

# **International Journal of Research Publication and Reviews**

Journal homepage: www.ijrpr.com ISSN 2582-7421

# Awareness Perceptions of School Staff on Safety, Health, and Environmental Issues in Primary Schools

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# ABSTRACT :

Occupational health and safety (OHS) in schools is a globally discussed issue. Recent studies in Turkey have aimed to enhance the knowledge of school administrators, teachers, and service personnel regarding OHS and to address the lack of awareness in safety practices. This study evaluates the awareness levels of school management, teachers, and service staff regarding OHS. The research employs surveys as data collection tools. The collected data were analyzed using ANOVA and t-tests in SPSS software to assess OHS awareness. The study participants included 66 school staff members, including administrators, teachers, and service personnel, from primary schools in Başiskele, Kocaeli. Survey results indicate that participants have varying perspectives on occupational safety. While most participants reported having good or very good knowledge of OHS, some experienced a lack of information. The majority perceive occupational safety as a fundamental right in their workplace. However, many believe that businesses do not prioritize OHS sufficiently and that a culture of workplace safety is not yet fully established. More efforts are needed to enhance awareness and the implementation of legal regulations related to OHS. The perception that businesses do not prioritize OHS suggests that a comprehensive safety culture is still lacking. In conclusion, increasing awareness and improving OHS practices in schools is crucial. Keywords: Occupational Health and Safety, School Administrators, Teachers, Service Personnel, Awareness, Safety Culture.

# 1. Introduction

School safety, health, and environmental management directly affect education quality and sustainability. Occupational health and safety (OHS) is crucial for ensuring the well-being of both students and staff. Research highlights that schools require not only physical safety measures but also the establishment of a strong safety culture (Salminen, 2013; Nearkasen Chau, 2007).

The concept of occupational safety refers to protecting workers from technical risks, while occupational health encompasses measures to safeguard employees from factors that may impact their well-being in the workplace (Altun & Altun, 2024). The main goal of occupational health is to maintain and improve employees' physical, mental, social, and moral well-being, ensuring a safe working environment (Keleş, 2004). This involves eliminating poor health conditions, implementing protection methods, and ensuring the alignment of job requirements with the individual's capabilities.

The education sector is a vast domain that encompasses various age groups, from preschool education to postgraduate levels. Schools, where children and young people spend a significant portion of their lives, must ensure a safe and healthy environment (Bağcı et al., 2024). Despite existing regulations, students and school staff face various hazards, such as infrastructure issues, accidents, and exposure to unsafe conditions. Therefore, implementing preventive measures, including fire safety, hygiene standards, emergency planning, and periodic safety training for educational personnel, is of critical importance. Such measures not only prevent accidents but also enhance the overall quality of education by ensuring a secure learning environment.

# 2. Literature Review

Various studies have examined OHS awareness in different educational settings. Ramirez (2004) identified that most injuries in schools occur during outdoor activities rather than in classrooms, emphasizing the need for safety measures beyond physical infrastructure. Similarly, Salminen et al. (2014) highlighted that school environments significantly impact student injuries and safety perceptions. A study by Ugwulashi (2017) emphasized the importance of administrative leadership in enforcing safety policies in educational institutions.

Bağcı et al. (2024) state that occupational health and safety awareness in schools must focus on reducing physical, psychosocial, and environmental risks. They emphasize that schools require comprehensive safety measures to minimize occupational accidents and health issues. The findings of their study highlight the significance of incorporating safety training into the education sector, aiming to cultivate a long-term safety culture within schools.

Altun & Altun (2024) emphasize that systematic and accurate OHS performance measurements play a crucial role in identifying deficiencies in OHS management and improving overall safety standards. These measurements not only contribute to accident prevention but also ensure the well-being of employees by addressing health-related risks. The use of OHSAS 18001 standards is highlighted as essential for managing and mitigating occupational safety risks.

Additionally, Altun & Altun (2024) stress that school administrators bear significant responsibility for enforcing safety protocols. Effective OHS training is necessary to bridge gaps in safety awareness and improve workplace conditions for teachers, students, and other employees. Despite the importance of

training, many school principals perceive existing OHS training programs as ineffective, necessitating the development of more structured and practical approaches.

# 3. Methodology

This study employs a descriptive research design to examine OHS awareness among primary school staff in Başiskele, Kocaeli. Both quantitative and qualitative research methods were used for data collection.

3.1 Research Design

A descriptive survey model was utilized to determine the current state of OHS awareness among participants. Surveys were used for quantitative data collection, while document analysis was conducted to complement the findings.

3.2 Participants

The study included 66 school staff members, comprising administrators, teachers, and service personnel, who were selected through random sampling. 3.3 Data Collection Tools

Data were collected using a questionnaire developed by Eraslan (2015) to measure OHS awareness levels. The questionnaire included Likert-scale questions assessing participants' perceptions of occupational safety regulations, responsibilities, and workplace safety culture. 3.4 Data Analysis

Quantitative data were analyzed using SPSS software. Descriptive statistics, frequency distributions, ANOVA, and t-tests were employed to identify differences in OHS awareness based on demographic factors such as age, gender, education level, and job roles. A 95% confidence interval and a 5% margin of error were used in the statistical analysis.

# 4. Results

#### 4.1 Survey Results

The results obtained from the survey conducted within the scope of the study are presented below.

#### Table 1 - Gender Distribution

GENDER	N	%
MALE	19	29%
FEMALE	47	71%

The study included 66 participants. The gender distribution analysis revealed that 29% (19 participants) were male, whereas 71% (47 participants) were female. These results indicate that female participants outnumbered male participants in the study.

#### Table 2 - Age Distribution

Age Range	Ν	%	
18-24	1	2%	
25-31	6	9%	
32-38	23	35%	
39-45	20	30%	
46+	16	24%	

The analysis of age distribution showed that the highest participation rate came from individuals aged between **32-45 years old**, representing **65%** of the total sample. This was followed by participants aged **46 and above (24%)**. These findings suggest that the majority of respondents were in the **middle-aged workforce**, which may influence their awareness of occupational health and safety regulations.

Fablo 3	-	Educational	Level
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Education Level	Ν	%	
Primary Education	6	9%	
High School	3	5%	
Associate Degree	3	5%	
Bachelor's Degree	43	65%	
Postgraduate	11	17%	

The majority of participants held a bachelor's degree (65%), followed by postgraduate degree holders (17%). This suggests that the study sample consisted of highly educated individuals, which may impact their level of awareness regarding workplace safety regulations.

Tablo 4 - Job Role in the Institution				
	JOB ROLE	Ν	%	
	ADMINISTRATOR	8	12%	
	TEACHER	48	73%	
	SERVICE PERSONNEL	10	15%	

The findings show that teachers made up the largest group (73%) among participants, followed by service personnel (15%) and administrators (12%). These results indicate that the majority of responses were collected from educators, reflecting the perspectives of teachers regarding OHS.

## 4.2. Survey Items

The survey consisted of 13 items, designed to measure participants' awareness of occupational health and safety (OHS). Responses were collected on a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree."

# 4.3 Key Findings

- Awareness of legal regulations related to occupational safety:
  - 35% of respondents reported being familiar with OHS regulations, whereas 29% were undecided, and 14% lacked knowledge about the relevant laws.
- Understanding of professional responsibilities regarding workplace safety:
  - 68% of participants were aware of their occupational safety responsibilities, while 18% were unsure and 14% lacked awareness.
- Perception of workplace safety as a fundamental right:
  - 88% of respondents agreed that workplace safety is a fundamental right.
- Perceived importance of occupational safety in workplaces across Turkey:
- 41% of respondents believed that businesses do not prioritize workplace safety, while 33% remained uncertain.
- Perception of workplace safety culture in Turkey:
  - 46% of participants thought that a strong occupational safety culture has not yet been fully established in Turkey.
- Training and risk awareness:
  - 69% of respondents indicated that employees in Turkey lack sufficient training in risk management.
- Quality of occupational safety training programs:
  - 59% of participants deemed current OHS training programs insufficient, while only 28% found them effective.
- Effectiveness of occupational safety specialists:
  - 58% of respondents found OHS specialists effective, whereas 32% remained undecided.
  - Integration of OHS courses in all education levels:
    - 0 86% of participants supported including occupational safety courses at all education levels.
- Effectiveness of penalties for OHS violations:
  - 41% believed that penalties for OHS violations were effective, while 28% thought they were insufficient.

These findings indicate that school staff members have varying levels of OHS awareness, highlighting the need for further improvements in training

and workplace safety culture.

# 4.4. Statistical Analysis of Survey Data

Table 5 - The descriptive statistics for the awareness scale are presented below						
	Scale	Min	Max	Mean	SD	
_	OHS Awareness Scale	13	65	42.59	6.22	

The normality tests (Kolmogorov-Smirnov and Shapiro-Wilk) indicated that the dataset follows a normal distribution (p > 0.05). T-tests and ANOVA were applied to compare awareness levels across demographic groups.

Differences Based on Demographic Factors

Gender Differences: The t-test results showed no significant difference in OHS awareness scores between male and female participants (p = 0.368). Age Differences: ANOVA results indicated no statistically significant difference in awareness scores across different age groups (p = 0.451). Education Level Differences: A significant difference in OHS awareness was found across education levels (p = 0.002), with primary and associate degree

holders scoring higher than bachelor's degree holders.

Job Role Differences: Significant differences were observed in awareness levels between different job roles (p = 0.001). Service personnel exhibited higher OHS awareness compared to teachers, likely due to their direct involvement in workplace safety regulations.

These findings suggest that job roles and education levels influence OHS awareness, emphasizing the need for tailored safety training programs for different staff categories.

# 5. Discussion and Conclusion

The findings of this study offer important insights into the level of Occupational Health and Safety (OHS) awareness among school personnel, revealing both strengths and areas that require improvement. Our research, similar to Altun and Altun (2024), highlights a general awareness of OHS among participants, yet significant gaps remain in areas such as legal knowledge and risk assessment. Specifically, only 35% of respondents were familiar with specific OHS regulations, closely aligning with Altun and Altun's finding of 30%. This similarity suggests that while there is a broad understanding of the importance of OHS, detailed knowledge of the regulatory framework remains an area in need of further attention in both studies. The lack of familiarity with legal regulations indicates a need for specialized training programs that emphasize the legal aspects of OHS to bridge this gap.

One notable difference between our study and that of Altun and Altun lies in the perception of workplace safety as a fundamental right. While 88% of our participants agreed with this statement, Altun and Altun observed a lower agreement rate of 75%. This discrepancy could reflect the evolving cultural attitudes toward safety over time, with our study capturing a more recent cohort that may be more influenced by contemporary safety awareness campaigns. It is also possible that recent changes in legislation and workplace safety initiatives have contributed to this increased awareness, suggesting a shift in societal attitudes toward OHS as an essential right.

Our study also aligns with previous research in emphasizing the role of demographic variables—such as job role and education level—in shaping OHS awareness. Both our study and that of Altun and Altun reveal that non-teaching staff, such as service personnel, exhibited higher awareness of safety regulations. This could be attributed to their direct involvement in safety protocols, which makes them more likely to encounter and address safety risks. However, our study diverges from Altun and Altun's findings by revealing that higher education levels were associated with higher OHS awareness, with primary and associate degree holders outperforming those with bachelor's degrees. This result contrasts with Altun and Altun's study, which found no significant difference based on educational background. This divergence may suggest regional or temporal differences in the educational system's approach to OHS training. It may also point to the possibility that lower-level education systems incorporate more hands-on, practical exposure to safety procedures, whereas higher education may focus more on theoretical knowledge, which might not be as directly applicable to safety practices in the workplace. Further investigation into the educational system's approach to OHS training is warranted.

Our findings are also consistent with those of Bağcı et al. (2024), who argue for a proactive approach to OHS that includes regular training for all school staff. This study emphasizes the need for comprehensive OHS training that extends beyond teachers to include administrative staff, custodians, students, and all other personnel who might face potential hazards. We share this view, reinforcing the importance of broad-based training programs to mitigate risks and improve safety awareness across the school community.

The results of our study further confirm the concerns raised by Deliönü and Utlu (2016), who identified significant gaps in OHS knowledge within school communities. Both studies emphasize the need for training all school employees, but our research builds on their findings by recommending more interactive training methods. In particular, we advocate for the use of real-life scenarios and active engagement strategies to enhance the practical application of OHS concepts. This approach moves beyond traditional, passive training methods, equipping staff with the necessary skills to address real-world safety challenges more effectively.

Similarly, Yivli's (2018) research on kindergarten teachers' OHS awareness mirrors our own findings regarding the lack of knowledge about risk assessments. Both studies highlight that risk assessments are frequently overlooked, with schools often ill-prepared to address potential hazards. However,

while Yivli focuses on the general lack of awareness, our study proposes more targeted risk assessment procedures, particularly in environments like kindergartens where unique safety concerns exist due to the age and development of the students.

In alignment with Tekin et al. (2021), we also stress the importance of fostering a culture of OHS within schools. Their research argues that such a culture is essential for improving overall school safety and well-being, a notion our study supports. However, we diverge from Tekin et al.'s conclusions by suggesting that OHS awareness should not be a peripheral concern but integrated deeply into the school curriculum. In our view, OHS education can empower students by instilling a sense of personal responsibility for their own safety and that of their peers, not merely as a regulatory measure but as a life skill that extends beyond the classroom.

Additionally, we find common ground with Kilitçi's (2018) evaluation of OHS committees in schools, recognizing the importance of such committees in ensuring the enforcement of safety policies. However, unlike Kiliçci, we propose that OHS committees should play a more dynamic role, engaging in regular evaluations and adjustments to safety protocols based on real-time feedback and evolving school conditions. This continuous monitoring approach is essential for adapting to new challenges and ensuring the effectiveness of safety measures over time.

Our study also resonates with the work of Yıldırım and Uğurlu (2022), who found that teachers generally view OHS measures positively. We share their belief that the active involvement of educational staff is key to the success of OHS initiatives. Nevertheless, our study extends their findings by asserting that school leadership, particularly principals, must play a pivotal role in establishing a school-wide OHS culture. This view aligns with the conclusions of Taşdemir and Gür (2021), who emphasize the influence of leadership and teaching experience on OHS competence. Our research underscores the necessity for school leaders to set the tone for OHS practices, actively engaging staff and promoting continuous communication about safety measures.

In line with the findings of Burç et al. (2024), this study also emphasizes the importance of evaluating existing OHS policies and practices within schools, with particular focus on enhancing responsibility and awareness among school personnel. Their research highlights the themes of policy comprehensiveness, updating and distribution needs, and the importance of continuous monitoring and assessment. The study suggests that school management must ensure effective communication and feedback loops to promote a culture of responsibility, awareness, and proactive risk management, echoing the findings of our own study.

In conclusion, our study contributes to the growing body of research emphasizing the critical role of OHS awareness in educational institutions. It suggests that OHS awareness should be comprehensive, dynamic, and continuously adapted to the specific needs of each school environment. Effective integration of OHS practices into school culture—through inclusive training, targeted risk assessments, and strong leadership involvement—is essential for ensuring the health and safety of students, teachers, and all school personnel. Future research should continue to investigate the effectiveness of various OHS training methods and risk assessment strategies, aiming to enhance the overall safety and well-being of educational communities.

#### 6. Recommendations

Based on the findings of this study, several recommendations can be made to enhance Occupational Health and Safety (OHS) awareness and practices in schools. These recommendations are aimed at school management, staff, and policymakers to improve the overall safety culture within educational institutions.

#### 1. Enhancing OHS Training Programs

It is crucial to expand and improve OHS training programs to cover all school personnel, not just teaching staff. Training should be comprehensive and include administrative staff, custodians, and even students. Programs should move beyond theoretical knowledge and incorporate practical, hands-on training, including the use of real-life scenarios. This would ensure that all staff members are adequately prepared to handle potential safety risks and hazards in the school environment.

#### 2. Focus on Legal Knowledge and Risk Assessment

Given the significant gap in knowledge regarding OHS regulations and risk assessments, it is essential to implement targeted educational initiatives focusing on these areas. Schools should offer specialized workshops or modules on the legal aspects of OHS, including the specific regulations applicable to educational environments. Additionally, schools should prioritize the training of staff on the identification, evaluation, and management of risks to create safer environments for both students and staff.

#### 3. Regular Updates and Review of OHS Policies

OHS policies in schools should be regularly updated to reflect changes in legislation, emerging risks, and new safety practices. A system for continuous review and revision of safety protocols is necessary to ensure that policies remain relevant and effective. Schools should establish mechanisms for ongoing feedback from staff, including safety audits and evaluations, to ensure that safety measures are implemented correctly and that any gaps or challenges are promptly addressed.

#### 4. Building a Strong Safety Culture

School leadership, particularly principals, must play an active role in fostering a strong safety culture. Leadership should set the tone by promoting OHS awareness across all levels of staff and ensuring that safety is not seen as a peripheral concern but as an integral part of the school's daily operations. Principals should lead by example and actively engage staff in safety-related discussions, providing the necessary resources to support OHS initiatives.

#### 5. Collaboration and Involvement of All Stakeholders

OHS efforts should not be limited to school management and staff but should also involve students and parents. Awareness campaigns and interactive workshops could be organized to educate students on basic safety principles, empowering them to take responsibility for their own safety and that of their

peers. Additionally, parents should be informed about OHS measures and encouraged to participate in creating a safe school environment.

## 6. Investing in OHS Committees and Monitoring Systems

Schools should invest in the establishment of OHS committees that have the authority to regularly assess and update safety measures. These committees should be composed of representatives from all staff categories and play an active role in monitoring safety practices. Real-time feedback from staff and students should be incorporated into safety assessments to ensure that protocols are adapted to the ever-changing needs of the school environment.

#### 7. Promoting Awareness and Responsibility through Curriculum Integration

OHS education should be integrated into the school curriculum to instill a sense of personal responsibility for safety in students. This can be done by introducing age-appropriate lessons on health and safety, which would foster awareness among young learners and empower them to take an active role in maintaining a safe environment. In this regard, educational institutions should collaborate with external experts to ensure that OHS principles are effectively conveyed across different age groups.

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