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Factor Analysis Affecting Safe Work Behavior of Technical Service Officers at PLN

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ABSTRACT

Introduction: PT PLN (Persero), a state-owned enterprise dedicated to the provision and distribution of electrical energy in Indonesia, operates in environments characterized by substantial risks. The Technical Services (Yantek) department, which handles tasks involving high voltage electricity, elevated heights, unpredictable weather, natural conditions, and substantial workloads, is particularly susceptible to these hazards. Notably, Yantek work is a significant contributor to the incidence of occupational accidents within PT PLN (Persero). **Method:** This study aims to identify the factors influencing Yantek Officers' adherence to safe working behaviors. The variables examined as potential determinants of safe behavior include Occupational Health and Safety (OHS) policy, OHS supervision, workload, OHS promotion, relationships with coworkers, and motivation as an intervening variable. **Result:** The study involved 270 Yantek workers, selected through proportional random sampling from various PLN locations. The findings revealed that factors significantly influencing safe work behavior among workers include OHS policy (p-value=0.000), OHS promotion (p-value=0.000), and relationships with coworkers (p-value=0.000). These significant relationships were observed when the independent variables were directly linked to safe work behavior. **Conclusion:** It is recommended that PT PLN (Persero) enhance the promotion and socialization of OHS policies to workers, including providing education regarding the company's OHS directives to ensure their proper implementation by employees. Additionally, the company should consistently motivate workers to engage in safe behavior by fostering a culture where coworkers act as motivators, reminding each other to avoid unsafe behaviors and conditions.

KEYWORDS: Safe work behavior, OHS policies, OHS promotion, Technical Service Officers.

INTRODUCTION

In general, occupational safety and health (OSH) issues in Indonesia remain frequently overlooked, as evidenced by the alarmingly high incidence of workplace accidents. Despite workers being invaluable assets, the level of concern for OHS within the business sector is relatively low. OSH encompasses all aspects of workplace health and safety, with a primary focus on preventing hazards (Liu *et al.*, 2020).

According to estimates from the International Labour Organization, 160 workers get illnesses related to their jobs every day, and one worker worldwide passes away from an occupational injury every 15 seconds. In addition to causing occupational illnesses and injuries, workplace accidents can cost businesses money. Many studies have focused on worker behaviors that promote safety and prevent injuries. The majority of behavior-based safety researchers believe that workers acting unsafely or inappropriately are the primary cause of harmful accidents. Human error is not the only factor that can account for workplace safety but also there are numerous other aspects as well (Zahiri Harsini *et al.*, 2020).

Occupational safety and health (OSH) is essential for improving effectiveness and productivity in the workplace. Zero accidents or accident-free work is a crucial aspect of OSH in any work environment. Accidents usually occur due to risky behavior and unsafe working conditions. Data shows that approximately 85% of work-related accidents are caused by risky behavior. Human error accounts for 80–85% of these accidents. Poor safety behavior among workers is the primary cause of a high number of work-related accidents, emphasizing the importance of safe behavior in the workplace (Bafadhal, Hapis and Kurniawati, 2022).

PT PLN (Persero) is a state-owned company in Indonesia which provides electrical energy to the public. Because it is related to electricity which is a source of danger, PLN is a company that employs workers at a relatively high risk level. The work performed by Technical Services (Yantek) at PT PLN (Persero) is particularly high-risk. This is due to the nature of their tasks, which involve direct interaction with both low-voltage (220-380 Volt) and high-voltage (20 KV) electrical currents, working at heights, exposure to unpredictable

weather conditions, challenging natural and geographical environments, and high work pressure due to the need for rapid response to disruptions. This work is conducted around the clock, 24 hours a day. In addition, based on data on work accidents that occurred at PLN Regional Sulmapana, out of 13 work accidents in 2023, all work accidents occurred in the distribution sector which is the field of work of technical service officers (Yantek).

Given the aforementioned factors and the critical importance of achieving zero accident performance at PT PLN (Persero)—an imperative that is non-negotiable and vital for maintaining corporate performance—this study aims to identify the factors that may influence the safety behavior of Technical Service Officers (Yantek), considering the high-risk nature of their work.

This research endeavors to elucidate the determinants influencing Yantek Officers' adherence to safe work practices. The study examines several variables hypothesized to impact safe behavior, including Occupational Health and Safety (OHS) policies, OHS supervision, workload, OHS promotion, coworker relationships, with motivation serving as a mediating variable.

The hypotheses posited in this research are as follows:

- a. Company policies pertaining to OHS have an impact on safe work behavior, either directly or mediated by motivation, among Technical Service Officers (Yantek).
- b. OHS supervision influences safe work behavior, both directly and through the mediating effect of motivation, among Technical Service Officers (Yantek).
- c. Workload affects safe work behavior, both directly and via motivation, in Technical Service Officers (Yantek).
- d. OHS promotion impacts safe work behavior, both directly and through the influence of motivation, among Technical Service Officers (Yantek).
- e. Relationships with coworkers affect safe work behavior, both directly and indirectly through motivation, among Technical Service Officers (Yantek).

- f. Motivation at work significantly influences the safe work behavior of Technical Service Officers (Yantek).

In synthesizing these hypotheses, the study aims to provide a comprehensive understanding of the multifaceted factors that contribute to the implementation of safe work practices among Yantek Officers, with a particular focus on the role of motivation as an intermediary variable.

METHODS

This research was conducted subsequent to securing recommendation and approval from the Research Ethics Committee of the Faculty of Public Health at Hasanuddin University, Makassar, as documented by permit number 1374/UN4.14.1/TP.01.02/2024. The study employs a quantitative research design, with data collection facilitated through an online questionnaire survey and data analysis performed using the path analysis method via the SmartPLS software.

The study's population encompasses a total of 766 workers distributed across various

locations. The research employs a Proportional Random Sampling method, ensuring that each member of the population possesses an equal probability of being selected as a sample. The sample size was determined using the Slovin's formula, given the known population size (N).

Following the principles of this sampling technique, the formula for calculating the sample size is applied as outlined by Santoso, (2023):

$$n = \frac{766}{766 \cdot (0,05)^2 + 1}$$

$$n = \frac{766}{2,91} = 263$$

So the minimum sample size must be 263 workers.

Data collection conducted in this study is primary data collection and secondary data. The data analysis used in this study was path analysis using Smart PLS. The data analysis method uses Outer Model testing which defines how each indicator relates to its latent variable.

RESULT

Respondents in this study were Technical Service Officers of PT PLN (Persero) spread across PLN UP3 Makassar Selatan, PLN UP3 Makassar Utara, PLN UP3 Kendari, and PLN UP3 Mamuju. The number of respondents who

filled out the questionnaire in the form of google form was 270 workers. The general description of the characteristics of respondents in this study is as follows:

Table 1. Characteristics of respondents

Respondent Characteristics	Frequency		
	Total	%	
Age	21-30 years	76	28.1
	31-40 years old	85	31.4
	41-50 years old	88	32.5
	51-60 years old	21	7.7
Gender	Male	270	100.0
	Women	0	0
Period of Service	< 1 Year	12	4.4
	1-5 Years	65	24.0
	5-10 Years	76	28.1

10-15 Years	45	16.6
> 15 Years	72	26.6

Based on the data presented in Table 1, it is evident that the entirety of the 270 respondents are male. The age distribution among these respondents is as follows: 28.1% are between 21-30 years old, 31.4% fall within the 31-40 age range, 32.5% are aged 41-50 years, and 7.7% are between 51-60

years old. Additionally, the data reveals variations in the respondents' lengths of service: 4.4% have less than one year of tenure, 24.0% have served for 1-5 years, 28.1% for 5-10 years, 16.6% for 10-15 years, and 26.6% have been employed for more than 15 years.

Table 2. Path Coefficient Results

Relationship between X and Y Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Workload -> Motivation -> Safe work behaviour	-0,019	-0,018	0,013	1,544	0,123
Workload -> Safe work behaviour	0,024	0,020	0,027	0,878	0,381
Relationship with colleagues -> Motivation -> Safe work behaviour	-0,002	-0,002	0,003	0,683	0,495
Relationship with colleagues -> Safe work behaviour	0,379	0,382	0,053	7,108	0,000
OHS policy -> Motivation -> Safe work behaviour	0,008	0,007	0,007	1,136	0,257
OHS policy -> Safe work behaviour	0,328	0,320	0,085	3,842	0,000
OHS supervision -> Motivation -> Safe work behaviour	-0,006	-0,005	0,007	1,939	0,348
OHS supervision -> Safe work behaviour	0,087	0,098	0,087	1,001	0,317
OSH promotion -> Motivation -> Safe work behaviour	0,000	-0,001	0,003	0,134	0,893
OSH promotion -> Safe work behaviour	0,236	0,230	0,051	4,645	0,000
Motivation -> Safe work behaviour	-0,043	-0,040	0,027	1,558	0,120

The t-statistic value,

which is less than 1.96, with a

representing the ratio of the deviation of an estimated number from its hypothesized value to its standard error, serves as a critical determinant in t-tests for either supporting or rejecting the null hypothesis. To be deemed significant, the t-statistic must exceed 1.96. The statistical analysis results presented in Table 2 reveal the following t-statistics for the relationships among the variables under study:

a. The relationship between workload and safe work behavior mediated by motivation yields a t-statistic of 1.544,

significance level of 0.123, greater than 0.05. This indicates that the workload variable, when mediated by motivation, does not significantly impact safe work behavior in this context.

b. The direct relationship between workload and safe work behavior produces a t-statistic of 0.878, below the 1.96 threshold, and a significance level of 0.381, exceeding 0.05. This demonstrates that the workload variable does not significantly affect safe work behavior in this study.

- c. The relationship between coworker interactions and safe work behavior, through the mediation of motivation, shows a t-statistic of 0.683, which is less than 1.96, with a significance level of 0.495, greater than 0.05. This result suggests that coworker relationships, mediated by motivation, do not significantly influence safe work behavior in this investigation.
- d. The direct effect of coworker interactions on safe work behavior yields a t-statistic of 7.108, surpassing the 1.96 benchmark, and a significance level of 0.000, below 0.05. This indicates a significant impact of coworker relationships on safe work behavior in this study.
- e. The relationship between OHS policy and safe work behavior, mediated by motivation, produces a t-statistic of 1.136, less than 1.96, with a significance level of 0.257, greater than 0.05. This shows that OHS policy, when mediated by motivation, does not significantly affect safe work behavior in this analysis.
- f. The direct relationship between OHS policy and safe work behavior yields a t-statistic of 3.842, exceeding 1.96, with a significance level of 0.000, less than 0.05. This result signifies a significant effect of OHS policy on safe work behavior in this study.
- g. The relationship between OHS supervision and safe work behavior, through the mediation of motivation, shows a t-statistic of 1.939, just below 1.96, with a significance level of 0.348, greater than 0.05. This indicates that OHS supervision, mediated by motivation, does not significantly impact safe work behavior in this study.
- h. The direct effect of OHS supervision on safe work behavior yields a t-statistic of 1.001, below the 1.96 threshold, and a significance level of 0.317, exceeding 0.05. This demonstrates that OHS supervision does not significantly influence safe work behavior in this investigation.
- i. The relationship between OHS promotion and safe work behavior, mediated by motivation, produces a t-statistic of 0.134, significantly less than 1.96, with a significance level of 0.893, greater than 0.05. This shows that OHS promotion, when mediated by motivation, does not significantly affect safe work behavior in this context.
- j. The direct relationship between OHS promotion and safe work behavior yields a t-statistic of 4.645, surpassing the 1.96 benchmark, with a significance level of 0.000, below 0.05. This indicates a significant impact of OHS promotion on safe work behavior in this study.
- k. Lastly, the relationship between motivation and safe work behavior produces a t-statistic of 1.558, less than 1.96, with a significance level of 0.120, greater than 0.05. This result suggests that motivation does not significantly affect safe work behavior in this analysis.

DISCUSSION

The Effect of OHS Policy Directly or Through Work Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) PLN

The OSH policy is a form of regulation and commitment issued by the company to protect workers from the dangers of work accidents and hazards that may occur in the surrounding environment. The OHS policy is very important as a guideline for companies in managing their workers to always be safe so that they can avoid work accidents and Occupational Diseases.

From the results of data analysis in this study, the t-statistics of the relationship between OHS policy and safe work behaviour through motivation is $1.136 < 1.96$ at a significance level of $0.257 > 0.005$. These results indicate that the OHS policy variable has no significant effect on safe work behaviour through work motivation. In the direct relationship between OHS policy and safe work behaviour, the t-statistics data obtained is $3.842 > 1.96$ at a significance level of $0.000 < 0.005$. This result shows that OHS policy when directly related to safe work behaviour has a significant influence.

The significant relationship between OSH policy and safe work behaviour is in line with

research conducted by Setyawan, Sudhartio and Rantau, (2021) who conducted research on 105 worker respondents who are general OHS experts in construction companies in Batam. This study wanted to find factors

associated with safe behavior of workers in the construction sector. The results showed that the p-value for the management commitment variable was 0.000 so it could be concluded that there was a significant relationship between management commitment and workers' safe behavior.

Other research conducted by Yuliani et al., 2021 on construction workers, obtained statistical test results between the application of procedures set by the company with safety behaviour at a significance value of $0.001 < 0.05$ and the application of punishment with safety behaviour at a significance value of $0.011 < 0.05$. The two data above show that the application of work procedures and the provision of punishment as rewards and punishments which are part of the company's policy on OHS have a significant relationship with the safe behaviour of these construction workers.

Based on the data above, it shows that the existence of an OHS policy in a company plays an important role because when workers understand and apply the OHS policy while working, they will obey the procedures or SOPs that have been set and make them behave safely while working. The condition that there are still workers who actually understand the existence of an OHS policy but still do not implement it at work shows that the existence of an OHS policy in a company is not only a formality, but it is necessary to carry out regular socialization and induction to workers so that they really understand the substance of the policy and apply what they understand when doing work.

The Effect of OHS Supervision Directly or Through Work Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) PLN

OHS supervision is a form of responsibility for overseeing workers, workplaces, and the environment around workers as well as authority over workers to ensure that safety

and health standards are followed. OHS supervisors are responsible for recognising hazards, providing appropriate training, and ensuring that workers comply with safety procedures both before work begins and until work is completed.

The analysis of the data in this study reveals that the t-statistic for the effect of OHS supervision on safe work behavior, mediated by work motivation, is 1.939, which is less than the critical value of 1.96 at a significance level of 0.348, exceeding the threshold of 0.005. These findings suggest that the OHS supervision variable does not significantly impact safe work behavior through the intermediary of work motivation. Furthermore, examining the direct relationship between OHS supervision and safe work behavior, the t-statistic is 1.001, also below the 1.96 threshold, with a significance level of 0.317, again surpassing 0.005. This outcome indicates that OHS supervision, when directly correlated with safe work behavior, has an insignificant effect.

These results align with the research conducted by Putra & Citroatmojo (2021) involving 143 workers at PT Meindo Elang Indah in the oil and gas sector. Their data analysis revealed a p-value of 0.559, which is greater than 0.005, concerning the relationship between supervision variable and workforce safety behavior. This finding suggests that there is no significant relationship between OHS supervision and workers' safe behavior,

The results of this study are also in line with research conducted by Agustiyana, Listyandini and Ginanjar (2020) which researched the factors that influence unsafe actions in workers at PT Taisho Pharmaceutical Indonesia by taking 60 workers as samples. The results showed that the supervision variable had a p-value of 0.635 so it can be concluded that supervision does not have a significant relationship with workers' unsafe actions. The results of this study, although looking for factors that influence unsafe behavior, could at least be a reference to the extent to which supervision of workers affects the behavior patterns of the workers themselves when doing work, both safe behavior and unsafe behavior.

Conversely, the insignificant relationship between OHS supervision and safe work

behavior is contradicted by the research of Uyun & Widowati, 2022. Their study, which sampled 79 workers from a furniture company in Jepara, found a p-value of 0.010, less than 0.05, indicating a significant relationship between OHS supervision and safe behavior (unsafe action). Their results showed that 71.1% or 64 workers exhibited safe behavior when OHS supervision was effective.

Additionally, the findings of this study diverge from those of Sukma Ika Noviarmi & Hamengku Prananya, (2023) who investigated PA Plant workers in a Gresik company. Their sample of 37 workers yielded a p-value of 0.000, below 0.05, regarding the relationship between supervision variables and PPE compliance. Their study demonstrated that 88% or 22 workers complied with PPE use under good supervision, while 83.3% did not comply when supervision was suboptimal.

In this study, OHS supervision did not significantly affect workers' safe behavior because most workers already understood the work procedures and the risks they would face because they had been routinely educated both during routine socialization activities and safety briefing activities carried out before work began. This will make workers always apply safe behavior even though there is no OHS supervisor when they are doing work.

In addition, even though there are OHS supervisors in the field when workers are doing work, sometimes workers still behave unsafely because there are other influencing factors such as workers' understanding or competence which is still low, unsupportive work environment conditions such as working at night, or the quality of OHS supervision itself which is not optimal.

The Effect of Workload Directly or Through Work Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) of PLN

Workload refers to the volume of tasks and responsibilities a worker is expected to complete within a specific time frame. An inappropriate workload can detrimentally affect productivity, job satisfaction, health, and the consistency of work performance, including adherence to safe working practices. Elevated workloads increase pulse rates,

constrict blood vessels, and require more energy, which induces fatigue (Thamrin *et al.*, 2019). Such fatigue can be hazardous and lead to workplace accidents.

Data analysis revealed that the t-statistic for the impact of workload on safe work behavior through work motivation was $1.544 < 1.96$ with a significance level of $0.123 > 0.005$. These findings indicate that workload does not significantly influence safe work behavior via work motivation. Furthermore, the direct relationship between workload and safe work behavior yielded a t-statistic of $0.878 < 1.96$ at a significance level of $0.381 > 0.005$, also demonstrating an insignificant effect.

The results of this study are similar to research conducted by Yusril, Muhammad Khidri Alwi, and Chaeruddin Hasan, (2021) who conducted research to determine the factors associated with unsafe acts on a sample of 47 workers at PT Sermani Steel. The results showed a p-value of 0.326 the relationship between workload and unsafe acts of workers. This shows that there is no significant relationship between workload and unsafe behavior of workers. This can be a general picture that shows that workload does not have a significant effect on the work behavior patterns of workers, both safe and unsafe behavior.

These results are incongruent with the study by Jannah, Nugroho and Fajariani (2023), which examined 70 workers in the printing industry in Solo. Their data analysis showed a p-value of $0.000 < 0.05$, indicating a significant relationship between physical workload and unsafe actions (unsafe behavior). Specifically, 17.1% of workers exhibited high levels of unsafe behavior under heavy workloads, while 25.7% showed moderate unsafe behavior under moderate physical workloads.

Additionally, the current study contradicts the findings of Saleem *et al.*, (2022) on Malaysian construction workers. Their research found a p-value of 0.000, signifying a significant relationship between workload and both safety compliance and participation in safe behavior. Higher workloads correlated with reduced safe behavior among construction workers.

One potential contributing factor to the non-significant impact of workload on safe work behavior in the present study is the relatively young age of Technical Service Officers (Yantek), with nearly 60% being under 40 years old. This demographic's good physical condition likely enables them to manage high workloads without experiencing the fatigue and errors that typically lead to unsafe work behavior.

The Effect of OHS Promotion Directly or Through Work Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) PLN

Companies have a role in promoting occupational safety and health among workers, employers and the community. In particular, K3 promotion through a human approach, namely to the workforce so that they can improve safe behaviour at work and workers can always remember and understand more about the K3 aspects conveyed. According to PP No. 50 of 2012, forms of OSH promotion such as, installation of OSH signs, training, supervision, communication, monthly OSH activities, etc. are found in the Ministerial Decree No. 386 of 2014. (Andriyadi, Setyowati and Ifroh, 2021).

From the results of data analysis, it is obtained that the t-statistics of the relationship between K3 promotion variables on safe work behaviour through work motivation is $0.134 < 1.96$ at a significance level of $0.893 > 0.005$. These results indicate that the OHS promotion variable has no significant effect on safe work behaviour through work motivation. In the direct relationship between OHS promotion and safe work behaviour, the t-statistics data obtained is $4.645 > 1.96$ at a significance level of $0.000 < 0.005$. This result shows that OHS promotion when directly related to safe work behaviour has a significant influence.

The significant relationship between the OHS promotion variable and safe work behaviour is in line with research conducted by Andriyadi, Setyowati and Ifroh, (2021) on 138 construction workers in the construction of the Mulawarman University building where based on research data, it was found that there was a relationship between safety talk and worker safety behaviour at a p-value of $0.001 < 0.005$. The results of this study showed that 63.8% of respondents felt motivated by the

safety talk that was carried out before work started.

Safety talk activities are a form of OHS promotion that can be carried out and are considered very effective in meeting employee needs for information on OHS aspects and building employee awareness of OHS information to prioritise safety in preventing work accidents. A safety talk represents a crucial component of Occupational Safety and Health (OHS) communications aimed at mitigating workplace accidents through a human-centric approach. Given that a significant majority, approximately 85%, of accidents are attributable to human factors and unsafe behaviors, this method underscores the importance of addressing these issues to enhance overall workplace safety.

The significant relationship between OSH promotion activities and safe work behaviour is also in line with research conducted by Ginting et al., 2021 where the data obtained on the significance of PPE use before K3 promotion was 0.105 and the significance value of PPE use after K3 promotion was 0.007 and a p-value of $0.000 < 0.005$ was obtained. This shows that there is a significant relationship between OSH promotion and safe work behaviour, which in this case is compliance in the use of PPE.

Through OHS promotion and education, workers become more aware of potential hazards and risks in the workplace and understand the importance of identifying and mitigating risks for the safety of themselves and their coworkers. In addition, OHS promotion helps shape positive attitudes towards safety. Workers learn that safety is a top priority and that each individual has a responsibility to maintain a safe working environment.

The Influence of Relationships with Colleagues Directly or Through Work Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) PLN

Interpersonal or co-worker relationships refer to interactions between individuals in the workplace including various aspects of the dynamics of human relationships in a professional environment. When a worker consistently demonstrates good safety

behaviour, they become a role model for other workers. This can inspire and motivate other colleagues to adopt and perform the same practices while at work.

Based on the results of quantitative data analysis, this study obtained t-statistics data between the variable relationship with colleagues on safe work behaviour through work motivation is $0.683 < 1.96$ at a significance level of $0.495 > 0.005$. These results indicate that the variable relationship with colleagues does not have a significant effect on safe work behaviour through work motivation. In the direct relationship between the variable relationship with colleagues on safe work behaviour, the t-statistics data is $7.108 > 1.96$ at a significance level of $0.000 < 0.005$. These results indicate that the variable relationship with colleagues when directly related to safe work behaviour has a significant influence.

The positive relationship between the variable relationship with coworkers and safe behaviour is in line with the literature review research. Desmayanny, Wahyuni and Ekawati, (2020) where three previous studies concluded that there was a relationship between coworkers and the incidence of unsafe actions (unsafe behaviour) of manufacturing sector workers. One of these studies is research conducted by Halimah who got the Odd Ratio (OR) value in his research at 21.129, which means that workers with a supportive coworker role have a 21.129 times greater chance of behaving unsafely. This value indicates that the role of co-workers is the dominant factor associated with safe work behaviour.

Research that states the relationship between coworkers and safe work behaviour is in line with the theory of E. Bird & Germain L, 1990 which explains that all members involved in the organisation must be able to provide supervision of the company's operations, if this supervisory function is not carried out, there will be a basic cause of an incident that can disrupt company activities. As Geller, 2001 states that peer pressure increases when more people are involved in certain behaviours and when group members who behave in certain ways appear relatively competent or experienced. So, if in one group

many workers behave unsafely, other workers will also behave unsafely.

The Effect of Motivation on Safe Work Behaviour of Technical Service Officers (Yantek) PLN

Work motivation is a force within a person that influences the direction, intensity, and persistence of behaviour in doing work. In relation to corporate organisations, motivation is an internal factor that encourages individuals to act or behave in a certain way in order to achieve organisational goals.

Based on the results of the analysis of this study, the t-statistics data between the motivation relationship variable on safe work behaviour is $1.558 < 1.96$ at a significance level of $0.120 > 0.005$. These results indicate that the motivation variable has no significant effect on safe work behaviour. This is in line with research conducted by Putra & Citroatmojo, 2021 which examined workers in the oil and gas sector. which examined workers in the oil and gas sector with a sample size of 143 workers and obtained a p-value of $0.332 > 0.005$ for the relationship between motivation and safe behaviour in the workforce. This shows that there is no significant relationship between motivation and safe behaviour of workers. Motivation has not been proven to have a significant effect on safe behaviour, because good motivation is sometimes from oneself and from others so that each person has different motivations in understanding safe behaviour depending on the amount of motivation obtained from outside and from oneself.

Research by Aulia, Kurniawan and Wahyuni, (2020) investigating online motorcycle taxi drivers in Semarang, with a sample size of 54 drivers, revealed that the relationship between motivational variables and safety riding behavior yielded a p-value of 0.105, which exceeds the significance threshold of 0.005. This indicates that there is no statistically significant correlation between motivation and safe driving practices, specifically in the context of safety riding. Despite the fact that most respondents demonstrated adequate motivation, a subset still exhibited unsafe driving behaviors, such as speeding on empty roads. This finding underscores that various factors contribute to safety or risky behavior, suggesting that motivational influences alone

may not be sufficient to explain safety behavior comprehensively.

The determinants of human behavior are complex and multifaceted, as behavior emerges from a confluence of both internal and external factors (Notoatmodjo, 2003). When addressing safety behavior, motivational factors alone may not exert a significant impact if not accompanied by other influencing factors, whether intrinsic to the individual or extrinsic from the surrounding work environment.

Intrinsic factors include the level of knowledge or skills of workers. Workers may be motivated to behave safely at work, but if they do not have sufficient knowledge or skills about OHS, they may not be able to act safely and thus avoid hazards. Other factors include different perceptions of the risks faced. One worker to another has a different perception of risk when facing a condition. There are workers who are alert and always careful but there are workers who do not realize or underestimate the risks involved in their work so they do not take the necessary precautions.

In addition to internal factors, extrinsic factors such as unsupportive work environment conditions in terms of inadequate equipment or unsafe work environment will hinder safe behavior even though the worker is motivated. In addition, inconsistent company policies related to OHS and lack of support from management regarding the application of OHS aspects can also reduce workers' motivation to apply safe behavior at work which can lead to unsafe acts or unsafe conditions.

CONCLUSION

The findings revealed that factors significantly influencing safe work behavior among workers include OHS policy (p-value=0.000), OHS promotion (p-value=0.000), and relationships with coworkers (p-value=0.000). These significant relationships were observed when the independent variables were directly linked to safe work behavior.

It is recommended that PT PLN (Persero) enhance the promotion and socialization of OHS policies to workers, including providing education regarding the company's OHS directives to ensure their proper

implementation by employees. Additionally, the company should consistently motivate workers to engage in safe behavior by fostering a culture where coworkers act as motivators, reminding each other to avoid unsafe behaviors and conditions.

CONFLICT OF INTEREST

The first author of this journal, Insan Sosiawan Gessa, declares that there is no conflict of interest that could affect the results of this research. All results of this study are purely based on data obtained and analyzed objectively. There are no affiliations, personal, financial, or commercial relationships that could potentially influence the interpretation, results, or publication of this research.

If any funding sources, institutions, or third parties contributed to this study, they had no role in the study design, data collection and analysis, decision to publish, or preparation of this manuscript. All parties involved have been clearly mentioned in the acknowledgment section and none had any influence on the final outcome of this study.

Thus, I declare that this study was conducted with high integrity and ethics, and no conflict of interest influenced this report.

AUTHOR CONTRIBUTION

Insan Sosiawan Gessa: Conceptualization, Methodology, Data Collection, Data Analysis, Writing – Original Draft. Yahya Thamrin: Methodology, Supervision, Review & Editing. Atjo Wahyu: Methodology, Supervision, Review & Editing. Lalu Muhammad Saleh: Validation, Results Verification. Syamsiar S. Russeng: Validation, Results Verification. Fridawaty Rivai: Validation, Results Verification.

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