

**THE INFLUENCE OF OCCUPATIONAL HEALTH AND SAFETY
AND SUPERVISION ON EMPLOYEE PERFORMANCE OF
PT. PAN MARITIME WIRA PAWITRA CREW MEMBERS**

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Abstract

The purpose of this research is to investigate, test, and analyze the impact of occupational health, safety, and supervision on the performance of ship crew employees at PT. Pan Maritime Wira Pawitra. This research follows an associative approach with a quantitative method. The sample consists of 70 employees and crew members of PT. Pan Maritime Wira Pawitra, using a population sampling technique. Data was collected using a validated and reliable questionnaire. Multiple regression analysis was employed for data analysis. The findings of this study indicate that occupational health, safety, and supervision have a positive and significant effect on employee performance. Specifically, occupational health and safety positively and significantly affect employee performance. This is evident from the calculated t-value of 3.876, which is greater than the t-table value of 1.668. Moreover, the significance value (sig.) is 0.00, which is less than 0.05 ($0.00 < 0.05$). On the other hand, supervision has a positive but not very significant effect on employee performance. The calculated t-value of 0.21 is greater than 0.05, and the significance value is 0.21, also greater than 0.05. In conclusion, occupational health, safety, and supervision have a positive and significant impact on the performance of ship crew employees at PT. Pan Maritime Wira Pawitra. The F-value of 45.833 is greater than the F-table value of 3.13, and the significance value is 0.000, which is less than 0.05 ($0.000 < 0.05$), as obtained from the coefficient of determination results.

Keywords: *Employee Performance, Occupational Safety, Supervision*

1. INTRODUCTION

Operations management is a process that continuously and effectively uses management functions to integrate various resources efficiently in order to achieve goals. (Herjanto, 2007). While according (Heizer & Render, 2010) stated that operational management is a series of activities that produce value in the form of goods and services by converting an input into an output.

The company certainly needs human resources in running its business, which cannot be separated from issues related to occupational safety and health. With the company guaranteeing the safety and health of its workers will be able to foster morale. The right to occupational health and safety is based on laws and regulations. Human resources abbreviated as HR are the driving force of a company or agency. Every company or agency must have human resources that help the company. Each HR has its own role both as a group and individually in carrying out its activities in the company. Companies in selecting human resources must have criteria that are in accordance with what is needed by the company. Starting from career paths, experience, education and others. Having good and quality human resources will greatly assist the company in carrying out its company duties.

PT Pan Maritime Wira Pawitra is a national shipping company engaged in transporting workers and light cargo to oil and gas fields located in the high seas. Being a company operating in such areas, it is essential to have a robust implementation of Occupational Health and Safety practices to ensure safe operations. Implementing K3 in their operational activities, along with effective work supervision, aims to minimize errors and enhance employee performance. An issue has been identified related to employee performance, which is perceived to be lacking among employees at PT Pan Maritime Wira Pawitra. Consequently, the company has experienced a decline in employee performance.

Based on the data from PT Pan Maritime Wira Pawitra, it is evident that the percentage of employee performance has decreased from 2019 to 2022. In 2019, the ship crew's performance seemed satisfactory, but it gradually decreased in the following years until 2022, with a significant decrease in percentage compared to the previous year. The author assumes that the decline in crew performance may be attributed to inadequate work supervision, which could potentially affect their performance negatively.

Safety and protection factors in the workplace are among the factors that influence employee performance. If employees feel safe and comfortable due to adequate protection from the company, they will work with a sense of tranquility and perform well. Efforts to protect employees can be achieved through the implementation of a Health and Safety at Work program, also known as K3 (Kesehatan Keselamatan Kerja). This program is designed for workers and employers as a preventive measure to avoid work-related accidents and illnesses within the work environment. It involves identifying potential hazards that may lead to accidents and taking precautionary measures in case of unwanted incidents.

According to Sutrisno as cited in (Nadhir, 2017), occupational safety refers to the safety of the workplace, its environment, work equipment, materials, and processing processes, as well as the ways in which employees carry out their tasks (Shiyamy et al., 2021). For a company, having employees necessitates the implementation of measures to protect their workforce. Therefore, a health and safety at work program must be conducted as a form of protection and to uphold human rights. Additionally, to improve employee performance, it is crucial to address the high rate of work-related accidents in Indonesia. The implementation of K3 is not yet fully adequate. Health and safety at work are connected to the prevention of work-related accidents and illnesses, and it aims to create a safe, efficient, and productive work environment (Tinambunan & Safrin, 2023).

The government itself is highly aware of the importance of health and safety at work, as evident from the legislation issued, such as Law No. 30 of 1947 concerning compensation for workers who suffer work-related accidents, which has been in effect since January 6, 1951. This was followed by Government Regulation No. 14 of 1969 concerning the fundamental provisions regarding labor. Additionally, Law No. 1 of 1970 regarding occupational safety.

Based on the data from PT. Pan Maritime Wira Pawitra, there were 18 cases of work-related accidents involving ship crew members from 2019 to 2022. From the table above, it can be concluded that there is a lack of adequate supervision and training related to occupational health and safety for the ship crew members. The table also shows that some crew members have a lack of understanding and adherence to established

procedures, and there were even cases where they did not use Personal Protective Equipment (PPE).

Considering the mentioned phenomenon, the implementation of occupational health and safety (K3) in work is crucial to minimize work-related accidents and reduce the number of such cases. By applying K3, employees can perform their duties with a sense of security and without fear. Recognizing the importance of K3 as a basic right of employees and as an effort by institutions or companies to improve their employees' performance, it should be a primary program for companies to ensure the safety and health of their employees. This will create a sense of security, comfort, and well-being among employees, leading to improved performance. Such efforts are crucial and must be taken seriously, as work-related accidents and illnesses not only impact the employees but also have negative consequences for the company as a whole.

Not only health and safety at work, but work supervision is also essential for every job in a company. With supervision in place, various aspects that may harm the company can be monitored, such as mistakes in job execution or improper use of machinery. In essence, supervision is a measurement of activities and achieved results compared to pre-established targets or standards. It is also carried out to ensure that the company's activities align with the previously set plans. According to (Harianto, 2020), work supervision is a systematic effort to establish performance standards in plans and design feedback information systems to determine deviations, measure their extent, and take necessary corrective actions to ensure that all assigned tasks are performed as effectively as possible to achieve organizational goals.

This can be supported by the research conducted by (Bangun & Hariyono, 2019) titled "Analysis of Health and Safety at Work (K3) on Passenger Ships at PT PELNI Semarang," which shows that the implementation of K3 has been quite good with the existence of a K3 division for both employees and ship crews. Employees work with adequate education and training. Similarly, the research conducted by Chair (2017) titled "Implementation of Health and Safety at Work on KM Mattoangin 01 Fishing Port Samudra Kenadari" has shown that the implementation of health and safety at work on the ship only includes the provision of gloves and boots. Furthermore, the research by Harini and Setiawan (2019) titled "The Influence of Occupational Health and Safety and Work Supervision on Employee Performance (A Study at PT XYZ in Bogor)" reveals that occupational safety has a positive and significant effect on employee performance, and work supervision has a positive and significant effect on employee performance at PT XYZ.

Efforts to improve employee performance in the operational department must be considered, and the implementation of health and safety at work should also be given high importance to ensure health and safety guarantees. Employees can feel comfortable and secure in carrying out their duties, and work supervision can minimize errors that may occur and ultimately affect work performance. Productive employees can make the company more effective in achieving its goals.

Based on the background and previous phenomena, the objective of this research is to determine, test, and analyze the influence of health, safety, and work supervision on the performance of ship crew employees at PT Pan Maritime Wira Pawitra.

2. LITERATURE REVIEW

2.1. Employee Performance

According to (Sutrisno et al., 2016), performance is the result of an employee's work seen from aspects of quality, quantity, working time, and collaboration to achieve the goals set by the organization. However, according to (Mangkunegara & Hasibuan, 2009), performance is the achievement or results of work in terms of quality and quantity, accomplished by an employee in carrying out their tasks according to the responsibilities assigned to them. And according to (Kasmir, 2016), in practice, performance is divided into two types: individual performance and organizational performance. Individual performance is the performance produced by an individual, while organizational performance refers to the overall performance of the company.

2.2. Occupational Health and Safety

Human resources are an asset to the company that must be provided with security and protection, one of which is health and safety protection at work. This protection is provided to ensure that every employee can carry out their daily activities to increase productivity and performance because they feel comfortable and safe. As a result, employees have a high level of trust. The full implementation of Occupational Health and Safety (K3) is the responsibility of the company that employs workers. K3 is a program formed to ensure the safety of workers from workplace activities to prevent accidents and diseases by adhering to applicable regulations and implementing standard operating procedures according to (Elphiana et al., 2017).

According to (Sucipto, n.d.), health and safety at work mean maintaining the highest degree of physical, mental, and social well-being of workers, preventing health disorders caused by work conditions, and protecting workers from various risk factors. It is also an effort to create protection and security from accidents and physical, mental, and emotional hazards for workers, companies, society, and the environment.

2.3. Work Supervision

According to (Handoko, 2011), supervision can be interpreted as a process to ensure that the objectives set by the organization and management are achieved. Meanwhile, according to (Harianto, 2020), work supervision is a systematic effort to establish performance standards in plans and design feedback information systems to determine deviations, measure their extent, and take necessary corrective actions to ensure that all tasks are carried out as effectively as possible to achieve organizational goals.

3. RESEARCH METHODS

The research design described above adopts an associative type of research, where the authors aimed to determine the relationship between two variables. The independent variables in this study were K3 (X1) and Work Supervision (X2), while employee performance (Y) was the dependent variable. The primary data was collected directly by the researchers themselves from the main source or the location where the research object was conducted, using questionnaires. Additionally, secondary data sources such as literature, articles, journals, and internet sites related to the research were also utilized.

The research was conducted at the office of PT Pan Maritime Wira Pawitra. The population for this study comprised the crew employees of PT Pan Maritime Wira Pawitra, totaling 70 people. Since the sample size was less than 100 respondents, a Non-Probability Sampling technique was employed, and the researchers used a saturated sample method to avoid subjectivity in selecting the sample. The sample was taken from the population with the assistance of the SPSS version 20 program. While the data collection methods used in this research included questionnaires, interviews, and documentation. The data analysis techniques encompassed the Research Instrument Test, Classical Assumption Test, and Multiple Linear Regression Analysis.

4. RESULTS AND DISCUSSION

4.1. Results

4.1.1. Respondent Description

Respondent data analysis is a description of the questionnaire that has been distributed to respondents. Respondents include male employees and female employees. This research was conducted at PT Pan Maritime Wira Pawitra. This study uses a saturated sample where all members are sampled. Based on the results of distributing questionnaires to 70 respondents in this study.

Based on data analysis, male respondents were more than female respondents. Male respondents were 83% or 58 respondents. Meanwhile, female respondents were 17% or 12 respondents.

Respondents were grouped into 4 groups, namely the first group aged <20 years by 4% or as many as 3 respondents. The second group aged 20-30 years was 46% or as many as 33 respondents. The third group was 31-40 years old 43% or as many as 30 respondents and the fourth group was > 40 years old by 7% or as many as 4 respondents. The majority of respondents in this study had a bachelor's degree of 62% or 43 respondents, with a high school education of 8% or 4 respondents, with a D3 education of 9% or 5 respondents, with a master's degree of 21% or 18 respondents and with a doctoral degree of 0% or 0 respondents.

4.1.2. Validity Test

The results of the analysis indicate that all statements related to health and safety at work are valid because all "r" values are greater than the "r" table value. Similarly, all statements related to supervision and employee performance are also valid.

4.1.3. Reliability Test

In this study, an instrument is considered reliable if its Cronbach's Alpha value is greater than or equal to 0.600. If the Cronbach's Alpha value is lower than this threshold, the instrument is considered unreliable. For the testing, there are 12 instruments for the independent variables, related to health and safety at work, 5 instruments for supervision, and 8 instruments for employee performance, all of which have been validated.

The results of the reliability test for each indicator of the research variables can be seen in the following table:

Table 1. Reliability Test Results

Variable	Cronbach's Alpha	Limitations	Description
Occupational safety health	0,780	0,600	Reliable
Supervision	0,609	0,600	Reliable
Employee performance	0,766	0,600	Reliable

Source: SPSS 20 Data Processing Results

Based on table 4.8, it shows that each independent and dependent variable is declared reliable because it has a Cronbach's Alpha value greater than 0.600, which means that it can be said that the results can be accepted by having a good value.

4.1.4. Normality Test

The points on the P-P plot graph spread around the diagonal and the distribution of data on the histogram graph is close to the normal line. Thus, it can be concluded that the data in this study have normally distributed regression values.

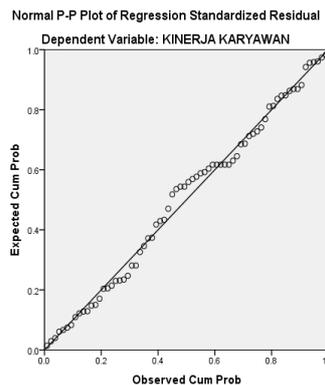


Figure 1. Normality Test Results

Source: Spss 20 Data Processing Results

4.1.5. Multicollinearity Test

Table 2. Multicollinearity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.545	2.806		.907	.368		
Occupational Safety Health	.392	.101	.498	3.876	.000	.382	2.615
Supervision	.510	.216	.304	2.367	.021	.382	2.615

a. Dependent Variable: Employee Performance

Source: SPSS 20 Data Processing Results

Based on table 2 above, it shows that the variance inflation factor (VIF) value is $2.615 < 10$ and the tolerance value is $0.382 > 0.10$ in all variables used in the study. This shows that there is no perfect or near perfect linear relationship between the independent variables. So that the regression model in this study did not find multicollinearity problems and met the requirements of a good regression model.

4.1.6. Heteroscedasticity Test

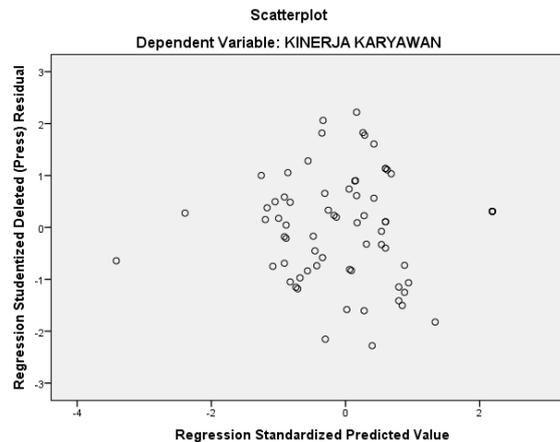


Figure 2. Heteroscedasticity Test Results

Source: Results of SPSS 20

Based on Figure 2, the results of the heteroscedasticity test using scatterplot can be seen that there is no clear pattern, and the points spread above and below the number 0 on the Y axis, it can be concluded that there is no heteroscedasticity in the regression model, so the regression model is suitable for use in testing..

4.1.7. Determination Coefficient Test

**Table 3. Determination Coefficient Test Results
Model Summary^b**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.760 ^a	.578	.565	3.952

a. Predictors: (Constant), Supervision, Occupational Safety Health
Source: SPSS 20 Data Processing Results

Based on the table above, it shows the R Square or R² value of 0.578 or 57.8%, these results indicate that the employee performance variable (Y) is influenced or contributed by the work safety health variable (X1) and supervision (X2) by 57.8%. So that 42.2% is determined by other variables.

4.1.8. T test

Table 4. T Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.545	2.806		.907	.368
Occupational Safety Health	.392	.101	.498	3.876	.000
Supervision	.510	.216	.304	2.367	.021

a. Dependent Variable: Employee Performance

Source: SPSS 20 Data Processing Results

- a. The effect of occupational safety health (X1) on employee performance from the results > t table (3.876 > 1.668) and a significant value of 0.00 < 0.05 so that Ho is rejected and Ha is accepted, meaning that occupational safety health has a positive and significant effect on employee performance (Y) at PT Pan Maritime Wira Pawitra.
- b. The effect of supervision (X2) on employee performance, from the results of the t test calculation above, it can be seen that t statistic > t table (2.367 > 1.668) and a significant value of (0.21 > 0.05) so that Ho is accepted and Ha is rejected, meaning that supervision (X2) has an effect and is not too significant on employee performance (Y) at PT. Pan Maritime Wira Pawitra.

4.1.9. F test

Table 5 F Test Result

ANOVA^a

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1431.944	2	715.972	45.833	.000 ^b
1 Residual	1046.627	67	15.621		
Total	2478.571	69			

a. Dependent Variable: Employee Performance

b. Predictors: (Constant), Supervision, Occupational Safety Health

Source: Results of SPSS 20 Data Processing

From the results of the f test calculation above, it can be seen that f count of 45.833 is greater than 45.833 > 3.13, besides that it is known that the sig value. 0.000 is smaller than 0.05 or 0.000 < 0.05, then ho is rejected and ha is accepted, meaning that occupational safety health and supervision together have a significant effect on employee performance.

4.2. Discussion

4.2.1. The Effect of Occupational Safety Health on Employee Performance

The variable of occupational safety health has a positive and significant effect on the performance of ship crew employees at PT Pan Maritime Wira Pawitra, as indicated by the t-statistic value (3.876), which is greater than the t-table value (1.668). Additionally, the significance value is 0.000, which is smaller than the significance level of 0.05 ($0.000 < 0.05$). As a result, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted, demonstrating that occupational safety health indeed has a positive and significant impact on employee performance at PT Pan Maritime Wira Pawitra. Consequently, the higher the level of work safety health, the greater the enhancement in employee performance, and vice versa. This finding aligns with the results of previous research conducted. (Firmanzah et al., 2017; Hidayati, 2020; Kartikasari & Swasto, 2017; Nissa & Amalia, 2017; Parashakti, 2020; Wangi et al., 2020; Wibowo & Widiyanto, 2019; Maulana, 2020).

The results of this study indicate that the better the implementation of the work safety program at PT Pan Maritime Wira Pawitra has a meaning for improving performance, so that if work safety is improved, employee performance will also increase. Work safety is an influential thing in improving employee performance. Therefore, companies must pay attention to the safety of workplace conditions and working conditions for their employees. In addition, occupational health has a significant role in improving employee performance. If employee performance is good, the company can achieve targets and goals optimally.

From this research, it can be said that the OHS policy must start from occupational safety and occupational health initiatives. The attitude or response from PT Pan Maritime Wira Pawitra towards occupational safety and health must be firm and clear in the form of a written policy. The policies outlined in an OHS program aimed at controlling the work environment, equipment and work processes carried out, the prevention of accidents that occur in the work environment is the focus of attention of the policies set by the management. After the formation of a clear policy, there must be a measurement or assessment of the performance of the OHS program so that improvements can continue to be made from knowing the effectiveness of these programs.

4.2.2. The Effect of Supervision on Work Performance

Variable supervision is positive or unidirectional relationship. meaning that if supervision increases by one unit, then work performance will also increase. Based on the results of the t test, it is known that t statistic is greater than t table or ($2.367 > 1.668$) and the significant value is greater ($0.21 > 0.05$), then h_0 is accepted and h_a is rejected, meaning that supervision has an effect and is not too significant on employee work performance. This is in accordance with previous research (Amanda, 2016; Karnawan & Supratikta, 2022; Nielwaty et al., 2017; Ramdani et al., 2022; Rivai, 2021; Situmeang, 2017; Toding, 2015) and (Maulana, 2020) that supervision affects employee work performance.

The results of this study indicate that supervision is a factor that affects employee performance in doing work. Supervision has a role to ensure that organizational and management objectives are achieved. It deals with ways to make activities as planned. A

systematic effort to set implementation standards for planning objectives, design feedback information systems, compare real activities with predetermined standards, determine and measure deviations, and take the necessary corrective actions to ensure that all company resources are used in an effective and efficient manner in achieving company goals. Supervision is also an assessment of the organization / activity with the aim that the organization / activity carries out its functions properly and can meet predetermined goals.

This research is also in accordance with the theory put forward by Mangkunegara which explains that supervision has an important role to oversee implementation standards in order to achieve planning goals, compare real activities with previously set standards, find and measure deviations to ensure that all company resources are used in an effective and efficient way in achieving company goals.

4.2.3. The Influence of Occupational Safety and Health and Supervision on Employee Performance

The variable of occupational safety and health has a positive and significant simultaneous effect on employee performance, as evidenced by the calculated F-value of 45.833, which is greater than the F-table value of 3.13, with a significance value of $0.000 < 0.05$. Thus, the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted, indicating that the variables of occupational safety and health (X_{10}) and supervision (X_2) have a positive and significant simultaneous effect on employee performance (Y). Therefore, higher levels of occupational safety and health and effective supervision lead to improved employee performance. Conversely, when the level of occupational safety and health and supervision is low, employee performance tends to decline.

In terms of occupational safety and health, the dimension that influences employee performance is the psychological atmosphere of employees. This is supported by questionnaire results indicating that "health and safety assurance is considered by the company." Consequently, companies should enhance health and safety assurance to ensure the well-being and safety of their workers during work. Occupational safety and health are crucial aspects that need attention from both employees and the company. By implementing occupational safety and health measures, the company also provides health assurance to its workers, which ultimately improves their performance within the organization.

As for supervision, the dimension that affects employee performance is direct supervision. This aligns with the questionnaire results indicating that "management requests job reports directly (on-site)." Therefore, companies should provide direct supervision to enable employees to work more effectively and efficiently. Through proper supervision, companies can monitor the progress made by employees.

Improving occupational safety and health can enhance employee job satisfaction. Employees who feel protected and cared for by management in terms of health and safety are more motivated to work better and achieve higher performance. A good occupational health and safety system can reduce absenteeism and workplace accidents, leading to overall productivity enhancement due to increased workforce availability and reduced

disruptions in the work process. When employees feel that their company cares about their health and safety, it strengthens their sense of loyalty and commitment to the organization, resulting in greater dedication.

In the long term, investing in occupational health and safety programs can reduce company costs related to workplace accidents, work-related illnesses, and absenteeism. Thus, there are economic benefits for the company. A healthy and safe working environment can enhance operational efficiency as employees are more focused on their tasks and less disturbed by health or safety issues. Effective supervision can influence employee behavior and increase compliance with organizational procedures and policies. Good supervision can also help prevent unsafe behavior.

5. CONCLUSION

Based on the results of the regression analysis, it can be concluded that both occupational safety and health and supervision have an impact on employee performance at PT Pan Maritime Wira Pawitra. Occupational safety and health showed a positive and significant relationship with employee performance. An increase in occupational safety and health by one unit was associated with a 0.392 unit increase in employee performance. The t-test results supported this finding, indicating that the relationship is statistically significant. Therefore, it is important for the company to prioritize and implement effective occupational safety and health measures to enhance employee performance. On the other hand, supervision also exhibited a positive relationship with employee performance, indicating that an increase in supervision by one unit resulted in a 0.510 unit increase in employee performance. However, the t-test results showed that the relationship was not statistically significant. While supervision may have an influence on employee performance, other factors may play a more significant role in determining performance outcomes.

When considering both occupational safety and health and supervision together, they demonstrated a positive and significant combined effect on employee performance. The study revealed that higher levels of occupational safety and health, along with effective supervision, lead to improved employee performance. Conversely, when these factors are lacking, employee performance tends to decline.

To improve employee performance, the company is advised to ensure frequent and clear direct supervision. Supervisors should provide specific instructions to employees to ensure tasks are carried out accurately and efficiently. Additionally, continuous attention to and enhancement of occupational safety and health programs are crucial to maintaining a safe and healthy work environment, fostering employee motivation and commitment. For future research, it is recommended to explore additional independent variables that might influence employee performance beyond occupational safety and health and supervision. Moreover, increasing the sample size and refining the sample criteria would contribute to more robust research findings. By understanding and addressing various factors affecting employee performance comprehensively, the company can take targeted actions to optimize organizational productivity and success.

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