

EHS 101 OCCUPATIONAL HEALTH AND SAFETY

Unit 1

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Definition and Context of Occupational Health and Safety

Occupational health and safety is a discipline with a broad scope involving many specialised fields. It encompasses the social, mental and physical well-being of workers that is the “whole person”.

Definition

Occupational health and safety is the discipline concerned with preserving and protecting human resources in the workplace.

As per the definition adopted by the Joint ILO/WHO Committee on Occupational Health(1950), occupational health is the adaptation of work to man and of each man to his job.

It has the following components.

- Promotion and maintenance of the highest degree of physical, mental and social well being of workers in all occupations;
- Prevention among workers of departures from health caused by their working conditions;
- Protection of workers in their employment from risks resulting from factors adverse to health; and
- Placing and maintenance of a worker in an occupational environment adapted to his physiological and psychological equipment.

Note Bank:

What is Occupational Health?

Occupational health deals with all aspects of health and safety in the workplace and has a strong focus on primary prevention of hazards. The health of the workers have several determinants, including risk factors at the workplace leading to cancers, accidents, musculoskeletal diseases, respiratory diseases, hearing loss, circulatory diseases, stress related disorders and communicable diseases and others.

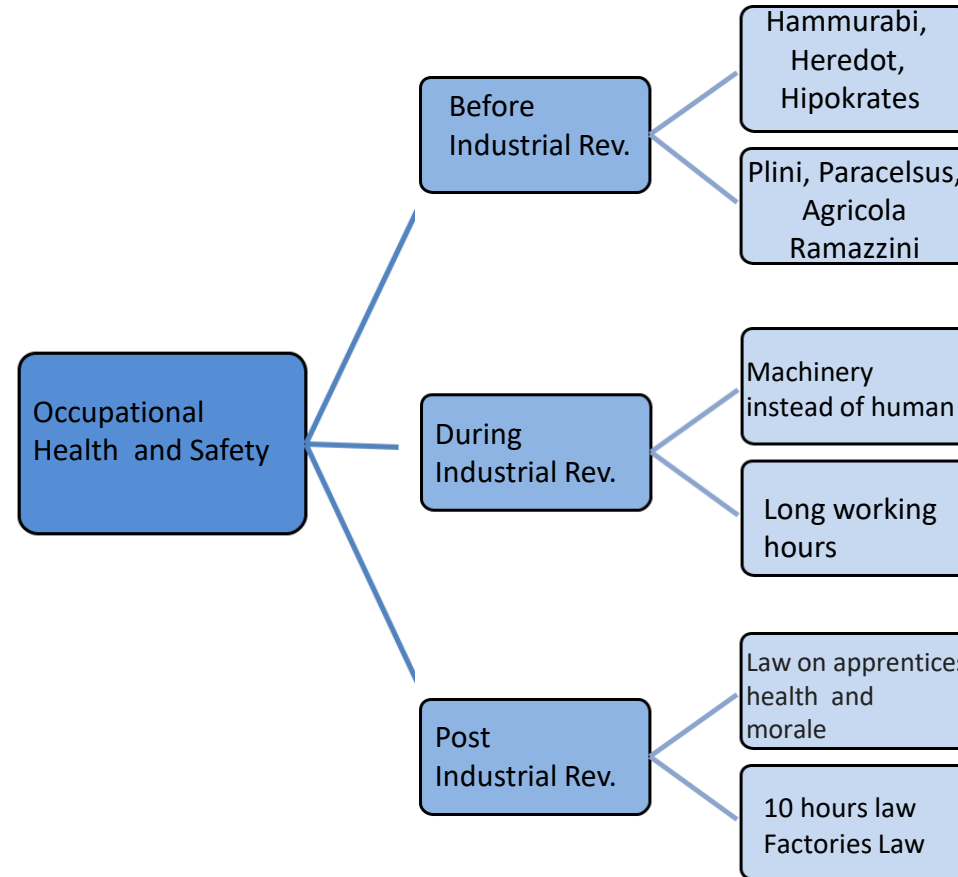
Source: World Health Organisation

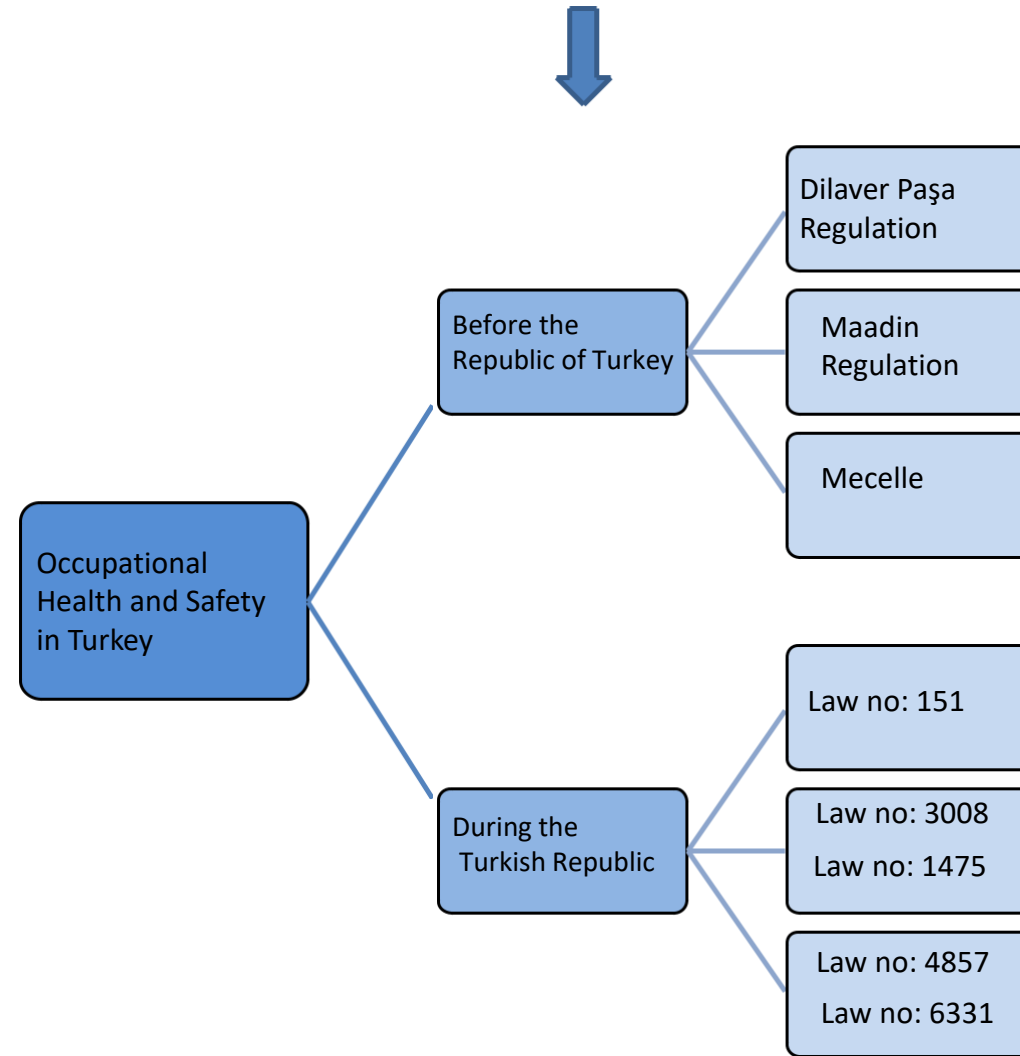
http://www.who.int/topics/occupational_health/en

Occupational health and safety is a cross-disciplinary area and it interacts with other disciplines such as occupational medicine, occupational or industrial hygiene, public health, safety engineering, ergonomics, toxicology, epidemiology, health physics, environmental health, industrial relations, public policy, industrial sociology, medical sociology, social law, labour law, and occupation health psychology.

History

The origins of occupational health and safety concerns can be traced back to the Industrial Revolution (late 18th to 19th century), which was marked by innovations like cotton spinning and textiles, steam engines, iron founding etc.





With the processing of stone and soil, the development of the mining sector, the invention of fire, the use of steam machines, and the development tools for work and production, a relationship between work and health began.

The Hammurabi Laws, prepared by Hammurabi (1819-1950 BC), the founder of the Babylonian Empire in 2000 BC, are one of the first known laws in history. Occupational health and safety was mentioned for the first time in this law.

In B.C. 370, Hippocrates first mentioned about the harmful effects of lead, defined lead colic, detected symptoms such as weakness, constipation, paralysis and visual disturbances, and explained that the findings were related to lead.



Hippocrates B.C. 466-399

Paracelsus mentioned about pneumoconiosis in his studies, wrote “De Morbis Metallicis”, the first occupational medicine book in the world, and also determined the relationship between the chemical structures of poisons and dose and organism.

Georgius Agricola determined the effects of some poisons and stated that protective measures should be taken. Agricola stated in his work “De Re Metallica” that there are toxic dusts in mines.

Bernardino Ramazzini, who makes important studies in the field of occupational health and safety, is an important scientist who suggests that occupational accidents should be prevented and protective safety measures should be taken in workplaces in his book named “De Morbis Artificum Diatriba”. He stated that workers should be asked what work they do when they get sick. He is the first scientist who calls ergonomics today, that is, to explain the harmonious and efficient operation of the worker, machine and the environment together.



Bernardino Ramazzini (1633-1714)

This resulted in the emergence of cotton mills, semi-automated factories and iron industries, which became the, leading sectors, which established the base for the Industrial Revolution.

Although the Industrial Revolution contributed to economic development, it had a negative impact on the health and safety of the workers working in these factories and industries.

Men and women workers were exposed to harmful gases, toxins, acids, extreme heat and cold temperatures, light and sound that had a harmful impact on their physical, social, and psychological health. The injuries, diseases and health hazards faced by workers as a result of the Industrial Revolution drew the interest of scholars and leading thinkers of that period, who felt that issues of industrial health and hygiene must be addressed.

It is Antony Ashly Cooper, a member of the British Parliament, who first stated that legal regulations and security measures should be developed in order to solve the problems brought by the Industrial Revolution. It is Thomas Percival who prepared a report on the improvement of working hours and conditions of young workers. These two politicians influenced Sir Robert Peel, an employer and a parliamentarian, and led to the enactment of the law named "Apprentices' Health and Morale" in the British Parliament. This law, which was enacted in the UK on occupational health and safety, limited the working hour to 12 hours a day.

With the "Ten Hours Law" enacted in 1847, working hours were limited to ten hours. Michael Sadler brought a new law proposal to the parliament in 1832 and in 1833 an important law called the "Factories Law" was put into effect. The obligations brought by this law; Employment of children under the age of 9 was prohibited, those under the age of 18 were prohibited from working for more than 12 hours, and inspectors were appointed to inspect the factories.

In 1842, employment of women and children under 10 years old in mines was prohibited. In 1847, the establishment of a workplace inspection and labor inspectorate structure, the obligation to report some dangerous occupational diseases in 1895, in 1900, employment, health examination, special examinations in dangerous works; Very important steps have been taken in the field of occupational health and safety, such as preparing reports for workers who become inoperable and injured, and reporting an occupational disease

While these developments regarding occupational health and safety in England, there were new developments in other European countries. New laws on occupational health and safety were enacted in Switzerland in 1840, in France in 1841, in Germany in 1849.

The first study on occupational health and safety in the United States of America (USA) was conducted in the state of Massachusetts. In 1836, a law on child labor was passed.

Annie Hamilton, an American toxicologist, physician and educator studied the impact of industrial metals and chemical compounds on human beings. She became a pioneer in industrial diseases and hygiene and contributed immensely to the discipline through her publications, which included Industrial Poisoning in the United States (1925), Industrial Toxicology (1934) and Exploring the Dangerous Trades, an autobiography (1943).

Note Bank:

William Harry McShane (1889-1975)

William Harry McShane was born in Philadelphia, Pennsylvania, in 1889. At the age of sixteen, McShane was pulled in by machinery in a factory in Cincinnati, Ohio where he was employed. His arm was ripped off at the shoulder and his leg was broken through the kneecap. The employers did not show any concern nor did they pay any compensation for the accident. Despite his injuries, McShane worked as a “switchman” for the railroad. He led a life of great hardship and sustained himself on a railroad pension.

The first written regulation on occupational safety and health was during the Ottoman era, in 1865. That Law aimed to regulate safety and health issues specifically in the coal mines. However, this Law was not approved by the Sultan and not implemented. Some years later, in 1869, another law was published and implemented to regulate the safety and health issues in coal mines. Following the establishment of a Grand National Assembly in 1920, two other laws entered into force for the regulation of rights and benefits of the coal mine workers, as well as to regulate workplace conditions.

Occupational safety and health legislation in Turkey is configured in line with the Constitution.

Constitution

The Constitution in Turkey has been revised several times, most recently in 1982. There are up to 20 Articles in the Constitution regulating various areas of working life; i.e., the right and responsibility to work, organizing unions, right to social security, etc.

The Articles related to working life play a central role in protecting the labour force, ensuring proper placement of the workers and providing a safe working environment.

Two of the Articles directly concern occupational safety and health. “No one can be employed at the workplaces not suitable for their age, gender and capacity. Children, women and the disabled are protected by Law” (Article 50).

“Everyone has the right to live in a healthy and balanced environment” (Article 56). The Constitution refers to the environment in general, nevertheless based on this Article, the working environment should be “safe and healthy”.

Occupational Safety and Health Law (No. 6331; 2012)

The Occupational Safety and Health Law (No. 6331; 2012 (OSH Law) was published in the Official Gazette in 2012. Before 2012, occupational safety and health issues were regulated in the Labour Law, related regulations and some other general laws. The OSH Law applies to all jobs and workplaces in both the public and private sector, regardless of their field of activities or number of workers, and covers all employees, interns, employers and their representatives.

The OSH Law regulates the duties, authority, responsibilities, rights and obligations of employers and employees in order to ensure occupational safety and health in the workplace and to improve the existing safety and health conditions.

The ultimate aim of the OSH Law is to prevent occupational diseases and accidents, and other physical and mental health problems of the workers related to work and the work environment.

The OSH Law defines the main stakeholders namely employees, employers and the State, and their duties and responsibilities in working life. The Law also defines the basic terminology related to work life such as workplace, hazard, risk, occupational disease, occupational accident, prevention, safety and health unit, occupational safety and health professionals and their responsibilities.

According to the OSH Law, the employer should perform risk assessment and has the responsibility of taking all necessary measures to ensure occupational safety and health. Therefore the employer shall fulfil the responsibility of avoiding risks, evaluating risks which cannot be avoided, combating the risk at its source, adapting the work and working conditions to the individual, adapting to technical progress, substituting dangerous substances or procedures with a non-dangerous or less dangerous ones, provide appropriate training and instructions to the workers, etc.

Article 4 of the Law defines the duties, authority and responsibilities of the employer and workers. As per Article 4, the employer has a duty to ensure the safety and health of workers in every aspect related to work. In this respect the employer shall take the measures necessary for safety and health protection of workers, including provision of necessary organization, designating safety and health staff, informing and training of workers, carrying out risk assessment, implementing measures related to occupational safety and health in accordance with the legislation, etc.

In case an employer enlists competent external services or persons, this shall not discharge him from his responsibilities in this area. Also the workers' obligations in the field of safety and health at work shall not affect the principle of the responsibility of the employer.

As indicated in Article 6 of the Law, in order to provide occupational safety and health services the employer shall designate workers as occupational safety expert, occupational physician and other health staff, meet the need for means of space and time to help designated people or organizations fulfil their duties, ensure cooperation and coordination among the occupational safety and health staff, etc.

The OSH Law also regulates workers' right to abstain from work in cases of serious or imminent danger. The OSH Law refers to secondary legislation to for a description of further details to ensure an effective implementation of the Law.

Other relevant laws

Before the enactment of the OSH law in 2012, the regulation of working life was contained in the Labour Law and in some other general laws. Soon after the establishment of Turkish Republic in 1923, laws to regulate certain aspects of working life came into force. Some of the well-known examples include the Weekly Rest Days Law (1924), the Code of Obligations (1926), and the General Health Law and Municipalities Law (1930). Workplaces and working life were regulated by these Laws until the enactment of the Labour Law.

Labour Law (No. 4857; 2003)

The first Labour Law came into force in 1936. Since then, it has been revised and amended several times at 25-to-30 year intervals. The most recent version was enacted in 2003 (No. 4857; 2003) (Labour Law). In the Labour Law the general conditions of working life are described such as work contract, minimum age for work, payments, etc.

The Labour Law used to have a special section for occupational safety and health where, inter alia, the employers' responsibility for taking all relevant measures to ensure occupational safety and health and the workers' obligation to follow the rules and measures in this regard were clearly described.

The Labour Law also regulates the inspection of workplaces and fines to be imposed in case of violations. Following the enactment of the OSH Law, all the articles of the Labour Law regarding occupational safety and health were repealed.

The Labour Law regulates other areas relevant for the employment relationship and occupational safety and health including:

- Minimum age for work: Article 71 of the Labour Law defines minimum age for work as 15 years.
- Working hours, maternity leave: According to the Law, the weekly working period is 45 hours. Activities included in the working period, rest periods, night work, underground work, working periods during maternity are described in Articles 63-76 of the Labour Law.

Article 74 defines maternity leave as 16 weeks; 8 weeks before and after delivery, and three hours daily leave for breast feeding until the baby is six months old, then one and half hours until the baby is one year of age.

Law of Obligations (No. 6098; 2011)

The Law of Obligations (No. 6098; 2011) was first enacted in 1926 to describe the obligations of people to each other. It was revised in 2011. The Law of Obligations describes specifically the mutual obligations of employers and workers. In this sense, employers have the responsibility to protect workers' health by providing for a safe working environment. In case of any harm caused to health of workers as a result of work, employers should compensate the workers' losses. On the other hand, workers should obey the rules and regulations of safe work.

General Health Law (No. 1590; 1930)

The General Health Law (No. 1590; 1930) came into force in 1930 as a general law, covering all issues relevant to health. At that time there was no legislation regarding occupational safety and health, and the General Health Law filled this gap, until the first Labour Law was enacted. The General Health Law has a specific section on occupational safety and health (Articles 173 to 180).

This section regulates the minimum age for working, duration of work, protection of workers' health and workplace health services. The Law provides for the establishment of an in-house workplace health service for workplaces employing 50 or more workers. Establishing the occupational health service is clearly defined as an employer responsibility. This article of the General Health Law remained in force for more than 70 years, until the Labour Law (No. 4857) was adopted in 2003.

Social Insurance and Universal Health Insurance Law (No. 5510; 2006)

Before the Social Insurance and Universal Health Insurance Law (No. 5510: 2006) was enacted, the insurance of workers was mentioned in some laws specific to certain areas of working life. The Law on Insurance of Occupational Accidents and Diseases, the Law on Insurance Institution, and the Law on Insurance of Illness and Maternity for a long time served to regulate some rights and benefits of the workers. In 1964 the Social Insurance Law was enacted, including several provisions regarding occupational accidents and diseases.

The Social Insurance and Universal Health Coverage Law came into force in 2006. It aims to provide social security coverage for workers. The Law applies to workers registered with the Social Security Institution, i.e. those with insurance premiums paid. People working in industrial establishments and services sectors, civil servants, agricultural workers and self-employed people paying insurance premiums are covered.

The Social Insurance and Universal Health Coverage Law defines an occupational accident and an occupational disease in a rather different way than the OSH Law, as its scope is compensation. The diagnostic procedure and notification of occupational diseases are described in detail in the Social Insurance Law, as well as the details of benefits and compensation of the workers in case of permanent incapacity due to occupational disease or an accident.

It not only applies to occupational accidents and occupational diseases, but to all other forms of social security implementations, such as marriage, maternity, retirement and treatment of general health problems.

Secondary legislation

A series of secondary legislation have been adopted to explain the details of relevant laws. Relevant Ministries and organizations took part in the preparation of this legislation, and their opinions were taken into consideration as well as relevant European Union Acquis. Some 30 Regulations have been adopted so far,

Although the urgency to address the occupational (industrial) health and safety issues emerged during the Industrial Revolution, it becomes much more crucial to address the issue at present with the tremendous expansion of cities across the world, further resulting in wide spread industrialisation and growth of population. Issues of health, hygiene and hazard control are essential and have to be dealt with by state governments and other bodies responsible for ensuring the safety and well-being of all workers, by ensuring that there are health and safety policies, systems in every workplace and that these are implemented in the best possible manner.

Summary of Unit 1

- Regulations developed to regulate working conditions in the workplace are the beginning of the occupational health and safety movement, became a base for the formation of occupational health and safety science in today's sense.
- Occupational health and safety, which has medical, technical, economic, social and legal aspects, is defined as ensuring the protection of workers against occupational accidents and diseases.

- Occupational disease is defined as a temporary or permanent illness, disability or psychological deterioration suffered due to a recurring reason or the conditions of execution of the job.
- The purpose of occupational health and safety is divided into three groups as protecting employees, ensuring production safety and ensuring workplace safety.

- In the Pre-Industrial Revolution Era, many scientists made suggestions for the health and safety of employees, which can be considered valid even today.

One of these, the famous historian Herodotus, for the first time, employees should be fed with high-energy foods in order to be productive,

Hippocrates first described the harmful effects of lead, lead colic, identified symptoms such as weakness, constipation, paralysis, and visual disturbances, and clearly demonstrated the relationship of the findings with lead.

- The problems brought about by the changes in the work life after the Industrial Revolution have increasingly led to social unrest. Long working hours, low wages, unhealthy and unsafe working conditions, and the large number of children and women being employed in heavy work caused reactions in the society.
- The International Labor Organization (ILO) has carried out important work in terms of occupational health and safety. The decisions taken regarding the "exposure limits at workplaces" and occupational health and safety and the "international conventions" established by the International Labor Organization, contributed to the solution of the problems in this matter.

- Occupational health and safety studies in Turkey, including the Pre-Republic Period and Republic Period is discussed in two parts. In the Ottoman Empire, there were tradesmen lodges, which were professional organizations governed by religious principles. Later, guilds, which were professional organizations in Europe, also took their place in the Ottoman Empire. In the pre-Republic period, the Dilaver Pasha Regulations and the Maaddin Regulations were issued. In the Republic Period, studies such as Weekend Holiday Law, Law of Obligations and Labor Law have come to the present day.

- Recently, the Labor Law No. 1475 and Labor Law No. 4857, which have provisions related with occupational health and safety, introduced.
- The Occupational Health and Safety Law No. 6331 entered into force in 2012, drawing attention to the importance of occupational health and safety, and new regulations were introduced with this law. This law adopts a preventive approach by classifying the workplaces into hazard class according to the work done.

- Some articles of the Occupational Health and Safety Law No. 6331: There will be occupational safety experts and physicians in all workplaces, employers will be able to receive services from common health and safety units. In order to prevent occupational accidents and diseases, risk assessment will be carried out at workplaces and employees will be subject to health surveillance at regular periods. Occupational health and safety committees will be established in workplaces with fifty or more employees, all employees will be informed of their rights and responsibilities in their working life, and the employee will have the right to refrain from working in dangerous jobs. Emergency plans will be prepared at workplaces.