

## Effect of orientation training on safety behavior

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**Abstract:** With the orientation training, the employees are provided with occupational health and safety information, including the job's threats, risks, and precautions. Although employees are required to take an orientation training on the first working day, according to the Social Security Institution reports of occupational accidents between 2001-2019, 60% of the occupational accidents occurred on the first working day, and 68% of these first working day accidents occurred in the construction sector. This study examines the effect of orientation training on displaying safety behavior. The data were collected from 493 construction employees in Turkey via a questionnaire. According to the results, an employment contract between the employee and the employer, the type of employer, and the type of work are associated with the provision of orientation training. Then, it was determined that the level of use of personal protective equipment was high in those who received orientation training. Finally, it was determined that the safety behavior of the employees who received orientation training was higher than those who did not. Orientation training increases the level of safety behavior and therefore has a preventive effect on first working day accidents in the construction industry.

**Keywords:** Occupational Health and Safety, Orientation, First Working Day Accident, Safety Behaviour.

## Efeito da formação de orientação no comportamento de segurança

**Resumo:** Com a formação de orientação, os funcionários recebem informações sobre saúde e segurança ocupacional, incluindo ameaças, riscos e precauções do trabalho. Embora os funcionários sejam obrigados a fazer um treinamento de orientação no primeiro dia de trabalho, de acordo com relatórios da Instituição de Previdência Social de acidentes de trabalho entre 2001-2019, 60% dos acidentes de trabalho ocorreram no primeiro dia de trabalho e 68% desses primeiros dias de trabalho dia de acidentes ocorridos no sector da construção. Este estudo examina o efeito da formação de orientação na exibição de comportamento de segurança. Os dados foram coletados de 493 funcionários da construção na Turquia por meio de um questionário. De acordo com os resultados, um contrato de trabalho entre o empregado e o empregador, o tipo de empregador e o tipo de trabalho afetam a oferta de formação de orientação. Em seguida, foi determinado que o nível de uso de equipamentos de proteção individual foi alto naqueles que receberam formação de orientação. Finalmente, foi determinado que o comportamento de segurança dos funcionários que receberam formação de orientação foi maior do que aqueles que não receberam. A formação de orientação aumenta o nível de comportamento de segurança e, portanto, tem um efeito preventivo nos acidentes do primeiro dia de trabalho na indústria da construção.

**Palavras-chave:** Saúde e Segurança do Trabalho, Orientação, Acidente no Primeiro Dia de Trabalho, Comportamento de Segurança.

## 1. Introduction

When the literature is examined, it is seen that many studies have been carried out to understand and prevent occupational accidents. Many scientists, especially Heinrich, Fine, Levitt, and Hinze, have studied occupational accidents (Abdelhamid & Everett, 2000; Baradan et al., 2016; Sorock et al., 1993). According to the literature in this field, occupational accidents are especially common in the construction sector (Bilim & Çelik, 2018; Cameron et al., 2008; Camino López et al., 2008; Ceylan, 2014; Hinze, 2008; Kang et al., 2021). Because of that, the construction sector has been characterized by high levels of risks and occupational accidents (Carter & Smith, 2006; Hinze et al., 2005). According to the International Labor Organization (ILO), workers in the construction sector are at risk of being injured 3-6 times more than those working in other sectors (ESAW, 2018; ILO, 2017).

The situation regarding the construction sector, which is revealed by the foreign literature, is not very different for Turkey. Müngen and Güranlı (2005) examined approximately 40,000 occupational accidents from all sectors in Turkey and reported that 4347 of them occurred in the construction sector, and 1774 of this number resulted in death. According to Social Security Institution (SSI) data, approximately 9% of all occupational accidents, 18% of permanent incapacity for work, and 34% of fatal occupational accidents occur in the construction sector (Müngen, 2011; SGK, 2019). For this reason, it is of particular importance to investigate the underlying causes of the high number of occupational accidents in the construction sector.

In Turkey, essential steps are taken to prevent occupational accidents in working life, especially in the construction sector. For this purpose, an Occupational Health and Safety (OHS) process is carried out by publishing many laws, regulations, and codes. However, the increase in the number of occupational accidents in the construction sector (see SGK, 2019) implies some faults in practice. One of the possible problems is the lack of orientation training for the construction sector employees on their first day on the job. Since the orientation training is carried out in order the employees to get used to the work environment and to learn the necessary safety precautions, the lack of this training is one of the potential underlying causes of occupational accidents.

There are different names in the literature for the training given to new employees, such as "induction training", "initial training", or "orientation training". According to Naoum (2011), induction training is the training in which the new employee is informed about the security policy, field conditions, and working style of the organization. On the other hand, initial training is a kind of training given to new employees to apply new knowledge, skills, and abilities (Wang et al., 2022). Lastly, according to Byars and Rue (2000), orientation training is the process of introducing the business by giving information about the department, jobs, and job-related threats and precautions to shorten the job adaptation process of recruits. For the scope of this study, these terms have similar meanings, and for the training given to the recruits, the term of "orientation training" is preferred throughout the study.

The main aim of this study is to examine the effect of orientation training on the level of safety behavior which is closely related to occupational accidents (Seo, 2005). To examine the effect of orientation training, 600 occupational accident reports were investigated. 420 (70%) of the occupational accidents in the reports occurred in the first month at work, and 358 (59.7%) of them occurred on the first working day. The fact that the accident rates are so high on the first day that employees are supposed to get

orientation training requires a particular investigation. Another striking point from the reports is that 290 of the first working day accidents occurred in the construction sector.

It is an essential process for preventing occupational accidents to explain the operational, task-related, machine-related, and equipment-related hazards and the precautions to be taken for all these to newly recruited employees through orientation training. Orientation training for Organizational health and safety awareness will increase the level of safe behavior in the organizations (Glendon & Stanton, 2000). In addition, considering the factors that affect employers' level of providing orientation training is necessary due to the importance of orientation training.

From this point of view, this study examines the effect of orientation training on displaying safety behavior. In this context, factors that may affect the availability of orientation training, such as the existence of a contract between the employee and the employer and the type of work, are discussed. Then, the effect of orientation training on employees' safety behavior and personal protective equipment (PPE) usage levels is investigated. By revealing the potential relationship between orientation training and safety behavior, the importance of concrete practices that can be applied in order to prevent occupational accidents will be demonstrated.

This study aims to contribute to the literature by determining the effect of orientation training on displaying safety behavior. There is no study that examined the relationship between orientation training and safety behavior to the authors' best knowledge. Moreover, by proving the potential relationship, the importance of concrete practices that can be applied to prevent and reduce occupational accidents will be revealed. Finally, there will be a theoretical contribution by determining the dimensions of the safety behavior scale in the construction sector in Turkey.

This study is critical because it draws attention to the effect of orientation training on the level of safety behavior and the use of PPE. In addition, the study would state the effect of employment contracts, employer type, and job type on the availability of orientation training.

## **2. Theoretical Framework**

Starting a new job is a complex process for all inexperienced or experienced employees. New employees do not know the structure, processes, procedures, colleagues, internal relations, operations, risks, and precautions. Companies that want to survive and prevail, need to quickly adapt their new employees to business and working conditions (Boylu & Ünlüönen, 2016). Because orientation training covers processes such as getting to know the work environment, learning the workflow, understanding the threats and dangers in the job, and learning the necessary precautions, this need can be partially fulfilled by orientation training. In this context, orientation training is critical in adapting new employees to business culture, business environment, safety measures, duties, and responsibilities in a short time basis.

Orientation training is defined as training given on the first working day, where newcomers become active members of the organization, prepare to do the job efficiently, and learn the corporate culture (Noe, 2013). Orientation training involves getting acquainted with the business and the organization by giving information about the department and the jobs to shorten the newcomers' adaptation period to the job (Byars & Rue, 2000; Cascio-Wayne, 1992). In addition, orientation training includes informing the employee about the business, the employee's job, the hazards of the machinery and

equipment, and the precautions to be taken. Consequently, orientation training containing information related to OHS will increase job security (Glendon & Stanton, 2000). The first working day in all sectors, especially in sectors such as construction classified as dangerous, should be utilized as an orientation training in which the details, hazards, precautions, and responsibilities of the work are explained, and the new employee meets his/her colleagues. However, based on the above-mentioned reports, it is seen that the first working day is used as a working day where accidents can also occur. Considering the relationship between occupational accidents and the lack of safety behavior (Heinrich, 1959; Seo, 2005; Sookhtanlou et al., 2021), it is vital to examine the relationship between orientation training and safety behavior.

Orientation training is a kind of training in which newcomers get to know the job, the colleagues they will work with, and the organization in general. The training plays a vital role in terms of the critical information they provide to the participants and the socialization of the newcomers within the organization (Klein & Weaver, 2000). While the training increases the level of adjustment of the new employees and provides a more accurate understanding of the job description and the task, on the other hand, they decrease the stress caused by the adaptation period (Anderson et al., 1996). With the help of orientation training, newcomers become insiders instead of outsiders (Bauer et al., 2007).

An employment contract signed between the employee and the employer is one of the potential variables affecting orientation training. The fact that employers sometimes avoid making a contract in order to keep the work unregistered leads to unregistered employment, on the one hand, it can also lead to significant deficiencies in OHS practices, such as not providing the necessary training on the other hand (Gültekin-Karakaş et al., 2021; Koçak, 2013; Lingard, 2013; Uzunkaya, 2013).

The type of employer that hires the employee is expected to be another possible factor in providing orientation training. In particular, it has been demonstrated by various studies that subcontractors do not show sufficient care in taking the necessary OHS measures (Gültekin-Karakaş et al., 2021; Koçak, 2013; Lingard, 2013; Uzunkaya, 2013). Studies have shown that 80% of the subcontractors in Turkey do not subject their employees to any OHS practice (Arı & Engin, 2018; İzgi & Öztürk Türkmen, 2015). It is also known that direct employers do not take the necessary precautions because they do not have enough information on OHS practices (Arı & Engin, 2018). Since orientation training is a kind of training exercise within the scope of OHS, it is expected that the type of employer will be effective in providing orientation training.

The type of work is considered as another potential factor in providing orientation training. The fact that repair works are usually carried out by subcontractors or direct employers (Uzunkaya, 2013) may negatively affect the necessary OHS precautions. The lower accident risk in new constructions compared to repairment works (Lingard, 2013) supports this idea. Since orientation training is also an OHS practice, it is expected that the job type will be effective in providing orientation training.

Safety behavior consists of behaviors such as using PPE correctly, working appropriately to prevent and reduce potential hazards and accidents, and complying with safety policies and procedures (Fugas et al., 2012). Human error is among the leading causes of occupational accidents (Heinrich, 1959). It is believed that 88% of occupational accidents are caused by unsafe behaviors of employees, 10% by unsafe conditions, and the remaining 2% by unknown reasons (Seo, 2005). Many studies have been carried out about safety behavior in various sectors and professions, and poor safety behavior has

been shown as one of the leading causes of occupational accidents (Amponsah-Tawaih & Adu, 2016; Bae et al., 2021; Elmoujaddidi & Bachir, 2020; Gao et al., 2021; Malakoutikhah et al., 2021; Mattson Molnar et al., 2019; Sookhtanlou et al., 2021).

Studies reveal the importance of training in displaying safety behavior (Bayram & Burgazoglu, 2020; Cheng et al., 2010; Lam & Kam, 2000). In a study conducted by Cheng et al. (2010), by analyzing 800 accident reports, it was determined that 74% of small construction companies do not provide any training on occupational safety, and as a result, unsafe work habits increase. In another study conducted by Lam and Kam (2000) in Hong Kong, it was determined that 61.3% of construction workers did not receive any training on occupational safety before starting work. Since the threats and precautions specific to the job and workplace are explained in the orientation training, it is expected that the orientation training would be effective in displaying safety behavior.

Personal protective equipment is the visible facet of safety behavior (Bayram, 2021; Berni et al., 2021). PPE is designed to create an effective barrier between the person and harmful objects and substances and is used as a preventive measure for occupational accidents (Berni et al., 2021). Since the use of PPE specific to the job and workplace was explained in the orientation training, it was expected that this training would be effective in using PPE, which is an indicator of safety behavior.

### 3. Materials and Methods

Based on the idea that science is made to explain events and phenomena, this study is based on a positivist approach. The study tries to reach the information that can be generalized over observable social reality (Remenyi et al., 1998). In this context, the study focuses on behaviors with the idea that human behaviors are observable. In this direction, the findings are reached by numerical measurements based on the quantitative method in the study. In addition, the perspective of the researchers was not reflected in the study.

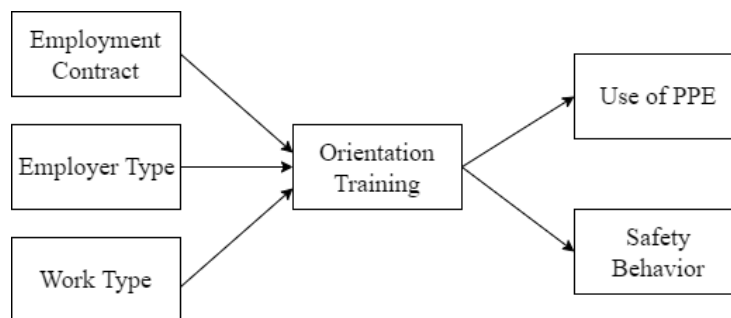


Figure 1: The Study Model

The study model shown in Figure 1 represents the variables that can affect the availability of orientation training in a workplace. Also, it shows the potential relationship between orientation training and the level of safety behavior of employees and the use of PPE. In the model shown above, the existence of an employment contract shows whether the employees made any employment contract with the employer when they started to work. The type of employer expresses whether the employers are contractors, subcontractors, or direct employers. Finally, the type of work refers to whether the construction work is new construction or a repair. Thus, the effect of employment contracts, employer type, and job type on orientation training will be examined. Then, the

effect of the orientation training on the safety behavior levels of the employees and their use of PPE will be investigated.

The relationships between the variables described above and showed in the study model are examined with the help of the following hypotheses:

H<sub>1a</sub>: The existence of an employment contract between the employee and the employer is effective in providing orientation training.

H<sub>1b</sub>: The type of employer that hires the employee is effective in providing orientation training.

H<sub>1c</sub>: The type of work performed by the employee is effective in providing orientation training.

H<sub>2a</sub>: Providing orientation training is effective on the level of safety behavior of the employees.

H<sub>2b</sub>: Providing orientation training is effective on the level of use of PPE by the employees.

In this study, survey results were used as data to examine the effect of orientation training on the level of displaying safety behavior and other hypotheses. The questionnaire prepared for this purpose consists of three parts. The first part includes questions about demographic characteristics, and the second part includes questions about the nature and characteristics of the job. The last section includes the safety behavior scale. The "Safety Behavior Scale" developed by Neal, Griffin, and Hart (2000) measures the level of employees displaying safety behaviors. The scale consists of two sub-dimensions, "Safety Compliance" (3 items, i.e., I use all the necessary safety equipment to do my job) and "Safety Engagement" (3 items, i.e., I put in extra effort to improve the safety of the workplace). Participants were asked to evaluate the statements with a 5-point Likert scale (1: Strongly Disagree, 5: Strongly Agree). The approval of Sakarya University Ethics Committee (Date and Number of Approved Documents: 02/02/2022-E.102863) states that the research and questionnaire complies with the ethical rules.

The research population is the employees working in the construction sector in Sakarya, Turkey. The quota sampling was used as the sampling method, and a sample was created so that those who had and did not have an occupational accident on the first day were equally represented. The first part of the sample consists of 245 people who had a first working day accident in the construction sector between 2001 and 2019, according to the Social Security Institution. Those employees were identified from SSI reports, and the face-to-face questionnaires were applied to voluntary applicants on construction sites. To make a comparison, employees who did not have an accident on the first working day constitute the second part of the sample (269 employees). These employees were reached through the contractors, and again, questionnaires were applied face-to-face to voluntary participants in construction sites. Thus, the study sample reached 493 people. The sample was formed in a non-probabilistic manner.

Descriptive statistics of the data were generated, validity and reliability analyses were made for the scale, and analyses showing the relationships between the variables were carried out by SPSS v.20. The model of the study is shown in Figure 1.

In the study, first of all, the reliability analysis of the safety behavior scale used in the survey was carried out. For this purpose, the Cronbach's alpha coefficient of the scale (.981) was calculated, and it was determined that the scale is reliable. In addition, exploratory factor analysis was applied to test the scale's validity. For this purpose, KMO and Bartlett Sphericity tests were carried out, which test the suitability of the data for factor

analysis. The tests showed that the data were suitable for factor analysis (KMO= .932; Barlett Sphericity Test =4179.813 [ $p<.001$ ]). After demonstrating the suitability of the data, factor analysis was performed. The results obtained are shown in Table 1.

**Table 1. Safety Behavior Scale**

| Items   | Factor Loadings |
|---|-----------------|
| I use all the necessary safety equipment to do my job                             | 0.931           |
| I use the correct safety procedures for carrying out my job                       | 0.929           |
| I ensure the highest levels of safety when I carry out my job                     | 0.939           |
| I promote the safety program within the organization                              | 0.951           |
| I put in extra effort to improve the safety of the workplace                      | 0.948           |
| I voluntarily carry out tasks or activities that help to improve workplace safety | 0.943           |
| <b>Explained Variance</b>   | <b>%88.417</b>  |
| <b>Cronbach's Alpha Coefficient</b>   | <b>0.981</b>    |

As can be seen in Table 1, as a result of the factor analysis performed, it was observed that the scale items were gathered under a single factor. The dimension that can be called safety behavior, represents 88.42% of the total variance. Considering the results from the factor analysis, the average of the items in the scale was calculated, and thus a score was obtained regarding the participants' levels of displaying safety behavior.

#### 4. Results

The demographic characteristics of the participants in the sample are summarized in Table 2. It is seen that most of the participants are male (96.3%), married (79.3%), aged between 26 and 35 (43%), and have a high school education (41.6%). It is possible to say that the gender distribution in the sample shows the ability to represent the population since the vast majority (98%) of the research population are male. Additionally, it is seen that the majority of those who had an accident are adults. In addition, the ratio of those who have secondary school or below education level is 57.8%, which indicates that the education level of the participants is low. Finally, approximately 45% of the participants had an occupational accident on their first working day.

**Table 2. Demographic Characteristics of the Participants**

|                        | Group             | N   | %    |
|------------------------|-------------------|-----|------|
| <b>Gender</b>          | Male              | 475 | 96.3 |
|                        | Female            | 18  | 3.7  |
| <b>Marital Status</b>  | Married           | 391 | 79.3 |
|                        | Single            | 102 | 20.7 |
| <b>Age</b>             | 18>               | 11  | 2.2  |
|                        | 19-25             | 122 | 24.7 |
|                        | 26-35             | 212 | 43.0 |
|                        | 36-45             | 112 | 22.7 |
|                        | >46               | 36  | 7.3  |
| <b>Education Level</b> | Illiterate        | 36  | 7.3  |
|                        | Literate          | 40  | 8.1  |
|                        | Primary School    | 107 | 21.7 |
|                        | Secondary School  | 102 | 20.7 |
|                        | High School       | 205 | 41.6 |
|                        | Bachelor's Degree | 3   | 0.6  |

|  | Group      | N   | %    |
|--|------------|-----|------|
| Occupation                                 | Molder     | 41  | 8.3  |
|  | Ironsmith  | 33  | 6.7  |
|  | Welder     | 40  | 8.1  |
|  | Stonemason | 29  | 5.9  |
|  | Roofer     | 95  | 19.3 |
|  | Plasterer  | 122 | 24.7 |
|  | Sheathing  | 115 | 23.3 |
|  | Cleaner    | 18  | 3.7  |
| Occupational Accident on First Working Day | Yes        | 224 | 45.4 |
|  | No         | 269 | 54.6 |
| Occupational Accident                      | Yes        | 228 | 46.2 |
|  | No         | 265 | 53.8 |

Two hypotheses were tested with the statistical analyses conducted on the participants' data. The H<sub>1</sub> hypothesis examines the effect of employment contract, employer type, and job type variables on providing orientation training. On the other hand, the H<sub>2</sub> hypothesis examines the effect of orientation training on PPE use and safety behavior levels. The findings obtained from the analyses are listed below.

The chi-square (or likelihood ratio) values were calculated to examine the effect of the employment contract between the employees and the employer, the employer type, and the work type on providing orientation training.

Table 3. Providing Orientation Training

|                     |                  | Orientation Training |      |              |      |       |      | χ <sup>2</sup> (or LR) |
|---------------------|------------------|----------------------|------|--------------|------|-------|------|------------------------|
|                     |                  | Provided             |      | Not-Provided |      | Total |      |                        |
|                     |                  | N                    | %    | N            | %    | N     | %    |                        |
| Employment Contract | Yes              | 223                  | 76.9 | 67           | 23.1 | 290   | 58.8 | 365.452 <sup>a</sup>   |
|                     | No               | 0                    | 0    | 203          | 100  | 203   | 41.2 |                        |
| Employer Type       | Contractors      | 208                  | 57.6 | 153          | 42.4 | 361   | 73.2 | 83.891 <sup>b</sup>    |
|                     | Subcontractors   | 9                    | 14.3 | 54           | 85.7 | 63    | 12.8 |                        |
|                     | Direct Employers | 6                    | 8.7  | 63           | 91.3 | 69    | 14   |                        |
| Work Type           | Repairment       | 15                   | 14.6 | 88           | 85.4 | 103   | 20.9 | 49.440 <sup>b</sup>    |
|                     | New Construction | 208                  | 53.3 | 182          | 46.7 | 390   | 79.1 |                        |
|                     | Total            | 223                  | 45.2 | 270          | 54.8 | 493   | 100  |                        |

<sup>a</sup>Likelihood Ratio Value; <sup>b</sup>Chi-Square Value; \*p<0.001

The results of all three analyses are found to be statistically significant. Accordingly, the fact that an employment contract has been concluded between the employee and the employer is effective in providing orientation training. In fact, the rate of taking orientation training on the first day who have an employment contract is significantly higher than those who do not. When Table 3 is examined, it can be seen that approximately 77% of the employers who have made an employment contract with the employee provide orientation training. On the other hand, all the employers who did not sign an employment contract did not provide orientation training. These results support H<sub>1a</sub>.



Moreover, the employer type is also effective in providing orientation training. While the rate of providing orientation training is over 55% for contractors, this rate drops to about 15% for subcontractors and 9% for direct employers. The result shows that contractors pay more attention to orientation training as compared to subcontractors and direct employers. These results support H<sub>1b</sub>.

Lastly, it was found out that the type of job is effective in providing orientation training. According to the results, while the ratio of orientation training is about 53% when the job type is new construction, this ratio decreases to approximately 15% in repair works. In other words, most repair workers have not received orientation training. These results support H<sub>1c</sub>.

**Table 4. Relationship between Orientation Training and Safety Behavior**

| Orientation Training | N   | Average | SD    | t       |
|----------------------|-----|---------|-------|---------|
| Provided             | 223 | 4,16    | 0,199 | 71,446* |
| Not-Provided         | 270 | 2,12    | 0,386 |         |

\* $p < 0.001$

The t-test was applied to determine whether the participants' levels of displaying safety behavior differed according to taking orientation training. As shown in Table 4, the level of safety behavior of the employees who received orientation training was significantly higher than those who did not. This situation clearly reveals the importance of orientation training in terms of occupational safety. These results support H<sub>2a</sub>.

**Table 5. Relationship between Orientation Training and Use of PPE**

|                      |              | Use of PPE |      |     |      |       |      | LR       |
|----------------------|--------------|------------|------|-----|------|-------|------|----------|
|                      |              | Yes        |      | No  |      | Total |      |          |
|                      |              | N          | %    | N   | %    | N     | %    |          |
| Orientation Training | Provided     | 223        | 100  | 0   | 0    | 223   | 45.2 | 490.496* |
|                      | Not-Provided | 31         | 11.5 | 239 | 88.5 | 270   | 54.8 |          |
|                      | Total        | 254        | 51.5 | 239 | 48.5 | 493   | 100  |          |

\* $p < 0.001$

The chi-square test was used to check the effect of orientation training on the use of personal protective equipment. The result of the analysis is statistically significant. Accordingly, providing orientation training is effective in using PPE by employees. While 100% of those given training used protective equipment during work, only 11.5% of those who did not get training used protective equipment. Considering the existing importance of the use of protective equipment, the importance of orientation training is understood due to the relationship between them. These results support H<sub>2b</sub>.

## 5. Discussion

In this study, which deals with orientation training in the context of the first working day accidents in the construction sector, the effect of orientation training on safety behavior is examined. Orientation training should be given on the first working day of

employees. However, when the relevant reports are examined, it is seen that a significant part of the accidents occurred on the first day.

According to the test results, an employment contract between the employee and the employer is effective in providing orientation training. The employment contract is a private law contract that imposes responsibilities on both the employee and the employer. The absence of an employment contract causes unregistered employment, and the employer can ignore legal obligations. Since orientation training is also a legal obligation, it was seen that the training is not given in workplaces where there is no employment contract. At this point, the relationship between the employment contract and orientation training shows that the theoretical sanction power of employment contracts is also reflected in practice.

According to the results, the type of employer that recruits employees impacts the provision of orientation training. Data on subcontracting is significant, because occupational accidents are more common in subcontracted workplaces (Arı & Engin, 2018; Gültekin-Karakaş et al., 2021; İzgi & Öztürk Türkmen, 2015; Lingard, 2013). It has been determined in previous studies that subcontracting causes deficiencies in OHS practices, especially in training (Arı & Engin, 2018; Gözüak & Ceylan, 2021; İzgi & Öztürk Türkmen, 2015; Koçak, 2013; Lingard, 2013; Uzunkaya, 2013). The results in this study also showed that the subcontractors and direct employers are inadequate in providing orientation training, which is one of the OHS practices. At this point, the state has a tremendous responsibility. By raising awareness of both employers and employees about the importance of training in the context of OHS and by ensuring the necessary inspections, the state can ensure that the orientation training is provided.

Moreover, according to the results obtained, the type of work that the employee has worked on also affects providing orientation training. Subcontractors and direct employers usually deal with the jobs related to repairs, and their lack of OHS practices is reflected in the results of some other studies (Lingard, 2013; Uzunkaya, 2013). In this study, it was revealed that the level of orientation training in repair work is low.

As a result of the subsequent analyses, it was determined that the level of safety behavior of the employees who received orientation training on the first day was significantly higher than those who did not. The importance of training in general in displaying safety behavior is reflected in some other studies (Bayram & Burgazoglu, 2020; Cheng et al., 2010; Glendon & Stanton, 2000; Hassanein & Hanna, 2008; Lam & Kam, 2000). Considering the importance of safety behavior in preventing occupational accidents, the significance of the relationship between orientation training and safety behavior is better understood. For this reason, it is crucial to take the necessary steps to provide the orientation training that should be given on the first working day. In this way, a significant development will be realized in reducing occupational accidents, which pose a significant problem both in economic and humanistic terms.

Similarly, from the analyses' results, it is seen that providing orientation training has a positive effect on the use of PPE by the employees. Because the use of PPE reflects safety behavior, the relationship between PPE usage and orientation training is significant. This result is parallel to other studies (Çetin & Beğik, 2021; Madziatera et al., 2020; Ulutaş et al., 2019) that state the relationship between the use of PPE and training. In addition to these results, in the factor analysis performed, a single dimension was found for the safety behavior scale, unlike the previous studies (Dursun & Keser, 2014; Neal et al., 2000) that state two dimensions. In this respect, it has been determined that the scale represents a single dimension in the construction industry in Turkey.

## 6. Conclusion

As a conclusion, it is safe to state that orientation training increases the level of safety behavior and thus reduces occupational accidents. In this context, providing orientation training has a preventive effect on first working day accidents in the construction sector by increasing the level of safety behavior of the employees. Considering the effect of orientation training on safety behavior, relevant institutions need to ensure that employers give due importance to orientation training. In this regard, the state must add orientation training supervision to its supervision obligation due to the importance of the subject. In this context, sanctions should be imposed for not providing orientation training. The implementation of deterrent sanctions should be under state control. Finally, employees should be obliged to participate in orientation training within the scope of Law No. 6331, and orientation training should officially be brought to an important position regarding organizational health and safety.

Law No. 6331 is the Occupational Health and Safety Law in Turkey. Article 17 of this law states that employees must receive OHS training before starting work in a new workplace or returning to work after an accident. However, there is no mention of orientation training in the law. Job initiation training is mentioned in the "Regulation on the Procedures and Principles of OHS Training of Employees" which was issued based on the law. However, there is no mention of the sanctions to be applied in case of not providing the training. In short, it is seen that not providing orientation training is not subject to any sanction through laws. Because of the importance of orientation training in terms of employees' safety and other aspects mentioned above, the training should be mandatory and forced by some kind of sanction.

Because of the importance of orientation training, employers should be encouraged to provide orientation training. If the benefits of orientation training can be conveyed to employers correctly, it is thought that they will give these trainings voluntarily. If employers are adequately informed about the role of orientation training in preventing financial expenses arising from occupational accidents, they will concentrate on this issue. In addition, if such training is not provided, the sanctions to be imposed by the state will also contribute to the provision of orientation training.

Employees should also be encouraged to participate in orientation training. Employees should fulfill their responsibility to participate in training. It is thought that if the orientation training is adequately explained to the employees, their interest in these trainings will also increase.

As a result, orientation training has a preventive effect on occupational accidents by increasing the level of safe behavior. In this context, orientation trainings should be compulsory in institutions and organizations in terms of employees' health and safety.

This study contributes to the literature by determining the effect of orientation training on displaying safe behavior. In the study, a theoretical contribution was made by selecting the dimensions of the safe behavior scale in Turkey's construction sector. Finally, the fact that the employers can apply the study results provides a practical contribution.

In future studies, similar research can be conducted in different sectors to strengthen the preventive effect of orientation training on occupational accidents. In addition, repeating the study with other safety behavior scales in this context will strengthen the results of this study.

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