THE FACTS BEHIND THE ANNUAL NUMBER OF WORK ACCIDENTS GRAPH OF TURKEY AND READING THE DATA FOR OCCUPATIONAL HEALTH AND SAFETY RESEARCHERS

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ABSTRACT

Statistics are included in scientific studies such as projects, theses, articles and papers in the field of occupational health and safety. We come across the graph showing the annual change in occupational accidents in almost every study. This study has been prepared with the aim of analyzing how the information obtained through graphics or tables should be used and evaluated in a science such as occupational health and safety, which requires proof, evidence and concrete data entry.

Keywords: Occupational Safety, Occupational Health, Occupational Health and Safety, Number of Work Accidents.

INTRODUCTION

Work accidents are events that cause injury, disability and sometimes death of a living being, disturb society morally, and cause financial losses to the contracting parties. Even though sometimes workers have their own faults in work accidents, this is never a reason to ignore these work accidents. Occupational accident statistics include figures that show how much society attaches importance to occupational health and safety activities. For this reason, publishing work accident data every year enables us to learn the progress made over the years. This reveals whether a successful occupational health and safety policy is implemented in that country. When the statistical results obtained every year are evaluated by continuing production in a way that does not disrupt the normal flow of businesses, the improvement or worsening of work accidents can be easily determined (Koçali, 2021).

Work accident is an integral part of every work in industrialized areas, which has serious negative economic and social effects especially on the lives of individuals, causes a significant decrease in the productivity of employees, and is an event that occurs because of work or during work and leads to fatal / non-fatal occupational injuries. Occupational accidents are the leading cause of loss of workforce or working time. (Ghanbari et al., 2017; Hamalainen, 2009).

Work accident; In short, it can be expressed as an accident that the insured employee is exposed to at the workplace due to the work(s) or duty carried out by the employer. However, it is defined in detail within the scope of national legislation. It is defined in

Article 13 of the Social Insurance and General Health Insurance Law No. 5510 (SSGSSK, 2006). In this context, “work accident”; While the insured is at the workplace; outside the workplace due to the work carried out by the employer or due to his duty, or if the insured is working independently on his own behalf and account, due to the work or field of work he is carrying out; The insured person working for an employer spends time without performing his/her main job due to being sent to another place outside the workplace as an employee; Breastfeeding female insured during the time allocated to breastfeed her child; "It is an event that occurs during the insured's journey to and from the place of work with a vehicle provided by the employer, and which causes immediate or subsequent physical or mental disability to the insured (Article 13 of Law No. 5510)." Occupational disease is defined in Article 14 of the same law. Within the scope of the provision of Article 14 of SSGSSK No. 5510; “It is a temporary or permanent illness, physical or mental disability suffered by the insured person due to a recurring reason due to the nature of the job he/she works or performs or the conditions of execution of the job. The insured person suffers from an occupational disease due to his work; It is obligatory to examine the health board report and the medical documents duly prepared by the health service providers authorized by the Institution, and in cases deemed necessary by the Institution, to examine the audit reports and other necessary documents revealing the working conditions in the workplace and the related medical consequences, and the result to be determined by the Institution's Health Board. (Article 14 of Law No. 5510).”

Framework Directive 89/391/EEC on measures to promote positive effects on the health and safety of employees in European Union workplaces has been published. Therefore, employers are obliged to keep a list of work accidents that result in a person being incapacitated for more than three days (Official Gazette, 1989). The European Statistics on Work Accidents at Work (ESAW) project was launched in 1990 to harmonize data on work accidents with all accidents that cause absence from work for more than three days. Data regarding EU countries are kept by the EU Statistical Office (EUROSTAT, 2013).

LITERATURE STUDIES

It has been seen in the literature studies that similar studies have been carried out. However, a different study was conducted from other sources by analyzing the breadth of the scope and the data obtained from SSI official sources obtained by year. Although the common aspects of similar literature studies are limited, the studies are evaluated in this section.

Ünal (2008) conducted a study on the cost of work accidents and occupational diseases occurring in the agricultural sector in Turkey. He stated that human life is more valuable than anything else. He mentioned that the time required for a person to participate in the workforce and the financial costs that must be spent for his education and training are incalculable. He emphasized that the rate of economic loss caused by a work accident or occupational disease is incomparably higher than the expenses.

Eser (2015) emphasizes that occupational accidents are an important issue that has begun to be emphasized and is an expression that is supported, inspected and tried to be controlled by legislation today. In the study where the analysis of work accidents occurring in the metal sector was evaluated at the national level using national data on the results of work accidents questioned using various variables, a current perspective was given to the study by creating a timing model of work accidents based on work accidents and time intensity. Work accidents and related deaths were studied on regression analysis between years.

In their study, Güvercin and Mil (2016) aimed to clarify how inspections should be carried out in order to reveal the concept, purpose, scope, characteristics and rights of occupational diseases. An insurance concept has been adopted in which work accident and occupational disease insurance aims to protect the employee(s) at the individual level and minimize the negativities that occur in the continuation of the process. Tarım (2017) stated that the chemical sector is very important for the industrial development of a country and that it causes great harm to the environment and health due to the use of chemicals, and touched upon the statistics of work accidents and occupational diseases.

Cerev and Yıldırım (2018) stated that societies make great efforts to reduce the rate of work accidents and occupational diseases, and that the costs incurred in this context affect and harm both the society, the employer and the employee. In their studies, the relationship between data on work accidents and occupational diseases and the demographic structure of employees was examined.

Dündar et al. (2018) conducted analyzes on work accidents and occupational diseases occurring in the mining field. The study stated that the mining sector is one of the riskiest business lines due to the nature of its work, and the steps taken by employers and the state to prevent work accidents were mentioned. A detailed analysis was made within the framework of the main and sub-sectors of occupational accidents and occupational diseases that occurred in the mining sector between 2012 and 2016. Within the framework of the 5-year data obtained, comments were made by comparing the mining sector with other sectors in terms of occupational health and safety.

Şimşek Kandemir and Şimşek (2019) mention that a work accident occurring in a workplace can cause material and moral losses, and in their study, types of work accidents, temporary disability, working environment and gender variables were taken into account and two separate models were established in this context. In the study where both models were significant, it was concluded that men had more work accidents than women and the number of work incapacity was more than 5 days.

Bozkurt and Naycı (2021) focused on the gender role, one of the roles in the occurrence of work accidents. The study focused on the effect of the gender factor on work accidents in the metal industry between 2016 and 2019. It was emphasized that the majority of work accidents in the metal industry, where men are dominant due to heavy work and working conditions are difficult, are men.

In their study, Özdemir and Serin (2022) conducted research on work accidents and occupational diseases, which are two main reasons that disrupt the health of employees at work. It was mentioned that if the necessary precautions are taken, occupational accidents can be reduced and occupational diseases can be completely prevented. The main purpose of their study is to compare the work accidents and occupational diseases that employees are exposed to at a sectoral level, to investigate their distribution according to years, the organ/limb where the work accident occurred and the time of the work accident. The data used in the study belongs to the years 2000 - 2018, and in line with the data evaluated, it was determined that the sector that resulted in the most deaths was the construction sector.

Çavdar et al. (2022), in their study, the distribution of employees who had a work accident in Turkey according to the time they had the accident and gender was statistically interpreted and evaluated. In the research, SSI's work accident data between 2009 and 2019 was used. Tables and graphs containing statistics on the time of occupational accidents and their distribution by gender were obtained and interpreted.

RESULTS

Statistics are frequently included in scientific studies such as projects, theses, articles and papers in the field of occupational health and safety. The issue of how the information obtained through statistics should be used and evaluated in a branch of science that requires evidence, evidence and concrete data input, such as occupational health and safety, needs to be specifically evaluated. This article has been prepared to analyze how field-specific information should be evaluated. Everyone working in the field of occupational health and safety, whether a professional or an academic; It currently carries out the evaluation of data in the form of graphics and tables or presented in any report content, and monitoring the results by applying intervention and correction activities in line with the results, as part of its daily business practice. When encountering data or a scientific report, the most important issue to consider is to carefully examine the unexpected situations behind this table or graph. A good occupational health and safety expert should be the first to notice changes in business accident data, especially those presented within a certain period of time, specific to the business, sector or regional or even international/international level. Because, these people are expected to have this skill with the competencies they received from associate degree, bachelor's degree, master's degree, doctorate or A/B/C class Occupational Safety Specialist Training. In scientific studies such as projects, theses, articles and papers in the field of occupational health and safety, we see that the annual change in the number of work accidents occurring in our country is given at different year intervals. In the interpretation of the data in Table 1, which was prepared in line with the information presented in the Statistical Yearbooks (2023) of the Social Security Institution (SGK), some sources include the number of work accidents and some sources include the number of insured people who had a work accident. When we examine the interpretations of this table in scientific studies, it is noteworthy that work accidents are interpreted as if they were a normal situation, and the data in this table is interpreted.

Table 1: Work accident statistics between 2012-2021

Year	Work Accidents
2012	74.871
2013	191.389
2014	221.366
2015	241.547
2016	286.068
2017	359.653
2018	430.985
2019	422.463
2020	384.262
2021	511.084
2022	588.823

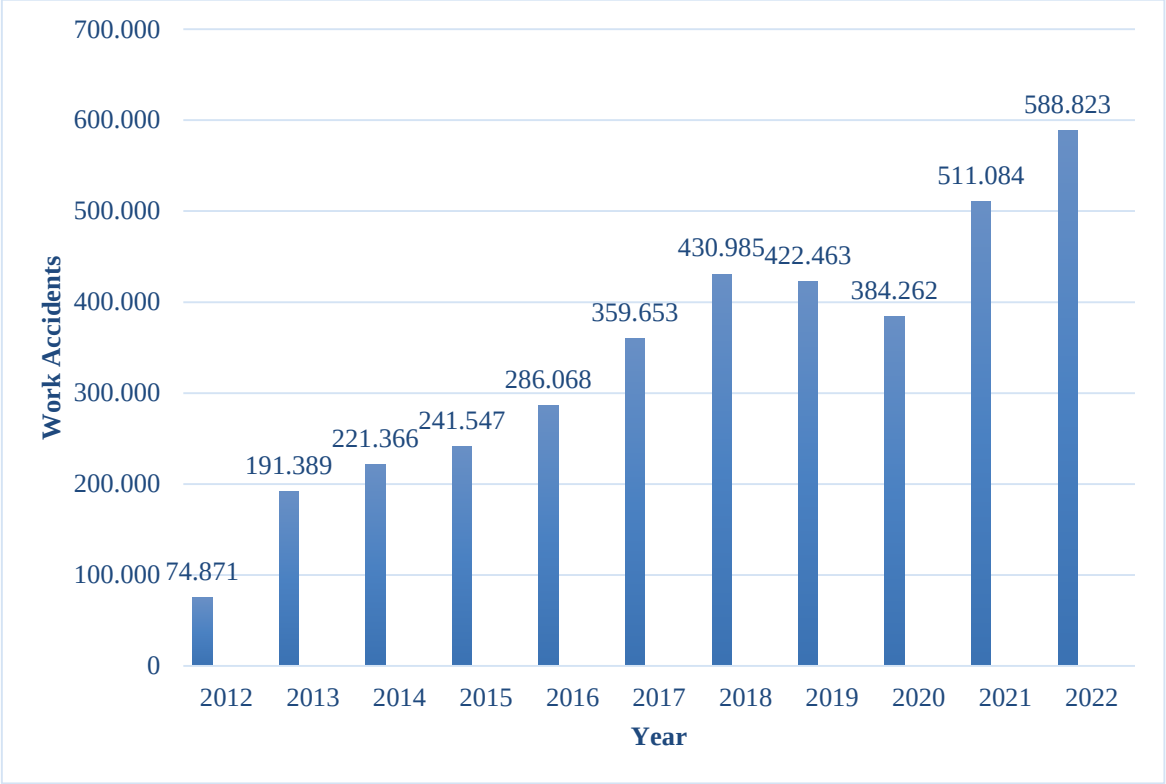


Figure 1: Work accident statistics between 2012-2021

In fact, both of these statements indicate correct information in terms of SSI. In its statistical shares, SGK does not share information specifically about the number of work accidents, but provides detailed information for 99 separate economic activity classifications under the tab "Number of insured people who had work accidents according to their incapacity for work (days)". This information is shown in the table "Distribution of the Number of Insured Persons Within the Scope of Article 4-1/a of Law No. 5510, Who Had a Work Accident or Occupational Disease, by Economic Activity and Gender". Another important point here is that the information provided only belongs to the "4(a)-Employee" class. Information and statistics regarding “4(b)-Employers” are also presented as separate documents by SSI. Therefore, this is the most important point to consider when reading the table.

CONCLUSION AND DISCUSSION

Examining Figure 1, which we created with the help of Table 1, will help us even more. When we look at the graph, we see the number of work accidents that rose suddenly after 2012, continued to rise between 2013-2018, decreased between 2019-2020, and showed another sudden increase in 2021.

We should not forget that the Social Security Institution's data belongs to employees who are registered for insurance at the national level. These data do not include uninsured or illegal/immigrant workers. For this reason, another important point is to interpret the ups and downs in the graph by taking into account the number of people working without being registered with SSI in the current situation of our country. The occupational health and safety researcher who focuses his attention only on increases and decreases must question the reason for the change.

Another important point is to know the laws well. It would be wrong to say that the Occupational Health and Safety Law No. 6331 was not in force before 2012 and that the number of work accidents increased in 2013 after this law came into force as of 01/01/2013. Because before the law, work accident notifications were made within the scope of the Labor Law No. 4857, in line with the Social Insurance and General Health Insurance Law No. 5510.

As everyone can guess, the main reason for the decline between 2019-2020 is the Covid-19 pandemic. Complete closure, remote working, etc. implemented within the scope of the pandemic. These situations have reduced the number of occupational accidents. With the reduction of pandemic measures in 2021, there was an increase in the number of work accidents with the increase in the number of people in working life.

When SSI Statistics for 2022 and 2023 are shared, it will be seen that work accidents have decreased in these data. The reason for this is that the earthquakes that occurred in Kahramanmaraş on February 6, 2023 and Hatay on February 20, 2023 brought life to a halt as they caused great destruction in Kahramanmaraş, Kilis, Diyarbakır, Adana, Osmaniye, Gaziantep, Şanlıurfa, Adıyaman, Malatya and Hatay. Loss of life, destruction, disruption of economic order, etc. that occurred in these provinces. Situations have disrupted the normal flow of life. For this reason, since the workforce and employment opportunities in this region have decreased, it is important for researchers who will conduct statistical studies to keep in mind that the data in these regions do not clearly reflect the truth and to note this information in their studies.

Considering these basic elements, it can be seen that the table is not just a table, and that different information must be managed behind the numbers. As a result of people who conduct research and present scientific studies in the field of occupational health and safety overlooking these elements, copy-paste information that is not based on sound interpretations can be prevented in the results and discussion sections of the studies.

Apart from all these, a good occupational health and safety researcher should observe the society with its social movements and take into account the risk factors that cause the annual increase and decrease in the number of work accidents.

With this perspective; The occupational health and safety researcher must be able to look at the data before him suspiciously, and then examine the results he reaches not only as information but also with a critical eye. After all, it is important not only to detect the situation, but also to take action against the situation and prevent the situation from occurring.

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