

# The Influence of Occupational Safety and Health Programs on Employee Performance of PT. PLN (Persero) Upt Makassar

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| Article Info                                                 | Abstract                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| Occupational Safety and Health Program, Employee Performance | This research aims to determine the influence of the Occupational Safety and Health Program on the Performance of PT Employees. PLN (Persero) Upt Makassar. This research uses quantitative methods. The type of data used in this research is quantitative data obtained from distributed questionnaires and is related to the problem being studied. Data collection was carried out by observation and distribution of questionnaires. In this research, the data sources used in data collection include primary and secondary data. The research instrument used in this research used the Likert scale method. Based on the results of data research using the SPSS version 29 application, the Occupational Safety and Health Program has a significant positive influence on employee performance at PT. PLN (Persero) Upt Makassar. |

## 1. Introduction

Every company is established to achieve specific goals, which require various forms of capital, one of which is human resources (HR). HR plays a crucial role in the success of an organization or company because people are living assets that must be managed effectively. Properly managed HR can provide significant contributions to achieving organizational goals. With the development of science and technology, companies must continuously improve the knowledge and skills of their HR to ensure optimal employee performance and productivity.

PT. PLN (Persero) is a state-owned enterprise tasked with providing electricity for public use. As part of its responsibility for workplace safety, PT. PLN (Persero) UPT Makassar strives to ensure the security and health of its employees through training and supervision, including optimizing the use of personal protective equipment to create a healthy, safe, and comfortable working environment. Occupational health and safety (OHS) is a critical aspect for this company, not only to protect employees but also to sustain the company's operations. However, data shows that over the past four years, there have been several workplace accidents at PT. PLN

(Persero) UPT Makassar, although none of them were fatal.

On the other hand, PT. PLN (Persero) UPT Makassar aims to achieve a "Zero Accident" target and optimal workplace safety conditions. One strategic measure to achieve this target is implementing OHS procedures in every work activity. Regular safety training is conducted, particularly for field workers who frequently face high risks, such as training in Bargainer installation and power line repairs. This training is conducted every six months to enhance employees' skills in avoiding accidents, such as electric shocks. Additionally, the training provides employees with insights to better understand and master their tasks.

PT. PLN (Persero) UPT Makassar is also actively promoting workplace safety through publications such as warning signs, guidelines for using personal protective equipment, and safety messages displayed in every workspace. These publications aim to raise employees' awareness of the importance of workplace safety, which can positively impact individual and collective safety. The company also conducts regular monitoring to ensure work standards are met. Employees who violate work procedures are subject to sanctions, ranging from warnings to formal reprimands, depending on the severity of the violation.

Awareness of health and safety is enhanced at both individual and organizational levels. Employees are encouraged to use personal protective equipment as an initial step in self-safety awareness. At the organizational level, the company involves employees in providing input for more relevant OHS programs. Environmental control in the workplace is regularly conducted by supervisors to create conducive working conditions. For example, regular checks on personal protective equipment such as shoes, gloves, helmets, masks, and goggles are carried out to ensure their availability and proper condition.

Based on this background, this study aims to analyze the impact of occupational health and safety programs on employee performance at PT. PLN (Persero) UPT Makassar.

## 2 Research Methodology

This research uses a quantitative method, which involves numerical data and analysis through statistics. Quantitative research is characterized by the use of numerical data or words and sentences converted into numerical data, which are then processed and analyzed to extract scientific information. The study was conducted at PT. PLN (Persero) UPT Makassar, located at Jl. Gunung Latimojong No.21, Gaddong, Bontoala District, Makassar City, South Sulawesi. It is scheduled to last approximately three months, from January to March 2024.

The data collection involves literature reviews and distributing questionnaires, which are then analyzed and compiled into a comprehensive text. The primary data are collected directly from the company and respondents via questionnaires, while secondary data are obtained from other sources such as documents, reports, and literature related to the research. The population of this study includes all employees of PT. PLN (Persero) UPT Makassar, totaling 56 individuals. Using a saturated sampling technique, all 56 employees are included as respondents.

Data collection techniques include literature studies, documentation, observation, and questionnaires. Literature studies involve reviewing books, journals, theses, and other relevant scientific works. Documentation includes analyzing written records, reports, or visual materials published by related institutions. Observation provides a clear understanding of the company's actual conditions and the problems it faces. Lastly, questionnaires, as a primary tool for data collection, consist of structured questions or statements aimed at obtaining respondent opinions or perceptions.

The operational definitions of the research variables are as follows: the independent variable (X) is occupational health and safety (OHS), defined as a system designed to prevent workplace accidents and diseases caused by work activities. Its indicators include working conditions, health services, and the work environment. The dependent variable (Y) is employee performance, measured by the quality and quantity of work achieved by employees based on assigned responsibilities, with indicators such as work results, work behavior, and personal traits.

The study employs a Likert scale to measure perceptions, attitudes, or opinions on a phenomenon, using response options ranging from "Strongly Agree" to "Strongly Disagree" with respective scores from 5 to 1. Data analysis includes descriptive statistics, simple linear regression analysis, and hypothesis testing. Descriptive analysis describes research findings to draw conclusions, while simple linear regression analysis examines the influence of the independent variable on the dependent variable. Hypothesis testing includes partial testing (t-test) to measure the influence of each independent variable and the coefficient of determination ( $R^2$ ) to assess the independent variable's ability to explain variations in the dependent variable.

The study ensures the validity and reliability of the instruments used. Validity tests determine whether a questionnaire effectively measures what it is intended to, using correlation coefficients where items are

considered valid if  $r_{\text{calculated}} > r_{\text{table}}$ . Reliability tests assess the consistency of the questionnaire, using Cronbach's Alpha, with values above 0.60 indicating acceptable reliability. The hypothesis is tested using a significance level of 5%. For partial tests, the hypothesis is accepted if  $p\text{-value} < 0.05$ , and the coefficient of determination measures the extent to which the independent variable influences the dependent variable.

### 3. Results and Discussion

#### 3.1 Data Presentation (Research Results)

##### Respondent Characteristics

The respondent characteristics in this study include gender, age, and education. Based on gender, the respondents are grouped into male and female, as shown in Table 4.1. This table shows that the majority of respondents are male, with 40 respondents (71%), while female respondents number 16 (29%). This indicates that the analysis of the impact of the Occupational Health and Safety (OHS) Program on Employee Performance at PT. PLN (Persero) UPT Makassar is predominantly based on responses from male participants.

Regarding age, the characteristics of the respondents are presented in Table 4.2. The largest group of respondents is in the 30–39 years age range, with 21 respondents (37.5%). This is followed by respondents aged 21–29 years, with 18 respondents (32%), 40–49 years, with 10 respondents (18%), and 50 years and above, with 7 respondents (12.5%). The average age group of 30–39 years seems to be more involved in this analysis, indicating that this age group dominates the workforce related to the study.

In terms of education, the respondents' highest level of education is presented in Table 4.3. The majority of respondents have a Bachelor's degree (S1), with 27 respondents (48%), followed by high school graduates (SMA) with 7 respondents (13%), Diploma (D3) holders with 12 respondents (21%), and Master's degree (S2) holders with 10 respondents (18%). This shows that

respondents with a Bachelor's degree are the dominant group providing responses regarding the analysis of the Occupational Health and Safety Program's impact on Employee Performance at PT. PLN (Persero) UPT Makassar.

#### Descriptive Analysis of Variables

This study aims to describe the research variables based on the distribution of the data obtained. The sample consists of 56 respondents, with the variables being analyzed being the Occupational Health and Safety Program (X) as the independent variable and Employee Performance (Y) as the dependent variable. The data were collected through questionnaires and processed using descriptive statistical techniques.

Regarding the Occupational Health and Safety Program (X), the results of the respondents' responses are presented in Table 4.4. The indicators in this variable show a dominance of "agree" responses from the respondents, with the highest values on several indicators such as the provision of safe work equipment, training programs, and a safe and clean working environment. This indicates that the majority of respondents believe that the Occupational Health and Safety Program at PT. PLN (Persero) UPT Makassar has been implemented well.

For the Employee Performance (Y) variable, the respondents' responses are presented in Table 4.5. Most respondents agreed with performance indicators such as discipline, responsibility, and work efficiency. This dominance of positive responses indicates that the respondents have a favorable perception of employee performance at PT. PLN (Persero) UPT Makassar.

#### Data Quality Testing

Validity testing was conducted using Pearson's product-moment correlation test with a sample size of 56 respondents at a 5% significance level. The validity test results are shown in Table 4.6, which indicates that all statements in the questionnaire are valid because the calculated  $r$  values are greater than

the r table value of 0.263. Therefore, all items in the questionnaire can be used for data collection.

Reliability testing was carried out using the Cronbach's Alpha method to measure the consistency of the questionnaire. Based on Table 4.7, the Cronbach's Alpha value for the Occupational Health and Safety Program (X) is 0.871, and for Employee Performance (Y) is 0.827. Since these values are greater than the standard reliability of 0.60, the questionnaire is considered reliable and consistent for use in the study.

### Simple Linear Regression Analysis

Simple linear regression analysis was used to determine the effect of the independent variable on the dependent variable. Based on the regression test results in Table 4.8, the regression equation obtained is  $Y = 8.695 + 0.761X$ . The constant of 8.695 indicates that, in the absence of the Occupational Health and Safety Program, there is a certain level of employee performance at PT. PLN (Persero) UPT Makassar. The regression coefficient of 0.761 shows that for each unit increase in the Occupational Health and Safety Program, employee performance will increase by 0.761 units.

### Hypothesis Testing

Hypothesis testing was conducted using the coefficient of determination ( $R^2$ ) and t-test. Based on the results in Table 4.9, the  $R^2$  value of 0.676 indicates that 67.6% of the variation in employee performance is explained by the Occupational Health and Safety Program. The t-test results in Table 4.10 show that the calculated t value of 10.622 is greater than the t table value of 1.673, with a significance value of 0.001 (which is less than 0.05). Thus, the hypothesis stating that the Occupational Health and Safety Program significantly affects Employee Performance is accepted.

### 3.2 Analysis and Interpretation (Discussion)

To determine the regression equation, a validity test was first conducted on the questionnaires used for the indicators of the

Occupational Health and Safety (OHS) variable (X) and the Employee Performance variable (Y). The results showed that all statements were valid after the data was analyzed using SPSS 29. To further ensure the reliability of the items in the questionnaire for both variables (X: OHS and Y: Employee Performance), a reliability test was performed. The test confirmed that the items for both variables were reliable, as the Cronbach's alpha values were greater than the critical value of the table.

The simple linear regression analysis, conducted using SPSS 29, yielded the equation  $Y = 8.695 + 0.761X$ , where  $a = 8.695$ . This constant indicates that, in the absence of the OHS program, employee performance at PT. PLN (Persero) UPT Makassar would still have a certain baseline level. The regression coefficient of 0.761 shows that for every unit increase in OHS, employee performance increases by 0.761 units.

This indicates that the OHS variable has a positive and significant impact on employee performance at PT. PLN (Persero) UPT Makassar. This was further supported by observations at the study site, where the company consistently provides protective equipment such as helmets, boots, gloves, and more. Additionally, the company regularly conducts training programs for employees, particularly field workers, to ensure safety and reduce risks. These efforts align with the goal of achieving a "Zero Accident and Safety Condition."

The findings of this study are consistent with previous research by Faizah et al. (2021) and Firmanzah et al. (2019), which also found that the OHS variable positively and significantly influences employee performance. Therefore, it can be concluded that improving OHS programs can enhance employee performance.

## 4. Closing

### 4.1 Conclusion

Based on the research findings and the discussion of the problem formulation regarding Occupational Health and Safety (OHS) influencing employee performance, as outlined

earlier, the researcher concludes from the analysis and statistical data testing (regression equation test) that the independent variable, OHS, has a positive and significant effect on employee performance. Therefore, it can be concluded that if the company improves its OHS programs, employee performance will also improve.

## 4.2 Suggestions

Based on the results of the research presented earlier, the researcher suggests that PT. PLN (Persero) UPT Makassar should continue to implement its OHS program effectively. The company should maintain the OHS programs that have already been established, as they aim to provide a sense of safety and security for employees in performing their work. This ensures that employee performance remains at a high level. Additionally, the company should consider enhancing safety talks conducted by supervisors or OHS officers to encourage compliance with safety regulations and minimize the risk of workplace accidents.

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