



The Occupational Health and Safety

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Abstract: Occupational health and safety (OHS) is commonly referred to as occupational health, or occupational safety, and is a multidisciplinary field that is concerned with the health, safety, and welfare of people across all occupations. Due to the high number of accidents and exposure agents that occur in all kinds of workplaces and the consequences, this has for workers organizations society, and countries; occupational safety and health has become a very important issue for stakeholders to take care of the human resources. Occupational health and safety are a specialized branch of medicine that focuses on the physical and mental wellbeing of the employees in the workplace. Exposure to environmental hazards such as chemical, physical and biological affects the co-workers and leads to occupational illnesses or occupational diseases including cancer, hearing loss, asthma, and musculoskeletal disorders, etc. Occupational safety and health programs help to ensure the mental, physical and emotional wellbeing of the employees and keeping the workplace environment relatively free from actual or potential hazards that could injure employees.

Keywords: Occupational health, Hazards, occupational safety, Risk, Illness.

INTRODUCTION

Occupational health is defined as the highest degree of physical, mental, and social well-being of workers in all occupations. It is the branch of health care which deals with all aspects of health and safety at the workplace. It lays a strong emphasis on the prevention of hazards at the primary level. Occupational health is essentially considered preventive medicine. This occupational health refers to the health, safety, and welfare issues in the workplace. The laws, standards, and programs related to occupational health and safety (OHS) collectively aim to make the workplace better for workers, co-workers, family members, customers, and other stakeholders. The better occupational health safety standards also ensure good business practice, better brand image, high morale, and employee peace of mind.

Occupational health and safety are concerned with addressing many types of workplace hazards including chemical, physical, biological, and psychosocial, Ergonomic issues, and accidents. The occupational health and safety standards are in place to mandate the removal,

reduction, or replacement of Jobsite hazards. Occupational health and safety programs should also include materials that help to minimize the effects of the hazards. The goal of the occupational health and safety program is to foster a safe and healthy occupational environment (Wikipedia). OSH also intends to protect the general public who may be affected by exposure to the occupational agents or may be affected by the occupational environment.

According to WHO, occupational health deals with all the aspects of health and safety in the workplace and has a strong focus on the primary prevention of hazards. Health has been defined as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. The occupational health is a multidisciplinary field of health care that is concerned with enabling an individual to undertake their occupation in a way that causes the least harm to health. Occupational health is mainly focused on 3 objectives, first, it maintains and promotes the health of workers and their working capacity, the second one is, improving the working environment and work to become conducive to safety and health and the third one is the development of working cultures in a direction which support health and safety at workplaces and it also promotes a positive social climate and smooth operation and may enhance the productivity of the undertakings.

The main aim of occupational health and safety is to promote and maintenance of the highest degree of physical, mental, and social wellbeing of all employees in all organizations. The prevention amongst workers of departure from health issues caused by their working conditions, the protection of the workers in their employment from risks resulting from factors adverse to health. The placing and maintenance of the workers in an occupational environment adapted to his physiological and psychological capabilities. The public health of the entire population is affected in the background by modernization and industrialization in the form of environmental hazards, the personal health of a large number of individuals especially people who work in industrial settings is exposed to workplace hazards, is also getting affected directly often in injurious ways. Occupational accidents and injuries are a substantial factor in the overall health profile of society. Though some occupational sectors remain particularly dangerous due to inherent features of the work environment, the necessary technology, and equipment or the absence of adequate policies and protection for the workers (Jaiswal, 2015).

In the recent emphasis on public health research and policies, personal injury and trauma may lead to renewed interest in occupational health as a public health issue. The occupational health and safety provided by the way of health provision; will depend on the size of the organization. It can be provided by a nurse with occupational health training and a part-time doctor, or through a range of specialists including physiotherapists, hygienists, ergonomic experts, and occupational therapists. The occupational health service might also work with

your employer to implement policies and ensure health and safety compliance and it also supports health promotion and education programs (Correll, 2020).

METHODOLOGY

The present paper is totally based on secondary data. The data was drawn from various sources which have been duly acknowledged. Information on occupational health and safety concept and various issues related to occupational health was obtained by consulting the websites concerned. The reports of the various Government agencies, NGO's and private agencies were also referred for obtaining the necessary data and also to give proper justification to the present review article.

RESULT: OCCUPATIONAL HEALTH

Occupational health refers to the relationship between work and health. Occupational health mainly aims to enhance the workers' health status, increase the productivity of workforces, and improve business performance and the economy. Occupational health is typically used to refer to an individual in the work whereas vocational rehabilitation tends to be used when referring to those outside paid employment but these terms vary across the world.

Occupational health mainly focuses on 3 objectives; first is, maintenance and promotion of workers' health and working capacity, second one into improving the working environment to ensure that they are conducive to health and safety, and the third objective involves the development of work organizations in ways which support health and safety at work and promote positive social interactions by improving productivity. Occupational health is important to the world because it is the work that is said to increase physical and mental health, considering not only what is best for the employees but also to enhance a worker's sense of purpose, confidence self -worth, independence and fulfillment. Returning to work post-illness or injury should be considered as an important outcome measure when exploring treatment options and the support for aged working people (Jaiswal, 2011; 2013).

Occupational health has occupational health specialists who are involved in performing impartial objectives. Assessments that consider not only what the best is for the employee, but also what the best is for the employer. This mainly focuses on both the patient and the coworkers, which sets occupational health apart from other areas of physiotherapy, where the focus is usually on the individual. Occupational health involves a team, which includes physicians, nurses with special training in occupational health, and psychologists. They promote and protect the health and workability of workers. The occupational health that entirely focused on helping business, keeps their workplace safe and healthy. Occupational

health is designed to protect the employees from potential risks and hazards on the job, assisting with everything from injury prevention to injury care (Fit for Work team, 2015).

THE RISK OF OCCUPATIONAL HEALTH HAZARDS

Health hazards involve the risk of illness or accidents in the workplace. An occupational hazard is something unpleasant that a person experiences or suffers, as a result, while doing their job. Occupational hazard as the term signifies both long-term and short-term risks associated with workplace environments and is a field of study within occupational safety and health and also public health. There are several types of occupational hazards such as biological, chemical, physical, and psychosocial hazards (Jaiswal, 2007; 2012).

1. **Biological Hazard:** Biological hazards refer to biological substances that threaten the health of human beings and other living organisms. These hazards may include toxins such as from viral sources or microorganisms, that are harmful to human health.
2. **Chemical Hazards:** Chemical hazards are a type of occupational hazard which involves exposure to chemicals in the workplace. There are hundreds of chemical hazards in our environment; it may include carcinogens, immune agents, neurotoxins, reproductive toxins, and dermatological agents. Long-term exposure to chemicals such as silica dust, engine exhaust, and tobacco smoke increases the risk of health diseases such as stroke and high blood pressure.
3. **Physical Hazards:** The physical hazard agents are those that can cause harm with or without contact. Radiation, heat, temperature, vibration, and noise are examples of this. The physical hazards cause injuries and illness in several industries.
4. **Psychosocial Hazards:** Psychosocial hazards are occupational hazards that affect the employees' psychological health. These hazards affect their ability to take part in an environment without their colleagues. Workplace violence, stress is examples of psychosocial hazards. The Ergonomic hazards include heavy lifting, repetitive and forceful movements, and awkward postures that arise from improper work methods and improperly designed workstations and equipment. These ergonomic hazards affect musculoskeletal disorders which in turn can affect the nerves, muscles, and supporting structure of the body.

More than 3 million people struggle with these kinds of serious work-related injuries or illnesses annually in the United States. Millions of employees are exposed to environmental hazards that could develop into health problems in the year ahead. The workplace or

occupational injury occurs on an average of every seven seconds. Most of these workplace injuries can be prevented to avoid unnecessary pain and suffering. The most common injuries include soreness or pain, sprains, strains or tears and cuts, punctures, etc. (Suárez Sánchez, 2017).

OCCUPATIONAL ILLNESS

Occupational illness refers to any chronic ailment that occurs as a result of work or occupational activity. The occupational disease is typically identified as something more prevalent in a given body of workers than in the general population. Occupational diseases are adverse health conditions in a human being, the occurrence or severity of which is related to exposure to factors on the job or in the work environment.

Some factors that contribute to occupational diseases include physical, chemical, biological and ergonomic, psychosocial, and mechanical. These factors in the work environment are predominant and are responsible for the causation of occupational diseases. Occupational medicine is concerned with the effect of all kinds of health benefits on a worker's ability and efficiency. The occupational illness is essentially preventable and can be ascribed to faulty working conditions. The control of occupational health hazards decreases the incidence of work-related diseases and accidents and improves the health and morale of the workforce, leading to decreased absenteeism and increased worker efficiency.

Occupational diseases are adverse health conditions in human beings, the occurrence or severity of which is related to exposure to factors during the job in the work environment (Jaiswal, 2007; 2014).

WHO also categorizes work-related diseases as multifactorial in origin? There are diseases in which workplace factors may be associated with their occurrence but need not be risk factors in each case. The Ministry of Health and family welfare, the government of India, launched a program entitled: National program for control and treatment of occupational disease. The national institute of occupational health, Ahmadabad, is the nodal agency for the same. The categories of major occupational diseases in India are occupational injury, occupational lung cancer, occupational infections, and occupational mental disorders (Saha, 2018; Jaiswal, 2013).

OCCUPATIONAL HEALTH AND SAFETY FOR WORKERS IN THE CONTEXT OF COVID-19

A coronavirus is a group of viruses belonging to the family coronaviridae, which infects animals and humans. The health workers are the front line of any outbreak response and as

such are exposed to hazards that put them at risk of infection with an outbreak pathogen. Hazards include pathogen exposure, long working hours, psychological distress, fatigue, occupational burnout, and stigma. It assumes overall responsibility to ensure that all necessary preventive and protective measures are to be taken to minimize occupational safety and health risks; it also provides information, instructions, and training on occupational safety and health, including refresher training on infection prevention and control and usage, putting on, taking off and disposal of personnel protective equipment. Covid-19 patients, as well as the workers, do not incur an expense for occupational safety and health requirements. It familiarizes personnel with technical updates on Covid 19 and provides appropriate tools to access, test, and treat patients and the public, and it as needed, provide appropriate security measures for personnel safety and also provide mental health and counselling resources. The health workers should follow the established occupational safety and health procedures to avoid exposing others to health and safety risks and participate in employer-provided occupational safety and health training and use to provide a protocol to assess, triage, and treat patients and health workers should also maintain patients' confidentiality. (http://www.who.int/occupational_health/activities/occupational_work_diseases/en/)

OCCUPATIONAL HEALTH AND SAFETY PROGRAMS

Every organization uses a variety of tools to achieve institutional goals, including business plans, strategic plans, and long-range development plans. The goals of an organization's OHSP areas including to identify hazards in the workplace and determine the risk associated with them, designing the facility and management program to reduce risks associated with the hazards, and communicating hazard identification, risk assessment, and appropriate safety measures to all employees (Jaiswal, 2007; 2012).

An occupational health safety program integrates the efforts of management, administration, employees, and health care professionals in an active, evolving program that promotes a culture of safety in the workplace. The challenge of providing a safe work environment is best met with the development of occupational health and safety program (OHSP) that provides a foundation for a culture of safety and makes worker safety a central mission for all employees of an institution. Although economics will have an impact on any animal care and use program, cost alone must not dictate the scope or relevance of the occupational health and safety programs implemented at an institution. The simple trade-off is that employee welfare and reduction in the loss of work time due to workplace injury will improve employee satisfaction and performance. The staff needs to know that management is concerned about their welfare. For both new and long-established institutions, there is value in having a reference document, such as this volume, that provides a ready source of information for creating occupational health and safety programs.

The National Research Council developed a document on occupational health and safety for animal research facilities, which serves as a guide for the management of occupational health and safety programs and provides a foundation for developing a program if none exists. The Committee on Occupational Health and Safety in the Care and Use of Nonhuman Primates has also attempted to address the meaning and implications of uncertainty in risk management (Jaiswal, 2011; 2012). National Academy of Science, 2003).

DISCUSSION

Occupational health and safety are considered an important topic of increasing importance over the last 30 years. The establishment of occupational safety and health administration (OSHA) in 1970 is aimed at safety in the workplace is a basic expectation for all employees. Occupational health is defined as the highest degree of physical, mental, and social well-being of workers in all occupations. It is a branch of health care which deals with the safety of the workplace. Occupational health is essentially preventive medicine.

Occupational health and safety invented several programs for reducing injuries for all occupational workers. Occupational health and safety aim to make the workplace better for workers, co-workers, and other stakeholders. The occupational safety and health addressing with many environmental hazards including chemical, physical, and biological, etc, the exposures of these factors lead to occupational diseases. These include cancer, musculoskeletal disorder, trauma, etc. The chemical agents are the most dangerous hazard in the workplace which include toxins, pesticides, etc. The occupational health and safety programs should also include materials that help to minimize the effect of the hazards. The goal of the occupational health and safety program is to provide a safe and healthy occupational environment. OSH also protects the general public who may be affected by exposure to the occupational agents or may be affected by the occupational environment (Correll, 2020, Jaiswal *et.al*, 2011).

The main aim of occupational health and safety is to promote and maintenance of the highest degree of physical, mental, and social wellbeing of all workers in all organizations. The occupational health hazards are very dangerous to the workers. The physical hazards include vibration, noise, etc and the chemical hazards include toxins, pesticides, etc., and the biological includes microorganisms, viruses, etc. these agent exposures affect the occupational workers' health.

Occupational health and safety involve a team that includes physicians, nurses with special training in occupational health, and psychologists. They also promote and protect the health and workability of workers. Occupational health and safety are designed to protect the employees from potential risk and hazards on the job, assisting with everything from injury to injury care.

More than 3 million people struggle with these kinds of serious work-related injuries or illnesses annually in the United States. Millions of employees are exposed to environmental hazards that could develop into health problems in the year ahead (Jaiswal, 2013). The workplace or occupational injury occurs on an average of every seven seconds. Many of these workplace injuries can be prevented to avoid unnecessary pain and suffering. The most common injuries are including soreness or pain, sprains, strains or tears and cuts, punctures, etc.

The occupational disease is typically identified as something more prevalent in a given body of workers than in the general population. The occupational disease is an adverse health condition in the human being, the occurrence or severity of which is related to exposure to factors on the job or in the work environment. Some factors are affected in the occupational disease that including physical, chemical, biological and ergonomic, psychosocial and mechanical. These factors in the work environment are predominant and essential in the causation of occupational diseases. The program Ministry of Health and Family Welfare, Government of India, launched a program entitled: National program for control and treatment of occupational disease. The national institute of occupational health, Ahmadabad, is the nodal agency for the same. The categories of major occupational diseases in India are occupational injury, occupational lung cancer, occupational infections, and occupational mental disorders. In recent pandemic conditions the spread of Covid19, the health workers have a responsibility and right to keep an occupational safety in the workplace, the occupational safety concept gave methods to protect the health workers from the pandemic disease (Jaiswal, 2015; 2016).

Occupational health and safety programs are helping to reduce the effect of health hazards in the workplace. The goals of an organization's OHSP are as follows: to identify hazards in the workplace and determine the risk associated with them, to design the facility and management program to reduce risks associated with the hazards, and to communicate hazard identification, risk assessment, and appropriate safety measures to all employees. An occupational health safety program integrates the efforts of management, administration, employees, and health care professionals in an active, evolving program that promotes a culture of safety in the workplace. The challenge of providing a safe work environment is best met with the development of an OHSP that provides a foundation for a culture of safety and makes worker safety a central mission for all employees of an institution (Fit for Work team, 2015, Jaiswal, 2016).

CONCLUSION

The exposure of environmental substances is affecting the occupational workplace; they lead to occupational diseases such as cancer, trauma, hearing loss, etc. The occupational

health and safety programs are involved in reducing the effects and control the hazards exposures. It also helps all workers in all the organizations. The National Institute of Occupational Health (NIOH) and Regional Occupational Health Centres are helping to promote the highest quality of occupational health through fundamental and applied research. It helps to prevent accidents and minimize the dangerous risk in the workplaces.

Conflicts of interest: The authors declare no conflicts of interest.

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