

The Influence of Occupational Safety and Health on Employee Work Productivity (Study on the Kisaran Majalengka Dam Project of Pt. Adhi Karya (Persero) Tbk)

Pipih Sopiyan¹⁾ Haris Fauzi²⁾ Windi Febriani³⁾

^{1 2 3} Management, Faculty of Economics and Business, Majalengka University, Majalengka, Indonesia

*E-mail: pipih.sofyan@unma.ac.id

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ABSTRACT

Issues regarding occupational safety and health are important and often overlooked. This is evident from the significant occurrence of workplace accidents. Type, nature, condition and location of work in construction projects that tends to be dangerous resulting in a relatively high level of work accidents that occur to workers compared to other industries so it affects work productivity. The goal of this study is to determine the role that workplace health and safety plays in influencing worker output.

The methodology employed for this study involves the utilization of a survey approach, employing both descriptive and verification methods. The population of this research consist of the workforce employed at PT. Adhi Karya (Persero) Tbk Majalengka Rentang Dam Project. This research employed a non-probability sampling strategy, specifically the saturation sampling method. The study's sample size was 60 participants. The data analysis makes use of numerous techniques, the t-test for hypothesis testing and other statistical methods such as the classical assumption test, multiple regression analysis, determination coefficient assessment, model feasibility study, and so on.

The study method followed a survey format and combined descriptive and verification techniques. Employee productivity was found to be affected by both workplace safety and occupational health, as predicted by the study's hypotheses.

Keywords: Employee productivity; health; work safety.

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INTRODUCTION

Effective resource management results in higher productivity, as measured by the output to input ratio. According to Rusdiana (2015:227). The importance of productivity has been universally recognized in terms of improving well-being. Increase productivity to create more useful goods and services in every aspect of human life. The costs associated with implementing productivity gains during the completion of a particular task can be substantial.

Occupational safety is the absence of hazards in the workplace that could endanger workers or endanger them. Widodo (2015:240). Since the first baby was carried by its mother, the need for security has been an essential aspect of the human condition. However, without realizing it, people have been talking about how to use safety to unleash potential profits in the environments where they live. (Ramli, 2015:6). It is very important for employees to have protection against workplace injuries and illnesses caused by working on a job or in a work environment so that they can feel safe and secure while carrying out their duties. When workers have good health, they will continue to work hard and productively, so it is hoped that worker productivity will increase.

Occupational health can be explained as a condition in which the physical and psychological well-being of individuals in general is sought to be achieved as much as possible. Preventing and controlling occupational diseases is a priority, combating worker fatigue, and fostering a healthy workplace (Agung Wahyudi, 2019: 3). Healthy workers are more likely to work long hours in the office, which should increase production.

Worker health and safety is a major concern in the construction business, but is rarely addressed. This phenomenon can be seen through the high number of work accidents. Awareness in the construction industry regarding work safety is still low. The construction industry has a higher accident rate than most others due to the nature of the work performed and the inherent dangers of the site itself. Accidents can occur for a number of reasons, including changing tasks and team chemistry, careless work and misuse of safety equipment, carrying out work that does not follow procedures, worker negligence in using machines, and operating equipment by individuals who do not have professional skills.

Safety and health in the workplace through changes in organizational policies aims to minimize the need for handling work accidents that may be caused by worker error. However, this must be done while still complying with applicable rules and regulations. In 2021, work accident cases in Indonesia will experience accelerated growth. The number of work accidents rose to 234,270 cases, totaling 221,740 cases, up 5.65% from the previous year.

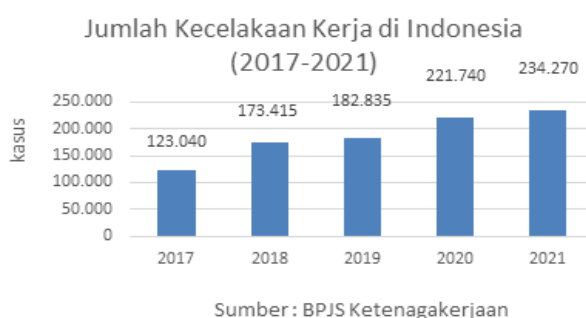


Figure 1. Number of Work Accidents in Indonesia

The Social Insurance Administration Agency (BPJS) for Employment predicts that in 2019 there will be a total of 234,270 work accidents in Indonesia. There were around 221,740 cases last year, therefore a decrease of 5.65% is expected. Over the last five years, the number of work accidents in Indonesia has reportedly continued to increase. Around 123,040 work accidents have been reported since 2017. In 2018, 173,415 work accidents occurred, an increase of more than 40.94 percent from 2017. The following year

there was an increase of almost 5.43% or 182,835 cases. Domestically, the number of work accidents has increased drastically, increasing by around 21.28% in 2020 to 221,740 cases. The current trend will continue into the coming year. According to BPJS Employment, quite a lot of accidents occur at work sites, especially between 06.00 and 12.00 on weekdays. As a result of these various work accidents, BPJS Employment must collect funds of around IDR 1.79 trillion to pay claims in 2021. Compared to the previous year which reached IDR 1.56 trillion, the current amount has increased by around 14.97%. (BPJS Naker, 2022).

Due to the potential impact of these factors on employee productivity in achieving organizational goals and objectives, workplace health and safety initiatives should be evaluated for their impact on productivity. Finding out how employees feel about occupational health and safety is the focus of this research influencing their output on the Kisaran Majalengka Dam Project for PT. Adi Karya (Persero).

LITERATURE REVIEW, FRAMEWORK AND HYPOTHESIS

Organizational behavior

According to Wijaya (2017:1), organizational behavior is a field of science that examines how people behave in organizations and how this behavior influences people's ability to perform individually, collectively and in the organization. Winardi emphasized that behavior is a function of individual, organizational and psychological factors (in Wijaya 2017, p. 2), and these factors interact to shape behavior.

Employee Work Productivity

Products and services are outputs, while labor, energy and other resources are inputs, as defined by Stevenson and Chuong (2015: 55).

Work safety

Mirwan (2015: 543) defines work safety as a condition where employees work honestly and without encountering any difficulties while carrying out their duties. In this way, work can be carried out normally without being hindered by work accidents. Work safety management is an integral aspect of every company operation, an important part in providing a sense of security to employees so they can carry out their work optimally.

H1: Work safety has an impact on employee productivity.

Occupational health

In an effort to achieve the highest level of health, according to Agung Wahyudi (2019:03), "Occupational health is defined as the stage where workers' physical health and work-related illnesses are eliminated, workers' exposure to workplace stress is minimized, and a healthy workplace is established," said WHO.

H2: Occupational Health has an impact on employee productivity.

METHODS

Human resource management is the focus of the author's research. The methodology used is a survey study. Based on the research method above, the approach used by researchers is both descriptive and verification. Participants in this research were all PT. Adhi workers at the Majalengka Dam with a total of 60 people. According to information gathered, there are sixty workers. Questionnaires were used to collect information for this investigation. Both descriptive and verification analysis are used in both approaches.

RESULTS AND DISCUSSION

Data Normality Test

**Table 1. Normality Test Results
One-Sample Kolmogorov-Smirnov Test**

		Unstandardized Residual
N		60
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	1.87623714
Most Extreme Differences	Absolute	.126
	Positive	.126
	Negative	-.078
Test Statistic		.126
Asymp. Sig. (2-tailed)		.200 ^c

Source: SPSS 25 output, 2023.

According to the results of data management with SPSS, all variable data (residual values) are normally distributed or the normality test is met if Asymp. The sig of the Kolmogrov-Smirnov output is all greater than 0.05.

Multiple Regression Analysis

Table 2. Result of Multiple Regression Analysis

		Coefficients ^a		t	Sig.
Model		Unstandardized Coefficients B	Std. Error		
1	(Constant)	10.424	.882	11.822	.000
	Keselamatan Kerja	.100	.030	3.334	.000
	Kesehatan Kerja	.160	.031	5.162	.000

a. Dependent Variable: Produktivitas Kerja Karyawan

Source: SPSS 25 output, 2023.

The table above displays the results of multiple regression analysis, which are as follows:

$$Y = 10.424 + 0.100 X_1 + 0.160 X_2 + \epsilon$$

Taking into account the statement above, it can be interpreted as follows:

1. The positive constant (a) in the regression shows that employee work productivity will still occur even without occupational safety and health variables.
2. The positive sign and regression coefficient of 0.100 for workplace safety indicate that worker output increases when safety measures are taken into account. Likewise, if worker safety is compromised, their output will suffer.
3. The positive regression coefficient of 0.160 for occupational health indicates that improving worker health has a beneficial effect on work productivity. Likewise, vice versa: a decrease in worker productivity if occupational health is ignored.
4. Residual values (ϵ) are errors introduced by the researcher's own sampling procedures when making predictions about the data.

Coefficient of Determination Analysis

Table 3. Coefficient of Determination Analysis Result Coefficients^a

Model		Correlations		
		Zero-order	Partial	Part
1	Keselamatan Kerja	.799	.452	.235
	Kesehatan Kerja	.854	.636	.382

a. Dependent Variable: Produktivitas Kerja Karyawan

Source: SPSS 25 output, 2023.

Based on table 3, conclusions can be obtained, namely:

1. A worker's productivity is influenced by the magnitude of the contribution to work safety which is calculated at 63.84%.
2. The proportion of increased employee productivity caused by increased work safety was 72.93%.

Fit Model Analysis (F test)

Table 4. F Test Result

		ANOVA ^a				
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	908.914	2	454.457	104.043	.000 ^b
	Residual	249.015	57	4.368		
	Total	1157.929	59			

a. Dependent Variable: Produktivitas Kerja Karyawan

b. Predictors: (Constant), Kesehatan Kerja, Keselamatan Kerja

Source: SPSS 25 output, 2023

Based on the data in table 4 above, the F test produces a value of 104.043 at a significance level of 0.000. A value of 3.16 was found for F statistics when the significance level was set at 0.05. As a result, it can be concluded that $F \text{ statistics} = 104.043 > F \text{ table} = 3.16$. Apart from having a significance level of 0.000 - 0.05, the model chosen is Occupational Safety and Health which has model feasibility or is appropriate (fit) in predicting Employee Work Productivity.

Hypothesis Test

The t test is used to partially test the hypothesis between location and tourist attractions on visiting decisions. The t test basically shows how far an independent variable has an individual influence in explaining variations in the dependent variable. The partial test results are in table 2 above. According to table 2, it can be explained as follows:

The Effect of Work Safety on Employee Work Productivity

t statistics of 3.334 is calculated using the data in the previous table. $Df = n - k = 60 - 2 = 58$ for a probability level of 5%. This is because the number $df = 58$ produces a t table of 2.001 in the t distribution. H_0 is rejected, while H_1 is accepted, because the significance level is $0.000 < 0.050$ and t statistics $3.334 > t \text{ table } 2.001$. As a result, it is clear that ensuring a safe workplace has a major impact on productivity. In order to validate the first hypothesis, which postulates that improving workplace safety increases worker output.

Workplace safety has a huge impact on employee output. According to the results of this research, workers at PT. The Adhi Karya Majalengka Span Dam Project is very productive, significantly influenced

by work safety indicators which include the use of work equipment or equipment, work load, regulations, communication, support, training and work safety.

PT. Adhi Karya The Majalengka span dam project demonstrated that work safety was successful. The fact that the majority of respondents agree with the implementation of work safety shows how this affects employee productivity as does the company. This was done by Adhi Karya personnel when working on the Majalengka span dam project. In order to increase employee productivity, companies must maintain or improve the implementation of the Work Safety program.

The Effect of Occupational Health on Employee Work Productivity

Using the previous information, calculate t statistics of 5.162. With $\alpha=5\%$, the parameter of freedom (df) is equal to $n - k = 60 - 2 = 58$. Specifically, $df = 58$ produces a t table value of 2.001, as shown in the t distribution table. Therefore, H_2 is accepted, because the significant value is $0.000 < 0.050$ and t statistics $5.162 > t$ table 2.001. Productivity is undoubtedly influenced by occupational health.

The health conditions of workers in the workplace have a major impact on employee productivity. These results show that the indicator of employee health facilities, productivity in PT is greatly influenced by the health of the work environment and employee health maintenance. The Kisaran Majalengka Dam project is known as Adhi Karya. Therefore, the more Occupational Health Programs and Implementation are improved, the better off the organization and its employees will be.

Consistent with the findings. Based on their 2020 study entitled "The Impact of Occupational Safety and Health on Worker Productivity at PT. Haleyora Powerindo Bandung," by Dindin Bernhardin and Ridwal Syahril Ismail that "health and safety programs have a significant impact on this research. This research shows that worker health has an impact has a big impact on their productivity at work.

CONCLUSION

Work safety has an impact on employee productivity. This implies that employee productivity increases when occupational safety standards are raised. Employee productivity in the workplace is influenced by occupational health. implies that employee productivity in the workplace increases in proportion to the level of occupational health practiced. Companies are advised to provide personal protective equipment so that workers feel safe in carrying out their duties and pay more attention to the workload given to them so that they can complete their tasks as a whole. In addition, businesses must ensure that their facilities are clean, have access to clean water, and have adequate ventilation so as to provide employees with a sense of comfort in carrying out their work. Companies must also pay attention to the health of their workers by conducting regular health checks to ensure that employees are healthy from various aspects. kind of disease. And companies must set standards that are in accordance with competency so that employees are able to complete tasks completely and in accordance with their responsibilities.

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