Evaluation of Students' Awareness of Occupational Health and Safety Education*

Öğrencilerin İş Sağlığı ve Güvenliği Eğitimi Farkındalığının Değerlendirilmesi

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Abstract

Purpose: This study aimed to assess the Occupational Health and Safety (OHS) awareness levels of students at Sinop University Health Services Vocational School (SHMYO) and examine associations with variables such as age, gender, high school type, work experience, OHS course status, department, and class level.

Material and Method: A descriptive cross-sectional design was used, involving 281 SHMYO students. Data were collected via an Informed Consent Form, an Introductory Information Form, and the Occupational Health and Safety Education Awareness Scale (OHSED). Data from students who had and had not taken OHS courses were analyzed using SPSS. Findings: Age and gender had no significant impact on OHS awareness (p>0.05). Awareness varied significantly by department and class level (p < 0.05); the highest levels were observed among second-year Medical Laboratory Technician students, while the lowest were among first-year Environmental Health students. Students who had taken an OHS course scored significantly higher in technical, general, and health-related OHS knowledge (p < 0.001). Vocational high school graduates had higher awareness in technical and general dimensions (p < 0.05), with no significant difference in the health sub-dimension (p>0.05). Those with work experience showed higher OHS awareness (p < 0.05). **Conclusion:** The elevated awareness among vocational high school graduates indicates that integrating OHS courses into other secondary schools may help promote OHS awareness nationwide. **Keywords:** occupational health; occupational safety; education; awareness; questionnaire

Özet

Amaç: Sinop Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu (SHMYO) öğrencilerinin İş Sağlığı ve Güvenliği (İSG) farkındalık düzeylerini değerlendirmek ve bu düzeyin yaş, cinsiyet, lise türü, çalışma deneyimi, İSG dersi alma durumu, bölüm ve sınıf gibi değişkenlerle ilişkisini incelemektir.

Gerec ve Yöntem: Tanımlayıcı kesitsel tipteki bu çalışmaya SHMYO'da öğrenim gören 281 öğrenci dahil edildi. Veriler, Bilgilendirilmiş Onam Formu, Tanıtıcı Bilgi Formu ve İSG Eğitimi Farkındalık Ölçeği (İSGEFÖ) kullanılarak toplandı. İSG dersi alan ve almayan öğrencilerin verileri SPSS ile analiz edildi. Bulgular: Yaş ve cinsiyetin İSG farkındalığı üzerinde anlamlı etkisi yoktu (p>0,05). Bölüm ve sınıf düzeyine göre İSG farkındalığı anlamlı farklılık gösterdi (p<0,05); en yüksek farkındalık Tıbbi Laboratuvar Teknikerliği 2. sınıf öğrencilerinde, en düşük ise Çevre Sağlığı 1. sınıf öğrencilerinde gözlendi. İSG dersi alan öğrencilerin teknik, genel ve sağlıkla ilişkili İSG bilgi düzeyleri, almayanlara göre anlamlı derecede yüksekti (p<0,001). Meslek lisesi mezunları, diğer lise türlerine göre teknik ve genel İSG düzeylerinde daha yüksek farkındalığa sahipti (p<0,05), ancak sağlık alt boyutunda fark bulunmadı (p>0,05). Çalışma deneyimi olanların İSG farkındalığı olmayanlardan yüksekti (p<0,05). Sonuc: Meslek lisesi mezunu öğrencilerin İSG farkındalıklarının yüksek olması, diğer ortaöğretim kurumlarında da İSG derslerinin verilmesinin, ülke genelinde İSG farkındalığına katkı sağlayabileceğine işaret etmektedir.

Anahtar Sözcükler: iş sağlığı; iş güvenliği; eğitim; farkındalık; anket

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Introduction

Occupational health is defined by the World Health Organization (WHO) as a state of complete physical, mental, and social wellbeing. Occupational safety refers to activities conducted to protect the health of employees in the workplace environment. The primary goal of OHS activities is to protect employees, and by achieving this goal, contribute to workplace safety and safe production (1).

Workplace factors and occupational accidents can harm employees' health. When the root causes of workplace accidents are investigated, unsafe acts and conditions performed by employees come together to cause accidents. In Herbert William Heinrich's study, the causes of accidents are defined as 88% unsafe acts, 10% unsafe conditions, and 2% unpredictable situations (2). The cause of unsafe acts mentioned here is due to many factors such as inadequate training, unsuitable training environments, and lack of motivation among employees (3,4). Similarly, unsafe conditions depend on many factors such as mechanical failures in the environment, inadequate control and maintenance, and insufficient engineering services. Unpredictable conditions refer to unavoidable natural events (4,5).

Research shows that the most important way to prevent unsafe acts is to educate workers. Knowledge of workplace hazards and risks is the first and most important step in preventing them (3,4). If employees do not receive OHS training, they may knowingly or unknowingly engage in actions that could lead to workplace accidents. It is crucial to provide OHS training before unsafe behaviours become habitual. Once unsafe behaviour has become habitual, it is increasingly difficult to change it through training (4,5). A report published by the European Agency states that the integration of OSH into university education will help both to overcome the challenges in this area and to remove practical barriers (6).

The basic steps in OSH education are to include it in institutional curricula and to support it with on-the-job training. This approach is seen as a way of creating an OHS culture (8). In practice, however, training is often seen as fulfilling a requirement rather than recognising its intrinsic value. Considering that today's students are tomorrow's industrial workers, it is assumed that the OHS courses they take during their student years will have a significant impact on their OHS awareness in their working lives. If OHS training is not included in the curriculum, graduates will be unaware of the risks in the working environment, increasing their likelihood of being exposed to workplace accidents and occupational diseases (8). Therefore, OHS courses should be taught in schools, especially in vocational schools where intermediate personnel are trained, in order to contribute to the formation of an OHS culture in society by raising awareness.

Various studies in the literature have explored students' perceptions of occupational health and safety (OHS) courses. For example, a study conducted by Topgül et al. (8) investigated the differences in perceptions between students who had taken a compulsory OHS course and those who had not. This course was taught under different titles within labor economics and industrial relations departments. The survey aimed to assess whether the presence of this course had any impact on students' knowledge and perceptions of occupational safety. The study found that, although there was no statistically significant difference in overall perceptions between students who took the course and those who did not, students who had completed the OHS course demonstrated a higher level of knowledge regarding occupational safety. This suggests that while the course might not have significantly altered students' general perceptions, it did enhance their understanding of key safety concepts and practices. This finding highlights the importance of OHS education in improving knowledge and underscores the potential benefits of integrating such courses into various educational programs to better prepare students for real-world occupational safety challenges.

Several studies have explored various aspects of Occupational Health and Safety (OHS) awareness among students, revealing insights into how educational interventions impact their knowledge and perceptions.

In a study by Kalintaş, a survey involving 287 students from the Faculty of Architecture at

Çankaya University was conducted to assess their levels of OHS awareness (10). The results indicated that the students' awareness levels were moderately positive, with a reported awareness rate of 65.2%. This suggests that while there is a reasonable level of OHS awareness among these students, there is still room for improvement.

Aydoğan (2021) carried out a survey to determine the OHS and environmental health awareness among vocational degree students (11). The study concluded that while receiving OHS training had a small but positive impact on increasing students' awareness of both OHS and environmental health, the effect was relatively modest. This highlights the incremental benefits of OHS training, emphasizing that even small improvements can be valuable in fostering greater safety awareness.

Hoşten and Eren (2021) conducted a survey aimed at measuring the knowledge levels of students at a vocational school of health services regarding the OHS Law and legal practices, as well as evaluating their perspectives on workplace safety culture and views on OHS training (12). The study found that 52% of the participating students considered the OHS training they received to be insufficient. Additionally, approximately 55% were aware of the legal practices in their field in the country. This indicates a perceived inadequacy in the training provided, suggesting the need for more comprehensive and effective OHS education.

Şahmaran et al. (2019) surveyed students in the Occupational Health and Safety Associate Degree Program at Hatay Mustafa Kemal University to evaluate changes in their perspectives on OHS as a result of the education and training process (13). The study found a significant difference in OHS perceptions between second-year and first-year students, with second-year students showing improved perspectives. This finding underscores the positive impact of ongoing education and experience in enhancing OHS awareness.

In a study by Kelleci et al. (2022), a survey was conducted to assess the perception levels of students at the Technical Sciences Vocational School following their OHS courses (14). The study concluded that the OHS course significantly increased students' knowledge about OHS in their areas of interest. This highlights the effectiveness of targeted OHS courses in enhancing specific knowledge relevant to students' vocational fields.

Zengin et al. (2022) conducted a survey to examine how safety perceptions of secondyear students in the OHS program compared with first-year students who had not yet taken core courses changed with the education they received (15). The study found no significant difference in safety perceptions between the two groups, with both first-year and secondyear students demonstrating high levels of safety perception. This suggests that while the students had high perceptions of safety, the education did not significantly alter these perceptions between the two groups.

Collectively, these studies illustrate various facets of OHS awareness and education among students. They highlight the moderate to positive impact of OHS training on knowledge and awareness, the perceived insufficiencies in some training programs, and the significant improvements in awareness and perspectives as students advance in their education. The findings underscore the need for continuous improvement in OHS education to ensure that all students, regardless of their academic level or field of study, have a robust understanding of occupational health and safety principles.

In our study, through a survey conducted at Sinop University Vocational School of Health Services, the impact of teaching OHS courses and the type of high school graduated from on OHS awareness levels was evaluated. This study highlighted the importance of teaching OHS courses.

Methodology

The research is a descriptive cross-sectional comparative study with the universe consisting of students at Sinop University Vocational School of Health Services. Instead of selecting a sample, the study aimed to reach the entire population. Students studying at Sinop University Vocational School of Health Services who agreed to participate were included in the study. The research data was intended to be collected through face-to-face surveys. Analyses were performed using the SPSS software package. The Occupational Health and Safety Training Awareness Scale (OHSTAS) developed by Tatar (2022) was used in the study (5).

Sample and Population

The population of the study consists of 587 students from the School of Health Services. The sample size to be included in the study has been determined as 238 students, based on a 95% confidence level and a 5% margin of error, using the known population sample calculation method (6). During the research process and data collection, the Informed Consent Form, Introductory Information Form, and Occupational Health and Safety Training Awareness Scale (OHSTAS) were used. The Consent Form was used to obtain consent from individuals who agreed to participate in the survey after reading the informed consent form. Participants who marked "I have read and agree to participate in the study" on the consent form were included in the survey. The Introductory Information Form contained 9 guestions regarding age, gender, family income levels, and characteristics of the OHS courses taken.

Data Collection Tools

The Occupational Health and Safety Training Awareness Scale (OHSTAS), developed by Tatar (2022), is a 5-point Likert-type scale with the options (1) Strongly disagree, (2) Disagree, (3) Neutral, (4) Agree, and (5) Strongly agree. The OHSTAS form consists of a total of 14 items, with 8 items under the general topics factor and 6 items under the general and health factor.

Collection of Data and Analysis

The scale's internal consistency Cronbach's alpha reliability coefficient was found to be 0.913, and the Kaiser-Meyer Olkin (KMO) validity value was 0.912. The data were processed using the SPSS 22 statistical program. The "Kolmogorov-Smirnov Goodness of Fit" and "Shapiro-Wilk" normality tests were used to test the normal distribution of the data. Additionally, it was determined that the assumption of homogeneity of variances was met using the "Levene Test" Descriptive statistics, parametric tests (independent samples t-test, One-Way Analysis of Variance, and Post Hoc tests to determine which groups differed in further analysis), and non-parametric tests (such as Mann Whitney-U and Kruskal Wallis tests) were used to evaluate the data. A significance level of p < 0.05 was accepted.

Ethical Committee Approval

This research has been ethically approved by Sinop University Ethical committee at 08.12.2023 with the number 2023/232-246.

Findings

In our study, conducted in January 2024, we surveyed the Occupational Health and Safety (OHS) Training Awareness levels of 281 students from Sinop University Vocational School of Health Services, reaching approximately 47.9% of the total population of 587 students. The primary aim of this research was to measure and evaluate the OHS awareness among these students. Additionally, the study sought to determine if there were any significant differences in OHS awareness based on various factors, including the students' age, gender, class year, type of high school they graduated from, their work experience, and whether they had taken an OHS course. To analyze the collected data comprehensively, we utilized the SPSS software, ensuring a thorough examination of the relationships and differences between the variables.

In the study, the participant demographics were as follows: 73.7% (207 individuals) were female, and 26.3% (74 individuals) were male. The age distribution of participants was predominantly in the 18-20 age range, comprising 74.4% (209 individuals). Those aged 21-23 made up 22.8% (64 individuals), while 1.8% (5 individuals) were aged 24-26, and 1.1% (3 individuals) were 27 or older. Among the students, 58.0% (163 individuals) were in their first year, and 42.0% (118 individuals) were in their second year. Regarding high school background, 25.6% (72 individuals) graduated from vocational high schools, while the majority, 74.0% (208 individuals), came from other high school types. Work experience was reported by 49.8% (140 individuals), whereas 49.1% (138 individuals) lacked work experience. Finally, 71.5% (201 individuals) had completed an OHS course, compared to 27.4% (77 individuals) who had not (Table 1).

Tablo 1. Frequency Analysis of Demographic and Other Variables				
Category	Groups	n		
Gender	Male	74		
	Female	207		
Age	18-20	209		
	21-23	64		
	24-26	5		
	27 and above	3		
Class	First-year students	163		
	Second-year students	118		
High School	Vocational high schools	72		
	Other	209		
Work Exp.	Yes	141		
	No	140		
OHS Course (in University)	Yes	130		
OHS Course (in High School)	Yes	72		
	No	79		

Table 2. Distribution of Responses of the Participants According to Technical Issues

Technical Issues (TI)						
Questions	n (%)					
	1	2	3	4	5	TOTAL
1. I have sufficient knowledge about manual lifting and transportation.	7 (2.5%)	17 (6.0%)	73 (26.0%)	137 (48.8%)	47 (16.7%)	281 (100.0%)
2. I have sufficient knowledge on the use of work equipment.	7 (2.5%)	34 (12.1%)	83 (29.5%)	124 (44.1%)	33 (11.7%)	281 (100.0%)
3. I have sufficient knowledge about electrical hazards, risks and precautions.	7 (2.5%)	30 (10.7%)	61 (21.7%)	147 (52.3%)	36 (12.8%)	281 (100.0%)
4. I have sufficient knowledge about the causes of occupational accidents and the application of protection principles and techniques.	4 (1.4%)	25 (8.9%)	72 (25.6%)	148 (52.7%)	32 (11.4%)	281 (100.0%)
5. I have sufficient knowledge about safety and health signs.	5 (1.8%)	21 (7.5%)	79 (28.1%)	141 (50.2%)	35 (12.5%)	281 (100.0%)
6. I have sufficient knowledge about the use of personal protective equipment.	7 (2.5%)	28 (10.0%)	70 (24.9%)	137 (48.8%)	39 (13.9%)	281 (100.0%)
7. I have sufficient knowledge about the general rules of occupational health and safety and safety culture.	7 (2.5%)	26 (9.3%)	74 (26.3%)	137 (48.8%)	37 (13.2%)	281 (100.0%)
8. I have sufficient knowledge about evacuation and rescue.	11 (3.9%)	61 (21.7%)	114 (40.6%)	78 (27.8%)	17 (6.0%)	281 (100.0%)

Table 3. Distribution of Responses of the Participants According to General and Health Rules						
Genera	l and He	alth Rules	(GHR)			
Questions	n (%)					
	1	2	3	4	5	Total
1. I have sufficient knowledge about labor legislation (e.g. Occupational Health and Safety Law No. 6331).	16 (5.7%)	56 (19.9%)	98 (34.9%)	92 (32.7%)	19 (6.8%)	281 (100.0%)
2. I have sufficient knowledge about the legal rights and responsibilities of employees.	5 (1.8%)	29 (10.3%)	101 (35.9%)	124 (44.1%)	22 (7.8%)	281 (100.0%)
3. I have sufficient knowledge about the legal consequences of work accidents and occupational diseases.	7 (2.5%)	36 (12.8%)	81 (28.8%)	133 (47.3%)	24 (8.5%)	281 (100.0%)
4. I have sufficient knowledge about the causes of occupational diseases.	5 (1.8%)	26 (9.3%)	72 (25.6%)	146 (52.0%)	32 (11.4%)	281 (100.0%)
5. I have sufficient knowledge about the principle of disease prevention and the application of prevention techniques.	4 (1.4%)	17 (6.0%)	85 (30.2%)	142 (50.5%)	33 (11.7%)	281 (100.0%)
6. I have sufficient knowledge about biological and psycho-social risk factors.	8 (2.8%)	40 (14.2%)	113 (40.2%)	94 (33.5%)	26 (9.3%)	281 (100.0%)

The survey results reveal that students generally possess above-average knowledge in several technical areas. Specifically, 52.7% of the participants reported having sufficient understanding of work accident causes, protective principles, and application techniques (Table 2). Additionally, 52.3% indicated that they are well-informed about electrical hazards, associated risks, and necessary precautions. In terms of safety and health signs, 50.2% of students reported having adequate knowledge. These findings suggest that while the majority of students demonstrate a solid grasp of critical OHS topics, there are opportunities for enhancing knowledge in these areas to further improve overall safety awareness.

However, the survey also highlighted areas where students exhibit lower confidence in their knowledge. Notably, many students are uncertain about evacuation and rescue procedures, revealing a significant area of concern. Additionally, their understanding of labor legislation, including the Occupational Health and Safety Act (No. 6331), appears to be relatively weak. This suggests a gap in their awareness of important legal frameworks. Furthermore, students seem less informed about biological and psychosocial risk factors compared to other OHS topics. These gaps indicate the need for targeted educational interventions to address these specific areas and enhance overall safety knowledge.

In general and health-related topics, the survey revealed that 52.0% of students feel they possess sufficient knowledge about the causes of occupational diseases. Similarly, 50.5% reported having adequate understanding of disease prevention principles and protective techniques. However, when it comes to the legal consequences of work accidents and occupational diseases, only 47.0% of students indicated they have sufficient knowledge (Table 3). These findings suggest that while students have a good grasp of some health-related aspects of OHS, there is a noticeable need for improved education on legal implications related to workplace health issues.

Findings presented in Table 2 and Table 3 suggest a varied level of preparedness among students regarding different aspects of occupational health and safety. They highlight

Table 4. Students' Sociodemographic Characteristics According to OHSED Mean Scores				
Variable	Technical Issues Subscale	General Health Subscale	OHSED	
Department-Class				
Anesthesia 1	25.78+3.85	18.42+3.46	44.21+7.01	
Environmental Health 2	30.25+4.93	21.33+3.94	51.58+8.58	
Anesthesia 2	27.73+4.19	21.04+2.89	48.78+6.13	
Environmental health 1	21.15+5.50	14.92+3.30	36.07+7.45	
Dialysis 1	27.58+4.57	21.77+3.24	49.35+6.94	
Dialysis 2	28.96+4.85	20.86+3.25	49.82+5.88	
Medical laboratory technician 1	26.82+5.41	18.13+4.53	44.96+9.04	
Medical Documentation Secretariat 1	30.09+3.71	21.98+2.69	52.07+5.37	
Medical Laboratory Technician 2	31.81+5.05	23.71+3.26	55.52+7.65	
Test Statistic	F=9.368 p<0.001	F= 13.874 p<0.001	F= 13.663 p<0.001	
Receiving OHS courses	Mean <u>+</u> SS	Mean <u>+</u> SS	Mean <u>+</u> SS	
Yes	29.58+4.78	21.77+3.58	51.35+7.40	
No	25.53+5.21	17.83+3.94	43.36+8.32	
Test Statistic	t=6.218 p<0.001	t=8.051 p<0.001	t=7.847 p<0.001	
High School	Mean <u>+</u> SS	Mean <u>+</u> SS	Mean <u>+</u> SS	
Vocational High School	29.45+5.14	21.48+4.01	50.94+8.44	
Other	28.09+5.22	20.38+4.07	48.4785+8.39	
Test Statistic	t=1.915 p=0.057	t=1.988 p=0.48	t=2.146 p=0.033	
Work Experience	Mean <u>+</u> SS	Mean <u>+</u> SS	Mean <u>+</u> SS	
Yes	29.26+4.79	20.85+3.93	50.12+7.81	
No	27.61+5.53	20.47+4.22	48.08+8.98	
Test Statistic	t=2.681 p=0.008	t=0.793 p=0.428	t=2.034 p=0.043	

specific areas where students are wellinformed and others where their knowledge is lacking. This indicates a clear need for targeted education and training to address these gaps and enhance overall preparedness in occupational health and safety practices.

Occupational Health and Safety (OHS) awareness was analyzed in relation to various factors, including age, gender, type of high school graduated from, work experience, attendance in OHS courses, and department-class level (Table 4). The statistical evaluation showed that neither age nor gender had a significant impact on OHS awareness (p>0.05). However, a significant variation in OHS awareness was observed based on department and class level (p<0.05). Notably, second-year students in Medical Laboratory Technology exhibited the highest levels of OHS awareness, while first-year students in Environmental Health had the lowest. This disparity might be attributed to the fact that firstyear students in Environmental Health had not yet participated in an OHS course, which could have contributed to their lower awareness levels. These findings suggest that exposure to OHS education and the stage of academic progression play crucial roles in shaping students' awareness of occupational health and safety.

Results and Discussion

Attendance in Occupational Health and Safety (OHS) courses had a significant impact on awareness levels. Students who had taken OHS courses demonstrated statistically higher levels of awareness in technical aspects, general health issues, and overall OHS knowledge compared to those who had not participated in such courses (p<0.001). This result clearly highlights the positive effect of OHS education on enhancing awareness among students.

Similar findings are corroborated by existing literature. Kızırgil (2018) conducted a crosssectional survey at Fırat University's Technical Sciences Vocational School and identified a significant statistical difference in OHS perception between students who had attended OHS courses and those who had not (p<0.05) (16). This study supports the notion that OHS education plays a crucial role in improving awareness and perception.

Topgül and Alan (2017) carried out a survey at Tokat Gaziosmanpaşa University's Department of Labor Economics and Industrial Relations (9). Their findings indicated that students who had received OHS education had higher awareness compared to those who had not. However, this difference was not statistically significant (p>0.05), suggesting that while there was an observed trend, it did not reach the threshold of statistical significance in their study.

Furthermore, Şen et al. (2023) surveyed students at Dicle University's Health Services Vocational School and found that those who received OHS education were more likely to believe in the applicability of OHS principles in their future careers (17). This perception was statistically significant (p<0.05), underscoring the importance of OHS education in shaping students' attitudes towards its relevance in their professional lives. Overall, these studies collectively reinforce the importance of OHS education in enhancing students' awareness and understanding of occupational health and safety issues.

Our study also explored the relationship between participants' high school type and their levels of Occupational Health and Safety (OHS) awareness. The results revealed that graduates of vocational high schools exhibited significantly higher levels of OHS awareness compared to graduates from other types of high schools (p<0.05). This difference was particularly notable in technical and general OHS areas, where vocational high school graduates scored better (p<0.05). However, there was no statistically significant difference in the general health issues sub-dimension between the groups (p>0.05).

This suggests that vocational high school graduates are better equipped with knowledge of technical OHS issues, likely due to their formal education in workplace safety during their high school years. Such education likely provides them with a foundational understanding of OHS principles that is more advanced compared to students from non-vocational high schools. This finding aligns with the research by Kara et al. (2021), which indicates that vocational education often includes specialized training in OHS, thereby enhancing students' awareness and understanding of occupational safety and health matters (18). Another variable affecting OHS awareness levels was work experience; those with work experience demonstrated higher OHS awareness compared to those without (p < 0.05).

Conclusion and Recommendations

Developing a strong safety culture and spreading it across various segments of society is essential for minimizing employees' exposure to workplace hazards and risks. At the heart of cultivating this safety culture is the critical task of raising awareness and encouraging safe behaviors within communities. Schools serve as pivotal institutions where such a culture can be effectively nurtured and widely disseminated. By integrating Occupational Health and Safety (OHS) courses into the curricula at primary, secondary, and undergraduate levels, educational institutions can play a significant role in fostering a safety-oriented mindset from an early age. This integration helps build a foundational understanding of OHS principles and promotes the widespread adoption of safety practices. Consequently, incorporating OHS education into school programs has the potential to significantly enhance awareness levels and contribute to a more safety-conscious society.

The 6331 Law outlines several responsibilities for the state, employers, and employees regarding

risk assessment and the implementation of essential safety measures. A key responsibility is the provision of adequate training for employees. This training is crucial as it equips employees with the knowledge to identify workplace hazards, understand the importance and proper use of personal protective equipment (PPE), recognize unsafe behaviors and learn to avoid them, and interpret warning signs and labels. Additionally, training covers emergency procedures to ensure preparedness in critical situations. This study focused on evaluating the awareness levels of students at Sinop University Health Services Vocational School concerning these vital topics. By assessing their understanding of hazard identification, PPE usage, unsafe behaviors, and emergency protocols, the study aimed to gauge the effectiveness of OHS education and training among the students.

Occupational Health and Safety (OHS) training activities are designed to help individuals identify potential hazards, thereby fostering safer behaviors in response to those hazards. For instance, when children are educated about the dangers of a hot tea kettle, they learn to avoid it instinctively. This principle of hazard awareness and safe behavior was the foundation of our study, which investigated the awareness levels of students who had received OHS training compared to those who had not.

Our study found that students who were required to take OHS courses demonstrated statistically significant higher levels of OHS awareness compared to their peers who had not received such training. This underscores the effectiveness of OHS education in enhancing students' understanding of safety protocols and hazard recognition.

Additionally, our study revealed that vocational high school students exhibited higher levels of OHS awareness compared to students from other types of high schools. This difference can be attributed to the specialized vocational training these students receive, which includes education on specific occupational hazards and risks. Such targeted training enhances their overall awareness and preparedness in dealing with workplace dangers. These findings highlight the importance of implementing OHS education across all types of high schools. By integrating comprehensive OHS training into various educational programs, we can improve safety awareness among a broader range of students, ultimately fostering a more safety-conscious society.

According to the 2023 statistics from the Ministry of National Education (MEB), there are a total of 4,437,748 students enrolled in secondary education institutions across the country. Of these, 1,772,627 students are attending vocational high schools (19). This data reveals that approximately 40% of secondary education students are enrolled in vocational high schools, highlighting their substantial role in the overall education landscape.

Given the significant presence of vocational high schools in the education system, these institutions have considerable potential to advance Occupational Health and Safety (OHS) awareness through their specialized training programs. However, to achieve a comprehensive level of OHS awareness across the entire student population, it is crucial to also incorporate OHS courses into the curricula of other secondary education institutions. By doing so, we can ensure that OHS education reaches a broader audience, fostering a nationwide culture of safety awareness and preparedness. This approach will help in building a more informed and safety-conscious future workforce, aligning with national safety goals and enhancing overall occupational health and safety standards.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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References

- Bilir N, Yıldız AN. İş Sağlığı ve Güvenliği. Ankara: Hacettepe Üniversitesi Yayınları, 2014.
- 2. Dekker S. The 1930s and onward: Heinrich and Behavior-Based Safety. Found. Saf. Sci. 2019;87-136.
- Akın GC, Taşdemir DÇ. Change of Occupational Health and Safety (OHS) University students' perceptions on OHS in parallel to vocational training: The comparative analysis. Üniv. Arşt. Derg., 2023;6(3):292-7.
- Dursun S, Keser A. (2014). İş Güvenliği Farkındalığı ve İş Güvenliği Davranışları arasındaki ilişkilerin araştırılması: Uygulamalı bir araştırma. Çalış. İlişk. Derg., 2014;5(2):1-9.
- Tatar G. Ünye Meslek Yüksekokulu Öğrencilerinin İş Sağlığı ve Güvenliği Eğitimlerinin İş Güvenliği Algısına Etkisi (Yüksek Lisans Tezi). Avrasya Üniversitesi Lisansüstü Eğitim Enstitüsü, Trabzon, 2022.
- Üzüm S, Özkurt-Sivrikaya B. Öğrencilerin İşçi Sağlığı ve Güvenliğine yaklaşımları (Kocaeli MYO örneği). Int. J. Discipl. Econ. Adm. Sci. Stud. 2022;4(7):99-111.
- Sümbüloğlu K, Sümbüloğlu V. Biostatistics. 10th ed. Ankara: Hatipoğlu Yayınları; 2002.
- Reşitoğlu B, Bağdatoğlu ÖT, Bahar L, Erden S, Apaydın S, Pekoğlu E. İş Sağlığı ve Güvenliği Eğitiminin sağlık hizmetlerindeki öğrencilerin bilgi ve tutumlarına etkisi. IBAD, 2018;3(2):459-73.
- Topgül S, Alan Ç. Öğrencilerin İş Güvenliği ve İş Güvenliği Eğitimi algısının değerlendirilmesi. SDÜİİBFD, 2017;22(2):587-98.
- Kalıntaş DÇ. İş Sağlığı ve Güvenliğinde Eğitimin Önemi: Üniversite Öğrencilerinin İş Sağlığı ve Güvenliği Farkındalığı Üzerine Bir Çalışma (Yüksek Lisans Tezi). Çankaya Üniversitesi Fen Bilimleri Enstitüsü, 2022.
- 11. Aydoğan Z. Meslek Yüksekokulu

Öğrencilerinin İş Sağlığı ve Güvenliği Eğitimleri ve bu eğitimin çevre sağlığı farkındalığına etkisi. İADSBD, 2021;13(1):261-84.

- Hoşten G, Eren Ö. Sağlık Hizmetleri Meslek Yüksekokulu öğrencilerinin iş sağlığı ve güvenliği farkındalık düzeylerinin belirlenmesi: Bir Vakıf Üniversitesi üzerinde bir inceleme. Avrupa Bilim Tek. Derg. 2021;(22):101-8.
- Şahmaran T, Kar H, Arısal İ. İş Sağlığı ve Güvenliği ön lisans programında verilen eğitim ve öğretimin iş sağlığı ve güvenliği algısı üzerine etkisi. OPUS Ulus. Topl. Arş. Derg., 2019;11(18):1797-827.
- Kelleci SÇ, Akalp HG, Saklangıç U, Taşcı H. Meslek Yüksekokulu Öğrencilerinin Temel İSG Eğitimlerinin İSG algısı oluşturulmasına etkisi: Bir üniversite örneği. Ergonomi, 2022;5(3):178-85.
- Zengin MA, Sekmen M, Tekbalkan M. İş Sağlığı ve Güvenliği Programı öğrencilerinin güvenlik algılarına verilen eğitimin etkisinin araştırılması. J. Acad. Soc. Sci., 2022;129(129):267-80.
- Kızırgil G. TBMO öğrencilerinin iş güvenliği algılarının değerlendirilmesi Fırat Üniversitesi örneği. Elazığ: Fırat Üniversitesi. (Yüksek Lisans Tezi). Fırat Üniversitesi Sosyal Bilimler Enstitüsü, Elazığ, 2018.
- 17. Şen MA, Kurt ME, Dönder A. Öğrencilerde iş sağlığı ve güvenliği dersinin etkinliğinin belirlenmesi. YYÜİİBFD, 2023;8(15):15-24.
- Kara HE, ÖzayME. Anadolu Lisesi ve Mesleki Teknik Anadolu Lisesi öğrencilerinin iş sağlığı ve güvenliği bakış açısı. JSHSR., 2021;8(75):2470-7.
- 19. Milli Eğitim Bakanlığı Milli Eğitim İstatistikleri, Örgün Eğitim 2022-2023. 14 Mayıs 2024 tarihinde https://sgb.meb.gov.tr/www/ icerik_goruntule.php?KNO=508 adresinden erişildi.