselskis 1993). LaDou(2003) reports that occupational health and safety laws cover 10% of working population in developing countries, omitting many high risk sectors such as agriculture, fishing, forestry and

construction. Koehn et al. (1995) have cited bureaucracy, time pressures, ineffective institutional structures for implementing occupational health and safety laws and ignorance on the part of workers about their rights to a decent workplace, as factors militating against the implementation of effective health and safety management practices in developing countries. Research carried out by Gibb and Bust (2006) on health and safety in developing countries has identified a number of factors having a negative impact on health and safety management in developing countries:

- a. poor infrastructure;
- b. problems of communication due to low literacy level;
- c. unregulated practices on construction sites;
- d. adherence to traditional methods of working;
- e. non availability of equipment;
- f. extreme weather conditions;
- g. improper use of equipment; and,
- h. Corruption.

Koehn et al. (2000) have stressed that a key barrier to health and safety management is the difficulty in training illiterate workers. High poverty levels compel workers to accept work in unacceptable high risk situations without complaining or demanding their employers put in place health and safety measures. The abundance of cheap labour in developing countries means employers can dismiss site workers who perform unsatisfactorily and also replace them with new workers easily. This has been argued by Koehn and Reddy (1999) to cause site workers to often take risks on the job, leading to serious accidents on site.

2.8.2. Consequence of Poor Working Environment

Unhealthy or unsafe working conditions are not limited to factories they can be found anywhere, whether the workplace is indoors or outdoors. Poor working conditions of any type have the potential to affect a worker's health and safety. Poor working conditions can affect the environment workers live in, since the working and living environments are the same for many workers. This means that occupational hazards can have harmful effects on workers, their families, and other people in the community, as well as on the physical environment around the

workplace. A classic example is the use of heavy machines in construction work. Workers can be exposed to dust and chemicals in a number of ways when spraying clearing and applying bitumen, they can inhale the chemicals during and after spraying, the chemicals can be absorbed through the skin, and the workers can ingest the chemicals if they eat, drink, or smoke without first washing their hands, or if drinking water that has become contaminated with the chemicals. The workers' families can also be exposed in a number of ways: they can be exposed to residues which may be on the worker's clothes. Other people in the community can all be exposed in the same ways as well. Thus poor working environment affects all round from the company to the community.

CHAPTER THREE: RESEARCH DESIGN AND METHODOLOGY

This chapter covers description of the study area, sources, types and methods of data collection, sampling techniques, methods of data analysis and presentation.

3.1. Research Design and Approach

The study used quantitative approach and descriptive type because the aim of this research is to obtain data regarding occupational safety and health management practice to describe the general phenomenon practice effectiveness. Quantitative research is ‘Explaining phenomena by collecting numerical data that are analyzed using mathematically based methods (Aliaga and Gunderson 2002). Descriptive type research is to describe a phenomenon and its characteristics. The research is more concerned with what aspects of OSH practice rather than how or why the issue has happened.(Gall, Gall, & Borg, 2007).

3.2. Data Type

To conduct this researcher both primary and secondary data types were used.

3.3. Sources data

Primary data was gathered from concerned department managers or supervisors, operation workers and the also working condition of employee in all factories worksite are observed by the researcher.

Secondary data are of the OSH policy and laws, records that tell the status of OSH practice in the corporation and other concerned sectors sources, research data, publications, website, books, journal and articles were largely used.

3.4. Method of data Collection

Data was gathered in various ways, tools used to collect primary data were through structured questionnaires, interviews and observation. And additional documents were examined or collected about all aspects of safety and health management practice.

Structured questionnaires containing mostly close ended questions were distributed and the researcher is from the researched company and participant observation also applied to gather additional information. Reason for using this two selected tools of data collection were questionnaires convenient for collecting useful comparable data from a large number of individuals that's can only produce valid and meaningful results if the questions are clear and precise and if they are asked consistently across all respondents. The researcher carefully considered to the design of the questionnaire convenient to these targeted population (Mathers, Fox and Hunn, 2009). And the researcher was distributed questionnaires by translating all questions to the local language or to Amharic that aimed to become confident on the responses from every targeted individual and to make each issue clear and equally understandable for all respondents.

Additionally, the study also used structured interview for the information collected from those top management and concerned department heads. Corbetta (2003), states a structured interview is sometimes called a standardized interview, which is asked to all respondents the same questions with the same wording and in the same sequence. Hoyle, Harris and Judd (2002) state interview have dual goals of motivating the respondent to give full and precise replies while avoiding biases from social desirability, conformity, or other constructs of disinterest.

3.5. Target Population and Sample Design

For the study two types of sampling techniques were used. By using Yamane (1967) simplified formula used to select target respondents from the mass population or workers from operation department and all responsible delegates of OSH departments to the interviewed population and purposive sample were used. From those four CIC factories total 1203 employee working on production department and all the first core management and concerned department heads are targeted.

3.6. Sample Size Determination

To determine the sample size from the target population the researcher used Yamane (1967) a simplified formula. A 95% confidence level and $P = 0.05$ is taken. Sample population taken for the questionnaires were

n= number of samples

$$n = N / (1 + (N * e^2))$$

N= total population

e= sample error

$$n = 1203 / (1 + (1203 * 0.05^2))$$
$$n = 300$$

Thus, 300 operation work employees and all 8 operation department managers and OSH supervisors from those four factories are targeted. Respondents were selected conveniently. Convenience sampling (also known as Haphazard Sampling or Accidental Sampling) is a type of non-probability or non-random sampling, where members of the target population that meet certain practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the purpose of the study. It is also referred to the researching subjects of the population that are easily accessible to the researcher. (Ilker Etikan, Sulaiman Abubakar Musa, Rukayya Sunusi Alkassim, 2015)

3.7. Data Reliability and Validity

3.7.1. Reliability

Reliability refers to the consistency of a measure. The most common measure of internal consistency used by researchers in social science is a statistic called Cronbach's α (the Greek letter alpha) which used to know the level of reliability of this study developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is connected to the inter-relatedness of the items within the test. The values for reliability coefficients range from 0 to 1.0. Generally, if the

reliability of a standardized test is above 0.80, it is said to have very good reliability; if it is below 0.50, it would not be considered a very reliable test.

Reliability Statistics			
Variables	Alpha Test	N of Items	Total N Cases
Total	0.87	31	247
Safety practices	0.80	11	247
Health practices	0.76	5	247
OSH practices effectiveness	0.82	7	247
Challenges of OSH	0.78	8	247

The alpha coefficient for the 31 items is 0.87, suggesting that those items have relatively high internal consistency.

3.7.2. Validity Test

Validity determines whether the research truly measures that which it was intended to measure or how truthful the research results are (Joppe 2000). The researcher applied pilot test to determine validity of questionnaires before distributing final data collection tool.

3.8.Data Analysis and Method

The analysis of the data collected was done after all required data are collected. The responses were classified and summarized on the basis of the information provided by the respondents. Qualitative and quantitative both tools were used for analysis. With the quantitative tools, the current version of Statistical Product and Services Solution (SPSS) data analysis program, Microsoft excel, absolute figures, tables and percentages was used, whereas qualitative made use of descriptions, analysis of feedback from interview.

So, This study is a descriptive type of research and tried to explain the basic research question which are; What are occupational safety management practices of the corporation?, what are occupational health management practices of the corporation?, how is the effectiveness of OSH management practices according to Labor Law?, and what are the challenges and future needs in practicing OSH management?.

The corporation manages four chemical processing factories and three projects. The study was targeted all those four factories of the corporation. The sample size is three hundred of the total operation department workers.

Interview was held with top level managers of all the four factories and questionnaires were given to the workers from each factory proportionally.

Convenient sampling was used for the sampling the targeted workers based on certain practical criteria, such as easy accessibility, geographical proximity, availability at the data collection time, and also their willingness to participate for the purpose of the study. Total population of these four chemical factories are workers in the operation department which were one thousand two hundred and three, two hundred forty seven were responded to the questionnaire out of three hundred which makes 24.9% sample size.

The time horizon of the study is a cross sectional type of study. By combining the responses from the top management & supervisors and the workers a more reliable and sound information was gathered so as to clearly describe the practices of the company.

Steps followed to undertake this study:

1. The first step was clearly defining the problem which occurred in the corporation based on the current situation and stating the questions which needs to be answered by the study.
2. Next the general and specific objectives were stated to answer the research questions.
3. Thirdly defining the research method, which includes, identifying the research type, the data collection method, and also the type of analysis to be done to interpret and to conclude the results and findings.
4. Then next the data collection instruments were prepared, which was the interview questions for the top level managers and questionnaire for the workers who are in the operation department.
5. The sample for this study includes one top level manager and OSH department coordinator from every chemical factory to respond to the interview, and totally 300 workers which is taken proportionate number of operation department workers from each factory to respond to the questionnaire.

CHAPTER FOUR: RESULTS & DISCUSSIONS

This chapter covers the presentation of responses, analysis and findings of data collected from diverse sources, i.e questionnaire, interview, personal observation and documentary evidence.

4.1. Response Rate

The study targeted and distributed 300 questionnaires to operation department from the total population and from that 247 or 82.3% are responded.

4.2. Analysis of Collected Data

The data is collected from four chemical processing factories those are Mugher cement factory cement manufacturing factory, Adami Tulu Pesticide Processing Factory, Awash Melkassa chemical processing Factory and Batu Caustic Soda Factories. 300 questionnaires were distributed proportionally on the basis of the production worker number.

The researcher is committed to get the right data from all targeted respondents supported by concerned department supervisors and delegated responsible body. All questionnaires distributed to target population by their own company OSH supervisors but on the beginning the researcher oriented them and asked permission from factory general managers and the corporation dedicated to write cooperative letter to all factories.

As all factories have very high concentration of chemicals, gasses and acidic content the research based on the external human part protection practices, effectiveness and challenges. Safety and health issues policy, plan and report, training, provision, inspection, monitoring, supervision and evaluation, proper usage, effectiveness of the practice and challenges hindering the company were studied.

The research has four problems and to data to each problem the questionnaire made to have five to eleven questions. And regarding occupational safety there were eleven questions, about occupational health there were seven questions, regarding the effectiveness of company OSH practice there are five questions and lastly about challenges hindering the company when implementing OSH are eight questions. And each question have five respective answering chooses like strongly agree, agree, neutral, disagree and strongly disagree having five to one value to the question.

4.1.1. Demographic Data

Age level	Male		Female		Total	
	Freq	%	Freq	%	Freq	%
From 18 to 29	13	(5.26%)	0	(0.00%)	13	(5.26%)
From 30 to 45	163	(66%)	13	(5.26%)	176	(71.26%)
From 46 to 55	53	(21.46%)	5	(2.02%)	58	(23.48%)
Level of edu						
Diploma	126	(51.01%)	8	(3.24%)	134	(54.25%)
First degree	38	(15.38%)	5	(2.03%)	43	(17.41%)
Master's degree	1	(0.405%)	1	(0.405%)	2	(0.81%)
Others	64	(25.91%)	4	(1.62%)	68	(27.53%)
Level work of experience						
From 1 to 3 years	18	(7.29%)	2	(0.81%)	20	(8.10%)
From 4 to 7 years	44	(17.81%)	2	(0.81%)	46	(18.62%)
From 8 to 12 years	34	(13.77%)	4	(0.62%)	38	(15.39%)
above 12 years	133	(52.85%)	10	(4.05%)	143	(57.90%)
Work position						
Operator	67	(27.13%)	3	(1.22%)	70	(28.3%)
Engineer	21	(8.50%)	4	(1.62%)	25	(10.1%)
Foreman	19	(7.70%)	1	(0.41%)	20	(8.1%)
Technician	38	(15.4%)	4	(1.62%)	42	(17.0%)
Other	84	(34.0%)	6	(2.43%)	90	(36.5%)

Source: Survey finding (2019)

The above table indicates that, 229 (92.71%) of the respondents were males and the remaining 18 (7.29%) of the respondents were females. The majority of the respondents 176 (71.26%) were found in the age range of 30-45 followed by 46-55 consists 58 (23.48%). The remaining respondents are in the age level of 18-29 which consist of 13(5.26%). The result indicates that majority of the employees of the companies are in the productive age, which can give the corporation an opportunity to enhance its service by utilizing these energetic staff.

With regard to the respondents' educational level, the more than half of them 134 (54.25%) were diploma holders followed by first degree 43(17.41%) and others 68(27.53%) respectively. Whereas 2 (0.81%) had Master's degree. This result reveals that majority of the respondents were have required technical educated and this can help the accuracy of the response since they can understand the intention of the survey and respond accordingly.

Concerning the work experience of respondents, more than half or 143(57.90%) have above 12 years' experience followed by experience of 4 to 7 years and 8 to 12 years which consists 46(18.62%) and 38 (15.39%) of the respondents respectively. The remaining 20 (8.10%) of the respondents have an experience of 1-3 years. The result indicates that the majority of the employees of the organization are well experienced.

The table above regarding working position of respondents indicates the various categories of the respondents in those four factories. From the table 28.3% of the respondents were operators, 10.1% were process and site engineers, 17% are technicians, 8.1% are foreman and 36.5% were others.

4.1.2. Occupational Safety Practices

Those activities considered as safety practices are, issues like; availability and know how on policy and procedures of OSH, training to workers on how to operate on their machines, installation of fire safeguarding systems and machineries, proper provision of personal protective equipment's, insurance coverage to employees, monitoring inspecting and supervising the safety of worker, machineries and worksite, controlling proper usage of safety materials, timely recording & reporting accidents and incident and participation of workers on OSH practices.

Table 5- Result of Occupational Safety practices

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		F	%	F	%	F	%	F	%	F	%		
1.	The factory give induction training to new production department workers	52	21.1	161	65.2	1	0.4	17	6.9	1	0.4	2.06	0.88
2.	The factory conducts training to its production department workers on how to operate the machines.	68	27.5	148	59.9	1	0.4	25	10.1	5	2	1.99	0.93
3.	There is regular inspection of electronic system and fire extinguisher performance.	71	28.7	100	40.5	3	1.2	54	21.9	19	7.7	2.39	1.31
4.	There is timely provision of required personal protective equipment's to employees as specified by company collective agreement.	43	17.4	154	62.3	0	0	42	17	8	3.2	2.26	1.04
5.	For any risk at work the factory has full insurance coverage to all its employees	1	0.4	5	2	0	0	175	70.9	66	26.7	4.21	0.58
6.	The factory regularly monitors and checks the employee's usage of provided personal protective equipment.	34	13.8	156	63.2	3	1.2	47	19	7	2.8	2.34	1.03

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		F	%	F	%	F	%	F	%	F	%		
7.	There is regular monitoring and checking of working machineries to safeguard.	34	13.8	132	53.4	0	0	78	31.6	3	1.2	2.03	1.11
8.	Employees are aware the backside effect of not properly using of personal protective equipment's in worksite.	12	4.9	47	19	1	0.4	136	55.1	51	20.6	3.68	1.14
9.	There is serous controlling of illegal substances; chat, drinking alcohol & the like not to be used and inter in the workplace	32	13	59	23.9	18	7.3	87	35.2	51	20.6	3.27	1.37
10.	There is immediate incident and accident reporting and system when happen	20	8.1	19	7.7	2	0.8	167	67.6	39	15.8	3.75	1.07
11.	There is employee participation of asking and launching information on OSH issues	19	7.7	82	33.2	1	0.4	110	44.5	35	14.2	3.24	1.26
Grand Mean											2.54	0.51	

Source: Survey finding (2019)

The above table describes the results for statement under the occupational safety practices of the company. The result indicates more than half or six out of eleven questions under this element and the grand mean of those all questions under this variable are falls in between 1.81–2.60,

which indicates disagreement of the respondents on the points. The remaining three questions concerning employee know how on the side effects of not using PPE, timely reports of incidents & accident and full insurance coverage for all employee fall between the agreement intervals of 3.41-4.2& 4.21-5.00, which indicates an agreement & strongly agreement on the mentioned points respectively and the rest of the two questions response fall under 2.61- 3.40 which indicate undecided to respond on this issues.

4.1.2.1. Induction training to new employees

The result of this study shows that, there is a claim by employee's on induction training given to new employees. Nishgaki (1994) defined "human ware" as a function composed of leadership, fellowship, and the interaction between them. His suggested that the major causes of OSH failures are; inadequate safety education, inadequate instruction and willful transgression. Employers and employees attitudes play a major part in safety on site. Management commitment is responsible for the majority of the "human-ware" problem.

4.1.2.2. Training to workers on how to operate the machines

Employees have a claim on training given by their company regarding how to operate on their machineries, that they get enough awareness about their machines operation mostly by experience. All companies were not giving proper consideration in training to their production department workers. And the result shows that there is inadequate awareness that cause misunderstanding to operate and protect their safety.

4.1.2.3. Provision of Personal Protective Equipment and Usage

As the result shows provision of PPE as specified by the law, from all only 17% respondents agreed there is enough practices by the company's on provision of personal protective equipment's. 63.2% respondents indicated that there is no proper inspection of OSH practices by the company. 55.1% of them responded that employees have enough awareness on side effect of not using protective equipment's. As the researcher observed all factories worksite only in one from those four factories proper personal equipment provision as specified in the law the rest three factories didn't provide as specified, providing the years back, under quality material, not providing for the long years to no provision are observed but managers who are interviewed

implied that they are providing within the company capacity, they said, PPE are very costly and require huge amount of capital each year however their company is not affording it and most of the workers as said they know the side effects of not using PPE in worksite but as observed most of them are not properly using their safety materials having the reason that equipment's are at less quality the company is providing. There is no regular check and control of OS practices in any one of them and Reynolds 2011 and Kariuki 2007 are implied that, Provision of occupational health and safety services means carrying out activities in the workplace with the aim of protecting and promoting workers safety, health and well-being, as well as improving their working conditions and the working environment. So, the reality on provision of PPE to its workers is not promoting their safety. Under this, employers were to note that suitable personal protective equipment having regard to the type of work and risks, should be provided and maintained by them without cost to the workers. Also under this provision, personal protective equipment should comply with standards set by the authorities, taking into account as far as possible the ergonomic principles. Further, employers should provide the workers with the appropriate training to enable them to use the individual protective equipment, and should require and ensure its proper use.

4.1.2.4. System of Accidents& Incident Recording

The finding output indicates that all factories there is a system keeping records of all the accidents and their causes that happened in the worksite mainly for the purpose of insurance process by coordination of safety officers and health centers professionals. All factories stated that their company has full insurance coverage for each worker for accidents occurred in worksite and work time. In the two factories fire extinguishers were fully installed in the right place and were found to be renewed every time before their expired. But in the other two factories, fire extinguishers were there but most of them were partially and fully expired and needs to be renewed. All factories are claimed that, there is no training about personal and others health problem protection and counseling service. And all factories claimed on having qualified safety and health professionals.

4.1.2.5. Awareness of Occupational Safety Issues

One of the ways in which employers meet legal obligations to advise health and safety information to protect workers is through training. A recent systematic review by the Institute for Work & Health (IWH) concluded workplace training and education have a positive impact on the health and safety practices of workers (Robson et al, IWH, 2010).

Two factories were described the level of the awareness about the organizational OSH policy at lower level and two of them are claimed that there awareness is at a middle level. All factories stated that they have OSH committee but any of them are not functional according to their stated guideline or responsibility given by higher controlling institute. In all factories there is no timely checking, monitoring and inspection as well as maintenance of working machineries as claimed. Mostly they indicated and also observed that in most of the time machinery maintenance is done after they stopped working or at the time of problems.

4.1.2.6. Employee participation on OS activities

From the finding 58.7% of respondents indicate that, employees participate on OSH activities by asking and complaining on issues. And 40.9% of them said that they have no any participation regarding OSH activities. The role of management and involvement of all employees are very important in order to cultivate the positive beliefs, norms, practices and attitudes are the important keys that play in safety and health cultures. According to Gardner et al., (1999), the promotion of OSH cannot be achieved without the employee's full co-operation and commitment.

Generally, as the data from the respondents and the aggregate mean indicated, the company occupational safety management practices are under the standards that causes different compliances and dissatisfaction of employees on their workplaces.

4.1.3. Occupational Health Practices

Occupational health practices considered by this paper are issues like, training and consultation on personal health issues, availability and service quality of health professionals, proper setup and availability of emergency kits, regular medical evaluation of employees working in hazardous worksite, full medical expense coverage by the company, availability of medical referral system to those over the company capacity and securing of employees health and medical information.

Table.6. Occupational Health Practices of the Company

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
1.	The factory provides health training and medical consulting service to employees.	53	21.5	147	59.5	0	0	47	19	0	0	2.17	0.98
2.	There is a nurse and doctor that give medical service to the staff.	47	19	121	49	4	1.6	64	25.9	11	4.5	2.48	1.19
3.	There is first aid, emergency dispensary facility in the workplace.	82	33.2	115	46.6	0	0	44	17.8	6	2.4	1.10	1.12
4.	Periodic medical examinations are conducted to those staffs	58	23.5	146	59.1	0	0	39	15.8	4	1.6	2.01	1.00

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
	exposure to hazards.												
5.	For any medical services the factory covers its full expense for its all employee's.	1	0.4	33	13.4	0	0	157	63.6	56	22.7	3.95	0.89
6.	There is referral system for those medical services above the company service.	3	1.2	37	15.0	0	0	146	59.1	61	24.7	3.91	0.98
7.	All employees medical and health history record are maintained secretly.	9	3.6	39	15.8	6	2.4	139	56.3	54	21.9	3.79	1.06
Grand Mean											2.77	0.61	

Source: Survey finding (2019)

Table.6. describes the results for statement under the occupational safety practices of the company. The result indicates more than half or four out of seven questions under this element falls in between 1.81–2.60, which indicates disagreement of the respondents on the health practice of the company. The remaining three questions concerning employee medical expense

full coverage by the company, higher medical examination referral to highest health service giving center/hospitals and secured system of personal medical information are fall between the agreement intervals of 3.41-4.2, which indicates an agreement on the listed points.

4.1.3.1. Training and Medical consulting service

To describe the issue, majority of the respondents, which consists 81.0% are replied that they do not get any health related or personal and others health protection training and counseling but the rests 19% of them are replied that they are getting health orientation and counseling in the workplace. More than half of the respondents or 68% of them are disagreed on the availability of qualified health professional or quality service they providing which is serving effectively employees in need with only 32.0% of them agreed that there are qualified professionals.

4.1.3.2. Availability of First-Aid and Emergency

Largely, 79.8% of the respondents disagree on the availability of emergency kits in the workplace only 20.2% are agreed that there is kits availability in the worksite. Supporting the result, as the researcher observed in all worksites there is no emergency kits readily available for its purpose in any one of the factory available only in the health center/clinic. Additional to these except one factories health center other three factories health centers are fully equipped with the appropriate first aid kits. The rule is that employers are to provide first-aid facility for every employee on a work site. It is required by law that employers are to provide first-aid room properly constructed and accessible for purpose of rest and treatment, and it should be operational during working hours.

4.1.3.3. Full medical services expense and referral system

Most of the respondents or 86.3% agreed that the company provided its employee full medical expenses and also 83.6% and 78.2% agreed on higher medical referral and security of personal medical information questions respectively.

4.1.3.4. Periodic medical examinations

These chemical factories are dangerous for internal and external parts of human parts; each and every person working in this worksite must check their health condition regularly. As indicated in the finding 82.6% of respondents replied that there is no regular health status examination taken by the company to those employees working in hazardous sites but those 17.4% agreed there is regular medical examination. As observed expect one factory others don't give any attention to regular medical examination of their workers but they send employees to medical checkup after they get problem.

Generally, as the finding indicated on the above points observed result is also not different from that. Regarding medical services, any service above first aid is out resourced to those capable service giving centers, but the backside of outsourcing this service as employees explained have effects on the productivity of the company, because it takes time to get the service and it costs high to the company. They said, it is good if all medical service were there in the company, this requires upgrading the health center there service level.

Generally, as the data from the respondents and the aggregate mean indicated, the companies occupational health related management practices are not satisfactory to most of its employees which cause the company to high cost of workers' health treatment over time.

4.1.4. Effectiveness of OSH Practices

This study taken effectiveness measuring variables like; employee know how about the OSH policy of the company, safety committee performance, regular evaluation of OSH performance, management commitment in responding on issues of OSH as occurred and controlling of proper usage of safety protection equipment's by employees.

Table.7. Effectiveness of OSH Practices of the Company

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
1.	Employees have enough understanding about OSH policy or guideline.	24	9.7	110	44.5	2	0.8	94	38.1	17	6.9	2.88	1.22
2.	The OSH committee performs properly its duty of supporting in safeguarding employee and workplace safety.	73	29.6	125	50.6	4	1.6	40	16.2	5	2	2.11	1.07
3.	The factory regularly evaluates OSH practices and takes corrective action to those issues requiring.	76	30.8	126	51	1	0.4	36	14.6	8	3.2	2.09	1.09
4.	The factory controls seriously the usage of personal protective equipment's.	58	23.5	130	52.6	2	0.8	44	17.8	13	5.3	2.29	1.16
5.	The factory management is committed in responding safety and health issues quickly.	47	19	130	52.6	2	0.8	57	23.1	11	4.5	2.41	1.17
	Grand Mean											2.35	0.79

Source: Survey finding (2019)

Table.7. describes the results for statement under the occupational safety practices of the company. The result indicates except one from those of five questions under this element falls in between 1.81–2.60, which indicates disagreement of the respondents on the effectiveness of occupational safety and health practice of the company. The left one question regarding employee’s knowhow on OSH policy of the company is fall between the agreement intervals of 2.61-3.40, which indicates an agreement level of undecided or neutral on this issue.

4.1.4.1. Company OSH policy and Procedures

From the interview all factories managers and concerned department heads indicated that their companies have OSH policy detailed activities also included in the company collective agreement and as observed they have it but not implementing it fully. But majority or 54.2% of respondents indicated that they don’t have full understanding on the company OSH policy but 45% of them said they know the policy properly.

4.1.4.2. OSH committee

Regarding safety committees 78.9% of respondents replied that they don’t know what safety committee is and it is not functional at all. According to MOLSA report from 2723 manufacturing companies in our country and 5.3% of them have established OSH committee in their own industries. About 95% of the manufacturing companies have no OSH committee that carries out follow up activities of their workplace safety conditions. Companies with good safety efforts allocated safety expenditure at the corporate level and assess accident costs at the project level. So, as the study indicated that, in any of the factory there is no one effective safety committee and also this is not a big concern for the management of the company.

4.1.4.3. Regular evaluation of OSH practices

From the finding 81.8% of respondents replied that there is no regular evaluation of OSH activities with only 17.8% agreement response to this activity. And 76.1% of them are not agree and also strongly disagree to the checking and controlling of employees proper safety equipment

usage issue and 23.1% were indicated that there is a proper controlling and the rests were neutral to these question. According to Peyton et al. (1991), Periodic review of safety record including accident statistics, reports of injuries and results of safety inspections is a valuable safety tool. Such a review focuses attention on the safety effort and can pinpoint those problem areas that need further safety attention. It is important to know the causes of accidents so that attention can be directed at controlling them. As indicated on other research and tested by this study the issue of safety and health are no reviewed at all on the regular company review session. And Nishgaki (1994) also suggested that regular inspection of the site by safety patrols promotes good job safety.

4.1.4.4. Management commitment to OSH practices

From the finding, management commitment to OSH practices shows 71.6%, that of the respondents agreed company management is not committed to proper and timely response to the OSH issues and 27.6% of respondents are indicated management is committed to the issue but 0.8% of them were neutral to answer the question. This result again verified by Peyton et al. (1991) and MOLSA (2012) report, OSH effort without the full support of the company's top management will meet with only limited success. As MOLSA reported that health and safety practice received little attention and comes at low levels in the lists of national priorities and additionally, specific strategies or guidelines to tackle these issues have not been put in place in 95% of manufacturing companies in the country. Harper (1998) and Holmes (1999) suggested that management commitment is required to enforce the wearing of safety equipment. Consequently, the provision of safety equipment alone does not improve construction site safety, there also needs to be a corporate culture that encourages its use. Generally, all information collected by interviewing managements of all factories, the fact were contradicting from that of workers responses but as the researcher observed every aspects of worksite, the reality is in between the two, not as bad as employees saying and not good as managers indicated.

Generally, as the data from the respondents and the aggregate mean indicated, the companies OSH related management practices were not effective, so problems related to safety and health of employees are becoming time taking to respond and correct.

4.1.5. Challenges of OSH for the Company

Important measuring variables considered in the challenge part of the company are cost of OSH equipment's as a challenge, the less awareness of employees on OSH practices as a challenges, having under qualified OSH professionals as a challenge, unwillingness of workers to use provided equipment's as a challenge, lack of regular supervision and control of OSH practices as a challenge, the costs of inputs for OSH related issues training as a challenge, the commitment of leaders in proper planning, regular supervision and report as a challenge and lower attention by delegates of factories to OSH practice as a challenge. Then the study finding indicates the following challenges:

Table.8. Challenges of OSH

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
1.	Considering the provision of personal protective equipment as a cost burden to the factory is a challenge.	47	19	116	47	0	0	65	26.3	19	7.7	2.57	1.27
2.	An absence of clear understanding about OSH issues by employees of the factory is a problem.	4	1.6	60	24.3	1	0.4	142	57.5	40	16.2	3.62	1.07
3.	Unavailability of the right OSH professionals in the factory is a challenge.	6	2.4	56	22.7	0	0	136	55.1	49	19.8	3.67	1.11
4.	Unwillingness of workers to use personal protective equipment in the factory is a challenge.	24	9.7	142	57.5	1	0.4	76	30.8	4	1.6	2.57	1.08

No	Items	Responses Level										Mean	Standard Deviation
		Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree			
		Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
5.	The absence of regular monitoring and controlling of workplace safety is a challenge.	14	5.7	33	13.4	0	0	101	40.9	99	40.1	3.96	1.2
6.	Considering OSH training expenses as a cost by the factory management is a challenge.	19	7.7	48	19.4	1	0.4	103	41.7	76	30.8	3.68	1.30
7.	Absence of preparation of delegated department to develop proper planning and reporting of OSH activities is a challenge.	10	4	38	15.4	4	1.6	102	41.3	93	37.7	3.93	1.17
8.	Overall management lack of commitment to OSH issues is a challenge.	13	5.3	44	17.8	4	1.6	87	35.2	99	40.1	3.87	1.26
Grand Mean											3.49	0.60	

Source: Survey finding (2019)

Table.8. describes the results for statement under the challenges hindering the company in the implementation of occupational safety health activities. The result indicates two from those of eight questions under this element falls in between 1.81–2.60, which indicates disagreement of the respondents saying that these issues are not challenges to the company. Those six questions regarding employee awareness on OSH practice, OSH qualified professional availability, regular inspection and control of OSH practices, proper planning and reporting of OSH practices and management commitment are falls between the intervals of 3.41-4.20, which indicates an agreement level of agreeing on these issues as they are challenges to the company.

From the finding, more than half of the respondents or 66% them indicated that costs or expenses to PPE are not challenges, however 34% of the respondents replied that costs of PPE are burden to the company. As Ingalls, (2002) a work done on 'measures on safety performance' identify and interview managers of the company explained that there is also a high cost of providing health and safety materials at work places which discourages management from fully executing health and safety standards in companies thereby leaving employees at the mercy of unsafe work environment.

As identified by the finding, most of respondents or 67.2% of them replied that employees are unwilling to wear personal protective equipment, 32.4% of them are agreed that workers are willing and properly using their personal protective equipment's and the rest are neutral to this question. Additionally, 74.9% of the respondents answered that lack of unqualified OSH professionals is a challenge. As stated by Ingalls, (2002), unqualified safety officers employed to manage the health and safety issues in many companies has been the misery of industrial accidents thereby causing needless industrial injuries and loss of life. There is lack of routine, regular and seasoned training courses on safety management for workers to appreciate the need for occupational health and safety precautions. Dejoy (1985), showed that safety records reflect how upper management perceives the causes of safety performance. The safety and health program is most effective when it involves two-way communication between workers and managers. However, high level management often has little firsthand experience on site; it is therefore difficult for them to relate to the needs of the workers. The wearing of protective clothing and the use of safety equipment is crucial in reducing the effects of accidents on operation sites.

From the finding 73.7% of respondents replied that lack of awareness on OSH issues is challenge, but 25.9% of them not agreed on this question that is workers have enough awareness and it is not a challenge to the company. According to Peyton et al. (1991), safety and health training and orientation are necessary elements of an effective safety and health program. Supervisors and workers must understand the company's safety policy and procedures and the hazards associated with the work. When employees first arrive on site, a safety orientation training program should be provided.

Regarding regular worksite supervision and control 81% of respondents are agreed that there is no regular supervision and controlling proper performance. Thus worksite supervision and control is a big challenge for the practice of OSH. More over 79% of respondents said delegates of the concerned department have no full preparedness to proper planning and reporting of OSH practices were a challenge. As (DeJoy, et al. 2000) said, there is lack of governmental control and monitoring program to visit business organizations particularly manufacturing companies to unravel whether these companies comply with certain minimum safety standard. This is also real for the study company as interview and observation data shows, there is absence of proper and regular supervision and control of company OSH practices by higher institutes or governmental bodies, which made the company more reluctant on proper OSH implementation.

Lastly, 75.3% of respondents agreed that company management lacks commitment to OSH issues at all and 23.1% respondents were disagree with this question. And as the researcher observed worksites, all those challenges are real problems of the company but the level of challenges differs. Mostly company management top concern is for machines performance that is first priority to working material not for human related issues. But it is important to give equal attention to machines and workers.

CHAPTER FIVE:

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter is the concluding part of the study. It looks into the summary of the entire work done; conclusion and recommendations are given as follows.

5.1. Summary of major finding

From the data analysis, it was established that majority of the company occupational safety and health management practices are induction training, full worksite insurance coverage to all employees, medical referral system for illness over the capacity of health center of the company, have registered doctors or nurses to deal with health issues, conduct medical examination on their potential employees during recruitment, have employee medical scheme, do not practice employee counseling and rehabilitation and do not promote physical fitness activities among employees. Majority of the company delegates are reluctant in enforcing safety and health rules and regulations among employees, don't have adequate resources to meet the minimal statutory health requirements, and do not have adequate health facilities in company health centers.

Most of the all companies of the corporation have clear health records for employees, do not carry out drug testing and screening to detect excessive drug abuse among their employees, ignore physical fitness practices and have no effective physical fitness programs. Most of them don't carry out inspection, maintenance, and repair of machines at the workplace on regular bases; have efficient physical plant layout; promote safety education practices; and proactively identify hazards at the workplace for mitigation purposes. At the same time, only a few delegates handle safety issues individually or as a group of their employees at the workplace.

Generally, the findings indicated the studied company is not effective in properly implementing both occupational safety and health activities. That is the current occupational safety and health practices at the company were not adequate.

5.2. Conclusion

This research work is assessing the practices of health and safety needs on the factories of Chemical Industry Corporation.

Occupational safety and health management practices should be given first priorities in any manufacturing companies. As well it requires greater management commitment. The main aim of occupational safety management practices is to create an accident free working environment by identifying, investigating, controlling and eliminating risks and hazards which cause accidents (Health and Safety Executive, 2006).

There cannot be any effective occupational health and safety policies if both employers and employees fail to perform their respective responsibilities. The employer is supposed to organize company accident reports, maintain records on health and safety issues, posting safety notices and legislative information, providing education and training on health and safety. The employer is required to institute a safety committee to be in charge of all health and safety related issues. The safety committee is responsible for studying trends in accidents with the view to making suggestions for corrective actions, examining safety reports and making proposals for avoiding accidents, examining and discussing reports from safety representatives, making proposals for new or revised safety procedures. It also acts as a link between the organization and the enforcement agency (the health and safety inspectorate), monitoring and evaluating the organization's safety policies, and making proposals for changes, if necessary. The employee on the other hand is required to comply with all health and safety rules, knowing that the person ultimately responsible for his/her health and safety is himself/herself. Staffs are required to wear protective clothing, use equipment and tools provided for their work, and report any contravention of the law by management. Also the employee has the right to refuse unsafe work. Accidents are costly both to the affected worker and the organization. Therefore, every effort should be made in order to avoid them from happening at the work place.

So, this study indicates that occupational safety and health management practices of the company stated; induction training to new hired workers, having clearly stated OSH rules and regulations; planning, recording and reporting OSH practices, installation and regular inspection of fire extinguisher, provision of personal protective equipment's. On the other hand, inspection,

maintenance and repair of machines; Employee protection from hazards and accidents or dangerous incidences; engaging in employee safety education; hazard identification and mitigation practices are the main occupational safety management practices of the company as observed.

Managers and workers in the company face different challenges in the workplace while implementing occupational safety and health management practices in creating a safer and healthier working environment. As observed from the finding; high cost of OSH equipment expenses, employee awareness on OSH policy and activities, unavailability of OSH qualified professionals, unwillingness to use PPE by the workers having the reason of under quality materials, lack of regular worksite supervision and control, training expense as cost in the eyes of management and less commitment. To conclude that, the company low level of attention to all OSH practices and less priority is were observed. Thus, ineffective occupational safety and health policy have a negative effect on the organization as well as the workforce.

5.3. Recommendations

Based on the discussed findings, the following points are recommended to the corporation as it is policy maker to those factories under its control and to indicate solutions for the problems:

The company regarding occupational safety management practices should be given top priorities. Thus; Organize regular proper induction and training for staff, employees should be made to understand that safety and health practices are the responsibility of both management and staffs and this will go a long way to make the work area safe.

The company is required to institute a safety committee to be in charge of all health and safety related issues. The safety committee is responsible for all trends in OSH practices, with the view to making suggestions for corrective actions, examining safety reports and making proposals for avoiding accidents, examining and discussing reports from safety representatives, making proposals for new or revised safety procedures. It also acts as a link between the organization and the enforcement agency (to the MOLSA), monitoring and evaluating the organization's safety policies, and making proposals for changes.

The company should regular implement inspection and maintenance of operating machines and equipment to make them safe for use. And since fire hazard is always dangerous and can make lots of damage to the workers as well as the workplace and the Ethiopian labor law states that there should be fire extinguishers available in every 15m distance and 1.5m above the ground, must be checked regularly, changed or filled on time, this can able the company to minimize the damage from fire hazards. Fire extinguishers and first aid treatment should be properly installed and fully provided in all factories to be protected from fire accidents in the work place, first aid until they get clinical treatment and overall to overcome different occupational hazard.

The company also should give big attention for occupational health practices, regular medical examination to its employee, upgrading internal health center service, altering problems of health professionals and should do to have qualified and ethically equipped medical service providers. There must be regularly supervising worksite & workers safety and taking quick corrective action on observed OSH problems to have safest overall working environment. Some industrial accidents that happen could have been avoided if effective supervision were carried out during the accomplishment of duties at the work place.

REFERENCES

- Abdul Rahman, B. (2006). Keynote address “Driving Improvements in Occupational Safety and Health”. In K. Soehod, & L. Laxman (Eds.), *Law on Safety and Health in Malaysia*.
- Abera Kumie. (2016). Occupational Health and Safety in Ethiopia. A review of Situational Analysis and Needs Assessment, Addis Ababa University, Ethiopia.
- ACKOFF, R. L. (1953). *The Design of Social Research*, Chicago, University of Chicago Press.
- Aliaga, M. and Gunderson, B. (2002). *Interactive Statistics. [Thousand Oaks]: Sage*
- Amera T, Abate A. (2008). An assessment of pesticide use, practice and hazards in the Ethiopian Rift Valley. Institute of Sustainable Development and Pesticide Action Network (PAN-UK). www.pic.int.
- Armstrong M, (2006). Human Resource Management Practice, 10th Edition. London, Kogan Limited.
- Benjamin A. (2001). Fundamental principles of Occupational Health and Safety. Geneva International Labour Office.
- Benjamin O. ALLI. (2008). Fundamental principles of Occupational Health and Safety. (2nd ed.).
- Benyakowa Attabra-Yartey (2012), Assessing the impact of Occupational Health and Safety needs on the Lives of construction workers. A study at Abasa General Enterprise limited-kumasi Cascio, W.F.(1986). *Managing Human Resources Productivity, Quality of Life, Profit: New York: MC Graw-Hill*
- Brewer S, King E, Amick B, Delclos G, Spear J, Irvin E, et al (2007). A systematic review of injury/illness prevention and loss control programs (IPC). Toronto: Institute for Work & Health;
- Brown, R. L., & Holmes, H. (1986). The use of a factor analytic procedure for assessing the validity of an employee safety climate model. Accident Analysis and Prevention,
- Chelule A.R., (2010). Quality of Work life Programs and Employee Satisfaction, A Survey of UNICEF Employees: Unpublished MBA Project, University of Nairobi.

- Conrad P., (1987). Wellness in the Workplace: Potentials and Pitfalls of Worksite health promotion.
- Diamond, W. and Freeman, R. (2001) What Workers Want for Workplace Organizations: A Report to the TUC's Promoting Trade Unionism Task Group, London, TUC
- DeJoy, C. E. (2000). Implementing and evaluating a system of generic infection precautions: Body substance isolation.
- Friend, Mark A. and Kohn, James P. (2007). Fundamentals of Occupational Safety and Health, Maryland, the Scarecrow Press.
- Gall, M.D., Gall, J.P., & Borg, W.R. (2007), Educational research: An introduction (8th ed.). Boston: Pearson
- Gardner D, Winder C. Qua Assur (1999), Occupational health and safety management systems. Department of Safety Science, University of New South Wales, Sydney, Australia.
- Håvold, J.I. (2005), Measuring occupational safety: from safety culture to safety orientation IOSH, Policy and Practice in Health and Safety.
- Hendrick M., (1991). The technology of ergonomics: Human- System Interface Technology (HSIT)
- Hoyle, R. H., Harris, M. J. & Judd, C. M. (2002). Research Methods in Social Relations. London: Thomson Learning, Inc.
- Ilker Etikan, Sulaiman Abubakar Musa, Rukayya Sunusi Alkassim, (2015), Comparison of Convenience Sampling and Purposive Sampling.
- ILO-OSH (2001). Guidelines on occupational safety and health management systems, Geneva, International Labor Organization (ILO)
- International Labor Standards on Occupational safety and health, (1996-2014), Geneva, International Labor Organization (ILO)
- Joppe (2000) Understanding Reliability and Validity in Qualitative Research<https://core.ac.uk/download/pdf/51087041.pdf>

- Johnstone, R., Bluff, E., & Clayton, A. (2012). *Work health and safety law and policy* (3rded.).
- Kariuki M.M., (2006). A survey on the Perception of Staff Welfare Programs in Large Manufacturing Firms in Nairobi. Unpublished MBA Project, University of Nairobi.
- Kassu Jilcha. (2016). Occupational safety and health practice & accident severity.<http://ijqr.net/journal/v10-n2/4.pdf>
- Kramer M.D., and Shain , M., (2004). *Health Promotion in the Workplace: framing the concept, Occupational and Environmental Medicine*
- Marshall. C, & Rossman. G. B. (1989). Designing qualitative research. Newbury Park, CA: Sage.
- Ministry of Labour and Social Affairs. *Occupational Safety and Health profile for Ethiopia*. October. Addis Ababa October 2006.
- Mohsen Tavakol, Reg Dennick. (2011). Making sense of Cronbach's alpha,International Journal of Medical Education.
- Nichols, T., & Armstrong, P. (1997). Safety or profit? Robens and the conventional wisdom. In T. Nichols (Ed.), The sociology of industrial injury. London: Mansell.
- Nichols, T and Tucker, E. (2000) OHS management systems in the United Kingdom and Ontario, Canada: Systematic Occupational Health and Safety Management.
- Ojem Duncan Odongo. (2012). Occupational health and safety management practices among the electronic media houses in Kisumu, Kenya.
- Oughton, N., (2007) A Systematic Occupational Health and Safety Management
- Reynolds, (2011)Green jobs and occupational safety and health: Foresight on new and emerging risks associated with new technologies.
- Robens, A. (Lord). (1972). *Safety and Health at Work*, (Report of the Committee 1970-1972). London: HMSO.
- Schensul. Stephen L.; Schensul, Jean J. & LeCompte, Margaret D. (1999). Essential ethnographic methods: observations, interviews, and questionnaires (Book 2 in Ethnographer's Toolkit). Walnut Creek, CA: Alta Mira Press.*

Segni Bobo. (2017). Assessment of occupational health and safety practices and its associated factors among star rated hotels housekeeping workers in Addis Ababa, AAU.

Sikpa Francis Cudjoe (2011). An assessment of Occupational health and Safety Practices on Job Performance at Tetteh Quarshie Memorial Hospital, Mampong-Akuapem.

Steve E. (2003). *An exploration of the right and obligation to refuse unsafe working conditions.*

APPENDIXES

Appendix A: Questionnaires (Type One: For Production workers)

A. Biographical Information Questionnaire

- Gender: Male [] Female []
- Age : From 18-29 [] From 30-45 [] From 46-55 [] Above 55 []
- Educational level: Diploma [] 1st Degree [] 2nd Degree [] Other []
- Job Position:
- Years of service: 1- 3 year [] 4 – 7 years [] 8- 12 years [] above 12 years []

B. Occupational safety and health questionnaire

Values of chooses

1. Strongly disagree 2. Disagree 3. Undecided 4. Agree 5. Strongly Agree

- Select your chooses to each question by using this mark
- Wright your reason for “strongly disagree” and “disagree” chooses on the space provided to those selected questions.

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.	Occupational safety management practices questions					

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.1.	The factory give induction training to new production department workers on OSH issues					
1.2.	The factory gives training to its operation department workers on how to operate the machines.					
1.3.	There is regular inspection of electronic system and fire extinguisher performance.					
1.4.	There istimely provision of required personal protective equipment's to employees as specified by company collective agreement.					
<p>-----</p> <p>-----</p>						
1.5.	For any risk at work the factory has full insurance coverage to all its employees					
1.6.	The factory regularly monitors and checks the employee's usage of provided personal protective equipment.					
1.7.	There is regular monitoring and checking of working machineries to safeguard.					
<p>-----</p>						

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
1.8.	Employees are aware the backside effect of not properly using of personal protective equipment's in worksite.					
1.9.	There is serous controlling of illegal substances; chat, drinking alcohol & the like not to be used and inter in the workplace.					
1.10.	There is immediate incident and accident reporting and system when happening.					
1.11.	There is employee participation in asking, challenging and launching information on OSH issues.					
2.	Occupational Health Management Practices of CIC					
2.1.	The factory provides health training and medical consulting service to employees.					
2.2.	There is a nurse and doctor that give medical service to the					

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
	staff.					
2.3.	There is first aid and emergency dispensary facility in the workplace.					
<hr/> <hr/>						
2.4.	Periodic medical examinations are conducted to those staffs exposure to hazards.					
2.5.	For any medical services the factory covers its full expense for its all employee's.					
<hr/> <hr/>						
2.6.	There is referral system for those medical services above the company service.					
2.7.	All employees medical and health history record are maintained secretly.					
<hr/> <hr/>						
3.	The effectiveness of occupational safety and health practices at CIC					

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
3.1.	Employees have enough understanding about OSH policy or guideline.					
3.2.	The OSH committee performs properly its duty of supporting in safeguarding employee and workplace safety.					
3.3.	The factory regularly evaluates OSH practices and takes corrective action to those issues requiring.					
3.4.	The factory controls seriously the usage of personal protective equipment's.					
<p>-----</p> <p>-----</p>						
3.5.	The factory management is committed in responding safety and health issues quickly.					
<p>-----</p> <p>-----</p>						
4.	Challenges associated with the promotion of health and safety practices in CIC					
4.1.	Considering the provision of personal protective equipment as a cost burden to the factory is a challenge.					
4.2.	An absence of clear understanding about OSH issues by					

No	Statement	Strongly Disagree	Disagree	Undecided	Agree	Strongly Agree
	employees of the factory is a problem.					
4.3.	Unavailability of the right OSH professionals in the factory is a challenge.					
4.4.	Unwillingness of workers to use personal protective equipment in the factory is a challenge.					
<p>-----</p> <p>-----</p>						
4.5.	The absence of regular monitoring and controlling of workplace safety is a challenge.					
4.6.	Considering OSH training expenses as a cost by the factory management is a challenge.					
4.7.	Absence of preparation of delegated department to develop proper planning and reporting of OSH activities is a challenge.					
4.8.	Overall management lack of commitment to OSH issues is a challenge.					

Thank you for your time and important inputs.

You have provided us with very supportive and valuable information!

Appendix B: Interview Questions to Managers

1. General Information Questions:

Factory Name: _____

Position title: _____

2. Occupational safety and health management practice questions:

- a. Does your factory have safety and health policy and procedures?
- b. State occupational safety and health practice of your factory?
- c. Do you have a safety and health professional in your factory? If so, what are the major duties and responsibilities of the safety professional?
- d. How do you describe the awareness of employees about OSH policies of your factory?

Indicate the level performance of OSH practice according to these basic elements:

- i. Management commitment and employee involvement (proper planning, implementation, periodic evaluation and controlling of OSH practices, in assigning proper personnel and allocating required budget)
- ii. Worksite analysis (inspection of working machineries and hazard protection materials, proper usage of personal protective equipment's, conducting periodic risk assessment and level of accident occurrence)

- iii. Hazard prevention and control (system of hazards controlling and its appropriateness, Record keeping of accidents and injuries.
- iv. Safety and health training(induction, training how to use working machineries and protective equipment, side effects and consequences chemicals and improper usage of protective equipment)
- e. Does your factory have OSH committee? If so, how it is implementing its duties and responsibility and is it effective handling its mandate? If not so, what will be your next action to make it effective?
- f. What are the challenges your organization is encountering when implementing OSH practices?
- g. As a manager what do you suggest to overcome those challenges listed before?