

Analysis of Employee Awareness and Behavior Toward the Implementation of Occupational Safety and Health (OSH) Culture at the Tulungagung Fire Department

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ABSTRACT

This study aims to analyze the level of employee awareness and behavior in implementing Occupational Safety and Health (OSH) culture at the Fire Department of Tulungagung Regency. This research used a descriptive quantitative method with a survey approach. Data were collected through questionnaires, observations, and documentation involving eight respondents selected through total sampling. The data were analyzed using descriptive percentage analysis. The results show that employee awareness of OSH is in the good category, while employee behavior in implementing OSH is also categorized as good. Overall, the implementation of OSH culture in the institution has been carried out well. However, several aspects still need improvement, especially consistency in the use of personal protective equipment. This study concludes that a strong safety culture is important for organizations with high-risk work environments, particularly emergency service institutions such as fire departments. The findings are expected to contribute theoretically and practically to strengthening workplace safety culture.

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INTRODUCTION

Human resources (HR) are a key determinant of organizational success in achieving goals effectively and efficiently. The quality of HR is not only measured by technical competence, but also by employees' ability to perform tasks in accordance with Occupational Safety and Health (OSH) standards. Therefore, effective human resource management, including competency development, training, and workplace safety systems,

has become a strategic necessity for modern organizations (Fajar & Yusnaldi, 2022; Kasmir, 2016; Sarbiah, 2023).

Occupational Safety and Health (OSH) refers to a system designed to protect workers from accidents and occupational diseases while creating a safe and productive working environment (Adhika et al., 2020; Saraswati et al., 2020). Workplace accidents are generally caused by two major factors, namely unsafe acts and unsafe conditions, in which human behavior is often considered the dominant cause (Fajar & Yusnaldi, 2022; Wang et al., 2018). This indicates that successful OSH implementation depends not only on facilities and regulations, but also on employees' awareness and behavior in responding to work risks (Fuadi et al., 2022; Yuliani et al., 2021).

In this context, self-awareness becomes an important factor in shaping safety behavior. Self-awareness enables individuals to understand their emotions, values, and the impact of their actions in the workplace (Eurich, 2018; London et al., 2023). This concept develops into safety awareness, which refers to an individual's ability to recognize hazards, understand risks, and take preventive actions to avoid accidents (Roslan, 2022; Ghofur et al., 2024). Previous studies found that higher awareness is associated with stronger compliance with safety procedures and lower risky behavior (Fara et al., 2017; Bahsin et al., 2024).

Besides awareness, safety behavior is the practical manifestation of OSH values in the workplace. It reflects employees' actions in following safety procedures, using personal protective equipment (PPE), and actively participating in safety programs (Ping & Hee, 2014; Yuliani et al., 2021). Safe work behavior contributes to the development of a strong safety culture, defined as shared values, norms, and beliefs that continuously support workplace safety (Setiono et al., 2019; Anggraeni, 2024). A strong OSH culture has been proven to improve productivity and reduce workplace accidents (Riansyah & Ezriani, 2024; Bernades, 2023).

Several previous studies identified awareness and safety behavior as key factors in successful OSH implementation. Fajar and Yusnaldi (2022) and Nurdianti et al. (2022) emphasized the importance of worker awareness in high-risk environments. Meanwhile, Hadiwijaya (2023) and Permana et al. (2024) found significant relationships between awareness and safety compliance or behavior. Other studies also highlighted the role of procedures and education in improving OSH awareness (Asmuni & Inayah, 2024; Suyitno et al., 2026).

However, several research gaps remain. First, most previous studies focused on industrial, construction, and manufacturing sectors, while studies in high-risk public service institutions such as fire departments are still limited. Second, prior research mostly

used causal approaches, whereas descriptive studies portraying the actual condition of awareness and behavior comprehensively are still rare. Third, many studies focused on only one variable, either awareness or behavior, without providing an integrated picture of OSH culture (Hadiwijaya, 2023; Permana et al., 2024; Anggraeni, 2024).

The Fire Department is a high-risk institution requiring readiness, accuracy, and strict compliance with safety procedures in emergency situations. Under such conditions, awareness and safety behavior are crucial to prevent workplace accidents and maintain effective public services. Nevertheless, field observations still indicate variations in safety behavior, such as incomplete use of PPE and differences in compliance among employees.

This study offers novelty by examining OSH culture in a fire department using a descriptive quantitative approach that integrates awareness and behavior within one analytical framework. The objectives of this study are: (1) to determine the level of employee awareness toward OSH culture, (2) to analyze employee behavior in implementing OSH, and (3) to describe the overall condition of OSH culture based on these two aspects. The findings are expected to provide empirical contributions to the development of workplace safety culture, particularly in organizations with high-risk working environments.

LITERATURE REVIEW

Occupational Safety and Health (OSH)

Occupational Safety and Health (OSH) refers to a systematic effort to protect workers from accidents, injuries, and occupational diseases while creating a safe and productive work environment (Adhika et al., 2020; Saraswati et al., 2020). OSH includes safety regulations, employee training, supervision, and the use of personal protective equipment (PPE).

Safety focuses on preventing accidents and physical injuries, while occupational health emphasizes maintaining employees' physical and mental well-being. Effective OSH implementation requires management commitment, employee participation, and continuous risk control. In high-risk institutions, OSH is not only a legal obligation but also a strategic investment to reduce losses, improve productivity, and protect human resources.

Safety Culture

Safety culture is a part of organizational culture that reflects shared values, beliefs, norms, and behaviors related to workplace safety and health. It shows how safety is perceived, prioritized, and practiced in daily work activities (Anggraeni, 2024). A strong

safety culture exists when employees consistently follow safety procedures even without direct supervision.

According to Setiono et al. (2019), safety culture is built through empowerment and habituation. Employees must understand safety values, develop awareness, and apply safe behavior regularly. Strong safety culture has been proven to reduce accidents, improve work discipline, and enhance organizational performance (Riansyah & Ezriani, 2024).

Safety Awareness

Safety awareness originates from the concept of self-awareness, which refers to an individual's ability to understand behavior, emotions, values, and responsibilities (Eurich, 2018). In the OSH context, safety awareness means the ability to recognize hazards, understand risks, and take preventive action to avoid accidents (Roslan, 2022).

High safety awareness can be identified through several indicators: understanding work risks, positive attitudes toward safety, compliance with standard operating procedures (SOP), proactive behavior such as reporting hazards, and self-reflection regarding unsafe actions. Previous studies show that higher awareness is associated with stronger compliance and lower risky behavior (Permana et al., 2024; Ghofur et al., 2024).

Safety Behavior

Safety behavior refers to employees' actions in applying OSH principles in the workplace. It includes following safety procedures, wearing PPE, attending safety training, and participating in safety programs (Yuliani et al., 2021). Safety behavior can be divided into two forms: safe behavior and unsafe behavior.

Safe behavior includes obeying work procedures, using protective equipment, and acting carefully. In contrast, unsafe behavior includes ignoring procedures, working carelessly, or taking dangerous shortcuts. According to behavioral theory, employee behavior is influenced by environmental factors, communication, supervision, and consequences of actions (Geller, 2001; McSween, 2003).

RESEARCH METHOD

This study employed a survey method with a descriptive quantitative approach. A quantitative approach was selected because the collected data were numerical and analyzed statistically to describe phenomena objectively and systematically (Sugiyono, 2019). The survey method was conducted through questionnaire distribution to obtain information regarding employee awareness and behavior in implementing Occupational Safety and Health (OSH) culture. This study was descriptive in nature because it aimed to portray

actual conditions rather than examine causal relationships among variables (Creswell, 2012).

The research was conducted at the Fire and Rescue Department of Tulungagung Regency from February to April 2026. The population consisted of all employees involved in operational and administrative duties. Since the number of employees was limited, the study used a total sampling technique, in which all members of the population were selected as respondents (Sugiyono, 2019). The total number of respondents in this study was eight employees.

This study focused on two main aspects of OSH culture, namely OSH awareness and OSH behavior. OSH awareness included understanding work risks, attitudes toward safety, compliance with standard operating procedures (SOP), proactive safety awareness, and self-evaluation of potential risks (Roslan, 2022; Permana et al., 2024). Meanwhile, OSH behavior referred to employees' actual actions in implementing workplace safety, consisting of safe behavior and unsafe behavior (Yuliani et al., 2021; Sahab, 1997).

Data were collected using a closed-ended questionnaire with a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The research instrument consisted of 20 statement items, including 10 items measuring OSH awareness and 10 items measuring OSH behavior. The questionnaire was developed based on theories of safety awareness and safety behavior (Permana et al., 2024; Anggraeni, 2024). Primary data were obtained from respondents' answers, while secondary data were collected from institutional documents, OSH policies, and related literature (Ary et al., 2010).

Data analysis was conducted using descriptive statistics with IBM SPSS Statistics version 25. The purpose of the analysis was to describe employee awareness and behavior levels toward OSH culture without hypothesis testing (Sugiyono, 2019). The analysis procedures included data tabulation, frequency distribution, percentage calculation, and interpretation of findings.

The research procedure was carried out through the following stages: (1) Identifying research problems related to OSH culture, (2) reviewing relevant literature and preparing research instruments, (3) distributing questionnaires to all respondents, (4) collecting and tabulating data, (5) analyzing data using descriptive statistics, and (6) interpreting results and drawing conclusions.

Table 1. Research Aspects and Indicators

Research Aspects	Indicators
OSH Awareness	Risk understanding, safety attitude, SOP compliance, proactive awareness, self-evaluation
OSH Behavior	Safe behavior, unsafe behavior

The findings from these procedures were used to provide a comprehensive description of the implementation of OSH culture in the Fire and Rescue Department of Tulungagung Regency.

RESULTS AND DISCUSSIONS

This section presents the findings of the study and discusses the level of employee awareness and behavior in implementing Occupational Safety and Health (OSH) culture at the Fire and Rescue Department of Tulungagung Regency. The data were obtained from eight respondents through questionnaires and analyzed using descriptive statistics.

Respondent Characteristics

The respondents in this study consisted of eight employees, and all respondents were male. Most respondents were above 45 years old and had more than ten years of working experience. This condition indicates that the respondents had sufficient experience to provide accurate information regarding the implementation of OSH culture in the workplace.

Table 2. Respondent Characteristics

Characteristics	Category	Frequency	Percentage
Gender	Male	8	100%
	Female	0	0%
Age	25–35 years	2	25%
	36–45 years	1	12.5%
	> 45 years	5	62.5%
Education	Senior High School	5	62.5%
	Diploma	1	12.5%
	Bachelor Degree	2	25%
Work Experience	< 1 year	1	12.5%
	1–5 years	1	12.5%
	> 10 years	6	75%
Work Unit	Fire Operations	4	50%
	Rescue Team	2	25%
	Others	2	25%

Employee Awareness of OSH Culture

The level of employee awareness regarding the implementation of Occupational Safety and Health (OSH) culture was analyzed using descriptive statistics. This analysis aims to provide an overview of how well employees understand safety procedures, recognize potential workplace hazards, and demonstrate responsibility toward maintaining

a safe working environment. The results are presented in Table 3, which summarizes key statistical indicators such as mean, median, mode, and standard deviation for each awareness item measured in this study.

Table 3. Descriptive Analysis Result of Employee's Awareness Level toward OSH Implementation

		1	2	3	4	5	6	7	8	9	10
N	Valid	8	8	8	8	8	8	8	8	8	8
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		4.50	4.63	4.75	4.50	4.25	4.63	4.63	4.50	4.38	3.88
Std. Error of Mean		.189	.183	.164	.189	.164	.183	.183	.189	.183	.350
Median		4.50	5.00	5.00	4.50	4.00	5.00	5.00	4.50	4.00	4.00
Mode		4 ^a	5	5	4 ^a	4	5	5	4 ^a	4	4
Std. Deviation		.535	.518	.463	.535	.463	.518	.518	.535	.518	.991
Variance		.286	.268	.214	.286	.214	.268	.268	.286	.268	.982
Range		1	1	1	1	1	1	1	1	1	3
Minimum		4	4	4	4	4	4	4	4	4	2
Maximum		5	5	5	5	5	5	5	5	5	5
Sum		36	37	38	36	34	37	37	36	35	31
Per centils	25	4.00	4.00	4.25	4.00	4.00	4.00	4.00	4.00	4.00	3.25
	50	4.50	5.00	5.00	4.50	4.00	5.00	5.00	4.50	4.00	4.00
	75	5.00	5.00	5.00	5.00	4.75	5.00	5.00	5.00	5.00	4.75

a. Multiple modes exist. The smallest value is shown

The results of descriptive analysis show that employee awareness of OSH culture was generally high. Most questionnaire items had mean scores ranging from 4.25 to 4.75, indicating that respondents agreed or strongly agreed with statements related to safety awareness. Employees demonstrated a good understanding of work risks, the importance of safety procedures, and responsibility for maintaining workplace safety.

The highest score was found in the aspect of recognizing workplace risks and understanding the importance of following safety procedures. This finding indicates that employees already possess strong cognitive awareness regarding occupational safety. According to Roslan (2022), safety awareness refers to the ability to identify hazards and understand preventive actions.

However, one item obtained a relatively lower score compared with the others, suggesting that some employees were less consistent in self-evaluating risky behavior. This finding implies that although employees understand safety principles, reflective awareness still needs improvement. Permana et al. (2024) stated that self-awareness is an important foundation for building consistent safety practices.

Employee Behavior in Implementing OSH Culture

The analysis of employee behavior in implementing Occupational Safety and Health (OSH) culture was conducted to examine the extent to which employees translate their safety awareness into actual workplace practices. This aspect focuses on observable actions such as compliance with safety procedures, proper use of personal protective equipment, and participation in safety-related activities. The results of the descriptive statistical analysis are presented in Table 4, which displays key measures including mean, median, mode, and standard deviation for each behavior indicator assessed in this study.

Table 3. Descriptive Analysis Result of Employee's Behavior in Implementing OSH Culture

		11	12	13	14	15	16	17	18	19	20
N	Valid	8	8	8	8	8	8	8	8	8	8
	Missing	0	0	0	0	0	0	0	0	0	0
Mean		4.63	4.63	4.50	4.38	4.25	4.25	3.50	3.63	4.00	3.88
Std. Error of Mean		.183	.183	.189	.183	.164	.164	.327	.263	.189	.125
Median		5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Mode		5	5	4 ^a	4	4	4	4	4	4	4
Std. Deviation		.518	.518	.535	.518	.463	.463	.926	.744	.535	.354
Variance		.268	.268	.286	.268	.214	.214	.857	.554	.286	.125
Range		1	1	1	1	1	1	2	2	2	1
Minimum		4	4	4	4	4	4	2	2	3	3
Maximum		5	5	5	5	5	5	4	4	5	4
Sum		37	37	36	35	34	34	28	29	32	31
Perce ntils	25	4.00	4.00	4.00	4.00	4.00	4.00	2.50	3.25	4.00	4.00
	50	5.00	5.00	4.50	4.00	4.00	4.00	4.00	4.00	4.00	4.00
	75	5.00	5.00	5.00	5.00	4.75	4.75	4.00	4.00	4.00	4.00

a. Multiple modes exist. The smallest value is shown

The descriptive analysis also shows that employee behavior in implementing OSH culture was categorized as good. Most mean scores ranged from 4.00 to 4.63, indicating positive behavior in applying safety principles during daily work activities. Employees generally followed procedures, used personal protective equipment (PPE), and participated in safety-related activities.

The highest scores were found in the use of PPE and compliance with safety procedures. This finding supports Mullen (2004), who explained that PPE use is one of the main indicators of safety behavior. Consistent PPE use shows that safety values have started to become part of employee work habits.

Nevertheless, several items obtained lower scores, particularly those related to behavior under work pressure or emergency situations. This suggests that situational factors may influence employee consistency in maintaining safe behavior. Geller (2001) explained that unsafe behavior may emerge due to environmental pressure even when individuals have adequate safety knowledge.

Employee participation in OSH activities such as training and safety briefings was also considered good, although not yet optimal. Robbins and Judge (2017) emphasized that active involvement in training strongly influences behavioral change and learning effectiveness. Therefore, more interactive training programs are needed to strengthen safety implementation.

Overall Discussion of OSH Culture

Based on the overall findings, the implementation of OSH culture at the Fire and Rescue Department of Tulungagung Regency can be categorized as good to high. This condition is reflected in the relatively high levels of employee awareness and behavior. Neal and Griffin (2006) argued that a strong safety culture is characterized by balanced safety awareness and safety behavior.

However, this study also found a gap between awareness and behavioral consistency. Although employees had high awareness of safety, this awareness was not always fully translated into consistent behavior in all situations. This finding is consistent with Ajzen's (1991) Theory of Planned Behavior, which explains that attitudes or awareness do not automatically become behavior because they are also influenced by environmental factors and perceived behavioral control.

The contribution of this study lies in showing that improving OSH culture cannot rely only on increasing employee knowledge or awareness. It must also be supported by organizational systems, supervision, leadership commitment, and a conducive work environment. In high-risk institutions such as fire departments, these supporting factors are essential to ensure that safety awareness is consistently transformed into safe work behavior.

Therefore, continuous efforts through education, training, monitoring, and organizational commitment are necessary to strengthen OSH culture. By doing so, employee awareness can be implemented more consistently in everyday work behavior, leading to safer and more effective public service performance.

CONCLUSION

Based on the results and discussion, it can be concluded that the implementation of Occupational Safety and Health (OSH) culture at the Fire and Rescue Department of Tulungagung Regency is generally in the good category. This is in line with the research

objectives to identify employee awareness, analyze employee behavior, and describe the overall condition of OSH culture.

Employee awareness of OSH was high, as shown by their understanding of work hazards, compliance with procedures, and concern for safety. Employee behavior also showed positive results, such as using personal protective equipment (PPE), following standard operating procedures (SOP), and participating in safety activities.

However, several aspects still need improvement, especially consistency of behavior in certain situations and strengthening the culture of reporting hazards. This shows that high awareness has not always been followed by consistent behavior.

Theoretically, this study confirms that awareness is important in shaping safety behavior and building OSH culture. Practically, the institution is expected to improve training, supervision, and safety programs to strengthen OSH implementation. Future studies may involve larger samples or examine other factors influencing safety culture.

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References

- Cranford, S. W. (2020). Seven Seconds or Less: Buzzwordy Titles in the Era of MOFs and Tinder. *Matter*, 3(4), 965–967.
- Cronje, J. C. (2020). Designing Questions for Research Design and Design Research in e-Learning. *Electronic Journal of E-Learning*, 18(1), pp13-24.
- Fryer, L. K., & Dinsmore, D. L. (2020). The Promise and Pitfalls of Self-report: Development, research design and analysis issues, and multiple methods. *Frontline Learning Research*, 8(3), 1–9.
- Grieshaber, S. (2020). Equity and research design. In *Doing early childhood research* (pp. 177–191). Routledge.
- Saragih, M., & Novimariono, N. (2020). An Experimental Study of The Effectiveness PEOW MODEL Through Applying Quartet Card in Teaching English Writing. *Indonesian Journal of Education, Social Sciences and Research (IJESSR)*, 1(1), 32–40.

- Shu, K., Mahudeswaran, D., Wang, S., Lee, D., & Liu, H. (2020). Fakenewsnet: A data repository with news content, social context, and spatiotemporal information for studying fake news on social media. *Big Data*, 8(3), 171–188.
- Stewart, E. (2021). Detecting Fake News: Two Problems for Content Moderation. *Philosophy & Technology*, 1–18.
- van der Giesen, C., Cucurac Adhika, M., et al. (2020). Konsep keselamatan kerja dalam perspektif manajemen sumber daya manusia. *Jurnal Manajemen dan Keselamatan Kerja*, 5(2), 112–120.
- Adwan, A., et al. (n.d.). Konsep keselamatan dan kesehatan kerja dalam perspektif laboratorium dan industri. *Jurnal Kesehatan Kerja*, 4(1), 1–10.
- Anggraeni, R. (2024). Hubungan perilaku dengan budaya keselamatan dan kesehatan kerja. *Jurnal Manajemen Keselamatan Kerja*, 9(1), 15–28.
- Armstrong, M. (2014). *Armstrong's handbook of human resource management practice* (13th ed.). Kogan Page.
- Ary, D., Jacobs, L. C., Sorensen, C., & Walker, D. A. (2010). *Introduction to research in education* (8th ed.). Wadsworth.
- Bahsin, A., et al. (2024). The influence of safety awareness on employee compliance behavior. *International Journal of Occupational Safety*, 11(2), 45–58.
- Barokah, S., & Sukarno, T. (2020). Investasi keselamatan dan kesehatan kerja sebagai strategi bisnis berkelanjutan. *Jurnal Manajemen Industri*, 8(3), 210–220.
- Bernades, L. (2023). Organizational safety culture and employee commitment. *Journal of Workplace Safety*, 14(2), 87–99.
- Bird, F. E., & Germain, G. L. (1996). *Practical loss control leadership*. International Loss Control Institute.
- Buntarto. (2015). *Keselamatan dan kesehatan kerja di industri*. Pustaka Baru Press.
- Candrianto. (2022). Konsep keselamatan kerja dalam manajemen risiko. Dalam Evasari (Ed.), *Manajemen keselamatan kerja modern* (pp. 45–60). Andi.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th ed.). Pearson.
- Daryanto. (2018). *Keselamatan dan kesehatan kerja di lingkungan industri*. Gava Media.
- Eurich, T. (2018). *Insight: Why we're not as self-aware as we think, and how seeing ourselves clearly helps us succeed at work and in life*. Currency.
- Fajar, A., & Yusnaidi. (2022). Analisis tingkat kesadaran karyawan terhadap kesehatan dan

- keselamatan kerja di PT. Karya Tanah Subur. *JASMINE: Jurnal Akuntansi, Manajemen, dan Ilmu Ekonomi*, 6(2), 78–84.
<https://jasmien.cattleyadf.org/index.php/jas/article/view/94>
- Fara, D., et al. (2017). Safety awareness and its impact on occupational accidents. *Journal of Safety Research*, 62, 45–52.
- Fuadi, M., et al. (2022). Identifikasi potensi bahaya dan pengendalian risiko kerja. *Jurnal Teknik Industri*, 10(1), 33–41.
- Ghofur, M. A., et al. (2024). Kesadaran keselamatan dan kesehatan kerja (K3): Kunci keberhasilan perusahaan dalam mengelola risiko dan produktivitas. *Journal of Educational Innovation and Public Health*, 3(1), 55–68.
- Hadiwijaya, R. (2023). Pengaruh tingkat kesadaran dan pengawasan terhadap kepatuhan keselamatan dan kesehatan kerja (K3) di PT Vicor Construction. *Cakrawala*, 7(2), 101–110. <http://www.cakrawala.imwi.ac.id/index.php/cakrawala/article/view/509>
- Heinrich, H. W. (1980). *Industrial accident prevention: A scientific approach* (5th ed.). McGraw-Hill.
- International Labour Organization. (1989). *Safety and health in construction*. ILO.
- Kasmir. (2016). *Manajemen sumber daya manusia (Teori dan praktik)*. Rajagrafindo Persada.
- Kementerian Tenaga Kerja dan Transmigrasi Republik Indonesia. (1999). Keputusan Menteri Tenaga Kerja dan Transmigrasi Republik Indonesia Nomor KEP-150/MEN/1999 tentang penyelenggaraan program jaminan sosial tenaga kerja.
- London, M., et al. (2023). Self-awareness and workplace effectiveness. *Journal of Organizational Psychology*, 23(1), 12–25.
- Mohamed, A. (2002). Safety climate in construction site environments. *Journal of Construction Engineering and Management*, 128(5), 375–384.
- Mondy, R. W. (2008). *Human resource management* (10th ed.). Pearson.
- Permana, T. A. W., Rusba, K., & Wahyuni, S. (2024). Tingkat kesadaran diri dan perilaku keselamatan pekerja catering di PT. Mutiara Merdeka Hotel Balikpapan. *IDENTIFIKASI: Jurnal Keselamatan, Kesehatan Kerja dan Lindungan Lingkungan*, 4(1), 1–12.
- Ping, C., & Hee, O. C. (2014). Safety behavior among employees in industrial settings. *Asian Journal of Management Sciences*, 3(2), 78–85.
- Prasetyo, A., & Budiarti, E. (2016). *Manajemen risiko keselamatan kerja dalam industri*

- manufaktur. *Jurnal Teknik dan Manajemen Industri*, 5(1), 22–30.
- Ramli, S. (2010). Sistem manajemen keselamatan dan kesehatan kerja OHSAS 18001. Dian Rakyat.
- Reason, J. (1997). *Managing the risks of organizational accidents*. Ashgate.
- Riansyah, M., & Ezriani, D. (2024). Budaya keselamatan kerja dan pengaruhnya terhadap produktivitas organisasi. *Jurnal Ilmu Manajemen dan Keselamatan Kerja*, 9(1), 66–79.
- Roslan, N. (2022). Safety awareness and accident prevention strategies. *International Journal of Safety Studies*, 8(3), 102–115.
- Sahab, S. (1997). *Manajemen keselamatan dan kesehatan kerja*. Bumi Aksara.
- Sarbiah. (2023). Implementasi sistem keselamatan dan kesehatan kerja dalam organisasi modern. *Jurnal Kesehatan Kerja Indonesia*, 11(2), 88–97.
- Saraswati, D., et al. (2020). Evaluasi penerapan sistem K3 pada industri manufaktur. *Jurnal Teknik dan Keselamatan Kerja*, 6(3), 150–160.
- Setiono, A., et al. (2019). Konsep budaya keselamatan dan kesehatan kerja di perusahaan manufaktur. *Jurnal K3 Nasional*, 5(2), 77–85.
- Stopiah, & Mamang, E. (2018). *Manajemen sumber daya manusia*. Alfabeta.
- Sugiyono. (2019). *Metode penelitian kuantitatif, kualitatif, dan R&D*. Alfabeta.
- Suma'mur, P. K. (2014). *Higiene perusahaan dan kesehatan kerja (Hiperkes)*. Sagung Seto.
- Suraji, A., & Endroyo, B. (2009). Model sistem manajemen keselamatan kerja pada proyek konstruksi. *Jurnal Teknik Sipil*, 16(1), 15–24.
- Tarwaka. (2015). *Keselamatan dan kesehatan kerja: Manajemen dan implementasi K3 di tempat kerja*. Harapan Press.
- Undang-Undang Republik Indonesia Nomor 1 Tahun 1970 tentang Keselamatan Kerja.
- Wang, X., et al. (2018). Unsafe behavior as a major cause of construction accidents. *Safety Science*, 110, 146–154.
- Yuliani, R., et al. (2021). Perilaku keselamatan kerja dan faktor-faktor yang memengaruhinya. *Jurnal Kesehatan Masyarakat*, 12(2), 134–142.
- hi, S., Guinée, J., Kramer, G. J., & Tukker, A. (2020). A critical view on the current application of LCA for new technologies and recommendations for improved practice. *Journal of Cleaner Production*, 259, 120904.