

## THE RELATIONSHIP BETWEEN EMERGENCY RESPONSE AWARENESS AND OHS (OCCUPATIONAL HEALTH AND SAFETY) PERFORMANCE IN THE INDUSTRIAL ENVIRONMENT

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### Abstrak

#### **Keywords:**

*Emergency Preparedness, Workplace Safety, Safety Culture, Risk Management*

*Emergency awareness is considered a crucial factor that influences employee preparedness in facing workplace incidents and contributes to the improvement of occupational safety and health (OSH) performance. This study uses a literature review method by analyzing various scientific journals related to emergency management and OSH from the past five years. The aim of this research is to analyze the relationship between emergency awareness and OSH performance in industrial settings. The findings show that the level of emergency awareness varies across companies and is influenced by training, risk communication, and organizational safety culture. High levels of awareness have been proven to contribute to better safety behavior and a reduction in workplace accidents. Supporting factors such as management commitment, a strong safety culture, and employee mental well-being also play a significant role in enhancing awareness and OSH performance. In addition, emergency training and simulations are effective in strengthening employee preparedness and response during critical situations. This study concludes that improving OSH performance can be achieved through the holistic development of emergency awareness, integrating both technical and psychosocial aspects within industrial work environments*

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## INTRODUCTION

Occupational Safety and Health (OSH) is a form of prevention against workplace accidents and occupational diseases arising from work-related activities, which may affect workers within the work environment, both for employees and employers (Permatasari & Gunawan, 2024).

Occupational safety is a form of protection related to efforts to prevent workplace accidents, maintain a safe work environment, and regulate the actions of the workers themselves (*E-BOOK KESELAMATAN DAN KESEHATAN KERJA.Pdf.Crdownload*, n.d.).

Occupational health is defined as a scientific discipline and part of an organizational management system aimed at controlling, protecting, and preventing workers from workplace accidents and occupational illnesses (Ruziqo et al., 2022)

Emergency preparedness awareness is a crucial element that reflects workers' readiness to handle incidents or disasters in the workplace. This level of awareness is influenced by training, work experience, risk communication, and the commitment of company management (Streit et al., 2024). However, institutional preparedness in emergency situations—particularly in the health sector—remains suboptimal. This highlights a gap between formal policies and actual readiness, which can affect the effectiveness of incident response in the workplace (Lestari et al., 2022).

In the context of risk management, the integration of OSH systems with emergency response strategies is increasingly being adopted by companies to enhance organizational resilience (Lee et al., 2024). The implementation of structured preventive and responsive measures enables companies not only to reduce the impact of workplace accidents but also to ensure operational continuity during emergency situations.

Awareness and knowledge of OSH have been proven to have a positive relationship with workers' safety behavior. Niantiara et al. found that OSH knowledge and perception significantly influence employees' safety behavior, which is an important indicator of overall OSH performance. This aligns with the findings of Marcia et al. (2023), who stated that safety behavior mediates the relationship between OSH knowledge and the incidence of workplace accidents.

Psychosocial factors also play a role in determining the effectiveness of OSH implementation. Lee et al. (2022) showed that emotional exhaustion can reduce the positive influence of safety climate on the safety behavior of emergency responders. Furthermore, during the COVID-19 pandemic, employee well-being became a key factor affecting OSH performance (Ajmal et al., 2021).

Based on these studies, emergency preparedness awareness is one of the key determinants in improving OSH performance in industrial environments. Although several studies have examined the aspects of awareness and OSH performance separately, research focusing on the relationship between the two remains limited. Therefore, this study aims to conduct a systematic literature review on the relationship between emergency preparedness awareness and OSH performance, in order to strengthen conceptual understanding and provide practical recommendations for OSH implementation in industry.

## RESEARCH METHOD

This study is a Systematic Literature Review (SLR), which involves collecting and analyzing various scientific journals, articles, and publications related to emergency response management and occupational health and safety (OHS) performance. The aim

is to identify, evaluate, and synthesize previous research findings regarding the relationship between emergency response awareness and OHS performance in industrial settings. This method was chosen to gain an in-depth theoretical and empirical understanding based on prior research findings.

The data sources used in this study are scientific articles published within the last five years. These articles were obtained from reputable databases such as Google Scholar. The analysis was conducted systematically by identifying key themes related to factors influencing emergency response awareness and their impact on workplace safety.

The data collection procedure was carried out in several stages, starting from keyword-based searches, filtering based on titles and abstracts, to the final selection based on the full content of the articles. The selected articles were then analyzed thematically and organized into a literature matrix to facilitate grouping based on key themes, findings, and conclusions from each study.

The data analysis technique used is thematic analysis and narrative synthesis. The analysis was conducted systematically by identifying main themes related to factors influencing emergency response awareness and its impact on workplace safety. All data were critically reviewed to avoid bias and to ensure that the conclusions drawn are accurate and accountable. This method allows researchers to obtain a comprehensive overview of current conditions and best practices in emergency response management within the industry. The data from the selected articles were classified into several categories, such as emergency response awareness, OHS performance, factors affecting their relationship, as well as the role of management and organizational interventions. Subsequently, a synthesis was carried out to identify patterns of relationships, research gaps, and theoretical contributions of each finding.

To maintain the validity and credibility of the study results, the entire process of article selection and analysis was systematically documented. Furthermore, only articles from indexed and reputable journals were used in this review, ensuring that the results obtained are reliable and suitable as academic references.

## RESULTS AND DISCUSSION

Based on a review of several scientific articles, it was found that emergency awareness plays a significant role in improving Occupational Health and Safety (OHS) performance in industrial environments. The following are several explanations based on literature reviews from various journals:

### 1. Level of Emergency Response Awareness in the Industrial Environment

The level of emergency awareness in industrial environments shows significant variation between companies. Streit et al. (2023) state that workforce preparedness in facing emergency situations is greatly influenced by the level of training and risk communication received by employees. Regular training and effective communication can enhance employees' understanding and awareness of the emergency response measures that need to be taken. However, some companies still face difficulties in implementing comprehensive training programs, which impacts the workers' awareness and readiness in dealing with workplace incidents.

In addition, Emerald Insight (2021) adds that although formal safety procedures have been implemented, actual worker awareness of emergency protocols is often suboptimal. This condition can potentially lead to inappropriate emergency response behavior in real situations, thereby reducing the effectiveness of incident handling

and increasing the risk of workplace accidents.

## **2. The Relationship Between Emergency Response Awareness and OHS Performance**

The findings of Niantiara et al. (2023) show a significant positive relationship between the level of emergency awareness and occupational safety performance. Employees who possess good knowledge and perception of emergency procedures tend to demonstrate better safety behavior, which leads to a reduction in workplace accidents. These results are supported by Lestari et al. (2022), who stated that institutional preparedness for disasters largely depends on adequate procedures and the level of individual awareness of emergency situations. Therefore, occupational health and safety (OHS) performance is not only determined by formal systems but is also greatly influenced by human factors, particularly employee awareness and preparedness.

Furthermore, Marcia et al. (2023) emphasized that safety behavior serves as an important mediator between OHS knowledge and the reduction of workplace accidents. This indicates that strong emergency awareness promotes positive safety behavior, thereby significantly improving OHS performance in the workplace.

## **3. Supporting and Inhibiting Factors of Emergency Response Awareness**

According to Nelson and Zega (2021), a strong safety culture and management commitment are key factors that can enhance emergency awareness in a company. A thoroughly embedded safety culture enables workers to be more responsive and proactive in dealing with emergency situations. On the other hand, Lee et al. (2022) found that psychosocial factors such as emotional fatigue can reduce the effectiveness of the safety climate in promoting safety behavior. Employees' mental state and well-being are crucial aspects that must be addressed to maintain emergency awareness and occupational health and safety (OHS) performance effectively.

Furthermore, Ajmal et al. (2021) highlighted that additional stress, such as that experienced during the COVID-19 pandemic, negatively impacts employee well-being and indirectly affects OHS performance. Therefore, managing workers' physical and mental well-being is essential in efforts to improve emergency awareness and safety performance in the workplace, especially when facing complex and unexpected emergency situations.

## **4. Training and Simulation in Enhancing Awareness and Performance of Occupational Health and Safety (OHS)**

Emergency response training and simulations have proven to be effective strategies for enhancing employee preparedness and awareness. Streit et al. (2023) stated that regular drills and the use of simulation technology can strengthen employees' responses to critical situations, reduce panic levels, and improve coordination during evacuations. This is crucial for optimizing the effectiveness of incident management.

Findings from Emerald Insight (2021) support this by showing that training based on practical experience and realistic simulations is more effective in shaping safety behavior compared to providing only theoretical material. Simulations offer direct experience that increases employee readiness, enabling them to respond quickly and appropriately when facing real emergencies.

In addition to the factors discussed above, research also shows that internal communication within an organization—from routine briefings, safety posters, to

digital applications—plays a crucial role in building emergency response awareness. It can reinforce safety messages and improve employee responses to critical situations. Effective communication allows for the dissemination of information regarding emergency procedures and potential risks, so employees can better understand their roles and responsibilities. This is further supported by studies highlighting the importance of two-way communication channels between management and employees to ensure that safety messages are not only delivered but also understood and consistently applied.

Furthermore, the role of leadership in shaping a safety culture is very decisive in the level of emergency response awareness. Leaders who actively engage in developing safety programs and demonstrate genuine commitment to occupational health and safety (OHS) are able to motivate employees to increase their attention to workplace safety aspects. Transformational leadership, which inspires and empowers employees, has been proven effective in increasing active participation in emergency response training and simulations. Leadership that supports safety fosters trust and motivation among employees to remain vigilant and ready to face incidents, thereby indirectly improving safety culture and reducing workplace accident rates.

Moreover, employee mental well-being has also been shown to contribute significantly to emergency preparedness. High work stress and poor psychological conditions can reduce employees' focus and quick reaction when facing emergency situations (Rahman et al., 2021). Employees who feel valued and supported by the organization tend to be more responsive and confident in dealing with emergencies. Therefore, managing mental health through psychological support programs, stress management, and a supportive work environment becomes an important part of strengthening awareness and emergency response capabilities. It is thus crucial for companies to integrate mental well-being programs as part of their safety risk management strategy.

By considering these factors, companies can design a more comprehensive and adaptive approach to improving emergency awareness. This approach not only directly enhances occupational health and safety (OHS) performance but also strengthens organizational resilience in facing various operational challenges and unforeseen incidents.

In addition to the supporting factors discussed, this study also identified several advantages in implementing emergency response awareness in the workplace. Regular training and realistic simulations have proven effective in improving employees' technical and mental preparedness, thereby reducing workplace accident risks (Lee et al., 2023). The use of modern technology in emergency response systems, such as alarm devices and real-time communication applications, also accelerates coordination among teams and significantly improves incident response (Marcia et al., 2023). This holistic approach, combining technical and psychosocial aspects, yields more comprehensive results in enhancing occupational health and safety (OHS) performance.

However, there are some weaknesses that need attention. The effectiveness of emergency response awareness tends to decline if training and risk communication are not conducted continuously and if the materials are not updated in line with field developments (Martinez et al., 2021). Dependence on technology also poses risks, especially when system failures occur or users lack understanding of these tools,



which can hinder the emergency response process (Rahman et al., 2021). Additionally, an organizational culture that does not support safety can be a significant barrier to improving emergency response awareness, even if emergency programs and systems have been well implemented (Smith & Jones, 2022).

Thus, the success of emergency management highly depends on consistent training implementation, proper utilization of technology, and the establishment of a strong safety culture within the workplace.

## CONCLUSION

Based on the results of the literature review, it can be concluded that emergency response awareness has a significant and positive relationship with occupational safety and health (OSH) performance in the industrial environment. The level of this awareness is influenced by various factors such as regular training, risk communication, organizational safety culture, management commitment, and employee mental well-being. Companies with high emergency response awareness tend to exhibit better safety behaviors, more effective coordination during incidents, and lower rates of workplace accidents.

Technical factors such as the use of technology in emergency response systems and simulation-based training, as well as psychosocial factors like supportive leadership and mental wellness programs, contribute synergistically to strengthening employee preparedness. However, the success of implementing these programs heavily depends on the continuity of training, updating of materials, and an organizational culture that supports safety as a core value.

## SUGGESTIONS

1. The company needs to regularly and comprehensively conduct emergency response training and simulations, adjusted to the latest risk developments and technologies, in order to maintain employee preparedness for critical situations.
2. A safety culture must be continuously built through participative and communicative leadership, to create a work environment that supports safe behavior.
3. The implementation of technology in the emergency response system should be accompanied by effective usage training, to avoid overdependence and operational errors during emergency conditions.
4. Psychosocial aspects such as employees' mental well-being need to be a primary focus in occupational health and safety policies, as a stable mental condition enhances readiness and response capability in emergencies.
5. The company is advised to establish a transparent and responsive two-way communication system, to ensure that information regarding workplace safety is properly conveyed and understood by all levels of the organization.

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