

The Relationship Between Worker's Knowledge and Compliance in Implementing the Occupational Health and Safety Program at PT. Moratelindo

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Abstract

The rapid development of industry in the era of globalization has had a significant impact on occupational health and safety (OHS), including in Indonesia. The implementation of OHS programs is essential to prevent occupational accidents and work-related diseases, which continue to increase each year. This study aims to determine the relationship between workers' knowledge and compliance in implementing the OHS program at PT Moratelindo Regional Makassar. This research employed an analytical survey design with a cross-sectional approach. The population consisted of all 37 workers at PT Moratelindo, with 32 respondents selected as samples using a total sampling technique. The results showed that most respondents had good knowledge of OHS (90.6%), and their level of compliance with implementing OHS programs was also high (96.9%). The chi-square statistical test revealed a significant relationship between workers' knowledge and compliance with OHS implementation, with a p-value of 0.002 ($< \alpha = 0.05$). It can be concluded that workers' knowledge is significantly associated with their compliance in implementing OHS programs.

INTRODUCTION

Occupational Health and Safety (OHS) programs play a crucial role in preventing workplace accidents and ensuring the well-being of workers. However, the effectiveness of these programs largely depends on the level of workers' compliance in following established safety procedures (Dahl, 2013; Quagrains et al., 2024; Salguero-Caparrós, Pardo-Ferreira, Martínez-Rojas, & Rubio-Romero, 2020). One of the key factors influencing compliance is workers' knowledge regarding OHS principles, hazards, and preventive measures. Adequate knowledge can shape positive attitudes and behaviors, enabling workers to recognize risks and adhere to safety regulations more consistently. Nevertheless, in many workplaces, gaps in knowledge and awareness still lead to non-compliance, increasing the risk of occupational injuries and health problems. Therefore, examining the relationship between workers' knowledge and their compliance in implementing OHS programs is essential to identify strategies for improving safety performance and creating a safer working environment (Adebiyi, Babalola, Amuda-Yusuf, Rasheed, & Olowa, 2020; Uchenna Okoye, Ugochukwu Ezeokonkwo, & Okechukwu Ezeokoli, 2016).

Currently, the industrial world is developing and growing rapidly, so it is undeniable that the era of globalization has had a significant impact on the industrial world, especially in Indonesia (Maharani & Wahyuningsih, 2017). The development of the industrial world is also accompanied by technological developments. Industrial competition requires companies to optimize all their resources to produce high-quality products. The quality of the resulting product is also inseparable from the role of the

company's human resources. Human resources as workers are inseparable from issues related to safety and health while working (Lubis et al., 2024). A work accident is an undesirable event or incident that harms humans, damages property, or causes losses to the production process. Work accidents can occur due to poor or dangerous conditions or materials (Endriastuty & Adawia, 2018).

According to the International Labour Organization (ILO) in 2022, 2.9 million workers died annually due to occupational accidents and occupational diseases. Approximately 2.4 million (86%) of these deaths were due to occupational diseases, while more than 380,000 (13.7%) were due to occupational accidents. Each year, there are nearly 1,000 times more non-fatal workplace accidents than fatal ones. Non-fatal accidents are estimated to affect 374 million workers (Haworth & Hughes, 2023).

Based on data processing on workplace accidents and Occupational Diseases (PAK) from the BPJS Employment Work Accident Insurance (JKK) program in 2022, cases continue to increase annually. In 2021, 234,370 cases were recorded, resulting in 6,552 worker deaths, a 5.7% increase compared to 2020. This figure indicates that the implementation of OSH must increasingly become a priority in the Indonesian workplace (Ministry of Manpower, 2022).

Occupational Safety and Health (OSH) is a means of preventing accidents, disability, and death resulting from workplace accidents. Occupational safety and health (OSH) is one aspect of workforce protection through the application of protective control technology to all aspects that could potentially harm workers. Implementing effective occupational safety and health controls is expected to improve the workforce's physical endurance, work capacity, and health (Rimporok & Hamidah, 2016).

The Occupational Safety and Health (K3) Program is a program system created for workers and employers as an effort to prevent the occurrence of work accidents and illnesses due to work relationships in the work environment by identifying things that have the potential to cause work accidents and anticipatory actions if such an event occurs (Maharani & Wahyuningsih, 2017). The large number of work accidents that occur causes the government to have to collaborate with every existing company, starting with improving Occupational Safety and Health (Wibowo, 2024).

With various demands regarding occupational health and safety issues, companies must be able to fulfill their responsibilities in providing protection to employees by implementing occupational health and safety programs. Therefore, the government provides guarantees to employees by drafting the 1947 Law on Accidents Number 33, Government Regulation Concerning the Statement of the Enactment of the 1947 Accident Regulations (PP No. 2 of 1948), which demonstrates the awareness of the importance of occupational safety within the company (Saragih et al., 2023).

Law of the Republic of Indonesia Number 3 of 1992 states that it is only natural that workers play an active role and share responsibility for implementing welfare maintenance and improvement programs to ensure the protection of workers and their families. Therefore, it is not only the company that is responsible for this issue; employees must also play an active role in achieving shared prosperity (Indonesia, 1992).

Knowledge is a facilitating factor for employees to implement Occupational Health and Safety (K3) programs. Therefore, this factor triggers behavior, forming the basis or motivation for their actions due to traditions or habits, beliefs, education level, and socioeconomic status (Marchamah & KH, 2017). Roger's statement in Notoatmodjo states that knowledge/cognitive is a very important domain for the formation of behavior, and behavior that is based on knowledge will last longer than behavior that is not based on knowledge (Wibowo, 2024).

According to Blass, compliance is accepting orders from others. Compliance can occur in any form, as long as the individual demonstrates obedient behavior towards something or someone. Compliance in wearing PPE when entering a dangerous workplace, not only applies to workers, but also to company leaders, field supervisors, supervisors, and even applies to anyone who enters the workplace. Thus, workers will feel that their leaders are very disciplined and concerned with Occupational Safety and Health issues (Rimporok & Hamidah, 2016).

Based on the initial study conducted at PT Moratelindo, data was obtained that the number of workers was 37 people, and the results of brief interviews conducted by researchers found data that worker compliance in implementing the K3 program was still not optimal because there were no sanctions for violating the program, so based on these problems, it is necessary to conduct research on worker knowledge with compliance in implementing the Occupational Health and Safety Program.

Although numerous studies have reported that workers' knowledge is associated with compliance in implementing Occupational Health and Safety (OHS) programs, most previous studies have focused on manufacturing industries, construction sectors, or hospital settings. In addition, these studies generally emphasize the statistical relationship between knowledge and compliance without considering the specific characteristics of the workplace that may influence workers' safety behavior. Therefore, evidence regarding the relationship between workers' knowledge and compliance in the telecommunication infrastructure sector remains limited, particularly in Indonesia.

Considering these gaps, this study investigates the relationship between workers' knowledge and compliance in implementing the Occupational Health and Safety Program at PT Moratelindo, a telecommunication infrastructure company. The findings are expected to enrich the existing literature by providing empirical evidence from a different industrial setting and offer practical recommendations for improving OHS program implementation through strategies aimed at enhancing workers' knowledge and compliance

METHOD

The research design is an analytical survey that attempts to explore how and why phenomena occur (Hikmawati, 2020). The cross-sectional approach was used to determine the relationship between worker knowledge and compliance with occupational health and safety programs at PT Moratelindo. This research was conducted at the research location at PT Moratelindo, which is located on Jl Pelita Raya, Makassar City in April – June 2025.

The population in this study is the total number of research objects or objects studied. The population is all employees at PT Moratelindo, namely, a total of 37 respondents. The sample is a sample is a portion of the population that is considered representative of the population. The sample in this study is the entire population used as a sample (total sampling), namely employees at PT Moratelindo, namely 32 respondents. Data collection used a questionnaire.

Initially, the target population consisted of 37 employees at PT Moratelindo. However, during the data collection process, only 32 employees met the inclusion criteria and agreed to participate by completing the questionnaire. Five employees were excluded because they were unavailable during the study period due to field assignments and incomplete questionnaire responses. Therefore, the final sample comprised 32 respondents, representing all eligible participants who fulfilled the study requirements.

RESULTS AND DISCUSSION

1. Respondent Characteristics

Table 1. Frequency Distribution of Worker Characteristics at PT Moratelindo

Characteristics Respondent	n	%
Age		
20-40	29	90,6
41-50	3	9,4
>50 years	0	0,0
Total	32	100
Education		
SD	0	13,2
JUNIOR HIGH SCHOOL	0	4,0
SMA	1	3,1
College	31	96,9
Length of work		
1-5 Years	27	84,4
6-10 Years	3	9,4
>10 Years	2	6,3
Total	32	100

Source: Primary Data, 2025

Based on table 1, the results show that the characteristics of respondents based on age are 29 respondents (90.6%) aged 20-40 years, 3 respondents (9.4%) aged 41-50 years. Furthermore, based on educational characteristics, it can be seen that 31 respondents (96.9%) have graduated from college, 1 respondent (3.1%) has a high school education. Furthermore, based on the characteristics of length of service, 27 respondents (84.4%) have a work period of 1-5 years, 3 respondents (9.4%) have a work period of 6-10 years, and 2 respondents (6.3%) have a work period of >10 years.

2. Univariate Analysis

Table 2. Frequency Distribution of Worker Knowledge About Health and Safety Programs at PT Moratelindo

Employee Knowledge	n	%
Good	29	90,6
Enough	3	9,4
Not enough	0	0
Total	32	100

Source: Primary Data, 2025

Based on table 2, the results show that workers' knowledge of the Health and Safety Program at PT Moratelindo is in the good category, namely 29 respondents (90.6%) and sufficient knowledge, namely 3 respondents (9.4%).

Table 3. Frequency Distribution of Compliance in Implementing the K3 Program among Workers at PT Moratelindo

Level of Knowledge	n	%
Implemented	31	96,9
Not applied	1	3,1
Total	32	100

Sumber : Data Primer, 2025

Based on table 3, the results show that compliance with implementing K3 among workers regarding the Health and Safety Program at PT. Moratelindo in the implementing category is 31 respondents (96.9%) and not implementing is 1 respondent (3.1%).

3. Bivariate Analysis

Table 4. Relationship between Worker Knowledge and Compliance in Implementing the K3 Program at PT Moratelindo

Knowledge	Compliance in Implementing K3				Total	p-value	
	Implement		Not applied				
	n	%	n	%	n		%
Good	29	90,6	0	0,0	29	90,6	0,002
Enough	2	6,3	1	3,1	3	9,4	
Total	31	96,9	1	3,1	32	100	

Source: Primary Data, 2025

Based on Table 4, cross-tabulation between workers' knowledge and compliance in implementing the K3 program, it is known that as many as 29 respondents (90.6%) have good knowledge and comply with implementing K3, as many as 3 respondents (9.4%) have sufficient knowledge and comply with implementing as many as 2 respondents (6.3%) and 1 respondent (3.1%) does not comply with implementing K3.

DISCUSSION

Based on the research results obtained regarding the relationship between worker knowledge and compliance in implementing the Occupational Health and Safety Program at PT Moratelindo, it can be explained as follows:

Based on the results of the chi-square test, it shows that the significant value of the probability of knowledge is $p\text{-value} = 0.002$ or $<\alpha\text{-value} = 0.05$. This proves that worker knowledge has a relationship with compliance in implementing the PT Moratelindo Regional Makassar OHS program. Based on the results obtained, almost all respondents have knowledge that is in the "Good" category regarding the implementation of the Occupational Safety and Health (K3) Program.

This demonstrates workers' knowledge of occupational safety and health within the company. The problem in this company is that employees have varying ages and varying lengths of service, which influence their behavior. If workers have a high level of knowledge about the OHS program, they will utilize it. However, if workers have low knowledge of the program, they will not be willing to utilize the program provided by the company. Efforts must be made to increase workers' knowledge by continuously providing outreach to them.

This research is in line with the research conducted by (Saragih et al., 2023) namely the frequency distribution table shows that the knowledge of factory employees regarding the Occupational Health and Safety (K3) program of 54 factory employees (42.2%) is good, while 61 factory employees (47.7%) have sufficient knowledge and 13 factory employees (10.2%) have insufficient knowledge regarding the K3 program. For sample knowledge, it is assessed based on the average value (mean) of the questionnaire, the results obtained are 74.22 (sufficient).

Knowledge is the result of human sensing or the result of a person's knowledge of an object through their senses (eyes, nose, ears, etc.). Naturally, the time from sensing to producing knowledge is greatly influenced by the intensity of attention and perception of the object. Most of a person's knowledge is acquired through the senses of hearing, namely the ears and the sense of sight (S Notoatmodjo, 2018).

These results are supported by Lawrence Green's theory, which states that health behavior is influenced by three main factors: predisposing factors (knowledge, attitudes, beliefs), supporting factors (availability of facilities or infrastructure), and motivating factors (support from others) (Notoadmojo, 2012). In this case, knowledge as a predisposing factor plays an important role in shaping compliance with OHS practices.

Knowledge, or the cognitive domain, is a very important dominant factor in shaping a person's actions (overbehavior). If someone accepts a new behavior or adopts a behavior based on knowledge, awareness, and a positive attitude, the behavior will persist. Conversely, if the behavior is not based on knowledge and awareness, it will not last long (Soekidjo Notoatmodjo, 2018). Companies need to provide regular training and adequate educational resources, such as safety posters, emergency simulations, and orientation programs for new employees. Continuously improving knowledge is expected to foster a safe and productive work culture.

Based on the findings, this study confirms that workers' knowledge plays a significant role in influencing their compliance with Occupational Health and Safety (OHS) program implementation. The high level of knowledge among respondents is in line with the high level of compliance observed, indicating that well-informed workers are more likely to adhere to safety procedures and regulations. The statistically significant relationship ($p\text{-value} = 0.002$) further strengthens the assumption that knowledge is a key determinant of safe behavior in the workplace. These results imply that continuous education, training, and socialization of OHS principles are essential strategies to maintain and improve compliance levels (Ashari, 2022; Frick, 2011; Kadir et al., 2026; Kirana & Rianse, 2025). Therefore, organizations should prioritize enhancing workers' knowledge as part of their safety management efforts to create a safer and more sustainable working environment.

In the context of PT Moratelindo, workers are frequently involved in field activities that expose them to various occupational hazards, including working at heights, handling electrical equipment, and operating in dynamic environments. Under these conditions, adequate knowledge enables workers to recognize potential risks, understand standard operating procedures, and consistently use personal protective equipment, thereby improving their compliance with OHS regulations. These findings indicate that knowledge is not only associated with compliance statistically but also serves as a practical foundation for developing safe work behavior. Therefore, strengthening continuous OHS

education, regular safety training, and periodic supervision is essential to sustain workers' compliance and enhance the effectiveness of the company's Occupational Health and Safety program

CONCLUSIONS AND RECOMMENDATIONS

The results of the study indicate that workers' knowledge of the Health and Safety Program at PT Moratelindo is in the good category, and compliance in implementing the program is also high. This study also found a significant relationship between the level of worker knowledge and their compliance in implementing the occupational health and safety program. Therefore, it can be concluded that the better the workers' understanding, the greater their compliance with the implementation of the OHS program in the company.

Based on the conclusion that good knowledge influences the high level of worker compliance in implementing the Occupational Health and Safety program at PT Moratelindo, it is recommended that the company strengthen efforts to improve worker understanding through regular training, continuous socialization, and the provision of easily accessible educational media to ensure consistent implementation of K3. In addition, further researchers are encouraged to expand the scope of the study by considering other factors that may influence worker compliance, such as work culture, supervision, and motivation, so that the research results can provide a more comprehensive and applicable contribution to the development of strategies to improve the implementation of K3 in the work environment.

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