

Effects of Occupational Hazard on Employee Health and Productivity in Case of Academic Institutions

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ABSTRACT

Occupational hazard is experienced at the work place which is related to the work like noise, chemicals, vibration, temperature, dust, over work load etc. While occupational health is concerned with the impact of work on worker health and well-being. From work places university in most countries is also large, growing, includes employers with widely varying organizational cultures, and involves high risk exposures. Hence the objective of the study is to determine occupational effect on workers' health and productivity in Ethiopia higher education institutions selected samples by identifying anthropometric elements mainly injured when none ergonomically operate day to day jobs and roughly estimating the loss in birr of occupational injury/productivity. In Ethiopia civil service declaration an employee of the government is expected to work a minimum of 8hours/day even though reality in the ground is different. Because sometimes absent staffs observed and presented employees are stay perhaps 2hrs/day work as an average. To gather the data naturally capturing the workers in their working places through camera and Measurement tools are conducted to all parameters/respondents. A Well designed Interview and questioner were distributed for key informants to Investigate which body part is mainly damaged usually. Structured checklist to explore the status of occupational safety, health services and related morbidity and 60 literatures were collected in order to describe the type and prevalence of work related hazards, patterns of industries and of workforce. Books, journals, other published/unpublished research's works are collected from web of science, goggle scholar and research get, then 25 articles selected and reviewed by prioritize according to the relevance and closeness percentage. A total of 13 participants included in the study. Stratified and simple random sampling techniques have done on jobs that were selected in exposed employees. Therefore the impact of occupation hazard on two things is very high, needs action.

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Keywords: Academic Institution, Health, International Labor Organization (ILO), Mine Safety And Health Administration (MSHA), National Institute For Occupational Safety And Health (NIOSH), Occupational Hazard, OSH, Productivity, Occupational Contact Dermatitis (OCD), Personal Protective Materials/Equipment (PPE/M)

INTRODUCTION

An educational institution must have a safe and healthy working environment, as appropriate to education and a holistic approach towards wellbeing at the workplace. Occupational health is concerned with the impact of work on worker health and well-being. It is critical in assisting employers in caring for and understanding the needs of their employees, allowing firms to minimize injury, illness, and employee turnover, as well as sick leaves, and increase performance and productivity Tamene (2021) [1]. It and safety is based on the following principles: All workers have rights, The OSH policy must be established, Consultation with the social partners, employers and workers as well as other stakeholders is necessary, Prevention and protection should be the aim of programs and policies, Health promotion is the core element of health policy at the workplace, Compensatory, rehabilitation and treatment services must be made available for workers, Education and training are vital components of a healthy and safe working environment, and Workers, employers and authorities have certain responsibilities, tasks and duties (Zagar, 2013) [2].

Universities in most countries is large, growing, includes employers with widely varying organizational cultures, and involves high risk exposures. Three approaches showed that the university sector is large, with a notably wide range of occupational hazards, and other significant factors which must be considered in planning occupational health provision for individual universities or for the sector as a whole. People using university premises and services include many students and members of the public with whom there are no employer-employee relationship. Compared to industry, work in universities is carried out with little training and supervision Venables (2005) [3]. From the legal perspective, new methodologies, such as genetic engineering, can raise complex issues. Some of the problems described by commentators were related to the change process as longstanding campus primary care services changed their role to become preventive services (Venables, 2005)[3].

Academic staff productivity in the university system is enhanced by a number of factors such as proper reward system, good welfare packages, adequate working environment, timely promotion, adequate provision of necessary working facilities, mentoring of newly recruited staff, ICT training and compliance, participation in seminars, workshops and conferences as well as continuous in-service training for the workforce. It measures the aggregate output or total volume of work done by the lecturers in terms of research, teaching the students and other responsibilities which are directed towards producing the desired result in the educational system. The working environment and health conditions of academic staff significantly affect their productivity. The more healthy and strong they are, the more productive they become. It is therefore the statutory responsibility of management of public universities to create enabling work environment and promote the welfare of their staff in order to increase their productivity.

LITERATURE REVIEW

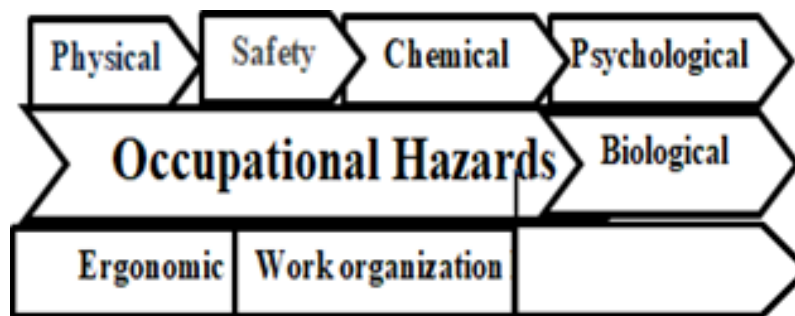
Personal resources are defined in terms of resiliency and control; they may reduce burnout and increase engagement. It implies that they may buffer negative effects of job demands on burnout and exacerbate positive effects of job resources on engagement (Schaufeli, 2014) [4]. Employees are major assets of any organization. The active role they play towards a company's success cannot be underestimated. As a result, equipping these unique assets through effective training becomes imperative in order to maximize the job performance. Also position them to take on the challenges of the today's competitive business climate (Nassazi, 2013) [5]. It is a fact that every worker is exposed to some sort of hazard; or every work is associated with hazards that may be obvious and acute, or insidious and slow to manifest. Although occupational hazards do not elicit their devastating results as quickly as a motor vehicle crash, fall, or burn, the common work place hazards identified in this study and that of the Ministry of Industry have the capacity of producing health problems or death. Most of the SSEs 70.8% in Jimma town are located in residential and commercial areas instead of the industrial zone that has been designated by the town administration. Workers in the SSEs are also exposed to ergonomic factors such as repeated motion 51% and static conditions. Protective devices such as ear muffs, goggles, gloves etc. are supplied to only 36.3% of the workers that need protection; but only 40.2% workers

use them whenever they are engaged in the particular job they are assigned (Faris, 1997) [6]. Considering the welfare and safety of employees in order to boost productivity and profitable must be minimized or prevented because it serves as a negative catalyst for declined productivity. Illuminate the effect of occupational hazards on employee's productivity is crucial, because it negatively affects productivity, which in turn affects organizational profitability. It is a fact that profit maximization serves as an important objective for setting up business organizations by mentioning Bamiduro (2006) [7]. Organizations are set up to achieve specific goals and objectives. Such objectives are achieved by harnessing the resources available including human resources. The human resource is the most critical asset of the organization because other assets are inanimate. Occupational health does not only deal with occupational hazards causing accidents and occupational diseases but also includes all kinds of factors at work or related to working conditions that may cause or

contribute to diseases/deviation from good health (Ofoegbu , 2013) [8]. The ILO (1950) [9] defined hazards as a condition with the potential of causing an accident, leading to injury, damage or even both. In any event of occupational hazard, there is the possibility of causing an accident which may directly or indirectly lead to declined productivity. Productivity in its broadest sense refers to the qualitative relationship between what is produced and resource used in producing a given production. The research result revealed that exposure of workers, occupational accident and occupational hazards have a negative impact on employee's productivity and this implies that 1% increase in them will reduce the productivity by 85.6%, 87.1 and 55.2% respectively. While provision of safety materials, training of employees and safety measures have positive impact on employee's productivity in an organization and this implies that 1% increase in them will increase the employee's productivity by 19.2%, 55% and 7.3% respectively (Ofoegbu , 2013) [8].

Following the advent and development of the flower sector, various work-related chemical, biological, physical, psychosocial, and ergonomic hazards have been emerging unacceptably, with increased risks of exposures for

Figure 1 Type of occupational hazards.



Workers and local communities

However 92.2% of the respondents had no regular supervisions and communication on safe work procedures; 86.5% worked without health and safety instructions, symbols and pictograms; 82.7% reported there were no programs for health and safety at work. Because shortage of facilities such as drinking water, shower, toilets, and hand washing facilities were noticed in the firms. In many circumstances, chemical sprayers, supervisors and their assistants did not consider wind directions (Geleta et al., 2021) [10]. Healthcare workers are exposed to a large number of concomitant risks such as: Among occupational hazards happened in industries or working places are a chemical hazard is a substance that has the potential to cause harm to life or health.

Chemicals are widely used in the home and in many other places. There are many kinds of hazardous chemicals and toxins in different workplaces, including environmental smoke, cleaning products, acids, pesticides, carbon monoxide, and flammable liquids. Exposure to chemicals can cause acute or long-term detrimental health effects. It also Acids, Bases, Lead Solvents Petroleum, silica, highly reactive chemicals etc. including from drugs used in the treatment of cancer and from disinfectants; Biological hazards include Bacteria, virus, fungi, mold, blood borne pathogens, tuberculosis and Fire, conflagration and explosion Hazards Explosion, deflagration, detonation, conflagration Ofoegbu (2013) [8]. Infections caused by needle stick injuries and other communicable diseases. They can pose a threat to human health when they

are inhaled, eaten or come in contact with skin. They can cause illness such as food poisoning, tetanus, respiratory infections or parasite infection. In some settings, such as farms, zoos, hospitals or medical offices, or veterinary clinics, workers can be exposed to biological health hazards like blood, fungi, mold, viruses, animal droppings, and insect bites. Psychological hazards are aspects of the work environment and the way that work is organized that are associated with mental disorders and/or physical injury or illness. A physical hazard is an agent, factor or circumstance that can cause harm with contact such as from ionising radiation. They can be classified as type of occupational hazard or environmental hazard. These are hazards in the environment that can harm your body without you actually touching it, like radiation, prolonged exposure to sunlight, extreme high or low temperatures, and loud noise. It includes ergonomic hazards, heat and cold stress, vibration, electricity etc. Hence Noise at work can be a serious health hazard. Reasons for occupational health and safety are Moral,

Legal and Economics. Ones up on a time the researchers deal about the conditions happening now and the problems faced practically. Because both researchers working in such institutions. That is why the focus to explore the extent of an issue (Ofoegbu, 2013) [8].

Safety includes any condition, substance, or object that can injure a worker; like working from heights, spills on floors, machinery with moving parts, confined spaces, steep stairs, or exposed electrical wiring. Ergonomic hazards put strain on your body over a period of time. during patient handling feel sore or cramped in the short term, but repeatedly sitting or standing in awkward positions or completing the same movements over and over, across a long period of time, can lead to long-term injury and illness. Work organization hazards Workplace violence, discrimination, lack of respect, sexual harassment, and other conditions are hazardous to mental, emotional, and physical health. Psychosocial risks, including violence and shift work.

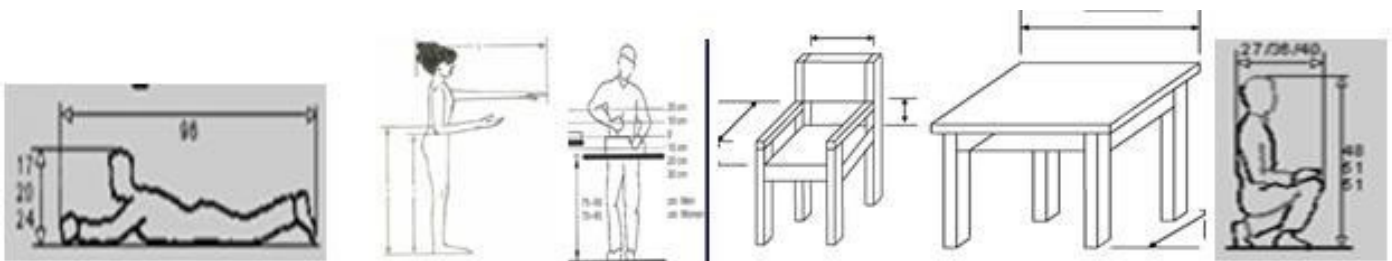


Figure 2: agronomical design and anthropometric parameters in work organizations

Duty of reasonable care, Unacceptability of putting health and safety of people at risk, Society's attitude to moral obligations, Making the moral case to senior management, the preventive enforcement through criminal sanctions. Direct and indirect cost associated with incidents and their impact on the organization, to include insured and un-insured costs (Ofoegbu, 2013) [8]. Impact force, Collision, fall from height, Struck by objects, Slips and trips, Entanglement, Equipment related injury are some mechanical/physical hazards. Safe work and workplace, for increased production and higher productivity, are necessary and hence promotion and protection of safe work and workplace are the complementary aspects of industrial development. Like other settings where WHO has developed health-promoting initiatives (schools, cities, hospitals, and industries), the workplace can have a very positive impact on the health and well-being of workers,

their families, communities, and society at large. However, industrial occupations may create unsafe work and work environment because of the inherent sources of hazard present in their material, process, technologies, or products. Health- and safety-related problems in developing countries have always been there. A review report conducted in Ethiopia indicates that there are gaps on research, capacity, policy and regulation, training, organizational structure, monitoring, and evaluation as well as database for intervention (G/Ezgiabher et al, 2019) [11].

Various Sectors occupational outlook

Textile industry is one of the oldest large-scale economic activities that led the industrialization process since centuries ago and the first manufacturing industry to have a worldwide dimension. In many of the textile industries, workers are

largely exposed to cotton dust, which can leave workers with respiratory disorders. Exposure to cotton dust encountered in the factory environment was shown to reduce the overall mean values of lung function parameters like FVC, FEV1, FEV, PEF and FEF (Kanko et al, 2017) [12].

The integration of OSH in school education in particular has been on the agenda of the European Agency for Safety and Health at Work (EU-OSHA) for years. Educational institutions, in particular schools, are highly suitable as settings for the implementation of early prevention and health promotion. In many countries, there are places where all young people can be reached over an extended period of time. Accordingly, prevention in schools is seen as an effective strategy to prevent health disorders such as MSDs in adulthood as well as build safety and health competences that young people can carry through their entire lives. As already found in EU-OSHA reports such as "OSH in the curriculum: requirements and activities in the EU Member States" (2009) [13], "Training teachers to deliver risk education" (2011) and "Occupational safety and health and education: a whole school approach" (2013), education and training in the area of safety and health in the scope of preschool, school and university education is an important part of preparing young people for work and an important part of the agenda for lifelong learning (Hundeloh, 2022) [13].

The health and social care sector is one of the largest sectors in Europe, employing around 10 % of workers in the EU, with women accounting for 77 % of the workforce. A significant proportion of healthcare workers are employed in hospitals; however, they can also be found in other workplaces, including nursing and care homes, medical practices and in other health-related activity areas. This state-of-the-art report considers the OSH issues in the health and social care sector in the EU Member States. The activities associated with healthcare in institutions such as hospitals and nursing homes, as well as those activities undertaken in patients' own homes, have been explored. Workers employed in the healthcare sector have to deal with a wide range of activities and environments that pose a threat to their health and put them at risk of occupational disease or work-related accidents. Many of the settings in which healthcare workers carry out their jobs and the multiplicity of tasks they perform when, for example, delivering frontline care for the physically or mentally impaired, handling patients or providing cleaning services,

can present a great variety of hazards. The combination of the different types of diverse risks happening means it makes healthcare a high-risk sector for workers (Jong, 2014) [14].

Cotton dust is one of the risk factors for occupational respiratory diseases, a condition characterized by reduced pulmonary function and overwhelming respiratory symptoms. Occupational respiratory diseases are among the major worldwide public health problems accounting for 30% of all registered work-related diseases and 10-20% of respiratory-related deaths. Cotton dust related respiratory disorders start to drop in developed countries while the problem is quite neglected in developing countries. Cotton ginning factories are considered as dustiest areas with high amounts of endotoxin and cotton dust level that are associated with pulmonary function abnormalities. Therefore, cotton-ginning workers are at risk of acquiring respiratory illnesses following exposure to cotton dust. It is an increased prevalence of respiratory symptoms mainly dry cough, phlegm, chest tightness, chest wheezing, and breathlessness (Dereso et al, 2021) [15].

Globally, the traditional way of producing goods and commodities has been revolutionized since the advent of the industrial revolution. This has made the workplace a concern of the public health sector. This concern seems to have emerged from the duty to protect workers from adverse health effects of workplace hazards. The current rapid economic development has brought changes in workplaces in developing countries, including Ethiopia. The organization of occupational health and safety services is not yet resilient enough to handle the growing demands for workers' health in the context of industrialization. The internal infrastructural capacity is weak and cannot help to identify and assess hazards in the workplace. Monitoring system and laboratory investigation is limited despite the presence of favorable policy and regulatory frameworks. An estimated work force of about 2million is currently engaged in the public and private sectors. Males constitute the majority of this workforce. Most of the workforce has basic primary education. Commonly observed hazards in the workplace include occupational noise and dust of various types in manufacturing sectors and chemical exposures in the flower industry. Injury in both the agriculture and the manufacturing sectors is another workplace hazard commonly observed in the country. A lack of information made assessing workplace exposures in detail difficult. The prevalence of noise exposure was found to be

high with the potential to seriously impact hearing capacity (Kumie et al, 2017) [16].

It was concluded that Safety Education and Training for Workers" strategy is not effective in reducing accidents in the industries. More researches and use of multiple safety programs were suggested. Many workplace Managements have achieved these three pertinent safety drivers culminating into relatively low or no-injury records. Major of these hazard control strategies as outlined by Stressor are: Education (area to which this study is delimited), Engineering control and Enforcement of safety rules and regulations, which they called the 3E"s of accident control.

Though conventional, safety education and training for workers as a strategy had often been looked at as a positive approach to the prevention of accidents, confirming the strength of education. The essence of health and safety education in industrial works or in any setting is sensitizing the society towards safe living and operations for hazard prevention. Though widely accepted as a tool for accident prevention, controversies have generated regarding the efficacy of education in preventing accidents, especially when it is singly used. Respective industrial management must make adequate provision for fund, personnel, safety facility and equipment (Rachael et al, 2013) [17]. The scope of School Health Education curriculum should be widened to cover the area of occupational health in order to provide opportunities for University graduates. Such occupational health education could help their knowledge application when they are eventually given appointments in industries (Rachael et al, 2013) [17]. The Government should come up with a policy to support the existence of an Emergency Response Plan in each school so that emergency cases are responded to with the urgency that they clearly deserve. The benefit of running safety programs in the workplace is a matter that should be given priority by the Government through the Ministry of Education, Science and Technology confirms this when he asserts that health promotion programs positively impact on employees" health, increase staff productivity and reduce work absenteeism. Employee health and safety programs should be a major priority for management because they save lives, increase productivity, and reduce costs. These health and safety programs should stress employee involvement, continued monitoring, and an overall wellness component. Work safety requires that safe working conditions should

not create significant risk of people being rendered unfit to perform their work. Health and safety at work is therefore aimed at creating conditions, capabilities, and habits that enable the worker and his/her organization to carry out their work efficiently and in a way that avoids events which could cause them harm. According to "careless worker" model employers assumed that most of the accidents were due to the employee's failure to take safety seriously, or failing to protect themselves. It recognized that the "careless worker" model does not explain occupational ill-health caused by toxic substances, noise and badly designed and unsafe systems of work. A new approach to occupational health and safety, the "shared responsibility" model assumes that the best way to reduce levels of occupational accidents and disease relies on the cooperation of both employers and employees (Jonathan et al, 2016) [18]. The findings revealed among others that the strategies of managing chemical hazards for academic staff productivity in public universities in Rivers State include: provision of PPM; encouraging proper handling and labeling of chemicals and providing safety training to academic staff; management of chemical hazards for academic staff productivity is challenged by lack of adequate provision of protective equipment, inadequate maintenance of plants and equipment that emit poisonous gases and inadequate training of staff on the management of chemical hazards. Productivity is very important in every business organization. Staff productivity could be seen as the amount of work done per unit of time or more aptly as total work over total time worked by a staff. It explains the output of workers over a period of time when compared with the amount of resources employed. Academic staffs are the teaching staffs in the universities who are directly involved in teaching, research, community service, character molding, knowledge creation and transfer among others. In the university system, academic staff include: professors, associate professors, senior lecturers and other teaching staff of lower hierarchy such as lecturers I & II and even graduate assistants. Administrators of public universities in Rivers State in their management strategies of chemical hazards for academic staff productivity should enforce government safety policies and regulations in accordance with basic measures, global practices and using modern technologies and are also faced with many challenges which must all be surmounted by all the stakeholders in education (Kaegon et al, 2020) [19]. In Ethiopia, safety at the workplace is a matter of the state and is regulated by the Constitution,

the Labor Code, the OHS Law 319 /2006, the Methodological Norms/2006 for the application of the provisions of its as well as legal acts (Zagar, 2013) [20] & (Tamene, 2021) [1]. The encumbrance of diseases caused by environmental and occupational health hazards and the effects of global climate change are of growing concerns in Ethiopia. It implies, no adequate information seems to be available on the current situation. This means there is a critical gap in research, policy framework and implementation in Ethiopia. There is also very limited trained skilled manpower and physical infrastructure to monitor the environment and enforce regulatory guidelines. Research, policy frameworks and regulatory mechanisms were among the cross-cutting issues that needed urgent attention. The organization and availability of health services in workplaces varies widely depending on the scale of the enterprises, making the majority of the workforce engaged in small-scale enterprises vulnerable to health effects and injuries associated with occupational exposures (Berhane et al, 2017) [21].

The production of particleboard used for furniture making and construction is increasing in many countries, and cause dust, endotoxin and formaldehyde exposure of the workers. Particleboard workers had higher prevalence of wheezing, cough, cough with sputum production, phlegm, and shortness of breath compared to controls. Workers in the particleboard manufacturing factories in Ethiopia had significantly higher prevalence of respiratory symptoms compared to water bottling workers control. The lung function values were not significantly different between the two groups when adjusting for age, height, previous respiratory illness, availability of separate kitchen and use of biomass fuel as source of energy (Asgedom et al, 2019) [22].

Workplace stress is a public health problem worldwide; Studies focusing on work-related stress among vehicle repair workers are scarce in African countries. Work-related stress is defined as the harmful emotional and physical responses that employees experience when their abilities and skills do not meet current job requirements and that challenge their ability to cope. The most important independent risk factors identified by a multivariable logistic regression model were work experience, work-related musculoskeletal disorder, servicing large-sized vehicles, and squatting and lying work postures. In other words, these factors were workers' years of service, symptoms of pain on various body regions, and the

work environment (Mulugeta et al, 2021) [23].

Occupational safety and health involves helping people by preventing them from being injured or becoming ill due to hazards in their workplaces. Occupational safety and health is also a field where in professionals attempt to prevent catastrophic losses. In practice occupational safety and health includes moral and economic issues there is an increasing awareness in management failure to pay greater attention to the health and safety of employees. This awareness has translated into criminal charges and financial devastation for some companies. Safe requirements for health and safety program include systems for management commitment and responsibilities; hazard assessment and control and safety planning, rules, work procedures and training that are in place and operating effectively. The management of the factory should follow up every activity related to occupational health and safety program and implement effectively occupational hazard control programs, especially on three occupational hazards namely chemical, accidental and psychological hazard control programs and continuously improve occupational safety and health programs to increase the factory productivity (Ayalew, 2020) [24].

Infrastructure projects are the foundation for essential public services and have an influential position in societal development. Although the role of infrastructure projects is substantial, they can involve complexities and safety issues that lead to an unsafe environment, and which impacts the project key stakeholders. The construction industry contributes a valuable amount to the economy of any country; however, it is still badly affected by several issues such as cost overrun, time overrun, price fluctuation due to inflation, and most importantly due to poor safety performance. Despite these severe issues, a project gets completed, but is not declared successful because the project failed to achieve the projects' objectives. The Gaza Strip is the south western part of Palestine, which is located on the southeastern coast of the Mediterranean Sea. The area of the Gaza Strip is about 365km², with an approximate length of 45km, and a width between 6 and 12km. This study sets a benchmark for construction stakeholders, especially policymakers, to observe the influential factors causing distress, and to make the changes in their planning, accordingly. The outcome of this study is also useful for countries having a similar geography. It is recommended to deeply investigate occupational safety

during other phases (design, operation, and demolition) in infrastructure projects in the Gaza Strip. The relationship between project owner, consultant, contractor, and workers separately for each and their impact on the application of occupational safety can be evaluated (Aisheh et al, 2021) [25].

Among 75 state funded colleges in the United States which had graduate programs found that the majority 89% had identified physical, chemical, and biological hazards within the workplace and 70% reported a radiological hazard. A survey of 33 French universities in 1984 reported that more than half of them had no occupational health service, despite the high risk profile of many employees (Venables, 2005) [3]. Based on the established GPJEM, the 112 exposure groups could be reclassified into 86 industries and 74 occupations. In the 1980s, the highest exposure levels were estimated in “knitting and weaving machine operators” with a WAM concentration of 7.48 fibers/mL; in the 1990s, “plastic products production machine operators” with 5.12 f/mL, and in the 2000s “detergents production machine operators” handling talc containing asbestos with 2.45 f/ml. Of the 112 exposure groups, 44 groups had higher WAM concentrations than the Korean occupational exposure limit of 0.1f/ml. The International Agency for Research on Cancer concluded that all forms of asbestos, including chrysotile, are causally associated with an increased risk of cancer of the lungs, larynx, and ovary, and mesothelioma and asbestosis. Recently, the WHO reported that there are about 125 million people in the world exposed to asbestos at the workplace, and at least 107,000 people die each year from asbestos-related lung cancer, mesothelioma, and asbestosis due to occupational

exposures. In its 2014 update, the WHO reiterated the call for global campaigns to eliminate ARDs (Choi, 2016) [26].

Heat is one of the physical hazards that can cause health problems in the workplace and one of the most important and common occupational health problems in workplaces is inappropriate thermal conditions that can impact the health and productivities of workers. Daily heat exposure during the hot season in tropical and subtropical parts of the world is a problem particularly for people working in jobs that cannot be, or are not cooled by air conditioning or other technical methods. Tropical climates with high ambient temperature and humidity may therefore pose higher heat-related occupational health and safety risks to the exposed population in low and middle income countries. People who carry out heavy physical labor as a part of their daily jobs (or household activities) are at particular risk, as the physical activity itself causes high internal heat production which must be released to avoid heat strain health symptoms, as it may lead to life-threatening severe hyperpyrexia body temperature > 40.6 (Venugopal, 2016) [27]. Occupational skin diseases are the second leading occupational disease, accounting for almost 25% of all missed workdays. OCD accounts for 70% to 90% of all skin disorders in the workplace. Only a few occupational epidemiology studies have looked into the prevalence and risk factors of occupation-induced dermatitis among narcotic crop farm workers around the world (Tamene, 2021) [1]. An occupational hazard is any workplace condition that causes a risk to employee health. The OSHA, the government organization in charge of keeping workers safe, has defined some main categories of occupational hazards.

Table 1: Occupational Hazards Overview in different jobs.

| Occupations | Health | Productivity | Cost Percentage |
|-----------------------------|--------|--------------|-----------------|
| Fishing | 110 | 400 | 12 |
| Hunting | 110 | 103 | 7 |
| logging | 223 | 214 | 9 |
| aviation | 197 | 120 | 77 |
| roofing | 134 | 121 | 13 |
| construction | 202 | 210 | 8 |
| waste management industries | 200 | 100 | 15 |
| Transportation | 450 | 99 | 34 |

The place you work can sometimes be hazardous to your health, even fatal. In 2019, there were 5,333 fatal work injuries recorded in the United States, according to the United States Bureau of Labor Statistics. Have higher-than-average on-the-job death rates. Transportation incidents accounted for the largest share of deaths, at more than 2,100, followed by falls, slips, and trips; exposure to harmful substances and environments; unintentional overdoses due to nonmedical use of drugs or alcohol; and fires and explosions. Fortunately, in order to keep those risks and hazards to a minimum, there are federal and state organizations to monitor and review the work environment to ensure every employee's safety. A few organizations that have this responsibility, One of the largest of these is OSHA, created in 1970 by Congress with the mission of ensuring "safe and healthful working conditions for workers by setting and enforcing standards and by providing training, outreach, education and assistance." The law that established OSHA entitles workers to a safe workplace, and it offers protections of OSHA includes training, safe machines/safety equipment, protected, inspection, Report, Review records, and See results of tests taken to find workplace hazards. It also gives workers the right to file a complaint about working conditions they believe to be unsafe, and it protects them from retaliation. NIOSH (part of the CDC) studies OSH and it develop new interventions and recommendations to make workplaces safer. It was also established in 1970 by the same law that created OSHA: the Occupational Safety and Health Act. Most state governments also have workplace health and safety programs of their own, operating within the state's Department of Labor or Department of Health, and sometimes both. They track work-related injuries and fatalities in their state, investigate and intervene in hazardous situations, and provide education about occupational health risks. Depending on the type of job you have, there are also specific organizations that set standards, develop guidelines, and/or investigate risky workplace environments. If you work in a hospital pharmacy and are involved with compounding IV medications, a job that involves exposure to hazardous drugs, an organization called U.S. Pharmacopeia sets standards for the safe handling of hazardous drugs in health care settings. Or if you work in the mining industry, there is a federal organization, the MSHA, created by the Federal MSHA of 1977 that is charged with preventing death, illness, and injury from mining and promoting safe and healthful workplaces for miners. A safe workplace depends on the exact type of

work you do and the place you do it in. But there are some principles that apply no matter where you work or what your job is. Neat, free of clutter that could cause an accident, dressing PPE, Lift, bend & stretch carefully to avoid injury. Don't operate tools, equipment, or machinery that you have not been trained to use. Do not use alcohol or drugs on the job, Take breaks as needed finally know and follow all emergency procedures, including locations of emergency exits, first-aid kits, and fire extinguishers.

To Measure and Evaluate Employee Performance Data; Graphic rating scales 1 to 5/10, to rate an employee's relative performance in specific areas and The 360o feedback, Self-Evaluation, MBO, and Checklists are among the most basics. Workers, employers and governments are marking the World Day for Safety and Health at Work. In a new report, the ILO says the annual cost to the global economy is a staggering 1.25 trillion. This report outlines the occupational safety and health crisis and explains how it can be dealt with (DCOMM, 2003) [28].

On the job accidents and illnesses annually take some 2 million lives and cost the global economy an estimated \$1.25 trillion, according to the ILO. In a new report, "Safety Culture at Work", the ILO says this toll of accidental death and disease can be stopped if workers, employers and governments respect international safety standards. The new report reviews current knowledge about the toll of workplace illness, injury and death, which costs some \$1.25 trillion in annual losses in global GDP. The ILO said its estimate was based on a calculation that accidents and work-related illnesses cost some 4% of annual GDP. That is a worldwide figure, based on the latest ILO estimates and part of the immense suffering caused by workplace hazards. Some 160 million people on this planet have work-related diseases. Meanwhile, the number of work accidents, fatal and non-fatal, is put at 270 million a year. There are also big regional variations, the ILO says: "In parts of the developing world, fatality rates soar to four times those in the safest industrialized countries". For the first time, the ILO has put a cash figure on this seldom-mentioned global problem. The calculations are set out in a new booklet published on 28 April, the World Day for Safety and Health at Work. The ILO wants to add its own particular strength to that event tripartism. In other words, cooperation between governments, employers and workers, meeting as equals.

Apart from compensation payments, costs borne by society

due in part to work-related accidents and diseases include: Lower competitiveness, Early retirements, Unemployment, Absenteeism: An average of 5% of the work force is absent from work every day. This may vary from 2-10%, depending on the sector, type of work and management culture. And poorer households: An occupational injury to one worker can seriously reduce the income of a household. In the USA, for example, workers who receive a partial disability due to a workplace injury lose about 40% of their income over five years. In many cases, other family members may have to give up jobs in order to care for an injured worker, thus further reducing household income.

The impacts of poor health and safety on a company's bottom line may, the ILO says, include higher absenteeism and more downtime - leading to loss of productivity, underutilization of expensive production plants and a possible decrease in economies of scale, low morale - leading to loss of productivity, loss of skilled and experienced employees, plus the loss of the company's investment in their training, difficulty in recruiting high-quality employees and payment of compensation and/or damages to injured or sick workers or to the dependents of workers killed. In addition, companies suffer associated legal costs, payment of danger bonuses, higher insurance premiums, material damage to equipment and premises due to incidents and accidents, fines, disputes with trade unions, public authorities and/or local residents, loss of image, loss of custom - particularly in the case of subcontractors to larger companies, and in high-profile cases, the complete or partial loss of the "licensed to operate". Certainly, the direct costs to business are very high. In the EU, for instance, 150million workdays are lost each year due to work accidents, and the insurance costs to be borne by industry add up to 20billion. And American businesses spend \$170.9billion/year on costs associated with occupational injuries and illnesses. For businesses wishing to make a cost-benefit analysis of safety and health protection, the new ILO booklet lists a number of practical guides. The world's biggest workplace killers are cancer (an estimated 32% of all work-related deaths), circulatory diseases 23%, accidents 19% and communicable diseases 17%. Clearly, most of these deaths are preventable. So the ILO calls for the rapid development of a worldwide safety culture at work. In particular, it emphasizes that:

- Enterprise management and commitment have a key role. Companies that have an occupational safety and

health management system (OSH-MS) set up according to the ILO Guidelines, ILO-OSH 2001, have better safety and productivity records.

- The stronger the union, the safer the workplace. Workers' involvement in planning and running the company OSH-MS - and freedom of association - are of vital importance here.
- Much of the action on safety and health must be local, but much of the framework must be global.

On the campaign for "decent work" worldwide is at the heart of the ILO agenda. Obviously, it must also be safe jobs. The ILO's own members certainly place a high priority on occupational health and safety issues. A detailed ILO survey was emphasized on the subject in 2002 to 2003 session of the ILO's plenary, the International Labour Conference. The strongest theme to emerge from the report and the survey is the crucial importance of promoting ILO standards and other instruments, such as Codes of Practice and Guidelines. The ILO is pursuing two major strategies to improve the implementation of its standards:

- An integrated approach, streamlining all its means of action, in order to achieve more effective occupational safety and health implementation by member states.
- Use of voluntary measures and, in particular, wide use of the ILO's new Guidelines on Occupational Safety and Health Management Systems, ILO-OSH 2001

RESULT AND DISCUSSION

The cases were considered in two university and 6 campuses. That is Mizan Tepi University and Dilla universities. MTU has three campuses; Aman, Tepi and Mizan. DU also has three campuses Referral, Semera and main campus. According to the job type the starta has defined in those 6 campuses, and then the test has been conducted. Once scientifically quantified the problem suggestion and respond by convincing approach. Hence ways to stay safe on the job were; be Aware, Maintain Correct Posture, Take Breaks Regularly, Use Equipment Properly, Locate Emergency Exits, Report Safety Concerns, Practice Effective Housekeeping, and Make Use of Mechanical Aids. Because the importance of OHS are reduces injury and illness in the workplace and Improves employee productivity, even it helps to retain your employees and reduces the cost of injury and workers' compensation. On the other scenario OSH deals with all aspects of health and safety in the workplace

and has a strong focus on primary prevention of hazards. Its goal is to prevent accidents and harm to people from work-related activities. Following these principles for workplace health and safety, which may assist businesses, organizations, and employers if implemented and adhered to: Health/safety policy & objectives, risk assessments, employee training and procedure. To evaluate health and safety performance pass rate of training, competency evaluations and Results of training feedback surveys are recommended. Then performance also measure in terms of Financial, Customer, Internal Business Process, and Learning and Growth. A common performance metric has three components: quantity, the thing being measured, and a time period. The main factors that influence health and safety are the workplace Size, Location of sites, Types of work done/Degree and nature of inherent dangers. Measure of occupational health & safety performance in the workplace are; Identifying nonconformance (anything that is hazardous that poses a risk to personnel), Locate the Cause, Identify the changes that need to be made, Create a platform for improvement and Feedback.

CONCLUSION

Careers in higher education may include departments such as: Faculty, Admissions, Enrollment, Human resources, financial services, Athletics, Student housing, Administration, Accounting, Food service and Counseling. Careers/Jobs/Occupations difficulty will happening in sitting job, Standing, Leaning, Sleeping Running, Walking etc. There are also many other positions available in universities, including: Alumni and donor relations officer, Library assistant, Sports coach, Counselor, Foodservice coordinator, Administrative assistant, IT director, Fundraiser, International program supervisor, Residence manager, Tutor, Learning representative, Curriculum writer, Computer programmer, Student services representative, Dean, Assistant professor, Success coach, Pre-law advisor, Director, Associate director etc. The theoretical concept of hazard management through avoidance, reduction, or isolation appears to be currently ineffective in Ethiopia due to the widespread use of obsolete machines, poor accountability by employers, poor knowledge of and awareness by workers of work-place risks, and a lack of training in safety issues. Risk management at the individual level, through the provision of PPE, is a common practice, but of little efficacy (Berhane et al, 2017) [21].

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