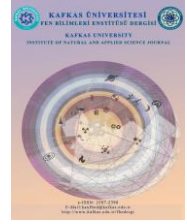




## Kafkas Üniversitesi Fen Bilimleri Enstitüsü Dergisi Institute of Natural and Applied Science Journal

Dergi ana sayfası/ Journal home page: <https://dergipark.org.tr/tr/pub/kujs>



E-ISSN: 2587-2389

# Investigation of Occupational Health and Safety Practices Performed at Kafkas University

Neşe KALFAT <sup>1\*</sup>, İsmail ÇAKMAK <sup>2</sup>

<sup>1</sup> Kafkas Üniversitesi, Fen Bilimler Enstitüsü, Disiplinlerarası İş Sağlığı ve Güvenliği Anabilim Dalı, Kars, Türkiye

<sup>2</sup> Kafkas Üniversitesi, Fen Edebiyat Fakültesi, Kimya Bölümü, Kars, Türkiye

<sup>1</sup> Kafkas University, Institute of Science and Technology, Interdisciplinary Department of Occupational Health and Safety, Kars, Turkey

<sup>2</sup> Kafkas University, Faculty of Arts and Sciences, Department of Chemistry, Kars, Turkey

(İlk Gönderim / Received: 19. 07. 2022, Kabul / Accepted: 25. 11. 2022, Online Yayın / Published Online: 12. 12. 2022)

### Keywords:

Culture of Safety,  
Concept of Occupational  
Health and Safety,  
Concept of Occupational  
Accident,  
Structure of Occupational  
Health and Safety,  
Kafkas University

**Abstract:** When we examine the incidence of accidents at work in Turkey, it is possible to see that it is extremely high. Efforts to reduce this rate and provide a healthier and safer working environment for employees are increasing rapidly. Under Occupational Health and Safety Law No. 6331 in particular, important developments are taking place in terms of implementing occupational health and safety measures in work areas. A culture that fosters occupational health and safety should be developed with the same care in universities. In this research to examine the occupational health and safety practices in Kafkas University, the interior of the building, the school road, the cafeteria, the security areas, the health and field studies, the functioning of the occupational health and safety studies, conducted trainings and Matrix risk assessment were examined. Within this framework, Kafkas University has made significant progress in developing an occupational health and safety culture, creating healthy workplaces, and enabling students and staff to enjoy healthier and safer environments. Such developments contribute to a reduction in the rate of accidents at work by minimizing the likelihood that such accidents will occur.

## Kafkas Üniversitesi'nde Gerçekleştirilen İş Sağlığı ve Güvenliği Uygulamalarının İncelenmesi

### Anahtar Kelimeler:

İş Sağlığı ve Güvenliği  
Kavramı,  
İş Kazası Kavramı,  
Güvenlik Kültürü,  
İş Sağlığı ve Güvenliği  
Kurulumun Yapısı,  
Kafkas Üniversitesi.

**Özet:** Ülkemizde iş kazalarının oranına bakıldığında, bu oranın oldukça yüksek olduğunu gerçekleştiren iş kazalarından görmek mümkündür. Bu oranın düşürülmesi ve çalışanlara daha sağlıklı ve güvenli çalışma ortamı sağlama çalışmaları hızla artmaktadır. Özellikle 6331 sayılı İş Sağlığı ve Güvenliği Kanunu ile çalışma alanlarında iş sağlığı ve güvenliği önlemlerinin alınması hususunda önemli gelişmeler gerçekleşmektedir. İş sağlığı ve güvenliği kültürünün, eğitim kurumu olarak üniversitelerde de aynı özenle geliştirilerek, güvenlik kültürünün yerleştirilmesi gerekmektedir. Kafkas Üniversitesi'nde gerçekleştirilen iş sağlığı ve güvenliği uygulamalarını incelemek için bina içi, okul yolu, yemekhane, güvenlik alanları, iş sağlığı ve güvenliği çalışmalarının işleyişi, saha çalışmaları, gerçekleştirilen eğitimler, sağlık çalışmaları, gerçekleştirilen Matrix risk değerlendirilmesi incelenmiştir. Kafkas Üniversitesi, bu çerçevede iş sağlığı ve güvenliği kültürünün gelişmesi, sağlıklı iş alanları oluşturulması, güvenlik kültürünün benimsenmesi, öğrencilerin ve personellerin daha sağlıklı ve güvenilir ortamlarda bulunabilmesi için önemli gelişmeler göstermiştir. Gerçekleşen bu gelişmeler neticesinde oluşabilecek kazaların oranını en aza indirerek, iş kazalarının azalmasına katkı sunmaktadır.

\*Correspond Author: inalpolatnese@gmail.com

## 1. INTRODUCTION

With technological development and the progress of industrialization in Turkey, as elsewhere in the world, the work-related health and safety problems of workers have started to gain prominence. These problems first drew attention when they caused a decrease in productivity and safety in the workplace, and this led to the acceleration of work on the implementation of the necessary preventive measures. Within this framework, various laws and rules began to come into force to provide the necessary safe environment for operations in the workplace. However, it was realized that the regulations which had emerged over time were insufficient, and it was understood that these problems should be approached from different perspectives. As a result, the concept of "Occupational Health and Safety" emerged and, subsequently, attempts have been made to examine this issue using various scientific approaches (Yesil, Sonmez, Calis, 2016). In a workplace, the employer is obliged to provide the necessary training in respect of occupational health and safety, and to provide supervision and surveillance. However, the incidence of accidents at work in Turkey provides a clear indication that this obligation is not being completely fulfilled. An occupational accident that arises because of an employer's failure to fulfil these obligations does not only cause physical and mental damage to the insured party but also causes material hardship and emotional trauma to their relatives. Most occupational accidents in Turkey are caused by employers not taking the necessary precautions regarding occupational health and safety. The employer must minimize the likelihood that occupational accidents will occur by implementing these measures following the law and with ethical standards. This duty is also inherent in the concept of the social state. It is emphasized in the Constitution that the state is obliged to safeguard the physical and mental health of employees. If the necessary care is not taken to prevent occupational accidents, an increase in such accidents is the inevitable result. There is a correlation between the level of development of any state and the value that the state attaches to occupational health and safety measures. In this respect, it would not be wrong to state that a society that has transformed occupational safety into a culture is both developed and truly modern (Inciroglu, 2008). In Turkey, occupational health and safety are regulated by the law and regulations numbered 6331. The purpose of this law is to regulate the powers, rights, obligations, responsibilities, and duties of employers and employees, to secure occupational health and safety in the workplace, and to regulate the health and safety conditions that exist there.

Through an examination of the occupational health and safety practices carried out at Kafkas University, this study aims to identify measures that could be taken in other universities to reduce the incidence of occupational accidents in Turkey. Leading the way in this regard, it seeks to contribute to the literature and set an example for other universities. This research is important because Turkey ranks fourth in the world among the countries with the highest number of occupational accidents and occupational diseases. The main reasons for this are that the necessary occupational health measures are not taken and that a culture of implementing occupational health and safety measures

does not exist. There have been few studies on the establishment and coordination of occupational health and safety measures in universities here. Therefore, we believe that our study will make a significant contribution to the literature by highlighting and expanding the measures to be taken.

This study will attempt to explain the concept of occupational health and safety with specific reference to the occupational health and safety practices carried out at Kafkas University. It will first examine how the existing measures are implemented there; then, it will determine additional measures that could be taken; and, finally, it will extrapolate these findings to contribute to the occupational health and safety culture of other universities.

### 1.1. The Concept of Occupational Health and Safety, Its Purpose and Importance

Before explaining the concept of occupational health and safety, the concepts of occupational health and occupational safety should be discussed and explained separately. The concept of occupational health was formulated by the Joint Committee on Occupational Health of the International Labor Organization (ILO) and the World Health Organization (WHO) in 1950. The agreed declaration stated: *"To maximize the physical, mental and social well-being of workers in all occupations, to maintain them at this level, to prevent the deterioration of workers' health due to working conditions, to protect workers from dangers caused by unhealthy factors during their employment, to place workers in the most appropriate occupational environments for their physiological and psychological conditions, and to maintain this situation, in short, adapting the work to the person and each person to their work."* (Yesil, Sonmez, Calis, 2016). The importance of occupational safety, on the other hand, lies in ensuring that employees in the workplace operate in the safest possible environment. Occupational safety has been defined in general terms as: *"systematic studies to take precautions against the dangers that may arise due to the conditions of the work and the prevention of work accidents and occupational diseases that may occur"* (Kurt, 2013). The two concepts mentioned above come together to create the concept of occupational health and safety. After all, it is difficult to characterize these two concepts separately. Failure to take all necessary precautions regarding health in any work area causes workers to lose their health. However, not taking adequate safety measures in the workplace leads to occupational accidents. Since this situation may cause the workers to lose their health, these two concepts complement each other by influencing each other (Baloglu, 2013). The concept of occupational health and safety has emerged to remedy environmental conditions in the workplace that may threaten the worker physically and spiritually and to eliminate or minimize the risks in the profession (Kilic, 2006). The importance of this concept has been magnified by technological change and development, so that, nowadays, there is a continuous focus on creating a healthy and safe work environment. Another definition, within the framework of the laws, numbered 155 and 161 of the ILO convention, states that occupational health and safety encapsulates the creation of the most appropriate conditions to secure psychological and physiological health in the

workplace, the creation of safe and healthy work areas, as well as any action intended to ensure the continuity and development of such safe and healthy work areas (Ilter, 2019). The purpose of occupational health and safety is to take necessary precautions before an occupational accident occurs. If an accident at work has occurred despite such measures being in place, the aim is to intervene immediately and to prevent damage to personnel, the environment, and the workplace (Agari, 2019). In other words, the purpose of occupational health and safety is to eliminate any negative conditions that might affect employees and the environment. The main objectives of occupational health and safety can be listed as follows:

- 1) To increase efficiency and quality in production,
- 2) To ensure the continuity of production in the workplace,
- 3) To prevent the occurrence of all kinds of occupational diseases that may occur in the long term,
- 4) To provide safe and healthy working areas,
- 5) To increase safety in enterprises and production,
- 6) To protect personnel from risks arising in their work areas,
- 7) To ensure and improve the safety, health, and welfare of personnel,

(Cabuk, 2020). Fulfilling all these objectives is of great importance in preventing the occurrence of accidents at work.

Failure to give due importance to OHS (Occupational Health and Safety) measures in the workplace causes an increase in the incidence of accidents at work and occupational diseases and, therefore, has a detrimental impact on the physical and psychological wellbeing of the workforce. Moreover, this situation negatively affects not only the personnel employed but also society (Karacan, & Erdogan, 2011). The implementation of all OHS measures specified for the workplace will cause the person to feel better, increase their motivation and increase their work efficiency (Kandemir, 2020). In other words, increasing the importance given to OHS measures and taking all the necessary measures ensures positive results.

## 1.2. The Concept of the Accident at Work and Its Causes

The definition of an accident at work, generally accepted in education and training, is: *“the sum of all of the events, including external factors, that culminate in physical or mental harm to a worker in a workplace, due to incidents that occur as a result of the work performed while he is present under the direct or indirect authority of the employer or the employer's representative.”* The existence of the authority of the employer or employer's representative mustn't be taken in isolation here. In terms of criminal law, incidents in which the causal link is broken due to the remoteness of the sphere of influence are not treated as workplace accidents (Ozkan, 2016). In other words, it is important to emphasize that a causal link must exist for the incident to be considered a workplace accident. For example, if a worker, who has injured his arm due to an accident in the workplace, is taken to hospital and dies as the result of a wrong intervention, there is no causal link between the work accident and death here. The concept of occupational accidents is defined and clarified in the

legislation. OHS Law No. 6331, article 3/1-g states that an occupational accident is: *“An event that occurs in the workplace or due to the conduct of the work, causing death or rendering bodily integrity mentally or physically disabled.”* (Ozen, 2015). The concept of the accident at work is also accepted as defining an event that occurs suddenly due to work or the requirements of a job, and that may occur due to external reasons, where an injured worker is under the authority of an employer, and while performing his current duty (Ekmekci, 2011). Occupational accidents may occur due to difficulties in adapting to technology, especially changing technology (Dizdar, 2006). The main reason for the high rate of occupational accidents is that employers are conscious of occupational safety but do not act appropriately (Guler, 2011). The reasons for the increase in work accidents and occupational diseases may be summarized, as follows:

- 1) Failure to benefit from continuous developments in technology,
- 2) Lack of control and supervision when diseases and accidents occur,
- 3) Lack of training in the occupational health and safety precautions required to do the job,
- 4) Inadequate protective measures in the workplace, failure to apply the existing protective measures strictly, negligence and disregard in practice,
- 5) Workplace conditions that are not conducive to health and safety,
- 6) The employment of inexperienced personnel to reduce costs and failure to provide newly recruited personnel with the necessary training,
- 7) Failure on the part of the employer, the employer's representative, the workplace safety manager, etc. to take the necessary precautions before or after an accident in the workplace (Kol, 2016).

## 1.3. Need for Occupational Health and Safety in Turkey

According to the figures revealed by the ILO, there are an average of 350 million occupational accidents in the world per year. While approximately 2 million of these occupational accidents result in death, more than 300 million occupational accidents result in temporary incapacity for work. According to this research, carried out in 2012, the countries with the highest number of fatal accidents at work are Austria with 39%, Canada with 31.2%, India with 31%, and, in 4th place, Turkey with 24.6%. Moreover, as far as Turkey is concerned, it cannot be said that this figure reflects the whole truth since not all of the occupational accidents that occur are reported to the Social Security Institution because of the practice of employing uninsured workers. According to the latest statistics, while the number of occupational accidents in Turkey was 286,068 in 2016, it was recorded as 359,653 in 2017. Occupational accidents resulting in death were 1405 in 2016 and 1633 in 2017 (Narter, 2021). To stem this noticeable increase in the number of occupational accidents and deaths in Turkey, employers must show the necessary sensitivity to occupational health and safety measures. Strict sanctions should be prepared and imposed immediately upon employers who do not take the measures required in law and who fail to pay due attention to occupational health

and safety. As technological developments have been made, the importance of occupational health and safety in the use of tools and machinery has increased. The increase in occupational accidents in this area has started to provoke public reaction, which has led to more importance being given to the implementation of occupational health and safety measures and has accelerated this process. As in many other countries, and in line with the level of industrial development, medical, technical, and legal interventions have started to be made regarding occupational health and safety (Guzel & Okur, 2003). Thus, there has been an increase in the importance given to occupational health and safety measures in Turkey.

#### 1.4. Structure of the Occupational Health and Safety Board

Article 6/1-2 of the Regulation on Occupational Health and Safety Boards states that: “(1) The Board consists of the

following persons: a) Employer or employer's representative, b) Occupational safety specialist, c) Occupational physician, ç) A person in charge of human resources, personnel, social affairs, or administrative and financial affairs, d) Civil defence expert, if present, e) Foreman, master craftsman or supervisor of craftsmen, if present, f) Employee representative, if there is more than one employee representative in the workplace, the chief representative. (2) The chairman of the board is the employer or employer's representative, and the secretary of the board is an occupational safety expert. In workplaces where the occupational safety specialist is not obliged to work full-time, the role of secretary to the board is to be carried out by a person in charge of human resources, personnel, social affairs, or administrative and financial affairs.” (Yönetmeliği). The structure and membership of the board are shown below (Figure 1).

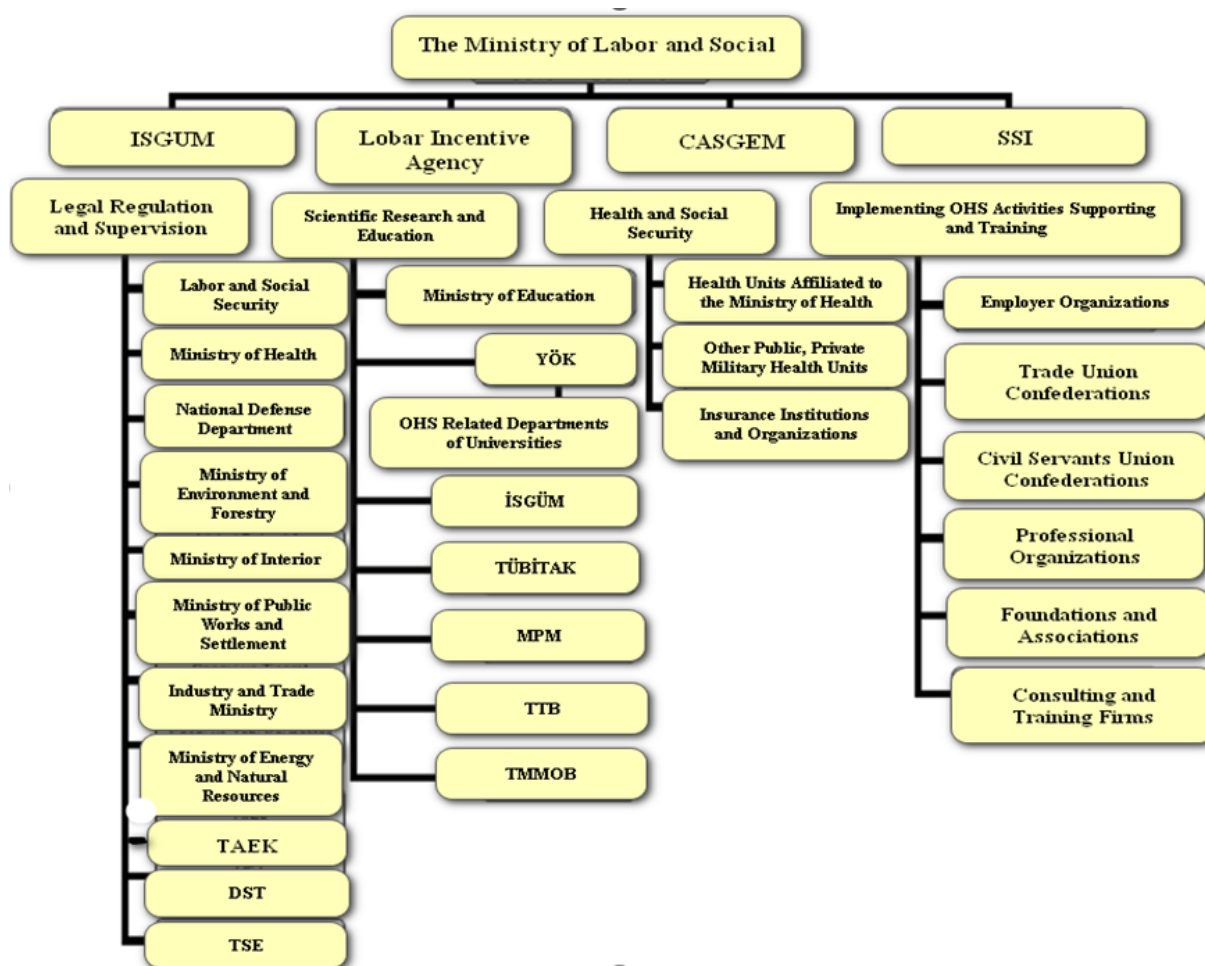


Figure 1. Occupational Health and Safety System in Turkey – Institutional Structure (Yılmaz, 2010).

#### 1.5. Safety Culture and OHS Training in Turkish Legislation

According to some authors, the concept of security may be expressed as “being safe” (Demirbilek, 2005). Fundamentally, it is important for employees to feel safe in their work areas. Moreover, the increase in productivity secured by providing personnel with a safe and healthy working environment contributes to the welfare of a

country. According to a study published by the ILO, 4 personnel per minute and an average of 6300 personnel per day die with their work at the workplace. There are about 317 million occupational accidents in the world throughout the year, and an average of 2.5 million people die (Karagoz, 2002). These figures reveal how important it is to foster a culture of safety. To prevent occupational accidents, safety measures must be implemented appropriately. The concept of working in a safe environment involves increasing the

quality of life of the personnel, achieving the necessary level of awareness about health and safety, maintaining a positive attitude towards working in a healthy and safe environment, and working safely (Serifoglu & Sungur, 2007). Employees need to carry out their work in a safe environment in terms of increasing work efficiency. According to labour law, the employer's obligation to provide training on occupational health and safety covers all fields of work. In other words, the number of personnel, the line of business, or the risk group within which the employee work are irrelevant here. The importance of giving the necessary training to employees in the workplace is also supported by the literature (Ekmekci, 2006). Employers should ensure that all training deemed necessary in the workplace is provided and they should follow it up. The purpose of OHS training in the workplace is to provide personnel and managers with the skills and knowledge that will enable them to identify and eliminate any hazards that pose a risk in terms of potential workplace accidents and occupational diseases. Training in the workplace is an important factor in improving the working environment. In general, the purpose of such training is to raise employee awareness regarding accidents at work and occupational diseases and to contribute to the development of good relations with management (Güven, 2006). Thus, the employer ensures that the necessary and appropriate occupational health and safety training is given to personnel working in the workplace and that the working area is safer and healthier. In short, establishing a culture of safety helps to eliminate risks in the workplace.

## 2. MATERIAL AND METHOD

After getting permission from Kafkas University Rectorate (E-10829923-300.99-22238), OHS units were visited. Studies related to the study were made. Risk assessment analyses were performed. Meetings were held with the coordinator and its members (workplace doctor, workplace nurse, etc.). In line with these data, Occupational Health and Safety practices carried out at Kafkas University were examined. Occupational health and safety studies carried out in the field were examined.

## 3. RESULT AND DISCUSSION

### 3.1. Evaluation of OHS Practices at Kafkas University

It is important to take the necessary steps in higher education institutions to minimize accidents at work and occupational diseases. In this regard, first of all, a commission must be established to develop an occupational health and safety policy. The commission should develop the policy in such a way that it does not contradict the current legislation and then put it into effect with the approval of the University Senate. Thus, at Kafkas University, the coordinators and the occupational health and safety supreme board were constituted by the persons specified in article 7 of the policy, thereby facilitating the exchange of information and coordination between units. Please visit (<https://www.kafkas.edu.tr/isg/TR/sayfa9736>) for the policy. The members of the supreme board specified in article 7 take advisory decisions about deficiencies and actions to be taken, at board meetings. Annex-8 and Annex-9 of the policy were among the first to be put into use at

Kafkas University. Units monitor their operations using the occupational health and safety in-unit inspection chart in Annex-8. With this chart, the tasks that need to be performed are controlled within the unit. The letter template in Annex-9 is used to ratify the appointment of the employer's representatives, which facilitates the meeting of the committees at the appropriate times, thus accelerating the functioning of the unit. Notification of the meetings is made by the Occupational Health Supreme Council secretary (coordinator) 3 days in advance, via the EBYS (electronic document management system) and the meeting notification group on WhatsApp. Appointments to be made are presented to the rectorate as a result of the decision of the board, in line with the proposal of the coordinators. The OHS committee proposes that sub-committees are established and convened in light of the policy. Each sub-committee makes an internal emergency plan, carries out its risk assessment, and reports it to the higher committee. In addition, sub-committees prepare their work plans annually and present them to the upper committee. The Supreme Board determines the measures to be taken and the work to be carried out as a result of this risk assessment. To ensure faster and healthier communication between the units if an accident at work occurs, a communications network has been developed over the Teams program, with passwords that the appropriate personnel can use. For all correspondence to be realized, that is for the coordination to provide correspondence, it is necessary to receive a Detsis code and to use the EBYS. Likewise, the units must also receive a NACE code. Kafkas University has fulfilled all these conditions, created an occupational health and safety unit, and put it at the service of its personnel. The NACE code is a 6-digit activity code (Statistical Classification of Economic Activities in the European Community), which is important in determining the hazard class of a workplace and in the realization of occupational health and safety practices according to the hazard class determined. This code starts from the second number of the registration number of the workplace in the SSI (Social Security Institution) and consists of 4 or 6 digits (Ustaoglu, 2020). While performing a risk assessment, the matrix method is applied. The L Type Matrix (5x5 Matrix) method is generally used in evaluations based on cause and effect. This method, which is performed for risk analysis, is the process of rating and measuring the probability of any incident occurring against the risk that will be created if such an incident should take place (Aker & Ozcelik, 2020). This method is one of the most suitable methods for work areas that do not carry a high level of risk. After applying this method, the actions to be taken are specified in the Prevention and Control Measures form. The risks identified are communicated to the required unit, with a request that the deficiencies be remedied. In work areas where risk assessment is not performed, occupational accidents have a high rate of occurrence. Risk assessment involves identifying hazards that pose a risk, analysing and evaluating them, determining the measures required, putting them into effect immediately, monitoring and reviewing the measures taken, and maintaining communication. The risk assessment process undertaken by universities plays an important role in determining the measures to be taken to prevent occupational accidents. In this context, Kafkas University carried out a risk analysis that aimed to



determine the measures to be taken, eliminate deficiencies, and create a safer workplace. In the implemented Matrix L-Type method, the evaluation of the cause-effect relationship is used. Risk assessments emerge by multiplying probability and severity. R: Risk, O: Probability, S: Severity (degree of damage). With the  $R = O \cdot S$  transaction, the degree of probability of a work accident and occupational disease occurring in the workplace is determined (Ceylan & Basar, 2020). In line with these targets, the probability of an occupational accident has been reduced. The training to be given to personnel is of great importance in stemming the increase in occupational accidents. For training to be given, a request must first be submitted to the Chancellor for approval. Basic occupational health and safety training was carried out via the program used by the university during the covid-19 pandemic, in line with the decision taken by the ministry. Training in this program is repeated every year and takes the form of 3 months of participation in classes, followed by an examination. Alongside the training given, the equipment has been provided so that personnel can work in a healthier environment, and a culture of safety culture has been created that encourages personnel to behave more carefully in their working areas. For instance, as a result of this training program, the awareness of the personnel working in the cafeteria was raised, and both staff and students have been provided with a healthier environment. Efforts are continuing to ensure that this training is updated and repeated periodically and to establish hygiene awareness. The objective is to raise the necessary awareness in terms of occupational health and safety. To provide personnel with first aid training, an application must be made to the Provincial Health Directorate. Acquiring this training is important in terms of providing the first response to any occupational accidents that might occur. The areas for employee training are set out in ANNEX-7 of the policy. The monitoring of the units participating in the training is secured via the training participation form in Annex-7a, which is also included in the policy. Personnel participating in first aid training are motivated by being awarded certificates. It was ensured that the personnel working in the cafeteria complied with the clothing and accessory rules during working hours by giving the necessary training. In this regard, the cafeteria employees were trained to understand that the use of jewellery such as rings, earrings, etc. in their work area poses a health risk, and learned to behave more carefully. Periodic health checks are made for the cafeteria employees every 6 months. Other personnel are checked every 2 years. Principally, hemogram, biochemistry, Elisa (hepatitis), nose culture, nasal swab culture, throat, urine, stool culture, and stool parasite tests are conducted. During these checks, personnel whose culture samples yield values that are potentially harmful in their work areas are given treatment and do not resume their work until after their values have returned to normal. The vaccination status of personnel against tetanus, hepatitis, etc. is regularly checked. Especially during the covid-19 pandemic period, the vaccination status of the employees was checked periodically, and the risk of contagion was minimized. Personnel health checks are conducted in line with the periodic inspection form in Annex-4 of the policy. Likewise, people who have an infection or contagious disease or are at risk of such are suspended from their duties until the treatment process is over, thereby protecting the

health of other employees. After the requisite treatment of these personnel has been carried out and their checks are clear, they resume their work. Personnel who have been away from their jobs for a long time for various reasons, including for military service, are administered a health check when they resume work and are provided with training for readaptation to the workplace.

An employee who has an occupational disease first reports their health-related complaints to the workplace physician. The physician directs the employee to the hospital after performing an examination. The occupational physician determines a work area suitable for the employee in the light of their illness and reports this to the coordinators in writing. These recommendations are submitted for the approval of the Chancellor and, with the approval of the Chancellor, the employee with the disease is assigned to a working area suitable for their health condition. When an employee experiences an accident at work, they report this by going to the hospital. After the hospital doctor conducts the necessary examination, he must submit a statement to the occupational health and safety coordinator with a petition. Then, in line with the statements of the employee who suffered the accident, and the statements of any witnesses, the ANNEX-2 form in the policy is completed and the occupational accident is reported to the SSK (Social Security Institution) within 3 working days. After an accident, a risk assessment is carried out for the area again. If the accident has been caused by deficiencies in the workplace, they are reported to management for remedying. If the occupational accident is the responsibility of the employee, the necessary training is given again to raise the employee's level of awareness on this issue, and prevention and control measures are taken.

#### 4. CONCLUSION

Developments in occupational health and safety have been increased by Occupational Health and Safety Law No. 6331. The creation of a safe environment in all workplaces has become a priority. This obligation also covers educational institutions and requires that new measures are taken in respect of occupational health and safety. Turkey has many educational institutions incorporating very high numbers of personnel and students. It follows that considerable importance must be given to occupational health and safety precautions in these institutions. Kafkas University has taken important steps in terms of establishing a culture of safety and has started work to reduce occupational accidents by establishing an OHS coordinator. The basic training given to personnel has played a major role in creating safe working environments by raising awareness about hygiene and health. As a result, we believe that, by raising awareness here, our work will set an example to other universities in the establishment of occupational health and safety coordinators within the institution. Due to the crowded environments of educational institutions, it is necessary to have enough experts to create the necessary culture in the field of occupational health and safety. Occupational health and safety should be given as a lesson in every unit. In educational institutions, posters containing the necessary basic information should be hung on the boards periodically to raise awareness of students on

occupational health and safety. Seminars should be given periodically to establish a safety culture among students. The meeting dates of the OHS committee to be formed at universities should be determined in advance. After the necessary cleaning is provided in the toilets, precautions should be taken with warning signs against the slippery floor. The personnel responsible for the boiler room should be the person with the necessary knowledge and skills in the work area, should be supported in the use of equipment suitable for the work area, the contact number of the responsible person should be hung visibly. Emergency exit doors should not be locked, they should be opened to the outside with a panic bar system and exit routes should be empty. Ergonomically necessary risk analyses should be carried out and training programs specific to the working area of the personnel should be carried out. The basic trainings given to the personnel should be given by considering the disabled personnel in the business areas. Education of disabled personnel and students should be supported by using sign language in education. Small posters should be prepared to create a safety culture according to the fields of the personnel. These posters will contribute to the safety culture of the personnel.

#### ACKNOWLEDGMENTS

We would like to thank Aslıhan Aycan Tanrıverdi for her support in the preliminary review of the article.

#### 5. REFERENCES

- Ağari, G. (2019). İş Güvenliği İle İlgili Bilgilendirme Profillerinin İncelenmesi: Kütahya Porselen Örneği (Yüksek Lisans Tezi). Kütahya: Kütahya Dumlupınar Üniversitesi Sosyal Bilimler Enstitüsü .
- Aker, A., & Özçelik, T. Ö. (2020). Metal Sektöründe 5x5 Matris ve Fine-Kinney Yöntemi ile Risk Değerlendirmesi. *Karaelmas İş Sağlığı ve Güvenliği Dergisi* , 65-75.
- Baloğlu, C. (2013). Avrupa Birliği ve Türkiye’de İş Sağlığı ve Güvenliği (1. Baskı). İstanbul: Beta Yayıncılık.
- Ceylan, H., & Başar, O. (2020). Tavas Bahçeköy Olivin Üretim Tesisinde İş Güvenliği Risk Analizi. *Teknik Bilimler Dergisi*, 10, 9-15.
- Çabuk, A. (2020). İstanbul Anadolu Yakasında Eğitim-Öğretim Faaliyetini. Kocaeli: Kocaeli Üniversitesi Fen Bilimleri Enstitüsü.
- Demirbilek, T. (2005). İş Güvenliği Kültürü. İzmir: Legal Yayıncılık.
- Dizdar, E. N. (Ocak 2006). İş Güvenliği. İstanbul: ABP Yayıncılık 3. Baskı.
- Ekmekçi, Ö. (Ocak 2006). İş Sağlığı ve Güvenliği Eğitiminin Usul ve Esasları. MESS Yayını *Mercek Dergisi* (4), 86-96.
- Ekmekçi, Ö. (2011). Sosyal Güvenlik Hukuku Dersleri . İstanbul : Yenilenmiş, 14. Beta Basım .
- Güler, M. (2011). İş Sağlığı ve Güvenliği Eğitiminin İş Kazalarının Önlenmesine Etkisi: İETT Örneği Yüksek Lisans Tezi. İstanbul: İstanbul Üniversitesi.
- Güven, R. (6 Nisan-Mayıs-Haziran 2006). Güvenlik Kültürü Oluşumunda Eğitimin Önemi. *İş Sağlığı ve Güvenliği Dergisi Çalışma ve Sosyal Güvenlik Bakanlığı Yayını* (30), 5-11.
- Güzel, A., & Okur, A. R. (Ekim 2003). Sosyal Güvenlik Hukuku Yenilenmiş 9. Baskı. İstanbul: Beta Yayınevi.
- İlter, B. (2019). Zorunlu İş Sağlığı ve Güvenliği Eğitiminin İş Kazalarına Etkisi: İmalat Sektöründe Bir Vaka-Kontrol Çalışması. Doktora Tezi. İstanbul: İstanbul Üniversitesi.
- İnciroğlu, L. (2008). İşçi Sağlığı ve İş Güvenliğinde İşçi ve İşverenin Hukuki ve Cezai Sorumlulukları. İstanbul: Legal Yayıncılık.
- Kandemir, H. (2020). İnşaat Sektöründe İSG Proseslerinin Belirlenmesi Üzerine Karar Destek Sistemi Uygulamasının Geliştirilmesi. İstanbul: İstanbul Esenyurt Üniversitesi.
- Karacan, E., & Erdoğan, Ö. N. (2011). İşçi Sağlığı ve İş Güvenliğine İnsan Kaynakları Yönetimi. *Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* , 102-116.
- Karagöz, A. (2002 ). Suç Önleme Hizmetleri Özel Güvenlik ve Emniyet Teşkilatı. Ankara: Sen Yayıncılık.
- Kiliç, L. (2006). İşverenin İş Sağlığı ve Güvenliği Sağlama Hükümlülüğü ve Sorumluluğu, . Ankara: Yetkin Yayınları.
- Kol, İ. (2016). İş Sağlığı ve Güvenliğinde Operasyonel Disiplin Yüksek Lisans Tezi. İstanbul: Gedik Üniversitesi.
- Kurt, R. (2013). Herkes İçin İş Sağlığı ve Güvenliği Rehberi ( 1 Baskı). Ankara: Seçkin Yayıncılık .
- Narter, S. (2021). İş Kazası ve Meslek Hastalığında Hukuki ve Cezai Sorumluluk (Güncellenmiş 4. Baskı Gözden Geçirilmiş b.1.) Ankara: Adalet Yayınevi.
- Özen, M. (2015). İş Kazalarında Hukuki, Cezai ve İdari Sorumluluk. *Ankara Barosu Dergisi* , 215-253.
- Özkan, H. (2016). İş Kazalarından Doğan Ceza Sorumluluğunda Kusur Tespiti . Gazi Üniversitesi Hukuk Fakültesi Dergisi , 20 (1), 511-571.
- Şerifoğlu, U. K., & Sungur, E. (2007). İşletmelerde Sağlık ve Güvenlik Kültürünün Oluşturulması; Tepe Yönetimin Rolü ve Kurum İçi İletişim Olanaklarının Kullanımı. İstanbul Üniversitesi İşletme İktisadi Enstitüsü Yönetim Dergisi , 1-17.

Ustaoglu, E. (Eylül 2020). Eğitim Kurumlarında İş Sağlığı ve Güvenliği Üzerine Bir Çalışma Yüksek Lisans Tezi. Ankara: Çankaya Üniversitesi.

Yeşil, Y., & Sönmez Çalış, Ö. A. (2016). İş Sağlığı ve Güvenliği Eğitiminde Önlisans Programları: Türkiye'deki Uygulama ve ABD' deki Uygulama İle Karşılaştırılması. Süleyman Demirel Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi , 21 (4), 1173-1189.

Yılmaz, F. (2010). Avrupa Birliği Ülkeleri ve Türkiye'de İş Sağlığı ve Güvenliği. Uluslararası İnsan Bilimleri Dergisi , 7 (1), 149-192.

Yönetmeliği, İ. S. (tarih). 5 15, 2022 tarihinde [https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=17031&mevzuatTur=KurumVeKurulYonetmeli&mevzuatTertip=5#:~:text=MADDE%206%20%E2%80%93%20\(1\)%20Kurul,Bulunmas%C4%B1%20halinde%20formen%2C%20ustaba%C5%9F%C4%B1%20veya adresinden alındı](https://www.mevzuat.gov.tr/File/GeneratePdf?mevzuatNo=17031&mevzuatTur=KurumVeKurulYonetmeli&mevzuatTertip=5#:~:text=MADDE%206%20%E2%80%93%20(1)%20Kurul,Bulunmas%C4%B1%20halinde%20formen%2C%20ustaba%C5%9F%C4%B1%20veya adresinden alındı)