



***ASSESEMNT OF OCCUPATIONAL SAFETY AND HEALTH PRACTICES;
THE CASE OF MANUFACTURING COMPANIES AT GURAGE ZONE***

By

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partial fulfillment of the requirements for the Master of Science in Business
Administration***

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Approval Sheet

We, the undersigned, and members of the Board of Examiners of the final open defense, we certify that we have read and evaluate the thesis prepared by Abderazake Wolela and examined candidate. We recommend that it can be accepted as fulfilling the thesis requirement of the Degree of Master of Science in Business Administration.

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Statement of certification

This is to certify that Abderazake Wolela has carried out his research work entitled “Assessment Of Occupational Safety and Health Practices In The Case Of Manufacturing Companies At Guragh Zone” under the guidance of Tasw.S(PhD) and Mr. Minda.Y(Ms). The work is original in nature and is suitable for the submission for the award of the Degree of Masters of Business Administration from the Wolkite University.

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Declaration

I Abderazke Wolela hereby declare that the work which is presented in this thesis entitled “Assessment Of Occupational Safety and Health Practices In The Case Of Manufacturing Companies At Guragh Zone” is the original work of my own and has not been presented for a degree of any other university. All sources of material used for this thesis have been duly acknowledged.

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Abstract

Organizations have both legal and moral obligations to provide healthy and safe working environments as well as ensuring the total well-being of their employees.. All organizations even those with limited resources can achieve an important basic requirement for health and safety within the workplace using minimal resources and maximal management and staff commitment. The study adopted Descriptive Research Design inform of Survey where data was collected from population by use of Primary source for purposes of assessing occupational health and safety practices at manufacturing companies of Guragh Zone. A structured questionnaire was used to collect data. A Five point Likert scale was used to determine the degree to which various OSH practices are being implemented at the companies. The researcher analyzed and report the information in form of tables, bar graphs, percentages, continuous prose and through use of Statistical Package for Social Sciences (SPSS). The findings of the study established that some occupational safety and health practices were found to have been adopted by the organization. However, safety and health inspection have not been implemented, have no practice of designing equipment and work tasks to prevent injuries(ergonomics practices), the companies have not been adopted an emergency action plan which specifies procedures for handling sudden and unexpected situations and the majority of employee in the companies are work under stress. The study recommends that manufacturing companies maintain effective health and safety practices, and be committed to its success.

CHAPTER ONE

1 Introduction

This chapter covers background of the study, statement of the problem, objectives of the study (general and specific objectives), research questions, significance of the study, delimitation of the study, definition of terms and organization of the thesis.

1.1 Backgrounds of the Study

Occupational safety and health is a discipline dealing with prevention of work related injuries and diseases, and the protection and promotion of healthy workers. It aims at the improvement of working conditions and environment. Occupational Safety and Health has recently become a much higher priority in light of the growing evidence of great loss and suffering caused by occupational diseases and ill-health across many different employment sectors, and is of concern to managers at least partly because of increasing number of deaths and accidents occurring at work.. Occupational Health and Safety (OHS) is a complex area which interacts widely with a broader spectrum of business interests and concerns. To date OHS has been confined to the periphery of Human Resource Management (HRM), where its role, influence and importance have been overlooked (Cassio, 2004).

In recent years, the quality, health, knowledge and safety requirements in many countries have been more stringent than was the case previously seen. Some research finding concluded that pressures from communities have led to the enactment of various safety legislations and safety standards in different countries and regions for different industries (Dejoy and Southern, 1993). Ahonen et al. (2002) argue that different international and national safety standards provide guidance to help organizations develop their safety management systems (SMS) with respect to varied business needs and requirements. Despite the fact that people are working and spend most of their working hours at the workplace, little attention and resources are accorded to health and safety at work (Michaels et al., 1985). In emerging economies, workplace safety and health has been overlooked in their industrial development policy and strategies. They are mostly focused on the production volume or profit undermining the latent effect of dissatisfactory working environment. For instance, in Ethiopia, there was no workplace safety and health related stringent policy standing alone for the manufacturing industries. When it is focused on the

workplace safety and health it is to mean that there should be both rules of effective resource utilization and safe workplace environment for employees where their health is considered and insured. Safe workplaces are profitable workplaces, whether measured in a company's bottom line, its market share, its broader consumer reputation, or its ability to attract and retain workers, managers, or investors. Healthy people are expected to contribute more to productivity and innovation. However, absenteeism from workplace site causes productivity loss (Michaels et al., 1985).

According to an estimate made by ILO, about 330 million accidents annually occur globally. Also, 160 million workers are estimated to suffer from work-related diseases that lead to a death of 2 million workers and loss of 4% of world's annual GDP. The rate of health damage is expected to increase, given the global growth in urbanization and industrialization in developing countries. While this is a benefit acknowledged to improve the livelihood of mankind, there are negative consequences in terms of the effect it may have on workers' health and on the immediate environment. This side effect will be felt if an effective and sustainable interaction between development and environment is not in place.

There are international labor conventions on occupational safety and health that are required to be adopted and ratified for the maintenance of workers' health through policy, regulatory framework and provisions of enforcement by UN member countries. Ethiopia has ratified about 20 ILO conventions, including core conventions such as - Occupational Safety and Health Convention, 1981 (No. 155). These conventions are the basis for developing laws in the area of workplace protection.

Ethiopia has had a regulation on Occupational Safety and Health (OSH) since the 1940's. The Ministry of Labor and Social Affairs (MOLSA) is the state organ that regulates workers' safety and health in work places, both private and state owned. MOLSA and its regional networks have an organizational structure lined to the periphery. Ethiopia is one among the many countries from around the world that have adopted ILO Convention No 155 of 1981 in 1991 which resulted in two major regulations: Labor Proclamation No. 377/ 2003 and Labor Proclamation No. 515/2007 on public civil servants. The national level policy on Occupational Safety and Health (OSH) has recently been developed and approved (July 2014) by the Central government.

The Ethiopian Labor Proclamation has a provision requires the employer to have an obligation to safeguard workers from accidents and injuries. The proclamation also requires that the employer provide regular health services including during worker injury and sickness. It further requires that Safety Committees be established in each factory to advise the management on matters of preventing injuries and accidents. Delegates from the management and workers' union are thought to be members of the committee. The number of members of the committee typically varies between five and seven. The activity is mainly managed by a Safety Officer, who organizes periodic safety inspections, documents OSH provisions and follows up the recommendations of the Committee.

The Ethiopian Ministry of Labor and Social Affairs (MOLSA) maintains that in any factory or work place in connections with any process carried the employer must keep into consideration more practical measures are to be adopted to shield employee or workers. One of the measures to protect workers is through providing protective equipment. The statute states that the protective equipment must be provided, maintained and kept readily available for use to affect a rescue or operations safe. The above measure keeps into consideration that the assessment on risk, control and communication is the cornerstone of health and safety legislation in many countries (ILO, 2005). All these measures were deliberately designed for the purpose of protecting personal health and safety of the workers and was made possible in order to compel with ILO Convention no 155 of year 1981, which demands every employer to provide safe working conditions for their employees This paper describes the existing profile of occupational safety and health services in manufacturing companies in Guragh Zone and identifies the current gaps and needs in occupational safety and health management practices.

1.2 Statement of the Problem

Employers have major duty to provide safe working conditions for their employees and they are liable at a common law for any accidents caused in the cause of an employment (Cole, 2005). Recently, accidents and diseases that occur in occupational places have been found that they have bigger impact on the reputation, productivity and competitiveness of personal, enterprises (Phoya, 2012). On the other hand, these accidents have impact on the individuals' livelihoods and also on the family. Additionally, these accidents as well as health problems caused by these accidents cause these adults to depend totally on others. The impact of it nationally is that the

economic burden will be carried by only a few people in the society as a result the economy of the country will deteriorate (ILO, 2014).

Ahonen et al. (2002) argue that different international and national safety standards provide guidance to help organizations develop their safety management systems (SMS) with respect to varied business needs and requirements. Despite the fact that people are working and spend most of their working hours at the workplace, little attention and resources are accorded to health and safety at work (Michaels et al., 1985).

In emerging economies, workplace safety and health has been overlooked in their industrial development policy and strategies. They are mostly focused on the production volume or profit undermining the latent effect of dissatisfactory working environment. The fatality rate in Sub-Saharan African countries is 21/100, 000 workers and the accident rate is 16,000/100,000 workers (Takala, 1999).

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. In Ethiopia, the fatal occupational accidents rate is 5,596 per year with a fatality rate of 21.5/100,000 workers and an accident rate of 16,426/100,000 workers (Takala, 1999) regardless of its poor reporting culture and availability of data accuracy.

In Ethiopia, a study done in Tendaho Agricultural Development Share Company (Osuman, 2007) showed that 783 per 1000 workers were injured in relation to their work. Another study done in Gondar (Abera, 2007), among construction workers and urban factory of Ketena One revealed that 335 per 1000 workers and 200 incidents per 1000 workers respectively. In addition to this, Zewdie A. et al. (2011) cited Amhara National Regional State BOLSA (2007/8), that Amhara National Regional State, textile factories incidence rate was very high as compared with other sectors.

Published information on the status of OSH in Ethiopia is very limited. Even the limited amount that is available is not updated to accommodate the dynamics of workplace exposures and the introduction of new technologies. The capacity of generating OSH related knowledge that can support industrial sectors is very limited. Only few sporadic articles on injuries, dust and noise

related illnesses were available for review. The articles were generated directly or indirectly by academic institutions through their faculty or graduate level thesis and/or dissertations. Lack of a strategic plan for research on OSH in the industrial sector has led to a persistent gap in research practice. Developing countries including Ethiopia need to harmonize their research agenda and the industrial sector growth in the context of globalization. They need to consider the workers' health as a central concern in this regard(Abera Kumie, Tadesse Amera, Kiros , Berhane (2006)) in situational analysis on occupational safety and health practices in Ethiopia).

These days, Ethiopia is moving fast towards industrialization and civil reform to advance productivity (GTP). According to the Annual Report of the Confederation of Ethiopian Trade Unions released in 2012, at the time the report was released, there were 702 undertakings that absorbed 370,000 workers. In the Growth and Transformation Program, (i.e., a national policy document) it is anticipated that Ethiopia will place industrialization at the forefront to be a middle-income country. This condition has necessitated a fresh campaign for the protection of industrial workers from hazards which are unfavorable to their health, safety and welfare through the provision of occupational health services.

Currently there is almost no documented verification of existing issues of occupational health and safety in relation to industrial workers in manufacturing companies in Guragh Zone. In order to address these gap, the researcher is motivated to find out the occupational health and safety issues confronting Industrial workers in manufacturing companies in Guragh Zone with special reference of Aden Water, Wow Water, and Zabidare Brewery companies.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to explore the extent to which occupational safety and health practices in manufacturing companies of Guragh Zone has been successfully implemented.

1.3.2 Specific Objectives

1.To identify the occupational safety and health practices of manufacturing companies in Guragh Zone.

2. To examine the effectiveness of occupational safety and health practices of manufacturing companies in Guragh Zone.
3. To evaluate how occupational safety and health practices is managed at manufacturing companies of Guragh Zone.
4. To describe the challenges of safety and health practices of manufacturing companies in Guragh Zone.

1.4 Research Questions

1. what are the occupational health and safety practices available in manufacturing companies in Guragh Zone?
2. Occupational safety and health practices available in manufacturing companies in Guragh Zone is effective in reducing accident?
3. To what extent have the safety and health practices managed at manufacturing companies in Guragh Zone?
4. What are the challenges facing safety and health practices in manufacturing companies in Guragh Zone?

1.5 Significance of the Study

The study is expected to benefit the academicians, practitioners and policy makers as it was intended to explore the extent to which the manufacturing companies for implementing health and safety has been successful in Guragh Zone. Academicians may use the findings of the study for reference and further research; policy makers may use the findings to change existing policies on industrial management and administration. Practitioners may use the result of this study to change the way they are behaving in doing their job.

1.6. Scope of the study

This study assessed the practices of occupational safety and health basically by looking at the extent to which manufacturing companies in Guragh Zone has been successful in implementing them. This research assessed only basic occupational safety and health practices such as establishment of Health and Safety Committee, Responsibilities concerning Occupational Health

and Safety, safety and health policy, Emergency action plan, Ergonomics practices, First Aid, Orientation program, Self-inspection, safety Training, provision of personal protective equipment and psychological aspect of employee health are available, how managed and what are the challenge facing in execution of such practices at Guragh Zone manufacturing companies.

1.7 Definition of Terms

1.7.1 Health According to the medical dictionary by Dorland (1988), health is defined as the situation of optimal physical, mental and social welfare. According to this definition, health is not simply the nonexistence of disease as well as frailty. According to ILO (1990) health is defined as a state of absolute physical, mental and social well-being and not only the absence of disease.

1.7.2 Job safety According to the occupational health and safety encyclopedia (1998), job safety refers to the relationship between people and job, tools, materials, machines, environment as well as economic considerations such as output.

1.7.3 Workplace According to OSHA (2007) work places refers to the physical location in which different activities are performed under the control of the business.

1.7.4 Occupational safety and health According to WHO (1995) occupational safety and health refers to the multidisciplinary activity with the aim of protecting as well as promoting health of employees by getting rid of occupational factors and conditions dangerous to health and safety at work places. Also, it aims at enhancing of physical, mental and social well-being of employees and prop up for the progress and maintenance of their working capability, as well as professional and social advance at work (WHO).

1.7.5 Accident According to WHO (1989) the definitions of both accidents and injury are always given in the agreement with those by the world conference on accident and injury prevention. On that regard, Anderson (1999) defined accident as involuntary event which results or could bring about the occurrence of an injury, while the collective term for health outcomes from traumatic events is referred to as the injury.

1.7.6 Safety According to the Oxford Dictionary (2008), safety is the state of being secure/harmless; being free from the episode of risk or injury, danger or loss. Business dictionary defines safety as a virtual autonomy from danger, risk, or threat of harm or injuries.

1.7.7 Health and Safety Committee According to The Ethiopian Labor Proclamation No.377(2003) Delegates from the management and workers' union are thought to be members of the committee. The number of members of the committee typically varies between five and seven. The activity is mainly managed by a Safety Officer, who organizes periodic safety inspections, documents of OSH provisions and follows up the recommendations of the Committee.

1.7.8 Responsibilities' Defined as an individual's obligation to carry out assigned duties CCOSH(1998).

1.7.9 Occupational health and safety policy; The occupational health and safety policy represents the foundation for which occupational safety and health goals and performance measures and components are developed. This statement reflect the employer's commitment to safety and health at work, and should indicate the standard of behavior are to be aimed for in health and safety matters (Storey, 1995).

1.7.10 Emergency action plan; An emergency plan specifies procedures for handling sudden unexpected situations.

1.7.11 Ergonomics Is the practice of designing equipment and work tasks to conform to the capability of the worker, it provides a means for adjusting the work environment and work practices to prevent injuries before they occur CCOSH (1998).

1.7.12 First Aid Refer to providing and maintaining basic life support until advanced medical help arrives and preventing a condition from getting worse.

1.7.13 Orientation It is the process of introducing new, inexperienced, transferred and returning employees to a safe and healthy workplace. Orientation provides employees with necessary safety information about their job and tasks, informs them of specific details about workplace hazards and provides an opportunity to learn about the company and their colleagues, ask questions and to clarify new or confusing information (Work Safe NB, 2011).

1.7.14 Training Refer to raising Health and safety awareness and skill levels of employee to an acceptable standard.

1.7.15 Self-inspection Health and Safety Inspections are program designed to examine a specific area of the organization, an operational department or a manufacturing process to locate and define any faults in the system, equipment, plant or machines, or any operational errors that might be a danger to health or source of accidents(Price, 2007).

1.7.16 Stress refer to Psychosocial aspects of occupational health and safety CCOSH(1998).

1.7.17 Personal Protective Equipment (PPE) Utilization of the worker-specialized clothing or equipment worn by employees for protection against health and safety hazards at the time of interview. Personal protective equipment is designed to protect many parts of the body, that is, eyes, head, face, hands, feet, and ears(OSHA).

1.8 Organization of the thesis report

The thesis report was organized under five chapters. Chapter one introduces important aspects of the study such as introduction, Statement of the problem, objectives of the study, research questions, significance of the study, delimitation, as well as definitions of the key terms. Chapter two presents literature review which consists of theoretical and empirical literature review from earlier studies. Chapter three addressed research methodology, research design, research area, population of the study, sample and sampling procedures, sample size and data collection methods. Chapter four give the data analysis, presentation and interpretation. Chapter five give the summary of the finding before coming to the conclusion, and recommendations and it also calls for limitation and further study, lastly, there was biography and appendices.

CHAPTER TWO

2 Literature Review

2.1 Introduction

This chapter consists of two sections; theoretical literature review and empirical literature review.

2.2 Theoretical Foundation

2.2.1 Heinrich's Domino Theory

According to Heinrich, an "accident" is one factor in a sequence that may lead to an injury. The factors can be visualized as a series of dominoes standing on edge; when one falls, the linkage required for a chain reaction is completed. Each of the factors is dependent on the preceding factor.

- personal injury (the final domino) occurs only as a result of an accident.
- An accident occurs only as a result of a personal or mechanical hazard.
- Personal and mechanical hazards exist only through the fault of careless persons or poorly designed or improperly maintained equipment.
- Faults of persons are inherited or acquired as a result of their social environment or acquired by ancestry.
- The environment is where and how a person was raised and educated.

Heinrich's Domino Theory – Critical Issues

The factor preceding the accident (the unsafe act or the mechanical or physical hazard) and it should receive the most attention. Heinrich felt that the person responsible at a company for loss control should be interested in all five factors, but be concerned primarily with accidents and the proximate causes of those accidents. Heinrich also emphasized that accidents, not injuries or property damage, should be the point of attack. An accident is any unplanned, uncontrolled event that could result in personal injury or property damage. For example, if a person slips and falls, an injury may or may not result, but an accident has taken place.

Heinrich's Domino Theory – Corrective Action Sequence (The three "E"s)

- Engineering – Control hazards through product design or process change .Education – Train workers regarding all facets of safety – Impose on management that attention to safety pays off.
- Enforcement – Insure that internal and external rules, regulations, and standard operating procedures are followed by workers as well as management.

2.2.2 Human Factor Theory

Heinrich posed his model in terms of a single domino leading to an accident. The premise here is that human errors cause accidents. These errors are categorized broadly as:

- Overload; The work task is beyond the capability of the worker. Includes physical and psychological factors. Influenced by environmental factors, internal factors, and situational factors.
- Inappropriate Work Response; to hazards and safety measures (worker's fault) and To incompatible work station (management, environment faults).
- Inappropriate Activities ; Lack of training and misjudgment of risk. But the structure of this theory is still a cause/effect format.

2.2.3 Importance of Health and Safety of Employees at Workplace

With regard to the significance of health and safety of employee Torrington (1987) states that the employees whose health, safety and welfare need are well protected by the employer they are very productive and loyal. Thus, in that way very less few industrial choses may occur. Also, in the same line Bratton (1999) argues that a good healthy and safe environment can improve productivity by reducing time loss due to the work related accidents. In addition to that, it precludes the work costs which are related to accidents and illness. Moreover, Bratton adds that it helps facilitate employees to achieve quality and improve industrial relation. Arguing on the same idea, Beer (1984) comments that a good attention to health and safety can have strong positive effects on employee commitment Beer's concern is that when employees work in a healthy and safe environment they are highly motivated and as a resulted in high performance and loyalty. On his hand, Collard (1989) said that, it is important for a company to have a strong safety and health work environment. Because a good working settings will enable an employee work comfortably and enhance the company realizes its objective as well personal objectives. Collard went further mentioning importance of health and safety as; it enables to facilitates

positive effect on employee's commitment, it improve industrial relations, it improve productivity and quality also it facilitates higher levels of motivation, performance and loyalty. On the other hand, Schuler et al. (1986) concur with the idea that safety has an advantage to any organization. Schuler et al. in defending this argument come up with following points as their argument. One, it helps in the reduction of medical and insurance cost. Second, it enables more productivity by cutting a few lost work days and this increase more effectiveness and efficiency to the workers because they will be more involved in their jobs. Thirdly, it increases the feelings of ownership as well as participation due to a greater flexibility and adapt

2. 2.4 Occupational health and safety activities for business organist ion

The principles of a healthy company include: a safe working environment; healthy working practices; programs to promote health and to address psychosocial risk factors at the workplace; health impact assessment for marketed products; and contribution to health and social development in the community(WHO). Of course many smaller companies and organizations have not the resources to achieve this grand vision of a Healthy Company. However all organizations, even those with limited resources can achieve an important basic requirement, which is a plan for health and safety within the workplace, using minimal resources and maximal management and staff commitment.

All workplaces carry hazards and risks which may result at some stage in serious accidents or which may be a continual but imperceptible health burden for employees. The consequences of continual noise, the stress resulting from unclear work practices, the ergonomic risks from poorly designed workplaces, can in the long term result in absenteeism and poor staff health and well-being in general. A commitment to workplace health and safety begins with a commitment to the health and wellbeing of all staff and to preventive practice at all levels of the Organization – as in other environments, in the workplace “Prevention is better than cure”. Occupational health and safety practices for business organizations are;-

2. 2.4 .1 Workplace Health and Safety Committee

According to Canadian Center for Occupational Health and Safety(1998),An occupational health and safety committee is a forum for cooperative involvement of employees representing both labour and management which assists in bringing the internal responsibility system into

practice. An effective safety program needs the cooperative involvement of all employees and employer. A joint health and safety committee brings together practical knowledge of specific jobs and management's larger overview of job interrelationships, general company policies and procedures. This team can be more effective in solving health and safety problems than a single individual as in general teamwork .To function properly, the committee needs an appropriate structure, a clear statement of purpose and duties, and standard procedures for meetings. In different surveys done from different countries it has been stated that unclear job description does increase level of stress at workplace. An employer does this by establishing terms of reference for the committee and by allocating adequate resources. Once the committee members have been chosen, the committee should participate in decisions on the details of its structure, duties, and procedures. However, the joint occupational health and safety committee members should be active participants in the development, implementation, and monitoring of all phases of the health and safety program CCOSH(1998).

Cooperation between management and workers or their representatives at the workplace, in the field of occupational health and safety, is an essential element in maintaining working environment. Joint health and safety committees provide a valuable framework for discussion and for concerted action to improve safety and health (Dessler, 2013). The human resource department can serve as the coordinator of a committee composed of several employee representatives. Where union exists, the committee should have union representation as well (Jackson et.al, 2000). According to Armstrong (2012) suggest that health and safety committee should help in conducting risk assessments and safety audits and make suggestions on improving health and safety performance. Employers should establish safety committees after consultation with trade union representatives and post a notice stating the composition of the committee and indicating what areas the organization will embrace. The overall objective of the safety committee is the promotion of cooperation between employers and employees in investigating, developing, and carrying out measures to ensure the health and safety at work of the employees'.

Safety Committees should be established in each factory to advise the management on matters of preventing injuries and accidents. Delegates from the management and workers' union are thought to be members of the committee. The number of members of the committee typically varies between five and seven. The activity is mainly managed by a Safety Officer, who

organizes periodic safety inspections, documents OSH provisions and follows up the recommendations of the Committee ELP No.377(2003).

2. 2.4 .2 Responsibilities concerning Occupational Health and Safety

While managers are accountable for implementing national legislations concerning health and safety, health and safety is the joint responsibility of management and workers, with each individual having specific responsibilities. Responsibility may be defined as an individual's obligation to carry out assigned duties. Health and safety responsibility is not just an extra part of an employee's job but an integral, full-time component of each individual's responsibilities. Responsibility and authority can be delegated to subordinates. It is important to note that, while some responsibilities can be delegated, managers remain accountable for seeing that they are carried out. Individual responsibilities apply to every employee in the workplace. When a safety coordinator or committee has been appointed, it is best to spell out his/her/their responsibilities as well. All employees will then know exactly what is expected of each individual in health and safety terms CCOSH (1998)

According to Doan (2001), the occupational health and safety of employees and visitors to workplace is an important issue for both employees and employers. The roles of employers need to be complemented by employees. Specifically, they are supposed to work in a safe manner, be safety conscious on their jobs and co-operate with their employers in the health and safety measures they put in place. They must also work safely to protect themselves and others from injury (ILO, 2008). For example, they must not move or disfigure or spoil signs, tamper with machine guards , and behave in a way that puts others at risk. All employees share equal responsibility and so must obey all health and safety procedures, including correctly wearing all personal protective equipment provided. They should also know emergency procedures, the location of the first aid kit and report any workplace hazards to employers (OSHA). According to ILO (2008), employers have the obligation to ensure that all their employees are protected from health and safety risks arising out of their work activities. This implies that they have to inform the workers of all the known hazards associated with their work, the health risks involved and the relevant preventive and protective measures; take appropriate measures to eliminate or minimize the risks resulting from exposure to those hazards; provide workers with

suitable protective equipment, clothing and other facilities where adequate protection against risk of accident or injury to health, including exposure to adverse conditions, cannot be ensured by other means; and provide first aid for workers who have suffered from an injury or illness at the workplace, as well as appropriate transportation from the workplace and access to appropriate medical facilities.

Clearly defined and well communicated health and safety roles and responsibilities for all levels of the organizations will create an expectation of a standard level of performance and accountability among employees, contractors, and visitors. All levels must be aware of their individual roles and responsibilities under both state law and company standards. (Alberta, 2006).

2. 2.4 .3 Safe and effective work policy.

National health and safety regulations represent minimum requirements for health and safety in the workplace. In almost all cases, organizations will have to augment these regulations with specific rules that all staff are expected to follow in the carrying out of daily work tasks, so that all staff can work safely and effectively. As mentioned above, it is preferable that all staff have contributed to the development of these correct work practices CCOSH (1998).

Health and Safety Policies except in very small firms of fewer than five employees, every employer is required to prepare and keep up-to date, a written statement of safety policy. Measures from prevention and control of occupational hazards in the workplace should be based upon a clear, implementable and well-defined policy at the level of the organization (Foot and Hook, 2008). The occupational health and safety policy represents the foundation for which occupational safety and health goals and performance measures and components are developed. This statement reflect the employer's commitment to safety and health at work, and should indicate the standard of behavior are to be aimed for in health and safety matters (Storey, 1995). Written health and safety policies are required to demonstrate that top management is concerned about the protection of organizations employees from hazards at work and indicate how protection will be. The policy statements should be a declaration of the intention of the employer to safeguard the health and safety of employees. The statement should describe the health and safety in the organization and the standards through which business is set and achieved by people

at all levels of the company. The statement should underline the ultimate responsibility of top management for health and safety performance of the organization (Wayne, 1986).

2. 2.4 .4 Emergency action plan

An emergency plan specifies procedures for handling sudden unexpected situations. The lack of an emergency plan could lead to severe losses such as multiple casualties and possible financial collapse of the organization. A vulnerability assessment extends the standard risks and hazards assessment to potentially major emergencies, such as fire, explosion, loss of power or natural hazards. Completing a comprehensive plan for handling emergencies is a major step toward preventing disasters. However, it is difficult to predict all of the problems that may happen unless the plan is tested. Exercises and drills may be conducted to practice all or critical portions (such as evacuation) of the plan. A thorough and immediate review after each exercise, drill, or after an actual emergency will point out areas that require improvement. Knowledge of individual responsibilities can be evaluated through paper tests or interviews CCOSH (1998).

workplace emergency is an unforeseen situation that threatens your employees, customers, or the public; disrupts or shuts down your operations; or causes physical or environmental damage. Emergencies may be natural or manmade and include the following: Floods, Fires, Toxic gas releases, Chemical spills, Radiological accidents, Explosions, Civil disturbances, and Workplace violence resulting in bodily harm and trauma (Elaine L. Chao, and John L. Henshaw).

A serious emergency (Such as explosion, fire, or flood) could seriously affect the operation of a business and put the health, safety, and livelihood of many employees in jeopardy. The best health and safety management system cannot protect your company from all natural or unexpected disasters; however, having a good emergency response plan (ERP) in place can reduce the severity and risk of loss. Knowing what to do and who to contact can save lives and reduce costs if disaster should strike(Alberta, 2006).

2. 2.4 .5 Ergonomics

Ergonomics is the practice of designing equipment and work tasks to conform to the capability of the worker, it provides a means for adjusting the work environment and work practices to prevent injuries before they occur. When there is a mismatch between the physical requirements

of the job and the physical capacity of the worker, work-related musculoskeletal disorders can result. The design and layout of working facility is critical in reducing risk factors. Workplace analysis might be useful to identify existing and potential workplace hazards and find ways to correct these hazards. Continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand. Musculoskeletal disorders often result through the improper use of computers which are used frequently by many workers CCOSH(1998).

Ergonomics is an applied science that studies the interaction between people and the work environment. It focuses on matching the job to the worker the study and design of work environment to address physiological and physical demands on individuals. In the work setting, ergonomic studies look at such factors as fatigue, stress, tools, equipment layout and placement of control (Robert and John, 2004). Ergonomics involves improvement of safety by making the job more comfortable and less fatiguing through ergonomics. Ergonomics considers changes in the job environment in conjunction with physical and psychological capabilities and limitations of employees (Jackson et. al, 2000).

2. 2.4 .6 First Aids

The purpose of rendering emergency first aid is to save life or to provide quick and appropriate care in the case of everyday accidents and injuries which can happen in any Organization. It may range from providing and maintaining basic life support until advanced medical help arrives and preventing a condition from getting worse to bandaging a cut finger. In either case the first responder`s actions are crucial to the well-being of the victim and can make the difference between life and death. Wrong decisions and actions can have tragic consequences. In order to act with competence and confidence the first aid responder needs to be properly trained in emergency first aid procedures and techniques. It is the duty of the organization to provide First Aid equipment on the premises which should be checked and replaced regularly. All employees should know the location of the First Aid Kit which should be clearly written with the emergency telephone numbers for medical assistance (perhaps the nearest medical clinic), ambulances, the nearest hospital etc. If an employee has a work related injury or illnesses that requires professional medical assistance, as part of an OHS Plan he/she would be responsible to write a incident report about the injury and keep record. Such documentation may also be a legal

requirement for the purpose of workplace accident insurance. In all cases requiring emergency medical treatment, immediately call, or have a coworker call, to request emergency medical assistance CCOSH(1998).

According to Health and Safety (First-Aid) Regulations 1999 Employers have a legal duty to make arrangements to ensure their employee receive immediate attention if they are injured or taken ill at work. It doesn't matter whether the injury or illness is caused by the work they do, what is important is that they receive immediate attention and that an ambulance is called in serious cases. First aid can save lives and prevent minor injuries becoming major ones. First-aid provision in the workplace covers the arrangements that need to be made to manage injuries or illness suffered at work. The Regulations do not prevent staff who are specially trained from taking action beyond the initial management stage. How much first-aid provision an employer has to make depends on the circumstances (the hazards and risks) of each workplace. Employers are well placed to determine the level of hazard and risk as they will be familiar with the exact circumstances of the workplace. There is no fixed level, but each employer needs to assess the equipment, facilities and personnel that are appropriate. Where employers have an occupational health service, or access to other occupational health advice, they might wish to delegate to them the responsibility for carrying out the assessment and advising on first-aid provision and needs.

2. 2.4 .7 Orientation

Health and safety education should start with employee orientation when an employee joins the organization or is transferred to a new job. It has been found that inexperienced workers, in general, are involved in accidents at a higher rate than others. They can also be more exposed to work related stress. While experience can only be gained through time, both health and safety education and job skills training can be used to improve this record CCOSH (1998).

When a new employee starts, you will engage in a “New Employee Safety Orientation and Program” with your supervisor. The supervisor will be responsible for completing and returning the safety checklist to the Safety Officer.

- Before any employee is assigned a new task, the Safety, Health Environmental & Security Programs checklist must be signed off by both the employee and supervisor and/or Safety Officer as having been discussed and understood.
- Before any employee is assigned to work with any other employee on a new task, the supervisor will orient the employee on the procedure/task, any safety concerns, and any required personal protective equipment (PPE).
- The supervisor will complete the “Workplace Hazard Assessment/Employee Review” with the employee. This will aid in identifying hazards currently present in the employees workplace. Documentation of completion will be recorded in a centralized database, maintained by the Location Safety Office (Skidmore College).

Health and safety orientation is a vital component of any company’s health and safety management system. It is the process of introducing new, inexperienced, transferred and returning employees to a safe and healthy workplace. Orientation provides employees with necessary safety information about their job and tasks, informs them of specific details about workplace hazards and provides an opportunity to learn about the company and their colleagues, ask questions and to clarify new or confusing information (Work Safe NB, 2011).

2. 2.4 . 8 safety and health Training

The objective of training is to ease the implementation of health and safety policies into specific job practices and to raise awareness and skill levels to an acceptable standard. While all employees can benefit from health and safety training, special attention should be given to the training of managers, trainers, and workers in general. It is advisable that training be conducted by a qualified person. In some places, employees and managers directly responsible for health and safety matters need to have certification, as required by the law CCOSH(1998).

Health and safety training is a key part of the preventive program. Safety and health training is an essential element in maintaining a healthy and safe workplace and has been an integral component of occupational health and safety management. Training provides individuals with the basic theoretical and practical knowledge for the successful exercise of their trade or

occupation and their integration into the working environment (Millmore et. al, 2007). Occupational safety and health training should meet the needs of the workers. Safety training spells out the rules and provides information on potential hazards and how to avoid them. The need to give appropriate training in occupational health and safety to workers and their representatives should thus be stressed as a fundamental element of occupational safety and health policy. Managers, supervisory staff and workers all need to be trained (Armstrong, 2006)

2. 2.4 .9 Health and Safety Inspections

Self-inspection check lists for OHS Plan activities and for common and workplace specific hazards and risks are valuable for regularly assessment of the status of the workplace in terms of health and safety. Such as availability of posting of signs ,recordkeeping, safety and health program, medical services and first aid, fire protection, personal protective equipment and general work environment CCOSH (1998).

Health and Safety Inspections are program designed to examine a specific area of the organization, an operational department or a manufacturing process to locate and define any faults in the system, equipment, plant or machines, or any operational errors that might be a danger to health or source of accidents. Health and safety inspections should be carried out in a regular and systematic basis by line managers and supervisors with the advice of health safety specialists (Price, 2007). health and safety audits and inspections can contribute in a sustainable manner to the organizational goals and performance if the programs are well designed and based on participatory approach Cole (2004).

2. 2.4 .10 Stress – Psychosocial aspects of occupational health and safety

The causes of stress are various and diverse. Two of the classic examples of the causes of stress are time pressure and an overload of work. Other causes may be found in the structure of the organization, the level of education of staff, or quite simply the uncertainties concerning what is demanded of employees. With the help of the following questions, you can test to what extent you are affected by stress at work CCOSH (1998). Working conditions do not only have physical effects on workers but there are psychological repercussions too which usually result in social

and mental problems. According to WHSA (2003), psychosocial hazards cause fatigue, stress and general loss of interest in work. Monotonous work which requires constant concentration, irregular working hours and work carried out at risk of violence can also have adverse psychological effects. Psychological stress and overload have been associated with sleep disturbances, burn-out syndromes and depression.

Stress is a feeling, an emotional state of fear and threat, with physical, mental and behavioral consequences. Words cannot easily describe the experience of stress and it is best illustrated by giving examples. People may mean different things when they use the word, but there is a general acceptance that being stressed is damaging to health and impacts on our behavior in a negative way. People perform better when they are motivated, challenged and encouraged, rather than when they are threatened – directly or indirectly aspects of the workplace that are over demanding in some way(WHSA).

2. 2.4 .11 Personal Protective Equipment for Health and Safety of Employee

Employees have rights to know, to refuse, to demand good working environment, to reject to work under dangerous situation as well as a right to demand personal protective equipment. On the other hand, the employer has a duty to ensure that employees are well protected from any unhealthy and unsafe condition at their place of work. In order to avoid unhealthy and unsafe working environment there is a necessity for the provision of the protective equipment such as safety shoes, safety training, face and head protector, working gloves , overall, mouth protector signs and smoking ban, fire extinguisher, safety shoes, ears protector and first aid to mention just a few of them (ILO 2015). Also, according to ILO (2015) the employees ought to be protected from unsafe and unhealthy condition at their place of work in order to prevent them from any harm. These safety gears are head protection, safety eyewear, safety mask, safety vest, as well as working glove and clothes. In that respect, Armstrong (1990) explains various factors that can cause accident at the workplace. According to Armstrong such factors may include occupational hazards arise from toxic substances, noise from machines, stress imposed upon body and mind at the job, lack of PPE, inadequate light, unsafe designed machines, sharp objects, wires, conveyer belts and piping, cracked containers, slippery condition, using PPE 14 unsafely either deliberately or due to fatigue, operating without enough clearance, operating machines unsafe speed and improper placing of materials.

Management must ensure that all personnel and visitors wear or use personal protective clothing or equipment provided if it is necessary to protect them from harm. Personal protective clothing or equipment must be properly fitted, and users instructed in their use. All personal protective clothing and equipment supplied must conform to an applicable Standard, be properly maintained and, if it becomes defective, replaced. All personnel must wear or use personal protective clothing and equipment where a sign is displayed to do so or as identified by risk assessment. All personnel must ensure that loose clothing, personal adornments and hair are confined to prevent entanglement with machinery, electrical equipment or other devices.

2.2.5 Impacts of Poor Occupational Safety and Health at the Place of Work

Sherman (1984) states that carelessness of employers in dealing with issues relating to workers welfare can affect the environment which workers are working and as a consequence this can lead to occupational hazards and harmful effects to the workers, their families and the organization at large. This can also result in the loss of employee's commitment and decrease performance, fall of production, the increasing of unnecessary cost to the company and then decreasing of profit. In addition to that Gupta (1990) argues that poor occupational safety and health can cause boredom to workers something which may result in more accidents, injuries, death, absenteeism and labor turnover, poor relation between employee and employer as well as increasing of organizational cost therefore the decrease of profit margin.

According to Torrington (1987) accidents related to work and illness can cost and may have indirect or direct impact on the workers lives and their company. For the employees, direct impact of injury or sickness include loss of income, sufferings and pain of the sickness or injury, loss of a job, medication cost, repair replacement of damaged machinery of equipment and reduction or temporarily discontinue in production.

These impact are also to the employer as the injured or sick employee has to be replaced, a new employee need to be trained and be given enough time to cope, it needs time to the new employee to produce to the standard of the original worker and it can lead to poor labor-labor relation.

2.2.6 Necessary conditions to maintain and ensure health and safety at workplace

In addressing the problem of poor health and safety in working places Armstrong (1984) proposed necessary conditions. In his work Armstrong indicated different issues that are supposed to be done in order to maintain and ensure safe and health workplace. Those issues include involvement of workers, make a commitment, identify and control threats, comply with health and safety regulations, train and retrain 15 employees, cultivate and support a culture of safety and improve system frequently. These factors are explained below;

Make a commitment; Employers should commit themselves to health and safety as they put into other parts of business. They have to make sure that they include the issue of health and safety in the business plan and make sure that they integrate it with the business strategy. They have to prepare a policy which wills emphasis the importance of health and safety in the working place. There must be a commitment of resource (such as time, money and personal) to make sure that employees are protected against any hazard.

Involve employees; In order to have a health and safe working place; employees are the main stakeholders in making sure that issues of health and safety programme are successfully. Employers should strongly encourage workers to participate in health and safety program me. Employers should play their parts to make sure that everyone in the organization does their part effectively. There must be a person to conduct daily safety inspections and provide report to the high authority. Employees should be given reports about the inspection such injury and illness statistics and other issues related to safety and health.

Identify and control hazards; Hazards should be identified and then to be controlled. There must be a review on the records of accidents, illness and trace back on the factors which led to injuries, or illness. There must be a review on the report from inspectors to see why there was an injury or illness to employees. Then the company needs to prepare a checklist to locate all dangerous conditions and take some measures to make sure that the condition is controlled.

Comply with regulation; Industrial owners should identify the occupational health and safety authority regulations that are applied in their place of work and conform to them. There must be with safety classes to impart workers with the required skills concerning with safety and health.

Safety programs should be developed and been implemented by employers as well as employees in the working places.

Training employees; Human resources should be trained concerning the hazards that they may be exposed in their working places and how to deal with them in order to avoid occupational accidents. New employees and employees starting new jobs should be given training on the company regulations as well as all the procedures concerning emergency. Employees should be given specific training on the hazards depending on their jobs and how to work safely. OSHA insists on training to be conducted as required by the standards, when jobs change as well as when employee returns from long absence.

Support a culture of safety; Employers ought to establish a two way communication and respond to the concerns and needs of workers accordingly. Management need to make sure that they establish by laws to make sure that they deal with the issue of health and safety effectively and control hazards. Workers should be encouraged to make sure that they go beyond their work to ensure a healthy working environment and minimize occupational injuries as well as illness.

Constantly improve your system; there must be a review on the health and safety programs strength and weaknesses. This should be done precisely with the reflection of how employers need to manage health and safety of workers. There must be a review on annually and as needed, investigate accidents, injuries and illnesses. Employers must select a person to conduct inspections as required by company and Occupational Safety and Health Authority (OSHA).

2.3 Empirical literature Review

Empirically, literatures on assessment of health and safety management in manufacturing companies in Ethiopia are: Those few studies available are too generalized. Thus, this study narrows down the situation to implementation of health and safety management in a specific industry which is manufacturing industries in Guragh Zone.

KassuJilcha& Daniel Kitaw(2016) in the tittle the influence of lean thinking on occupational safety and health problems improvement in manufacturing industries and it also to show how occupational safety and health severely hurts manufacturing industries productivity. The study was conducted by reviewing recent state-of-the-art literature and taking into consideration

secondary data records from Ethiopian Ministry of Labor and Social Affairs (MOLSA) for simple illustrative example. Findings from the literatures showed that there is less attention and consideration of lean workplace safety and health in manufacturing industries.

Solomon Tibebe (2014) on the title practices and challenges of occupational health and safety in Ethiopia; the case of Akaki textile and garment factory. The study assessed the current challenges of occupational health and safety practices and the extent of occupational health hazards of the textile workers as well as the cost implication of these work-related incidents and diseases among ATF. Four main categories of Akaki textile and garment factory workers were targeted in AACA. The sample consisted of 240 workers taking respondents randomly from each of the four work categories according to their workers number proportionately. The study indicated that work in the factory severely affected worker's health, as most activities are insecure, hazardous and take place in unhealthy and unsafe environment. In the study area the particular nature of work in the integrated textile manufacturing created various types of health hazards among the selected respondents such as headache, eye and skin infection, back and chest pain, asthma, loss of interest and mental fatigue. Results of the study showed that the highest 32 percent of the workers reported that they were affected by physical hazards, followed by 26 percent by chemical hazards and the total economic cost of work related injuries and illness among the four work departments for the last Ethiopian budget year(2013/2014) was Birr. 13,090. From the foregoing, a major recommendation is that both government and employing authority should ensure that they adhere strictly to International Labor Organization safety and working conditions or standard in order to increase productivity through improved welfare and health of workers.

Sen and Osborne (1997) in their work titled "To assess the knowledge, attitude, practices and health and safety at work". This study was conducted at North West Health Centre, Liverpool city UK. The study intends to assess the workplace hazards and safety practices in a typical health care facility (HCF) in Nigeria. The researcher applied methods like questionnaire, interview and observations to collect information. It was revealed that there was a lack of knowledge and understanding of health and safety legislation in general practice surgeries. As a result, compliance with such laws was also seriously lacking. However, both knowledge and

compliance could be significantly improved through information, guidance and contact with the Health and Safety Executive.

Pringle and Frost (2003) in their work named “The absence of rigor and the failure of implementation: occupational health and safety”. This study intends to examine the rights of worker concerning occupational safety and health in Hong Kong (China). Author of this work used methods such as interview, documentations and observations to gather information concerning the study. It shows that, despite government concern with occupational health and safety (OHS) and the declaration of new laws and regulations in 2002, a lack of rigor and lax implementation are major impediments to improvements in workplace safety. The article highlighted important elements from the new work safety law on the prevention and cures of occupational diseases, and then analyzed key issues arising from bureaucratic excesses, the impact of government restructuring, continuing confusions and contradictions in government responsibility for Occupational Health and Safety. Thus, they suggested for different strategies for preventing occupational diseases and injury at workplaces employs several elements including setting and enforcing standards; technical assistance, research, development and implementation of surveillance system. Also, Safety and Health Acts, and regulations provide for a wide array of basic public health measures to prevent occupational disease and injury at the workplaces if properly enforced.

Mhongole (2007) in his research titled “Effective in implementation of occupational health and safety act of 2003”. The study aimed at assessing the status of protective equipment in reducing accidents to workers who are exposed to hazards. The researcher used questionnaire and interview as sources of data collection. The findings revealed that the status of protective equipment availability to workers exposed to hazard areas was found to satisfy as 98% of the equipment required by the workers had been provided, also the study shows that awareness of occupational health and safety among workers indicate that that 42% of the respondents agreed being aware of the Act, while 58% were not aware. Also, the study aimed to find out whether workers knew to use protective equipment 60% of the respondents agreed to have knowledge of using protective equipment, while 40% of the respondents had no knowledge of using protective equipment. On the other hand study reveals that the health and safety committee existing in working places, though some workers were not aware of the committee. Also, the study shows

that the company had not provided the required number of first aid kit at working places as indicated by the 26% of the shortage of first aid boxes. The expected performance for effectiveness had to be above 81% of the predetermine goal.

Doris (2009) on her research titled “Accidents in cotton industries”. In order to write this work the researcher used interview to collect data. The aim of the researcher was to measure the causes of accidents in processing industries. The findings showed that there are three major factors which cause the industrial accidents in the cotton processing industries these are technology, human factor, poor working environment and ignorance of the rules and regulation of the work by the workers. The findings showed that in case of the ignorance of the rules and regulation 67% of the employers know nothing, while 87 of the interviewed employees say that 32 poor working environment are the causes of the industrial accidents and technological aspects aspect took 80% of the employees.

Ruth (2007) in her research titled “Examination of employers’ role in creating health and safety at work setting”. The objective of the researcher was to measure the contribution of management in preventing occupational accidents. The researcher used questionnaire, interview and observation to collect information. The findings revealed that all management does not have any specific reasons that cause accidents in the organization. Also, it was found that the organization did not encounter any problem in endeavor to promote safety. However, in the case of unsafe work condition to the employees and client management who were the target respondents reveal that there is no any reported impact resulting from unsafe working condition. Lastly the researcher discovered that, all employees are compensated, but the compensation rate of 108,000/= amount is likely to be outdated as it was set in 1958, therefore the general findings show that organization has to improve safe working condition so as to deliver fast and quality services to the customers.

After reviewing a number of literature’s, nothing has been said on the assessment of health and safety practices of manufacturing industries in Ethiopia specifically. There is no much effort has been committed toward exploring the assessment of health and safety management practices in manufacturing companies. Therefore, a gap for scientific study was evident. It is this reason that

motivates the researcher to commits his effort towards exploring the assessment of health and safety management practices in manufacturing companies of Guragh Zone.

CHAPTER THREE

3. 1 Introduction

This Chapter deals with design of the study, area of the study, sources of data, sample population and sampling techniques, instruments of data collection, Instrument Development, Instrument Validity and Reliability, procedures of data collection, and data analysis.

3.1 Research design

A descriptive survey design was used so as to assess the occupational health and safety management practices of manufacturing companies at Guragh Zone with special reference of Aden Water, Wow Water, and Zabidare Brewery. The design was selected on the assumption that it is helpful to gather enough information from many people on the issues under study. The appropriateness of this design for such study was noted by many scholars. For example, Koul (1996) states that descriptive survey design becomes useful particularly where one needs to understand some particular information. Best and Khan (1989) have noted that a descriptive survey research design involves a clearly defined problem and definite objectives.

3.2 Area of the Study

The study was conducted at Guragh Zone situated at southwestern parts of Ethiopia. The companies are more preferred with the assumption that there is a high possibility of occupational accident due to the nature of the work of employees working in the manufacturing companies of Aden, Wow , and Zabidare are exposed to danger or risk.

3.3 Population of the study and sample size

According to Castillo (2009), a research population is generally a large collection of individuals or objects that is the main focus of a scientific query. Workers are selected from the three companies of Aden Water, Wow Water, and Zabidare Brewery in Guragh Zone since, a

complete survey cannot be undertaken. The total number of employees in the companies are 503. From this total population, 101 staffs were taken as the sample size. In descriptive research typically uses larger samples; it is sometimes suggested that one should select 10-20 percent of the accessible population for the sample (Singh, 2006).

3.4 Sampling Technique

The researcher used probability sampling to attain the required sample. Under probability sampling the study will employed Multi-stage sampling Technique.

A two-stage stratified random sampling technique that considered a fair representation of all workers in each work unit will be employed. The study samples that have been determined in the sample size determination technique was first distributed in each companies according to their number proportions and then the determined sample size was distributed in each company work units fairly according to their worker number proportion. Workers registrations are used as sampling frame. To select the study subject the total number of workers in each companies was categorized in to different work unit and the study subjects are drawn according to their number proportions. To determine sampling interval and select the first subject, the total number of workers was divided to the total sample size and the first person was selected by lottery method and follow the already determined sequences.

3.5 Sources of Data

In this study, both primary and secondary sources are used to gather adequate information about the existing occupational health and safety management practices of manufacturing companies at Guragh Zone with special reference of Aden Water, Wow Water, and Zabidare Brewery. Primary sources was used to get first-hand information concerning the current OHS practices from workers in the companies. The primary sources are Factory workers. The secondary sources was used to strengthen the primary sources. They include books, journals, and articles. The internet was used to avoid the inadequacies of the data and to make the study reliable.

3.6 Data collection instrument

To gather necessary information from the participant closed ended questionnaire with a five point Likert scale and some open ended questions were used. The reason for using the Likert scale is that it help to measure the magnitude of the differences among the individuals or the

group. This type of questionnaires solicited some pieces of information from the employees. This is because they were many in number and so to interview them it could be difficult. Also, it could consume a number of days as well as time. Therefore, giving them the questionnaires was appropriate. Questionnaires are preferred because they enable the researcher to reach the target group with the minimum cost in terms of time and other resources. Yet again, it is the belief of the researcher that questionnaire enable the respondents to provide information at their own discretion. Therefore, it helps to avoid any direct influence contrary to other methods like interviews where the researcher may have direct influence in molding respondent's answer.

3. 6 .1 Instrument Development

Basically, the instruments was developed based on the objectives of the study and research questions. The questionnaires used simple and clear languages, too long statements not been used and use of appropriate punctuations was also considered.

3. 6 .2 Instrument Validity and Reliability

Validity is the degree to which a test measures what it purports to measure (Creswell, 2009:190-92). Validity defined as the accuracy and meaningfulness of the inferences which are based on the research results. It is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. The instrument which was selected can help to show basic occupational safety and health practices in manufacturing organization. It was clearly addressed how these practices implemented in the selected companies . The relevant data collected in the companies can better indicate the safety and health practices of the companies.

The reliability of instruments measures the consistency of instruments. Creswell (2009:190-92) considers the reliability of the instruments as the degree of consistency that the instruments or procedure demonstrates. In this study each statement will rate on a 5 point Likert-scale response which includes strongly agree, agree, moderate, disagree and strongly disagree. the results can be reproduced under a similar methodology that instrument is reliable and adopted from standardized works of others.

3.7 Data Analysis Technique

In this study both quantitative and qualitative data was collected and then analyzed. Statistical Package for Social Science (SPSS) was used for data coding. The SPSS was enabled the researcher to generate graphs, tables indicating frequencies, means and standard deviation of study responses from categories of the respondents. In this form of analysis the researcher was viewed the collected data and identifies information that is relevant to the research questions and objectives and developed a summary report identifying major themes. The frequency with which an idea or word appeared much was then used to interpret the importance, attention or emphasis (Kothari, 2004) .

CHAPTER FOUR

4 Data Analysis, Presentation and Interpretation

4.1 Introduction

This chapter presents analysis, presentation and interpretation. The chapter consists of four sections which are response rate, backgrounds of respondents, results of occupational health and safety practices which are presented through descriptive statistics of mean and standard deviation. The findings of the study are presented in form of tables and graphs.

4.2 Response Rate

This study was conducted at Aden Water, Wow Water, and Zabidare Brewery companies in Guragh Zone. The researcher in attempted to collect data relevant to the study distributed a total

copies of one hundred and one (101) questionnaires which were administered to the respondents working in various department at three companies of Aden Water, Wow Water, and Zabidare Brewery manufacturing companies through drop and pick method. However, out of the 101 questionnaires that were distributed, 93 questionnaires were completely filled and returned making a response rate of 92% while 8% were not returned as presented in table 4.1.

Table 4.1 Response rate

No	Response rate	Frequency	Percent	Valid Percent	Cumulative Percent
1	returned	93	92.1	92.1	92.1
2	unreturned	8	7.9	7.9	100.0
	Total	101	100.0	100.0	

Source "Own survey, 2010".

This response rate is acceptable and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

4.3 Background of Respondents

Data was collected from three manufacturing companies they are Aden water company, wow water company and Zabider Brewery company. The number of respondents for each companies is represented in Table 4.2.

Table 4.2 Background of Respondents

NO	Name of company	No of respondents	Percentage(%)
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1	Aden Water	40	43
2	Wow Water	29	31
3	Zabidre Brewery	24	26
	Total	93	100

Source “Own survey, 2010”.

From Table4, 2 it can be deduced that 40 (43 %) of total respondents were from Aden Water, company, 29 (31 %) of total respondents were from Wow Water company and and 24 (26 %) of total respondents were from Zabidare Brewery company. The research concludes that respondents from all companies was represented proportionally as their response may have significant effect on the findings of the study.

4.3.1 Respondents' Gender

The respondents were required to indicate their gender to ensure equal representation of both gender and obtain their views. The results are presented in Table 4.3.

Table 4.3 sex of respondents

NO	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
1	Male	69	74.2	74.2	74.2
2	Female	24	25.8	25.8	100.0
	Total	93	100.0	100.0	

Source “Own survey, 2010”.

The results indicate that 69(74%) of the respondents were male while 24(26%)were female. The findings indicate that there is significantly more male than female due to nature of work done at Guragh Zone manufacturing Companies. This shows that the study is not influenced by gender imbalance.

4.3.2 Respondents' Department of Work

The respondents to state their department range from production, Procurement and Maintenance Services, Human Resource and Administration, Finance and Accounting, marketing and customer relation and Other Departments. The response is analyzed in Figure 4.1

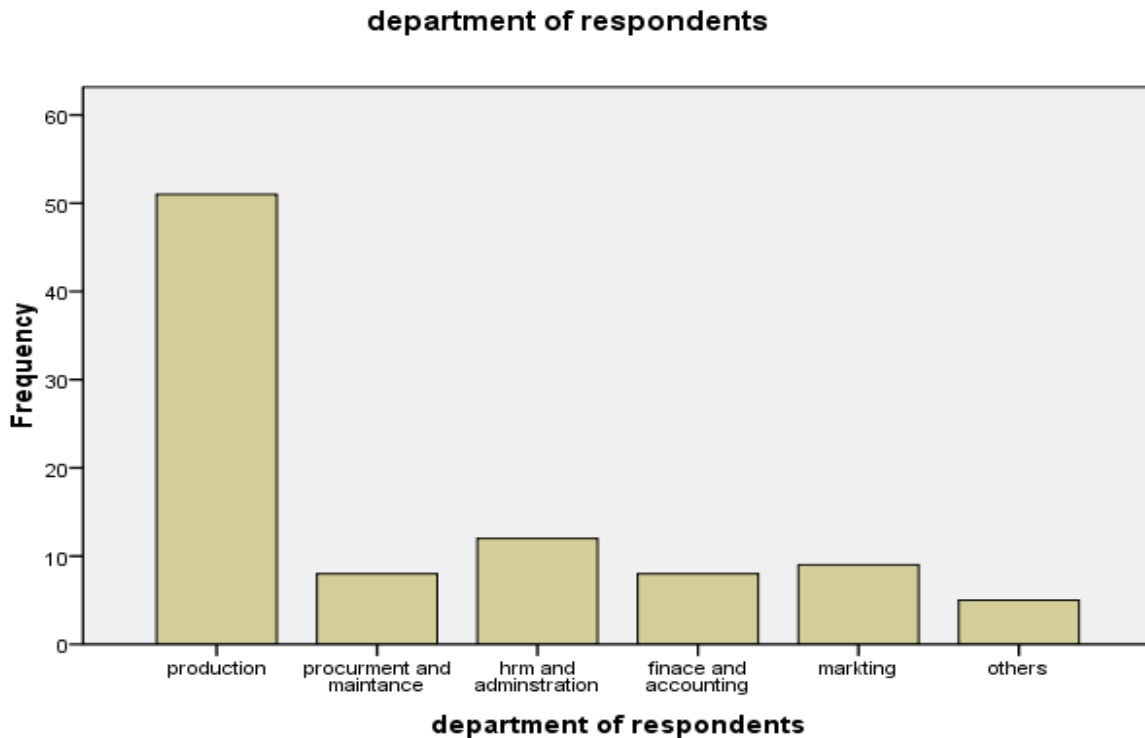


Figure 4.1 Respondents' Department of Work.

Findings as shown in Figure 4.2 above indicate that majority of the respondents are from production department (54.8%) compared to human resource and administration (12.9%), Marketing and Customer Relations(9.7%), Finance and Accounting (8.6%), procurement and maintenance(8.6%),and Other-Estates (5.4%). The study response therefore shows that there was representation of the respondents in each of the departments at Aden water, wow water, and Zabidare Brewery . The findings reveal that majority of the employees are in production department and It is therefore important to conclude that the all the departments/or business areas were covered by the research thus the study are representative of the companies work unit. In addition to this the study indicated that majority of respondents are working in the production department. This is because the working section has many sub units where product workers engaged in.

4.3.3 Category of Work in the Organization

The study sought to establish the category of respondents in terms of managerial position. The results are shown in Table4.4.

Table 4.4 level of management for respondents

NO	level of management for respondents	Frequency	Percent	Valid Percent	Cumulative Percent
1	top level management	3	3.2	3.2	3.2
2	middle level management	11	11.8	11.8	15.1
3	lower level management	7	7.5	7.5	22.6
4	operational employee	72	77.4	77.4	100.0
	Total	93	100.0	100.0	

Source "Own survey, 2010".

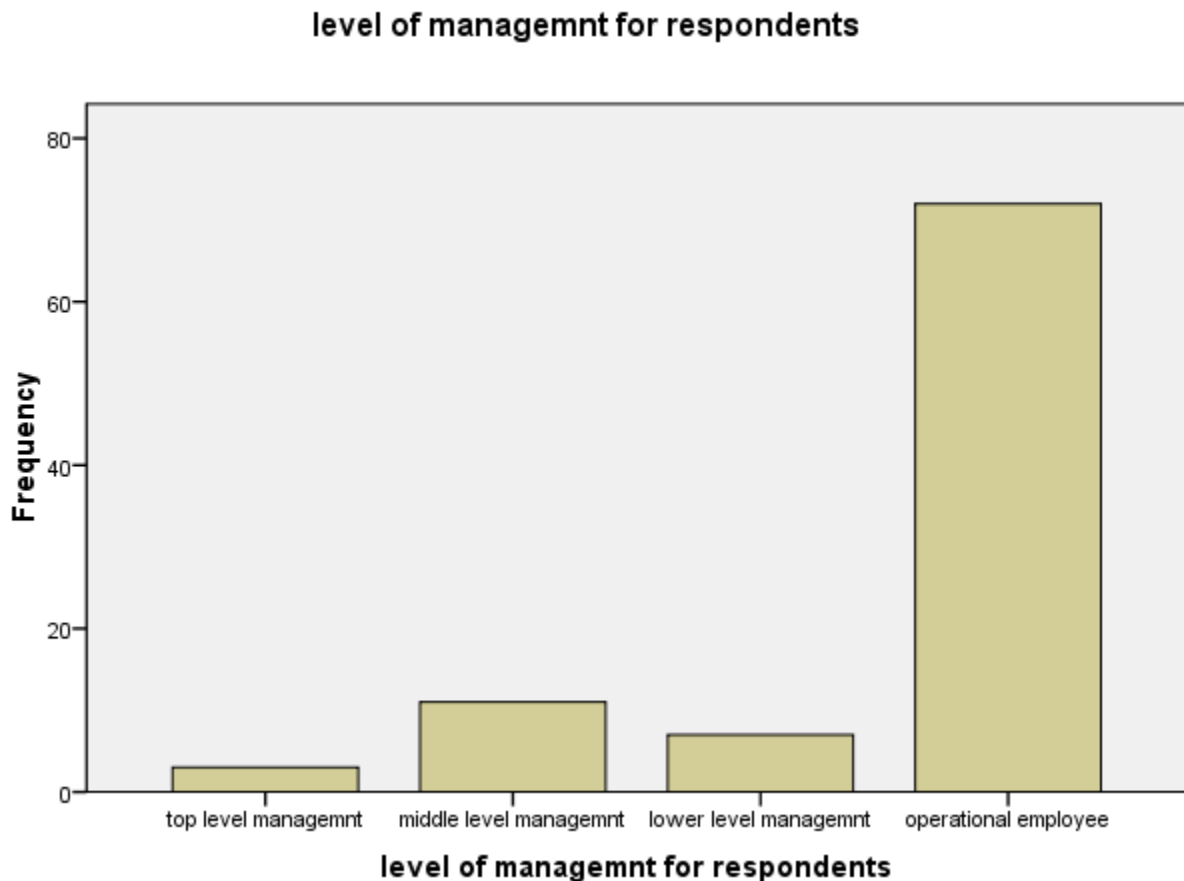


Figure 4.2 level of management for respondents

From the research findings as shown in Table 4.4 and figure 4.2 reveal that majority of the respondents were others non managemnt employee categories in the company 72 (75.8%), lower level management 11 (11.6%), middle level management 7 (7.4 %) and top management 3 (3.2%). The inference from table 4.4 indicates that all level of employees are represented as their response may have significant effect on the findings of the study.

4.3.4 Respondents Years of Employment at their Company

The study sought to know the number of years the employees have been employed in the Company. The analysis is presented in table 4.5 and Figure 4.3.

Table 4.5 Respondents years of experience

NO	Respondents years of experience	Frequency	Percent	Valid Percent	Cumulative Percent
1	below 3 years	12	12.9	12.9	12.9
2	4-6 years	32	34.4	34.4	47.3
3	7-9years	44	47.3	47.3	94.6
4	more than 10 years	5	5.4	5.4	100.0
	Total	93	100.0	100.0	

Source "Own survey, 2010".

Results as shown in Figure 4.3 indicate that majority of the respondents had been employed for 4-6 years 44 (47.3%), 7-9 years 32(34.4%) ,below 3 years 12 (12.9%) and more than 10 years 5(5.4%). From the data, we can understand that the experiences of respondents were found to be adequate in order to provide enough information regarding occupational health and safety practices in the Companies.

4.3.5 Respondents' Highest Level of Education

The study sought to identify the highest education qualifications of the employees. The findings are presented in the table 4.6 below.

Table 4.6 Respondents level of education

NO	education	Frequency	Percent	Valid Percent	Cumulative Percent
1	master's degree	6	6.5	6.5	6.5
2	bachelor degree	32	34.4	34.4	40.9
3	diploma	43	46.2	46.2	87.1
4	certificate	12	12.9	12.9	100.0
	Total	93	100.0	100.0	

Source "Own survey, 2010".

From the table 4.6 it is revealed that majority of the workers were Diploma holders 43 (46.2%), Bachelor's Degree 32 (34.4%), Certificate 12(12.9%), Master's degree 6(6.5%), and PHD (0%). Hence, it was thought that the information they provide would be rational due to their academic background.

4.3.6 Respondents' Age Category

The study sought to identify the age bracket of the respondents in the company. The results are summarized in the figure 4.3

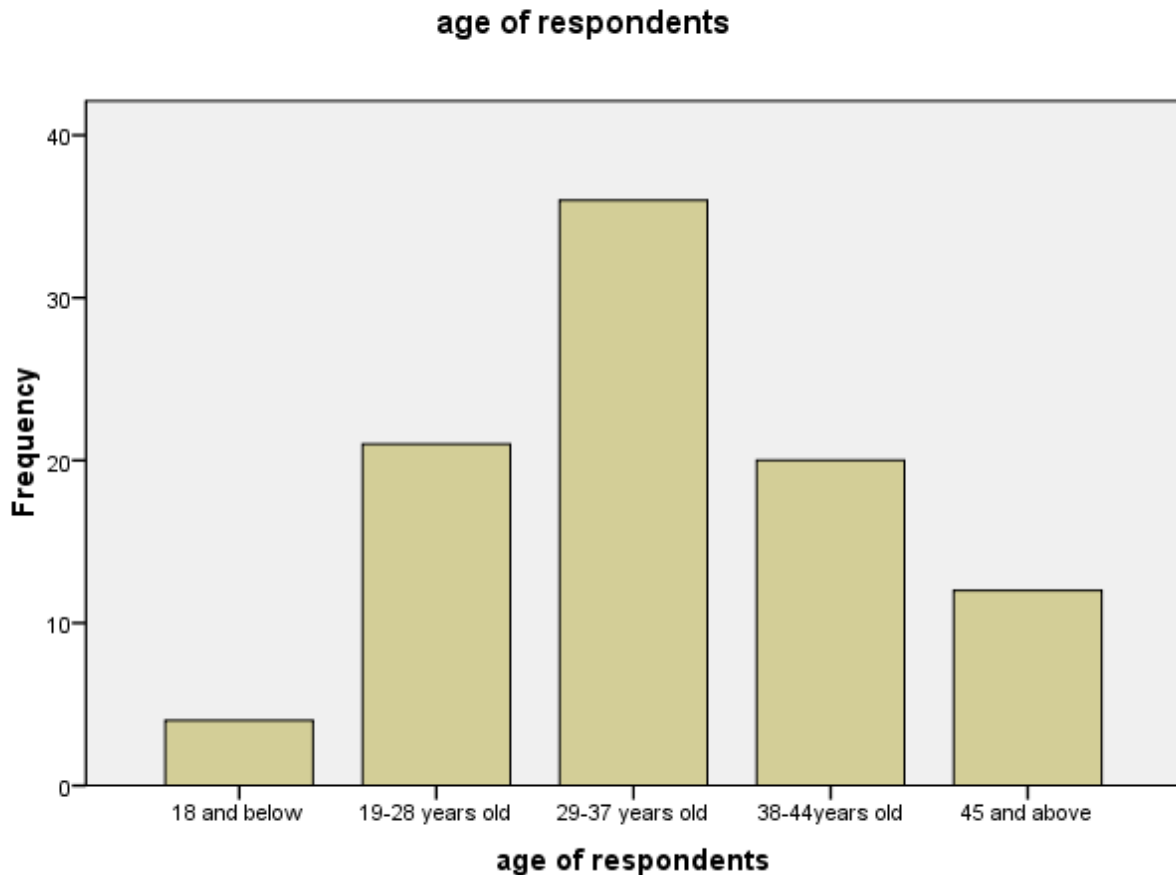


figure 4.3 Respondents' Age Category

Findings reveal that majority of the respondents were 29-37 years old (38.7%), 19-28 years old (22.6%), 38-44 years old (21.5%), 45 years old and above (12.9%) and 18 years old and below (4.3 %). The study concluded that employees of all age categories participated in the research.

4.4 Occupational Safety and Health practices

The objective of the study was to explore the occupational health and safety practices of manufacturing companies in Guragh Zone. This section therefore deals with occupational safety and health practices at Aden Water, Wow Water, and Zabidare Brewery companies. The respondents were asked to indicate the occupational safety and health practices provided by their companies in a five (5) -point Likert Scale in collecting the data so the factors were ranked based on their weighted mean. The range was 'Strongly Agree (5)' to 'Strongly Disagree' (1). The scores of 'Strongly Disagree' and 'Disagree' have been taken to represent a variable which has

mean score of 0 to 2.5 on the continuous Likert scale; ($0 \leq L.E < 2.4$). The scores of ‘Uncertain/Moderate’ have been taken to represent a variable with a mean score of 2.5 to 3.4 on the continuous Likert scale: ($2.5 \leq M.E. < 3.4$) and the score of both Agree and Strongly Agree have been taken to represent a variable which had a mean score of 3.5 to 5.0 on a continuous Likert scale; ($3.5 \leq G.E. < 5.0$). A standard deviation of ≥ 1 is taken to mean was consensus on employee responses while ≤ 1 shows there was no significance variance hence consensus in responses. .

4.4.1 Health and Safety Committees

The respondents were asked to indicate to what extent they agreed with the various statements listed under the health and safety committee in the company. The results are shown in Table 4.7.

Table 4.7 Health and Safety Committees

NO	Health and Safety Committees	N	Mean	Std. Deviation
1	The organization has a health and safety committee in place.	93	4.19	.537
2	Safety committee allows participation of employees in its activities.	93	2.24	.698
3	Safety committees identify issues to be addressed and make improvements.	93	1.80	.600
4	Employees are confident with the composition of the safety committee.	93	2.48	.993
		93		

Source “Own survey, 2010”.

Research findings as shown in Table 4.7 indicate that majority of the respondents agreed to a great extent in that the organization has a health and safety committee in place with a mean of 4.19. However, They agreed to a low extent that Employees are confident with the composition of the safety committee with a mean of 2.48 ,Safety committee allows participation of employees in its activities with a mean of 2.24, and Safety committees identify issues to be addressed and make improvements with a mean of 1.80.

These findings imply that Guragh Zone manufacturing companies have health and safety committee. However, the health and safety committee has not allowed participation of employees in its activities, has not identified health and safety issues to be addressed or make improvements hence employees are not confident with the composition of health and safety committee. As stated in Ethiopian Labor Proclamation No. 377/ 2003, Safety and health Committees should be established in each factory to advise the management on matters of preventing injuries and accidents. The study result supported by Mhongole (2007) in his research titled “Effective implementation of occupational health and safety act of 2003”in TANZANIA manufacturing companies revealed that, the health and safety committee existing in working places, tough some workers were not aware of the committee.

4.4.2 Health and Safety Policy

The respondents were asked to indicate the extent to which they agreed with the statements listed under health and safety policy .

Table 4.8: Health and Safety Policy

NO	Health and Safety Policy	N	Mean	Std. Deviation
1	The company has a healthy and safety policy in place that aims at promoting safety culture.	93	3.02	1.073
2	The policy defines the procedure for handling complaints on health and safety.	93	2.27	1.075
3	The policy has been made available to all employees for transparency purposes	93	2.19	.424
4	Roles and responsibilities of the employees and employer is defined in the policy	93	2.52	.665
		93		

Source "Own survey, 2010".

As it can be seen from the table above, in Table 4.8 indicate that majority of the respondents agreed to a moderate extent in that company has a healthy and safety policy in place that aims at promoting safety culture with a mean of 3.2 and Roles and responsibilities of the employees and employer is defined in the policy with a mean of 2.52. Further the respondents agreed to a low extent that the policy defines the procedure for handling complaints on health and safety with a mean of 2.27 and the policy has been made available to all employees for transparency purposes with a mean of 2.19.

The findings implies that manufacturing companies in Guragh Zone has a to moderate extent have a Health and Safety Policy in place and Roles and responsibilities of the employees and employer is defined in the policy. However, the policy has not defined the procedure for handling complaints on health and safety, and has not been made available to all employees for transparency purposes. As stated by (Foot and Hook, 2008),Health and Safety Policies except in

very small firms of fewer than five employees, every employer is required to prepare and keep up-to-date, a written statement of safety policy.

4.4.3 Health and Safety Inspections

The respondents were asked to indicate to what extent they agreed with the various statements listed under health and Safety Inspections. Table 4.9 below presents the results.

Table 4.9 Health and Safety Inspections

NO	Health and Safety Inspections	N	Mean	Std. Deviation
1	The company conducts regular inspections at the workplace.	93	2.23	1.295
2	The inspections help in developing health and safety strategies and initiatives that are tailored to the organization specific needs.	93	2.33	.825
3	Inspections identify dangerous sub-stances	93	2.24	.876
4	Employees are involved in the inspection process.	93	2.26	.954
		93		

Source "Own survey, 2010".

Research findings as shown in Table 4.9 reveal that majority of the respondents agreed to a low extent that the Company conducts regular inspections at the workplace with a mean of 2.23, the Inspections identify dangerous substances with a mean of 2.24 , the inspections help in developing health and safety strategies and initiatives that are tailored to the organization specific needs with a mean of 2.33 and Employees are involved in the inspection process with a mean of 2.26.

This implies that there is no health and safety inspections at Guragh Zone manufacturing companies, the company does not conduct regular inspections at the workplace, the inspections have not helped in developing health and safety strategies and initiatives that are tailored to the company safety needs and also the employees are not involved in the inspections process. As stated by Cole (2004) health and safety audits and inspections can contribute in a sustainable

manner to the organizational goals and performance if the programs are well designed and based on participatory approach.

4.4.4 Health and Safety Training

Table 4.10 Health and Safety Training

NO	Health and Safety Training	N	Mean	Std. Deviation
1	Employees are provided with adequate training to understand proper working methods.	93	3.10	.979
2	Company educate employees about a healthy work-style and lifestyle.	93	3.00	.780
3	There is an ongoing education programs on health and safety.	93	2.20	.405
4	Relevant laws and regulations are explained during training.	93	2.51	.802
5	Information about safety and health provisions and outcome are shared openly with employees	93	2.05	.901
		93		

Source “Own survey, 2010”

Majority of the respondents agreed to a moderate extent that Employees are provided with adequate training to understand proper working methods with a mean of 3.10, Company educate employees about a healthy work-style and lifestyle with a mean of 3.00 and Relevant laws and regulations are explained during training with a mean of 2.51. Further the respondents agreed to a low extent that Information about safety and health provisions and outcome are shared openly with employees with a mean of 2.05 and there is an ongoing education programs on health and safety with a mean of 2.20. These findings imply that health and safety training has been adopted at Guragh Zone manufacturing companies moderately. The companies partially conducts health and safety training to understand proper working methods, employees healthy work style, lifestyle, and explaining relevant laws and regulations. However, the company does not openly share with the employees information about health and safety provisions or outcomes, and there is no ongoing education on health and safety. As stated by(Armstrong, 2006),the need to give

appropriate training in occupational health and safety to workers and their representatives should be stressed as a fundamental element of occupational safety and health policy. Managers, supervisory staff and workers all need to be trained.

4.4.5 Health and Safety First Aid

The respondents were asked to indicate to which extent they agreed with the listed statements under the health and Safety First Aid. Table 4.11 below presents the results.

Table 4.11 Health and Safety First Aid

NO	Health and Safety First Aid	N	Mean	Std. Deviation
1	The organization provide First Aid equipment on the premises which should be checked and replaced regularly.	93	3.31	.955
2	All employees know the location of the First Aid Kit	93	2.83	.842
3	There is clearly written emergency telephone numbers for medical assistance (perhaps the nearest medical clinic), ambulances, the nearest hospital etc.	93	3.13	.679
4	The organization properly trained first aid responder in emergency first aid procedures and techniques.	93	2.27	.554
		93		

Source "Own survey, 2010"

Findings from the study shown in Table 4.11 indicate that majority of the respondents agreed to moderate extent in that The organization provide First Aid equipment on the premises which should be checked and replaced regularly with a mean of 3.31, There is clearly written emergency telephone numbers for medical assistance (perhaps the nearest medical clinic), ambulances, the nearest hospital with a mean of 3.13 and all employees know the location of the First Aid Kit with a mean of 2.83. Further the respondents agreed to a low extent that The

organization properly trained first aid responder in emergency first aid procedures and techniques with a mean of 2.27. The findings imply that Guragh Zone manufacturing companies provide First Aid equipment on the premises which should be checked and replaced regularly, all employees know the location of the First Aid Kit and Have clearly written emergency telephone numbers for medical assistance. However, The companies not properly trained first aid responder in emergency first aid procedures and techniques. According to Health and Safety (First-Aid) Regulations 1999 Employers have a legal duty to make arrangements to ensure their employee receive immediate attention if they are injured or taken ill at work.

4.4.6 Ergonomics practices

The study also investigate Ergonomics practices in the companies. The respondents were asked to indicate about Ergonomic practices in the companies. The results are shown in Table 4.12.

Table 4.12 Ergonomics practices

NO	Ergonomics practices	N	Mean	Std. Deviation
1	There is the practice of designing equipment and work tasks to prevent injuries before they occur.	93	2.03	1.151
2	Continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand.	93	2.03	.274
3	There is Workplace analysis useful to identify existing and potential workplace hazards and find ways to correct these hazards.	93	2.16	.370
4	The design and layout of working facility in the organization is effective in reducing risk factors.	93	2.13	.631
		93		

Source "Own survey,

Research findings as shown in Table 4.12 indicate that majority of the respondents agreed to a low extent that the companies has the practice of designing equipment and work tasks to prevent injuries before they occur with a mean of 2.03 ,Continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand with a mean of 2.03, design and layout of working facility in the organization is effective in reducing risk factors with a mean of 2.13 and there is Workplace analysis useful to identify existing and potential work-place hazards and find ways to correct these hazards with a mean of 2.16. These findings imply that Guragh Zone manufacturing companies have not conducts the practice of designing equipment and work tasks to prevent injuries before they occur hence, The design and layout of working facility in the organization is not effective in reducing risk factors. further, There is no workplace analysis useful to identify existing and potential work-place hazards and find ways to correct these hazards and no continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand. According to Canada center of occupational safety and health, when there is a mismatch between the physical requirements of the job and the physical capacity of the worker, work-related musculoskeletal disorders can result. the design and layout of working facility is critical in reducing risk factors. The study done by SELAMON TEBEB(2014) at Addis Ababa City Administration garment and textile sectors indicate that, all respondents in the four departments were affected in one way or the other by their working postures. experience general body pains whilst, suffer from eye infections. A combination of standing, bending and sitting results in waist, knee, feet and general body pains among respondents.

4.4.7 Health and Safety Emergency Action Plan

The respondents were asked to health and safety emergency action plan .The results are indicated in Table 4.13.

Table 4.13 health and safety emergency action plan

NO	health and safety emergency action plan	N	Mean	Std. Deviation
1	There is emergency plan which specifies procedures for handling sudden and unexpected situations.	93	2.23	.939
2	There is a vulnerability assessment to potentially major emergencies, such as fire, loss of power or natural hazards.	93	2.16	1.053
3	Exercises and drills can be conducted to practice all or critical portions (such as evacuation) of the plan.	93	1.94	.355
4	A thorough and immediate review after each exercise, drill, or after an actual emergency will point out areas that require improvement	93	1.92	.472
		93		

Source “Own survey, 2010”.

The study investigated on the occupational health and safety emergency action plan in the companies and the following aspects were tested. Majority of the respondents agreed to a low extent in that presence of emergency action plan which specifies procedures for handling sudden and unexpected situations with a mean of 2.23, a vulnerability assessment to potentially major emergencies, such as fire, loss of power or natural hazards with a mean of 2.16, Exercises and drills can be conducted to practice all or critical portions (such as evacuation) of the plan with a mean of 1.94 and a thorough and immediate review after each exercise, drill, or after an actual

emergency will point out areas that require improvement with a mean of 1.92. The findings implies that Guragh Zone manufacturing companies have no emergency action plan which specifies procedures for handling sudden and unexpected situations and a vulnerability assessment to potentially major emergencies , there is also no Exercises and drills can be conducted to practice and no review after each exercise. As stated by(Alberta, 2006), a serious emergency (Such as explosion, fire, or flood) could seriously affect the operation of a business and put the health, safety, and livelihood of many employees in jeopardy. The best health and safety management system cannot protect your company from all natural or unexpected disasters; however, having a good emergency response plan (ERP) in place can reduce the severity and risk of loss.

4.4.8 Responsibilities concerning occupational health and safety

Table 4.14 Responsibilities concerning occupational health and safety

NO	Responsibilities concerning occupational health and safety	N	Mean	Std. Deviation
1	There is clearly defined responsibilities on safety and health practices in your company.	93	3.53	.880
2	health and safety is the joint responsibility of management and workers	93	3.81	.824
3	Individual responsibilities apply to every employee in the workplace in your company	93	3.77	.782
		93		

Source "Own survey, 2010".

Table 4.14 indicate that majority of the respondents agreed to a great extent in that occupational health and safety is the joint responsibility of management and workers with a mean of 3.81, Individual responsibilities are applicable to every employee in the workplace in the companies with a mean of 3.77 and the companies have clearly defined responsibilities on safety and health issues with a mean of 3.53. The findings imply that the companies had clearly defined responsibilities on safety and health issues, health and safety issue is the joint responsibility of

management and workers and Individual responsibilities is apply to every employee in Guragh Zone manufacturing companies. A clearly defined and well communicated health and safety roles and responsibilities for all levels of the organizations will create an expectation of a standard level of performance and accountability among employees, contractors, and visitors. All levels must be aware of their individual roles and responsibilities under both state law and company standards(Alberta, 2006)

4.4.9 Safety and health orientation

The respondents were asked to indicate to which extent they agreed with the listed statements under the Safety and health orientation. The following are their means as shown in Table 4.15.

Table 4.15 Safety and health orientation

NO	Safety and health orientation	N	Mean	Std. Deviation
1	There is employee orientation when an employee joins the organization or is transferred to a new job.	93	3.77	.782
2	Both health and safety education and job skills training can be used in orientation sessions.	93	3.33	.838
3	Orientation sessions can be offered on com-men cement of employment, reassignment or transfer to a new job, and when coming back from extended leave.	93	3.34	1.166
4	There is evaluation of orientation program.	93	2.34	.730

Research findings as shown in Table 4.15 reveal that majority of the respondents agreed to a great extent that there is employee orientation when an employee joins the organization or is

transferred to a new job .with a mean of 3.77. Further the respondents agreed to a moderate extent that the Companies Orientation sessions can be offered on com-men cement of employment, transfer to a new job, and when coming back from extended leave with a mean of 3.34 and Both health and safety education and job skills training can be used in orientation sessions with a mean of 3.33. Further the respondents agreed to a low extent that the evaluation of orientation program with a mean of 2.34. This implies there is health and safety orientation practices in Guragh Zone manufacturing companies, the Orientation sessions can be offered on com-men cement of employment, reassignment or transfer to a new job, and when coming back from extended leave, and both health and safety education and job skills training can be used in orientation sessions. However, there is no evaluation of orientation program at manufacturing companies in Guragh Zone. Health and safety orientation is a vital component of any company’s health and safety management system. It is the process of introducing new, inexperienced, transferred and returning employees to a safe and healthy workplace(Skidmore College).

The respondents were asked to Psychological aspect of OSH .The results are indicated in Table 4.16.

4.4.10 Psychological aspect of OSH

Table 4.16 Psychological aspect of OSH

NO	Psychological aspect of OSH	N	Mean	Std. Deviation
1	you feel that you have to work long hours to keep your job or to get promoted in your company.	93	3.53	.370
2	you find your work too difficult to done in your company.	93	3.5	.104
3	you are not encouraged to develop your skills in your company.	93	3.67	.889
		93		

Source “Own survey, 2010”.

As it is shown in Table 4.16 reveal that majority of the respondents agreed to a great extent that they are not encouraged to develop their skills in the companies with a mean of 3.67. they feel that they have to work long hours to keep their job or to get promoted in the companies with a mean of 3.53 and they find the work too difficult to done in the companies with a mean of 3.5. This implies that the company does not encouraged to develop employee skills, employees are feel to work long hours to keep their job and find their work too difficult at Guragh Zone manufacturing companies. The study result supported by SELAMON TEBEB(2014) at Addis Ababa City Administration garment and textile sectors indicate that, psycho-social hazards cause fatigue, stress and general loss of interest in work. Among AKAKE TEXTILE and GRAMENT factory workers 2.9 percent of them work for 16 hours, 5 percent work for 14 hours and 5.4 percent work 12 hours a day. This increases the stress level among workers.

The respondents were asked to indicate whether Personal protective equipment has provided, adequate, training on the use of PPEs is given and use of PPEs is helps to reduce accidents in the companies. The results are shown in Table 4.16

4.4.11 Personal protective equipment

Table 4.17. Personal protective equipment

NO	Personal protective equipment	N	Mean	Std. Deviation
1	The company provide personal protective equipment to employees	93	4.58	.665
2	The personal protective equipment provided by your company is adequate	93	2.39	.794
3	There is adequate training on how to use the personal protective equipment	93	2.19	.595
4	The use of PPEs helps to reduce accidents in this company	93	4.01	.104

Source "Own survey, 2010".

The study investigated on the use of Personal protective equipment in the companies and the following aspects were tested.

Majority of the respondents agreed to a great extent in provision of personal protective equipment to employees with a mean of 4.58 and the use of PPEs helps to reduce accidents in the companies with a mean of 4.01. They further agreed to a low extent that personal protective equipment provided by the companies are adequate with a mean of 2.39 and There is adequate training on how to use the personal protective equipment with a mean of 2.19. The findings implies that Guragh Zone manufacturing companies provide personal protective equipment to the employees and the use of PPEs helps to reduce accidents in the companies. However, the personal protective equipment provided by the companies are not adequate and there is no adequate training on how to use the personal protective equipment. According to (ILO 2015), Employees have rights to know, to refuse, to demand good working environment, to reject to work under dangerous situation as well as a right to demand personal protective equipment. On the other hand, the employer has a duty to ensure that employees are well protected from any unhealthy and unsafe condition at their place of work. In order to avoid unhealthy and unsafe working environment there is a necessity for the provision of the protective equipment. The study result supported by Mhongole (2007) in his research titled “Effective implementation of occupational health and safety act of 2003” in TANZANIA manufacturing companies revealed that, the status of protective equipment availability to workers exposed to hazard areas was found to satisfy as 98% of the equipment required by the workers had been provided and also, the study aimed to find out whether workers knew to use protective equipment 60% of the respondents agreed to have knowledge of using protective equipment, while 40% of the respondents had no knowledge of using protective equipment.

4.4.12 The respondents were asked whether their companies are getting any challenge on occupational safety and health issue .

Table 4.18. challenge on occupational safety and health

NO	Yes/no	Frequency	Percent	Valid Percent	Cumulative Percent
1	yes	83	89.2	94.3	94.3
2	no	5	5.4	5.7	100.0
	Total	88	94.6	100.0	
	Missing System	5	5.4		
	Total	93	100.0		

Source "Own survey, 2010".

As shown in the table 4.18 above, 83 (89.2%) of the respondents were said that there companies are getting challenge on occupational safety and health issue and 5 (5.4%)of the respondent said no. The finding imply that majority of the respondent agree that there is challenges on occupational safety and health issue in Guragh Zone manufacturing companies and The major challenge are; Lack of commitment by management for Occupational safety and health practices, Limited financial resources allocation and low attention for OSH issue is given by employer, weak government regulating institutions(GZLSA) which should enforce compliance to health and safety measures in the companies, Limitation on proper use of personal protective equipment's by companies worker and no safety and health officer in the companies and most the companies run its OSH activates by company HRM department.

As study by Manitoba (2003) and Chan (2004),The major factors in the creation of hazards in manufacturing companies are: employee demotivation, lack of or unclearly defined working procedure and tasks, lack of control, lack of instructions or appropriate training, unsafe worker behavior, low management commitment to safety, no consensus on what a Safety Management System (SMS) exactly is and on the corresponding scope

4.4.13 Respondents were asked on what they can think it can be done so as to overcome the challenges on occupational safety and health issue.

Suggestions by Respondents on How to overcome the challenges on occupational safety and health issue in their companies

There is in need of a great commitment by management and employers on implementation of OSH practices, Employer should allocate optimum financial resources and give a high attention for OSH practices to be implemented, Government and regulating institutions should enforce compliance to health and safety measures in the companies, the companies should hire safety and health officer, Employees of the companies should be given adequate training on occupational Health and Safety issues, Management should show their effort in providing safe work environment through maintenance of effective health and safety system and goes a long way in satisfying workers safety needs, and capable of motivating them.

CHAPTER FIVE

5. Summary, Conclusion and Recommendation

5.1 Introduction

This chapter gives an overview of findings, conclusions and recommendations drawn based on findings, limitation of the study and suggestion for future research.

5.2 Summary of Findings

The objective of the study was to assess occupational safety and health practices at manufacturing companies in Guragh Zone. Data was collected by use of structured questionnaires. The findings indicate that majority of the respondents were male which had a significant difference thought did not affect the findings of the study due to the nature of work carried out in the company. This implied that the study was not influenced by gender imbalance. All the levels of employees were involved in the study with high response rate being in operational or non-management employees. From the data, we can understand that the experiences of respondents were found to be adequate in order to provide enough information regarding occupational health and safety practices in the Companies. The findings revealed that majority of the respondents had Diploma and above which meant that the respondents were knowledgeable on safety and health programs hence, information they provide would be rational due to their academic background.

The research found out that majority of the respondents were in production Department and the findings reflect that all departments and business areas were involved in the study. The findings indicate that there is large number of respondents who were 45 and above years old which that the likely to affected by hazards, illnesses, injuries, and occupational diseases in the workplace.

The findings show that majority of the respondents clearly indicate Guragh Zone manufacturing companies have Occupational safety and Health committee in place. However, the health and safety committee has not allowed participation of employees in its activities, has not identified health and safety issues to be addressed or make improvements hence employees are not confident with the composition of health and safety committee.

The findings also show that manufacturing companies in Guragh Zone has a to moderate extent have a Health and Safety Policy in place. However, the roles and responsibilities of the employees and employer are not well defined, the policy has not defined the procedure for handling complaints on health and safety, and has not been made available to all employees for transparency purposes.

The findings on health and safety inspections show that there is no safety inspection at the companies, the companies does not conduct regular inspections at the workplace, the inspections have not helped in developing health and safety strategies and initiatives that are tailored to the company safety needs and also the employees are not involved in the process.

The findings revealed that health and safety training has been adopted at Guragh Zone manufacturing companies moderately, The companies partially conducts health and safety training to understand proper working methods, employees healthy work style, lifestyle, and explaining relevant laws and regulations. However, the companies does not openly share with the employees information about health and safety provisions or outcomes, and there is no ongoing education on health and safety.

The findings show that Guragh Zone manufacturing companies provide First Aid equipment on the premises which should be checked and replaced regularly, all employees know the location of the First Aid Kit and have clearly written emergency telephone numbers for medical assistance. However, The companies not properly trained first aid responder in emergency first aid procedures and techniques.

The findings show that Guragh Zone manufacturing companies have not been conducts the practice of designing equipment and work tasks to prevent injuries before they occur hence, The design and layout of working facility in the organization is not effective in reducing risk factors, There is no Workplace analysis useful to identify existing and potential work-place hazards and find ways to correct these hazards and no Continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand.

The study revealed that the companies have not been adopted an emergency action plan which specifies procedures for handling sudden and unexpected situations and a vulnerability assessment to potentially major emergencies, there is no Exercises and drills can be conducted to practice and no review after each exercise.

The findings show that the companies had clearly defined responsibilities on safety and health issues, health and safety issue is the joint responsibility of management and workers and Individual responsibilities is apply to every employee in Guragh Zone manufacturing companies. The finding also show that there is health and safety orientation practices in the companies, the Orientation sessions can be offered on com-men cement of employment or transfer to a new job and both health and safety education and job skills training can be used in orientation sessions. However, there is no evaluation of orientation program at manufacturing companies in Guragh Zone.

The study finding revealed that employees are feel to work long hours to keep their job , find their work too difficult and the company does not encouraged to develop employee skills. The findings show that Guragh Zone manufacturing companies provide personal protective equipment to the employees and the use of PPEs helps to reduce accidents in the companies. However, the personal protective equipment provided by the companies are not adequate and there is no adequate training on how to use the personal protective equipment.

The study finding on safety and health management challenge in the companies are; Lack of commitment by management for Occupational safety and health practices, Limited financial resources allocation and low attention for OSH issue is given by employer, weak government regulating institutions(GZLSA) which should enforce compliance to health and safety measures in the companies, Limitation on proper use of personal protective equipment's by companies worker and no safety and health officer in the companies and most the companies run its OSH activates by company HRM department.

5.3 Conclusion

From the findings and discussion most occupational safety and health practices were found to have been adopted by the organization while some of them are need key interventions form stake holders at Guragh Zone manufacturing companies. Although occupational safety and health in great extent determines organizational success, the companies has put little effort in adopting some practices. The respondents were in agreement with certain occupational safety and health practices which were found to be strong while others were moderate and low.

The research established that, Guragh Zone manufacturing companies had clearly defined responsibilities on safety and health issues, have Occupational safety and Health committee in place, have a Health and Safety Policy in place, health and safety training has been adopted, provide First Aid equipment's, health and safety orientation and personal protective equipment to the employees. however, there is no safety inspection, have not been conducts the practice of designing equipment and work tasks to prevent injuries(ergonomics practices), the companies have not been adopted an emergency action plan which specifies procedures for handling sudden and unexpected situations and the majority of employee in the companies are work under stress. There is also safety and health management challenge in the companies they are; Lack of commitment by management for Occupational safety and health practices, Limited financial resources allocation for health and safety issues and low attention is given by employer for OSH issue, weak government regulating institutions(GZLSA) which should enforce compliance to health and safety measures in the companies, Limitation on proper use of personal protective equipment's by companies worker and no safety and health officer in the companies and most the companies run its OSH activates by company HRM department.

5.4 Recommendations

Occupational safety and health practices 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.

Manufacturing companies in Guragh Zone should set up a Joint safety and health committee that provide a valuable framework for discussion and for concerted action to improve safety and health. Cooperation in the field of occupational safety and health between management and workers or their representatives at the workplace is an essential element in maintaining a healthy working environment. The health and safety committee has allowed participation of employees in its activities, has identified health and safety issues to be addressed or make improvements hence employees are confident with the composition of health and safety committee.

Manufacturing companies in Guragh Zone should have a Health and Safety Policy in place. The roles and responsibilities of the employees and employer are well defined, the policy should defined the procedure for handling complaints on health and safety, and must be available to all employees for transparency purposes.

There should be clearly defined responsibilities on safety and health issues, health and safety issue is the joint responsibility of management and workers and Individual responsibilities is apply to every employee in Guragh Zone manufacturing companies. The responsibilities of top management, middle level management, supervisors and operational 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 company conditions and practice. Management should allocate sufficient resources (financial and human) for the proper functioning of the occupational safety and health program me.

A system of inspection must be in place to secure compliance with occupational safety and health measures and other labour legislation. The inspections have helped in developing health and safety strategies and initiatives that are tailored to the company safety needs and also the employees should be involved in the inspections process.

Education and training are vital components of safe, healthy working environments. The companies should conduct health and safety training to understand proper working methods, employees' healthy work style, lifestyle, and explaining relevant laws and regulations. The companies should openly share information with employees about health and safety provisions or outcomes, and there should be ongoing education on health and safety.

There should be the practice of designing equipment and work tasks to prevent injuries before they occur. Hence, the design and layout of working facilities in the organization is effective in reducing risk factors.

Manufacturing companies in Guragh Zone must provide First Aid equipment on the premises which should be checked and replaced regularly, all employees know the location of the First Aid Kit and have clearly written emergency telephone numbers for medical assistance. The companies also should properly train first aid responders in emergency first aid procedures and techniques.

There should be an emergency action plan which specifies procedures for handling sudden and unexpected situations and a vulnerability assessment to potentially major emergencies. Exercises and drills can be conducted to practice and review after each exercise.

There should be a health and safety orientation program at Guragh Zone manufacturing companies. The orientation sessions can be offered on commencement of employment, reassignment or transfer to a new job, and when coming back from extended leave, and both health and safety education and job skills training can be used in orientation sessions and there should be an evaluation of the orientation program.

Employees of the companies should be motivated, challenged and encouraged, rather than threatened – directly or indirectly aspects of the workplace that are over-demanding in some way. Hence, workers' stress is avoided.

There should be provision of personal protective equipment to the employees and the use of PPEs helps to reduce accidents in the companies. The personal protective equipment provided by the companies should be adequate and training should be given on how to use the personal protective equipment.

For a health and safety management system to be effective, management at all levels, should be demonstrate their support of the health and safety program. This may be demonstrated through management commitment for Occupational safety and health practices by allocation of sufficient resources, by provision of sufficient protective equipment's, by organizing safety and health department and staff etc. Government should enforce compliance to health and safety measures in the companies and employee should better fit with the culture of the organization regarding safety and health.

5.5 Limitations of the Study

The researcher faced financial and time constraints in carrying out the research. The manufacturing companies of Aden Water, Wow Water, and Zabidare Brewery operates in different areas of jurisdiction and as such to collect data was not easy. The mode of data collection was through drop and collect basis which was not only expensive but which also took long period. Most of the respondents were reluctant to participate in research and had to be really convinced by the human resource department to understand the essence of filling the questionnaire.

5.6 Suggestion for Future Research

For the purposes of future similar research study a large sample should be obtained to determine whether findings can be generalized as this study used a sample of 93 respondents. It is suggested that future studies can be extended to other sector to assess the occupational safety and health practices. The future research can assess the level of implementation and compliance of international and national laws related to health and safety in the workplace. Alternative data collection methods such as interviews can be used to yield more in-depth information on the occupational health and safety practices.

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Appendix

I Questionnaires

Instructions i:

Please provide the following regarding your position in the organization by placing “√”
In the appropriate block.

SECTION A: BIO DATA OF THE REpondENTS

1. What is your gender?

1	Male	
2	Female	

2. In which department you are work?

1	production,	
2	Procurement and Maintenance Services	
3	Human Resource and Administration	
4	Finance and Accounting	
5	marketing and customer relation	
6	Other (specify name)	

3. What category do you fall in your company?

1	Top Management	
2	Middle Level Management	
3	Lower level management	
4	Operational employee	

4. How many years have u been worked in this company?

1	Below 3 years	
2	4 – 6 years	
3	7- 9 years	
4	More than 10	

5. What is your highest qualification (Education Level) ?

1	PHD	
2	Masters	
3	Bachelor’s Degree	
4	Diploma	
5	certificate	
6	Others (specify)	

6. What age category do you fall?

1	18 years and below	
2	19– 28	
3	29-37	
4	45 and above	

SECTION B: OCCUPATIONAL SAFETY AND HEALTH PRACTICES

INSTRUCTIONS ii please indicate the extent to which you perceive that the following statements apply by indicating with an “√” in the appropriate box (Scale 5. Strongly Agree 4. Agree 3. Neutral(moderate) 2. Disagree 1. Strongly Disagree)

B1	Health and safety committees	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	The organization has a health and					

	safety committee in place.					
2	Safety committee allows participation of employees in its activities.					
3	Employees are confident with the composition of the safety committee.					
4	Safety committees identify issues to be addressed and make improvements.					
B 2	Health and safety Policy	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	The company has a healthy and safety policy in place that aims at promoting safety culture.					
2	The policy defines the procedure for handling complaints on health and safety.					
3	The policy has been made available to all employees for transparency purposes					
B 3	Health and safety inspections	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	The company conducts regular					

	inspections at the workplace.					
2	The inspections help in developing health and safety strategies and initiatives that are tailored to the organization specific needs.					
3	Inspections identify dangerous substances					
4	Employees are involved in the inspection process.					
B 4	Health and Safety Training	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	Employees are provided with adequate training to understand proper working methods.	a				
2	Company educate employees about a healthy work-style and lifestyle.					
3	There is an ongoing education programs on health and safety.					
4	Relevant laws and regulations are explained during training.					
5	Information about safety and health					

	provisions and outcome are shared openly with employees.					
B 5	First Aid	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	<i>The organization provide First Aid equipment on the premises which should be checked and replaced regularly.</i>					
2	All employees know the location of the First Aid Kit					
3	There is clearly written emergency telephone numbers for medical assistance (perhaps the nearest medical clinic), ambulances, the nearest hospital etc.					
4	The organization properly trained first aid responder in emergency first aid procedures and techniques.					
B 6	ergonomics	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	There is the practice of designing equipment and work tasks to prevent injuries before they occur.					

2	Continual education and training about ergonomic hazards to be updated and presented to employees in the language that they can understand.					
3	There is Workplace analysis useful to identify existing and potential workplace hazards and find ways to correct these hazards.					
4	The design and layout of working facility in the organization is effective in reducing risk factors.					
B 7	<i>Emergency action plan</i>	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	There is emergency plan which specifies procedures for handling sudden and unexpected situations.					
2	There is a vulnerability assessment to potentially major emergencies, such as fire, explosion, loss of power or natural hazards.					
3	Exercises and drills may be conducted to practice all or critical portions (such as evacuation) of the plan.					

4	A thorough and immediate review after each exercise, drill, or after an actual emergency will point out areas that require improvement					
B 8	<i>Responsibilities concerning Occupational Health and Safety</i>	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	There is clearly defined responsibilities on safety and health practices in your company.					
2	health and safety is the joint responsibility of management and workers					
3	Individual responsibilities apply to every employee in the workplace in your company					
B 9	Orientation	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	There is employee orientation when an employee joins the organization or is transferred to a new job.					
2	Both health and safety education and job skills training can be used in orientation sessions.					

3	Orientation sessions can be offered on commencement of employment, reassignment or transfer to a new job, and when coming back from extended leave.					
4	There is evaluation of orientation program.					
B10	<i>Stress – Psychosocial aspects of occupational health and safety</i>	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	you feel that you have to work long hours to keep your job or to get promoted in your company.					
2	you find your work too difficult to done in your company.					
3	you are not encouraged to develop your skills in your company. .					
B11	Personal protective equipment's	Strongly agree	Agree	moderate	Disagree	Strongly disagree
1	The company provide sufficient personal protective equipment to employees					

2	The personal protective equipment provided by your company is adequate					
3	There is adequate training on how to use the personal protective equipment					
4	The use of PPEs helps to reduce accidents in this company					

INSTRUCTIONS iii : please indicate the extent to which you perceive that the following statements apply by indicating with an “√ in Yes () or No () options.

1.your companies are getting any challenge on occupational safety and health issue ?

(I) Yes ()

(ii) No ()

If yes, please specify if any;

2. What do you think it can be done so as to overcome the challenges on occupational safety and health issue?

please specify if any;

This is the end of our questionnaire. Thank you very much for taking time to answer the questions. We appreciate your help.