

The Influence Of OHS Internal Communication On The Level Of Compliance In The Use Of Personal Protective Equipment (PPE) For Workers At Trisula Callender Hamilton Bridge Project

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ABSTRACT

One of the causes of work accidents is non-compliance with the use of PPE (Personal Protective Equipment). Occupational Health and Safety (OHS) communication is one of the company's efforts to improve the safety and health performance of workers. Based on field observations, internal OHS communication has been implemented in the company. However, it is known that there are still many workers who do not behave safely when using PPE. Furthermore, 83% of the observed workers did not comply with the standards for using PPE. This figure indicates that the level of worker compliance with PPE use is still significantly lacking for safe work and, if left unchecked, can have fatal consequences. Thus, research is needed to explore the influence of providing internal OHS communication on workers' compliance with PPE use. This quantitative research used a cross-sectional observation method. The research findings show that there is no influence between internal OHS communication and the level of worker compliance with PPE use, where the P-value is $>\alpha$ ($0.890>0.05$). Data were collected using a questionnaire distributed to workers and staff, with a total of 44 respondents. Logistic regression was used for data analysis in this study. The aim of this research is to determine the effect of implementing internal OHS communication on the level of worker compliance with PPE use.

Keywords: *OHS Internal Communication, Obedience level, Personal Protective Equipment (PPE)*

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INTRODUCTION

Occupational safety and health (OHS) are essential for workers, companies, and the government. According to a survey conducted by the Indonesian Employment Social Security Agency (BPJS Ketenagakerjaan), workplace accidents in Indonesia remain relatively common. The following are the results of the survey, conducted over the past six years (2017–2022).

According to data from the Social Security Administration for Employment (BPJS Ketenagakerjaan) as of November 2022, the number of workplace accidents reached 265,334. This figure contradicts the OHS goal of zero accidents. The two main reasons for workers' unsafe behavior in the workplace are inability or lack of information about occupational safety, and indifference to its importance. Citing data from the Ministry of Manpower (Kemnaker) and BPJamsostek, the construction sector is the largest contributor to workplace accidents in Indonesia. Construction work is a challenging, high-risk environment where workers are expected to be exposed to difficult and dangerous situations. In the construction sector, workers need to coordinate and provide clear information to ensure work is completed with zero accidents. Internal OHS communication is a tool that can help companies reduce the risk of workplace accidents. Internal OHS communication can be implemented in various forms,

such as vertical communication between management and workers and horizontal communication among workers. Therefore, construction companies need to implement policies through internal OHS communication.

Minister of Manpower and Transmigration Regulation No. 08/MEN/VII/2010 explains the use of Personal Protective Equipment (PPE) for construction workers. Compliance with the correct use of PPE is part of safe work practices that will reduce the risk of workplace accidents.

Based on the results of field observations, 83% of the workers observed by researchers did not comply with the standards for PPE use during the observation. This indicates that the level of worker compliance with PPE use is still significantly lacking for safe working. If left unchecked, this can have fatal consequences. Based on data from the findings of PPE, Emergency & Safety Installation inspections by safety officers, five out of eight (5/8) workers did not wear safety helmets while working. Additionally, in finishing work, only one out of five (1/5) workers had used safety glasses.

Based on this background, it is known that internal OHS communication has been implemented within the company. However, many workers are still found to be not behaving safely by using PPE at work. Therefore, research is needed to explore the effect of providing internal OHS communication on worker compliance with the use of PPE. Based on the above background, it is known that internal OHS communication has been implemented within the company. However, many workers are still found to be not behaving safely by using Personal Protective Equipment (PPE) at work. Therefore, research is needed to explore the effect of providing internal OHS communication on worker compliance with the use of Personal Protective Equipment (PPE).

METHODS

The research design is a quantitative, cross-sectional, and observational study. This study employed a quantitative approach, which involves testing hypotheses using statistical data. The target population for this study consists of PT HKI workers on the Callender Hamilton Trisula Bridge project. The sample size is 44 respondents. The sampling technique used was Probability Sampling, specifically Simple Random Sampling, ensuring that every member of the population had an equal chance of being selected. The data analysis utilizes logistic regression. Logistic regression analysis is a statistical technique used to model the probability of a categorical dependent variable based on one or more independent variables.

RESULTS

Analysis of Respondent Characteristic Variable

Table 1. Based on gender

Gender	Total	Percent (%)
Male	41	93.2
Female	3	6.8
Total	44	100

Source: Primer Data, 2023

The male gender category consisted of 41 (93.2%) respondents. The female gender category consisted of 3 (6.8%) respondents. Therefore, it can be concluded that the majority of Trisula Bridge project workers are male.

Table 2. Based on duration working

Duration	Total	Percent (%)
<1 year	33	75.0
>1 years	11	25.0
Total	44	100

Source: Primer Data, 2023

The majority of respondents had worked for less than a year (<1 year). This is because every time a new job is introduced, the company hires or replaces new workers with skills in that area.

Table 3. Educational history

Educational history	Total	Percent (%)
SMP	12	27.3
SMA	17	38.6
S1	15	34.1
Total	44	100

Source: Primer Data, 2023

The highest educational attainment was high school, with 17 (38.6%) respondents. The lowest educational attainment was junior high school, with 12 (27.3%) respondents. Meanwhile, 15 (34.1%) respondents had a bachelor's degree.

Table 4. Based on age

Age	Total	Percent (%)
<25 Tahun	18	40.9
26-40 Tahun	16	36.4
>40 Tahun	10	22.7
Total	44	100

Source: Primer Data, 2023

Based on the research results in the table above, it can be seen that the majority of respondents studied were aged <25 years with a total of 18 (40.9%) respondents. Ages 26-40 years were 16 (36.4%) respondents and ages >40 years were 10 (22.7%) respondents.

Variable Characteristics

Table 1. Independent Variable

No	HSE Internal Communication	Total	Percent
1.	Good	40	90.9 %
2.	Enough	4	9.1 %
3.	Bad	0	0.00%
Total		44	

Source: Primer Data, 2023

Based on the respondent data presented in the table above, internal OHS communication is divided into three categories: good, adequate, and poor. Of these, 40 respondents (90.9%) were in the good category, while 4 respondents (9.1%) were in the adequate category. This indicates that the majority of respondents in this study implemented internal OHS communication effectively.

Table 2. Dependent Variable

No	PPE Compliance	Total	Percent
1.	Obedient	38	86.4%
2.	Disobedient	6	13.6%
Total		44	100%

Source: Primer Data, 2023

Based on the table above, the level of worker compliance with the use of personal protective equipment (PPE) is divided into two categories. They are compliant and non-compliant. Of the 44 respondents, 38 respondents (86.4%) were compliant with the use of PPE and 6 respondents (13.6%) were non-compliant.

Logistic Regression Analysis

Table 1. Overall Model Fit

-2Log Likelihood awal (block number = 0)	35.051
-2Log Likelihood awal (block number = 1)	35.032

Source: Primer Data, 2023

The difference between the initial -2Log likelihood and the final -2Log likelihood shows a decrease of 0.019. This indicates that the hypothesized model fits the data well, so the addition of independent variables to the model indicates that the regression model is improving, or in other words, H_0 is accepted.

Table 2. Goodness and fit test

Chi-square	Df	Sig.
9.741	8	0.284

Source: Primer Data, 2023

The test results show that the probability value (p) ≥ 0.05 (significant value) is $0.284 \geq 0.05$, so it can be concluded that the model is able to predict the observation value or it can be said that the model is acceptable because it fits the observation data.

Table 3. Matriks Clasification

Observation	Prediction		Percentage Correct
	Worker compliance with PPE use	Non-Compliant	
Worker compliance with PPE use	Non-Compliant	0	6
	Compliant	0	38
Overall Percentage			86.4%

Source : Primer Data, 2023

The table above explains that the overall percentage value before the independent variables were entered into the model was: $38/44 = 86.4\%$. It can be concluded that the predictive power or accuracy of the model in classifying its observations was 86.4%.

DISCUSSION

The results of the distribution of the K3 internal communication questionnaire showed that 40 respondents (90.9%) had a good level of K3 internal communication. This result was measured by adding up the questionnaire scores with the frequency of answers Strongly Agree (SS) = score 5, Agree (S) = score 4, Undecided (RR) = score 3, Disagree (TS) = score 2, and Strongly Disagree (STS) = score 1. The results of the sum of the scores were then divided into three categories, namely good with a total score of 56-70 ($\geq 80\%$), sufficient with a score of 55-30 ($79 \geq \text{score} \geq 43\%$), poor with a score of 29-0 ($42\% \geq \text{score} \geq 0\%$).

In this study, workers were considered compliant in using PPE if there were ≥ 4 checklist items that stated (YES) in the questionnaire. The results of the questionnaire distribution regarding the level of compliance with PPE use by PT Hutama Karya Infrastruktur workers indicated that 38 respondents (86.4%) were compliant. In addition, 6 respondents (13.6%) workers were declared non-compliant in using PPE.

Based on the results of the logistic regression test that has been carried out, the P value is $0.890 > 0.05$, which means there is no relationship between internal OHS communication and the level of compliance with the use of PPE by workers. This shows that the independent variable does not have a significant partial effect on the dependent variable in the model. Internal OHS communication has a

Wald Sig of $0.890 > 0.05$, so it accepts H0 or rejects H1, which means internal OHS communication does not have an effect on the level of compliance with the use of PPE by workers

CONCLUSION

The research discuss about the influence of internal K3 communication on the level of compliance with workers' use of PPE. This research states that there is no influence between these two variables.

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