

PREVENTION OF WORK ACCIDENTS IN CONSTRUCTION PROJECTS: STRATEGIES AND APPLICATIONS

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Abstract

The construction industry represents a hazardous environment frequently associated with work-related accidents. This study concentrates on strategies and practices to diminish and prevent such occupational incidents. Preventing occupational accidents is paramount regarding workers' well-being, project efficiency, and cost management. Strategies and practices such as training, risk assessment, appropriate equipment utilization, collaboration, and inspection play pivotal roles in minimizing work-related accidents, emphasizing the effectiveness of integrating these measures.

This study underscores ensuring worker safety in the construction sector remains an ongoing priority. Strategies and practices aimed at preventing work-related accidents are deemed critical for all stakeholders within the industry. They are considered crucial steps towards reducing work accidents and fostering a culture of occupational safety.

Additionally, a survey conducted among approximately 600 workers across five different construction sites in Antalya aimed to explore the correlation between their knowledge levels in labor law, occupational health, safety, and work accidents. Findings indicated a necessity to augment workers' knowledge and awareness levels, suggesting that such improvements could lead to better self-protection of their health and safety, consequently reducing work-related accidents.

In essence, the primary objective of this study is to offer recommendations for enhancing occupational health and safety standards within the construction sector. The literature review aims to assess measures to improve workers' health and safety and ascertain their practicability in the industry, thereby striving to harmonize legislation with practical applications.

Keywords :Labor law, Occupational safety in the construction industry, Sustainable construction, Sustainability, Construction workers' rights, Awareness levels, and Personal protectors.

Introduction

Important concepts such as labor law, occupational safety in the construction industry, sustainable construction, sustainability of construction workers' rights, awareness levels, and personal protection play a vital role in the construction industry today. These elements are key elements that affect the rights, safety, and general well-being of workers in the construction industry.

Labor law, workers' rights, and occupational safety laws are the basic building blocks that regulate the behavior and relations of businesses and employees operating in the construction industry. These laws aim to ensure workplace safety and health while protecting workers' rights.

Sustainable construction and sustainability are one of the focal points of the construction industry today. Factors such as adopting environmentally friendly practices, energy efficiency, and waste management are important parts of the work carried out for sustainability.

The awareness levels of construction workers and the use of personal protective equipment are critical in occupational safety and worker health. Increasing workers' awareness of these issues is fundamental to reducing occupational accidents and improving working environments.

This article will discuss how these key concepts are effective in the construction industry, how they shape the rights and safety of workers, and how the understanding of sustainability is adopted in the sector. Additionally, issues such as what strategies can be used to increase workers' awareness levels and the importance of correctly using personal protective equipment will be examined in detail. This article aims to be a valuable resource for improvements in the sector by shedding light on issues such as labor law, occupational safety, sustainability, and workers' rights in the construction sector.

Material And Method

This study was designed to evaluate the impact of occupational health and safety legislation on training processes in the construction industry. The literature review conducted within the scope of the research focused on examining the basic concepts of occupational health and safety in the construction sector and reviewing sector-specific statistics. During this scanning process, methods such as in-depth analysis of occupational health and safety legislation, field research in the sector, detailed examination of statistical data, and especially observation of occupational safety practices through field studies were used.

During the literature review phase, the focus was on the effects of occupational health and safety legislation on training processes in the construction sector, and the impact of these processes on the health and safety of workers was examined in detail. In this context, issues such as how enterprises implement the current legislation, the compliance of training processes with occupational safety standards in enterprises, and the impact of these processes on workers' health are discussed in detail.

The research is based on a survey conducted on approximately 600 workers working at five different construction sites operating in Antalya, Turkey. This study aims to examine the potential relationship between knowledge levels of labor law, occupational health and safety, and occupational accidents. The participant group of the survey consists of individuals with different demographic characteristics, and the sample selection was made using a random sampling method. The survey form includes topics such as labor law, occupational health and safety knowledge levels, awareness, expectations, and demands, use of personal protective equipment, and awareness levels about the necessity of this equipment. Data were collected through face-to-face interviews and evaluated with statistical analysis.

Discussion

The survey on basic issues such as labor law, occupational health and safety, use of personal protective equipment, and general awareness levels of workers was carried out with approximately 600 workers at five different construction sites operating in Antalya, Turkey. This study aimed to examine the potential relationship between workers' knowledge of labor law and occupational accidents and determine their awareness of occupational health and safety issues.

According to the survey results, workers' knowledge levels of labor law vary. 25% of the workers surveyed stated they had little knowledge of labor law. While 40% stated that they had moderate knowledge, 30% stated they had a general awareness of labor law. Only 5% stated that they had sufficient depth of knowledge. These findings show that, in general, construction workers have a moderate level of knowledge about labor law.

When the survey results regarding the awareness levels of workers and employers are examined, it is stated that 55% of the workers have basic knowledge about workers' rights. 16% stated that they had more detailed information about these rights. Regarding employer rights, 29% of the participants stated that they needed a general level of awareness.

According to the results obtained regarding the use and awareness of personal protective equipment, 55% of workers stated that they think the use of personal protective equipment is important. However, only 45% stated they had sufficient knowledge about correctly using this equipment. 5% stated that they considered it unimportant. This situation shows that although the importance of personal protective equipment is known, there are deficiencies in its correct use.

Regarding occupational health and safety awareness, 46% of the workers participating in the survey stated that they have basic knowledge. However, only 24% stated they knew the need to prevent occupational accidents and reduce risks. 30% showed that they did not have basic knowledge. These results show that workers' awareness of occupational health and safety should be improved.

The findings reveal that occupational health and safety legislation significantly impacts training processes in the construction sector. The literature review revealed differences in the implementation level of existing legislation among enterprises and that training processes often need to comply with occupational safety standards. This situation led to the conclusion that occupational health and safety standards should be updated, and training processes should be reviewed to improve workers' health and safety conditions.

Raising awareness of workers on occupational health and safety issues, proper implementation of existing legislation by enterprises, and developing occupational safety culture are critical in reducing occupational accidents and creating healthy working environments. In this context, it is recommended to implement solution-oriented approaches such as understanding workers' rights and working conditions, training on the correct use of personal protective equipment, and awareness-raising programs. These steps will contribute to protecting the health and safety of employees in the business sector and increase workplace productivity.

Conclusion and Recommendations – sonuç ve tavsiyeler

It is very important to develop strategies and practices in construction projects in order to prevent occupational accidents and improve occupational health and safety standards. In this context, increasing workers' knowledge of labor law, occupational health, and safety can make significant contributions to reducing occupational accidents.

It was determined that the workers participating in the survey generally had a moderate level of knowledge of labor law and occupational health. However, it is emphasized that this level of knowledge requires training in a more in-depth understanding of current legislation. Although workers understand the importance of personal protective equipment, deficiencies in the correct use of this equipment have been identified. This shows the need for training programs for the effective use of equipment.

In order to improve workers' awareness of occupational health and safety, worker training programs should be organized in enterprises, and periodic information meetings should be held on current legislation. In addition, practical training should be organized for workers to use equipment that complies with occupational health and safety standards, and the use of this equipment should be encouraged.

Occupational health and safety standards should be followed by establishing regular workplace inspections and monitoring processes. Interactive training materials or digital platforms can be used to increase workers' knowledge levels, and awareness-raising campaigns can be organized on this issue. Employers should develop sustainability-focused policies to protect the health and safety of workers. Cooperation and communication between stakeholders should be strengthened so that workers are more aware of labor law and occupational health and safety.

Implementing these recommendations aims to increase the health, safety, and awareness levels of workers working in the construction sector. This way, important steps can be taken to reduce occupational accidents, improve occupational safety culture, and create healthier working environments. We foresee that these efforts can not only ensure the safety of workers but also increase the efficiency and cost control of project processes.

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