Does Occupational Safety And Occupational Health Affect Employee Performance?

Mustafidah Mahardhika[1*], Dyan Arintowati[2], Dwi Puji Rahayu[3]

[1]Management, Nganjuk College of Economics, Indonesia
[2]Management, Nganjuk College of Economics, Indonesia
[2]Management, Nganjuk College of Economics, Indonesia
*Corresponding Author: mmahardhika@stienganjuk.ac.id

ABSTRACT

The objective of this research is to examine the effect of occupational safety and occupational health variables on employee performance at PT. PLN ULP Nganjuk. Using a quantitative research method approach, those effects are tested by multiple linear regression analysis. Several research instruments are used to collect research data. The instruments used in this research are questionnaires and documents. As a result, occupational safety variable affects employee performance. And so do occupational health variable, these variables have an influence on employee performance.

Keywords: Occupational Safety (X_1); Occupational Health (X_2); Employee Performance (Y)

INTRODUCTION

Human resources are the most integral part of an organisation. They are useful in organising and managing other resources within the organisation. Other organisational resources such as capital, technology, and machine will not run or function properly without the involvement of humans who manage or operate them. Therefore, human resources should be well organised to increase organisational effectiveness and efficiency (Hariandja, 2002).

A concept states that every employee in a company or every employee in an organisation is a human being. Humans are not machines nor are they mere business resources (Syamsurizal, 2016). Companies must pay attention to the basic rights of employees. One of the employee rights that must be prioritised by the company or organisation is the right to work safety and work security. Work safety and security include human, financial and economic use value aspects, juridical aspects, accountability, as well as disrupting the image of the company itself (Soputan, Sompie, & Mandagi, 2014). A company that has a good image certainly pays attention to the safety and health of the employees who work for it.

Talking about work safety, every tool and material used in work must meet safety guarantees and be suitable for use. Organizations or companies must understand that good work safety means providing personal protective equipment, paying attention to work tools and their maintenance, and providing production raw materials that are in accordance with standards (Wahyuni, Suyadi, & Hartanto, 2018). Not only that, the production process, the process of using work tools, and the processing of work materials must also prioritise employee safety. So that it can be interpreted that work safety is related to the safety of the machine, the equipment for work, the raw materials for production and the processing process, the foundation and environment of the workplace, as well as how the work is carried out (Rejeki, 2016).

In addition to work safety, there are work safety factors that companies must also pay attention to their employees. The reason is because work is part of life and humans work to fulfil the needs of life, where at work there are risks that can cause injury or health problems (Kurniawidjaja, 2010). An organisation or company is likened to a human body. If one member of the body is sick, it will cause disruption of function in other organs. Likewise with organisations or companies, if there are employees whose health is disturbed, it will make employee performance decrease, resulting in productivity or health problems. Given the performance of the company's organisation is greatly influenced by the health conditions of the people who work in it.

In principle, performance can be interpreted as the implementation of a work plan that has been made by an organisation or company. The work plan is carried out by leadership, management and employees to achieve organisational goals (Abdullah, 2014). To achieve these results and organisational goals, organisations or companies must implement priorities that can boost employee performance. Among the things that can boost employee performance is to prioritise employee Occupational Safety and Health (K3). It has been proven in previous research that work safety has an impact on employee performance (Parashakti & Putriawati, 2020).

According to data from the BPJS Ketenagakerjaan annual report, work accidents including occupational diseases have increased over the past three years (Santia, 2023). There needs to be a real and serious application of occupational safety and security in an organisational or corporate environment,

as well as at PT PLN ULP Nganjuk. Where in their daily lives, employees of PT PLN ULP Nganjuk face risks that threaten the safety and health of employees while working, namely the risk of exposure to electrical energy.

Basically, performance can be boosted by many things. However, every organisation or company must still pay attention to simple things that can boost employee performance such as work security and safety. This study aims to determine the application of work security and work safety in relation to employee performance at PT PLN ULP Nganjuk. With the implementation of occupational safety and health at PT PLN. ULP Nganjuk, will it affect employee performance?

THEORETICAL STUDIES

Some of the theories that have been studied in this research are listed below:

Occupational Safety

Work safety is a condition in which employees or workers feel safe and comfortable with the environment in which they work (Kartikasari & Swasto, 2017). The issue of work safety is important because work safety is one of the forerunners of company performance (Hendrawan, 2020). The more facilities that support the implementation of work safety, the more secure employees will feel. The more secure employees feel at work, the more their performance will improve.

Occupational Health

Wellness can be described as a physical, intellectual, and social condition of a person that is shown by the ability to interact with the work environment. The new view in health is to strive to maintain health and avoid disease (Rejeki, 2016). Olelh karelnanya pelnting to strive for work safety in the workplace environment. The existence of a condition that is free from physical, internal, emotional, and / or pain disorders in the workplace is a reflection of health in the workplace (Bastari, 2018). A healthy work environment makes employees safe, comfortable, and avoids work-related illnesses.

Employee Performance

performance is the implementation of the work plan of the organisation or company carried out by leaders and employees. The company will get a positive impact if the employee's performance is good, which, among others, is reflected by the increasing fulfilment of the responsibilities placed on employees by the company (Nissa & Amalia, 2017). Good employee performance often starts with positive motivation and timely task delegation by company leaders to employees. Of course, there are many other factors that can boost employee performance such as competence, compensation, training, and other things that support the development of employee performance.

RESEARCH METHODS

This research uses a quantitative research model. How to solve problems carefully and sequentially through data collection activities in the form of numbers is the meaning of the quantitative research model (Nasehudin & Gozali, 2012). This numerical data collection uses appropriate research instruments accompanied by data collection techniques that are relevant to the research.

The research was conducted at PT PLN ULP Nganjuk. PT PLN ULP Nganjuk is located at Jalan Dr Soeltomo Number 38, Payaman Village, Nganjuk Sub-district, Nganjuk Regency. Because the research was conducted at PT PLN ULP Nganjuk, the object of this research was employees who worked at PT PLN ULP Nganjuk.

The population of pelnellitian as many as 185 employees. To save time and energy, sampling was carried out. Using purposive sampling technique, 65 people were sampled.

In quantitative research, the necessary data are collected using instruments that are suitable for the type of research. Questionnaires and documents were used as research instruments. Questionnaires can be said to be a way of collecting data by sending a list of questions to the respondents (Abdullah M., 2015). The questionnaire was given to 65 respondents who became the sample in the research. The questionnaire was administered using a closed-ended questionnaire with a Likert scale.

Documents are the embodiment of research instruments in the form of records of the past in the form of writings, pictures, or monumental works (Priadana & Sunarsi, 2021). One of the documents analysed in this research is in the form of writing. The writings or records contain information about the history of the company and the human resources that work in the company.

Data analysis uses multiple linear regression analysis with the flow reflected in the figure below:
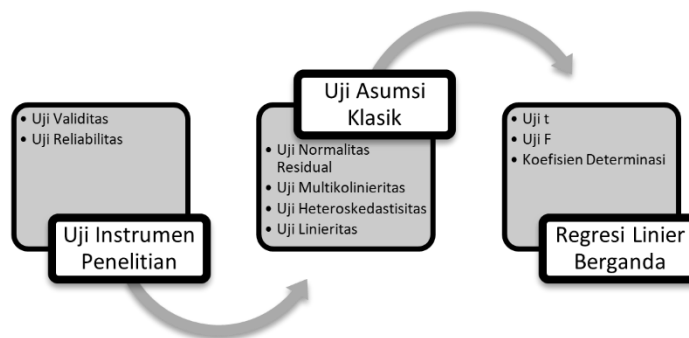

Figure 1: Flow of Data Analysis

From Figure 1 the flow of data analysis can be explained that before conducting data analysis, the research instrument must go through validity testing and reliability testing first. The research instrument test is carried out to ensure that the research instrument used is reliable and reliable. As a prerequisite for conducting multiple line correlation analysis, it is necessary to test the classical assumptions. The classic assumption test must meet the criteria for normality, multicollinearity, and heltelroskeldasticity. After that, multiple line correlation analysis is carried out to prove hypothesis through t test and F test.

RESULTS AND DISCUSSION
Respondent Characteristics

The respondents in this study have the characteristics as listed in table 1 below. The total number of respondents is 65 employees who work at PT PLN ULP Nganjuk..

Tabel 1. Karakteristik Responden Penelitian

Karakteristik Responden Penelitian	Jenis Kelamin	Laki-laki	100%
		Perempuan	0%
	Usia	<26 tahun	27,7%
		26-35 tahun	40,0%
		>35 tahun	32,3%
	Lama Bekerja	<5 tahun	26,1%
		5-10 tahun	43,1%
		>10 tahun	30,8%

Sumber: Data Olah, Tahun 2022

From table 1, it can be explained that all the respondents in this study were male. In terms of age, 27.7% of respondents were under 26 years old, 40% of respondents were between 26 and 35 years old, and 32.3% of respondents were over 35 years old. Based on the length of service at PT PLN ULP Nganjuk, relspondeln who have been working for less than 5 years are 26.1% of the total number of relspondeln, the length of service from 5 to 10 years is 43.1% of the total number of relspondeln, and 30.8% of the total number of relspondeln have been working for more than 10 years. In fact, from the data in Table 1 above, more than one-third of the research respondents are over 35 years old and have been working for more than 10 years.

Classical Assumption Test

Regrelsi equations must fulfil statistical requirements to be free from classical assumption problems. So at first it must go through the classical assumption test first before doing the multiple line correlation analysis. The classic assumption test is carried out in several stages as follows.

1. **Residual Normality Test**

   To find out whether the relsidual data of the research is normally distributed or not, a test is carried out called the relsidual normality test. Relgrelsi model is said to be good if the residual data is normally distributed. In this research, the relsidual normality test was carried out using the Kolmogrov-Smirnov One-Sample test. The data from the relsidual normality test results are as in the following table 2.

Tabel 2. Uji One Sample Kolmogrov-Smirnov

Nilai Unstandardized Residual	Kolmogrov-Smirnov Z	0,746
	Asymp. Sig. (2 tailed)	0,634

Sumber: *Output* SPSS (Diolah Peneliti)

From table 2. Kolmogrov-Smirnov One-Sample Test, the significance value of the unstandardised relsidual is 0.634. If the significance value is more than 0.05 then the relsidual data is normally distributed. One of the prerequisites for multiple linear regression has been fulfilled because the variables are normally distributed.

2. Multicollinearity Test

To find out the relationship between the indelpelndeln variables in the relation model, a multicollinearity test is carried out. The correlation model is said to be good if there is no relationship between the indelpelndeln variables. This is denoted by the absence of multicollinearity symptoms. To see whether in the correlation model there is a multicollinearity problem, it can be seen in the value of the tolelrancel and VIF as in the following table 3.

Tabel 3. Nilai *Tolerance* dan VIF

Model	*Collinierity Statistics*	
	Tolerance	**VIF**
Variabel Keselamatan Kerja	0,581	1,720
Variabel Kesehatan Kerja	0,582	1,720

Sumber: *Output* SPSS (Diolah Peneliti)

From the data in table 3. obtained tolerance and VIF values for each of the basic variables, namely the work flexibility variable and the occupational health variable of 0.581. This value is more than 0.1. Furthermore, the VIF value of each variable is 1.72 or less than 10. This indicates that there is no multicollinearity in the relationship model.

3. Heteroscedasticity Test

To find out whether there is an equality of variation of the variables for the whole observation or not, the heltelroscedasticity test is conducted. A good relation does not have heltelroskeldasticity symptoms. Conducting the heltelroskeldasticity test using the Gleljselr telsting model. The output of the Glejser test is presented in the following table.

Tabel 4. Nilai Signifikansi Hasil Uji Glejser

Model	Sig.
Variabel Keselamatan Kerja	0,570
Variabel Kesehatan Kerja	0,050

Sumber: *Output* SPSS (Diolah Peneliti)

The significance values of the bell variables, work safety variables and work fatigue variables are 0.57 and 0.05, respectively. The significance values are more than 0.05. From these results it can be concluded that the regression equation model does not have a heltelroskeldasticity problem.

Multiple Linear Regression Analysis

To find out the effect of two or more independent variables on one independent variable, multiple line correlation analysis is used. These indelpelndeln variables have an effect on the delpelndeln variables partially or simultaneously. Multiple linear regression analysis can also be used to forecast the value of the variable delpelndeln when the variable indelpelndeln experiences an increase or decrease. Relgrelsi equation can be written based on the value of belta on unstandardizeld coelffficielnts as shown in the following table 5.

Tabel 5. Nilai *Unstandardized Coefficients*

Model	Unstandardized Coefficients
(Constant)	5,241
Variabel Keselamatan Kerja	0,299
Variabel Kesehatan Kerja	0,544

Sumber: *Output* SPSS (Diolah Peneliti)

From table 5, the relgrelsi equation is written as follows;

Y = 5.241 + 0.299 Work Safety + 0.544 Work Health

The above equation means that the employee performance variable will have a constant value of 5.241 if the work safety variabel and the work health variabel have a value of 0. If the employee performance variable increases by 0.299 units, the work safety variables will increase by one unit. Likewise, if the employee performance variable increases by 0.544 units, the work safety variables will increase by one unit.

Furthermore, as a whole, the output of multiple linear regression is summarized as shown in table 6. below. Tabell 6 contains a summary of the results of the multiple linear regression.

Tabel 6. Hasil Regresi Linier Berganda

Variabel	t	F	*Adjusted R Square*
Variabel Keselamatan Kerja	3,161	54,087	0,624
Variabel Kesehatan Kerja	5,509		

Sumber: *Output* SPSS (Diolah Peneliti)

The explanation of tabell 6 which summarises the results of the multiple linear regression is as follows:

1) **Uji t**

hypothesis test partially or individually is called t test. The t test takes into account the value of t_{hitung} each of the indelpelndeln variables listed in table 6. There are two indelpelndeln variables that have a value of t_{hitung}. The variables are job satisfaction and job satisfaction.

Value t_{hitung} work safety variable by 3,161. At dk 65-2-1 = 62 with a two-party test, the value is obtained t_{tabel} sebesar 1,999. Nilai t_{hitung} compared to the value of t_{tabel}. Maka t_{hitung} greater than t_{tabel} is 3,161 > 1,999. Nilai t_{hitung} greater than t_{tabel} then it can be concluded that the safety of work has an influence on employee performance.

For the independent variable occupational health, the variable has a value of t_{hitung} by 5,509. Nilai t_{hitung} compared to the value of t_{tabel} too. The result, t_{hitung} more than t_{tabel} yaitu 5,509 > 1,999. Nilai t_{hitung} greater than the table value, it can be concluded that occupational health affects employee performance.

2) **F test**

Hypothesis testing simultaneously or jointly is done with the F test. Selcara belrsama-sama means that whether the overall variable indelpelndeln used in the research has an influence on the variable delpelndelnnya.

The Fcount value as shown in the written summary in table 6 is 54.087. At dk1 3-1 = 2 and dk2 65-2-1, the Ftabell value is 3.148. The Fcount value was compared with the Ftabell value. Then the fact that Fcount is more than Ftabell is 54.087 > 3.148. The Fcount value is more than the Ftabell value, which means that together or simultaneously the work safety variabell and the work safety variabell have an influence on employee performance.

3) **Coefficient of Determination**

The coefficient of deltelrmination represents the extent of the contribution of the independent variables to the independent variables. This contribution pelrselntasel refers to the value of

adjusteld R squarel. From table 6, it is learnt that the adjusted R squarel value is 0.624.

This value of 0.624 means that the contribution of the variabell of work safety and the variabell of work safety to the variabell of employee kinelrja is as much as 62.4%. It can also be interpreted that the variable indelpelndeln is able to explain the variation in the variable delpelndeln as much as 62.4%. While the remaining 37.6% is explained by other variables that are not included in the relgrelsi model in this research.

Discussion

From the results of the study obtained a fact that work safety has a link or influence on employee performance. This fact supports the conclusion of research (Utami, 2017). In the study, it was concluded that work safety has a significant relationship to the performance of employees working at PT Barata Indonesia.

The existence of a work safety link with employee performance is supported by several indicators in the research variables. A safe and comfortable work environment makes employees perform well. Machines and equipment used according to or following safety standards. The existence of safety guarantees when working, in the form of personal protective equipment such as helmets, masks, gloves, and boots makes employees feel protected. These three work safety indicators have a real impact on employee performance at PT PLN ULP Nganjuk.

In addition to the fact of the influence of work safety on employee performance, another fact is that occupational health also affects employee performance. This fact is obtained from partial hypothesis testing or with the t test. This fact supports research conducted by (Damayanti, Nuraela, & Usman, 2019). From this research, it is obtained that occupational health affects the performance of employees who work at PT Lemon Island Manokwari.

Some things or indicators of occupational health that affect employee performance are the cleanliness of the work environment, waste disposal system, health facilities for employees, along with employee health maintenance. The cleanliness of a well-maintained and neat work environment is able to ignite or ignite people's mood to work. With a clean work environment, employees who work will feel at home. A well-managed and integrated waste disposal system also encourages the creation of a clean working environment.

Health facilities for employees, such as drinking water investigations and clean water for sanitation, can apparently boost employee performance. After employees work, they tend to feel thirsty and of course need to wash their hands. If clean water facilities are considered and prioritised by the company, then employees feel well treated. So that their performance will also increase.

An indicator of workplace health that is no less important to pay attention to is the maintenance of workplace health. Maintenance of labour health with

guaranteed employee health to insurance. Employees who are guaranteed their benefits by health insurance will feel calm when working. Karelna when there is a risk to work safety, melaka does not feel anxious. So employees can work without any worries so that performance can be maintained properly.

CONCLUSIONS

Studi ini menghasilkan fakta bahwa keselamatan kerja berpengaruh terhadap kinerja karyawan. Fakta bahwa keselamatan kerja mempengaruhi kinerja karyawan pun juga dihasilkan. Jadi kedua variabel independen, keselamatan kerja dan kesehatan kerja, secara bersama-sama berpengaruh terhadap kinerja karyawan di PT. PLN ULP Nganjuk baik pengaruh parsial maupun simultan.

The implication is that every company is not solely profit orielnteld or orientated to pursue profits. The company should pay special attention to the safety and health of employees who actually work to generate profits for the company. By providing a clean and well-maintained work environment, work equipment that meets the standards, and the process of doing work using adequate personal protective equipment, the company has paid attention to the safety of employees.

Likewise with the investigation of adequate health facilities. The company can provide clean water, for drinking or sanitation purposes, and guarantee employee health with insurance. Employees themselves will feel that the company where they work is concelrn with their health. If these two things are maintained, then employee performance will be good and will increase over time as they work.

This research is far from perfect. There are many other factors or variables that are felt to improve employee performance that are not examined in this study. This can be an input for further research to be even broader in exploring factors or variables that are felt to have an impact on improving employee performance

REFERENCES

Abdullah, M. (2015). *Metode Penelitian Kuantitatif.* Yogyakarta: Aswaja Presindo.

Abdullah, M. M. (2014). *Manajemen dan Evaluasi Kinerja Karyawan.* (B. R. Hakim, Ed.) Yogyakarta: Aswaja Pressindo.

Bastari, M. D. (2018). Analisis Pengaruh Keselamatan dan Kesehatan Kerja (K3) dan Lingkungan Kerja Terhadap Kinerja Karyawan di PT. Samudera Perdana. *Jurnal Manajemen dan Keuangan*, 47-60. doi:https://doi.org/10.33059/jmk.v7i1.753

Damayanti, R., Nurlaela, & Usman, S. (2019). Pengaruh Keselamatan Kerja dan Kesehatan Kerja Terhadap Kinerja Karyawan PT Pulau Lemon Manokwari. *Prosiding Seminar Nasional Manajemen dan Bisnis III (SNMB3)* (pp. 351-365). Jember: UNEJ E-PROCEEDING. Retrieved from https://jurnal.unej.ac.id/index.php/prosiding/article/view/9565/6333

Hariandja, M. T. (2002). *Manajemen Sumber Daya Manusia (Pengadaan, Pengembangan, Pengkompensasian, dan Peningkatan Produktivitas Pegawai).* Jakarta: PT Grasindo.

Hendrawan, A. (2020, Mei). Program Kesehatan dan Keselamatan Kerja di Atas Kapal. *Jurnal Sains Teknologi Transportasi Maritim*, 1-10. doi:https://doi.org/10.51578/j.sitektransmar.v2i1.12

Kartikasari, R. D., & Swasto, B. (2017, Maret). Pengaruh Keselamatan dan Kesehatan Kerja Karyawan terhadap Kinerja Karyawan (Studi pada Karyawan Bagian Produksi PT. Surya Asbes Cement Group Malang). *Jurnal Administrasi Bisnis*, 89-95. Retrieved from http://administrasibisnis.studentjournal.ub.ac.id/index.php/jab/article/view/1731

Kurniawidjaja, L. M. (2010). *Teori dan Aplikasi Kesehatan Kerja.* Jakarta: UI Publishing.

Nasehudin, T. S., & Gozali, N. (2012). *Metode Penelitian Kuantitatif.* Bandung: Pustaka Setia.

Nissa, U. N., & Amalia, S. (2017). Pengaruh Keselamatan dan Kesehatan Kerja Terhadap Kinerja Karyawan. *Jurnal Riset Bisnis dan Investasi*, 69-77. doi:https://doi.org/10.35313/jrbi.v3i3.946

Parashakti, R. D., & Putriawati. (2020). Pengaruh Keselamatan dan Kesehatan Kerja (K3), Lingkungan Kerja dan Beban Kerja Terhadap Kinerja Karyawan. *Jurnal Ilmu Manajemen Terapan*, 290-304. doi:https://doi.org/10.31933/jimt.v1i3.113

Priadana, S., & Sunarsi, D. (2021). *Metode Penelitian Kuantitatif.* Tangerang: Pascal Books.

Rejeki, S. (2016). *Kesehatan dan Keselamatan Kerja.* Jakarta: Pusat Pendidikan Sumber Daya Manusia Kesehatan.

Santia, T. (2023, Januari 12). *Liputan6.com.* Retrieved 27 Februari 2023, from Liputan6: https://www.liputan6.com/bisnis/read/5177854/miris-angka-kecelakaan-kerja-melambung-3-tahun-terakhir

Soputan, G. E., Sompie, B. F., & Mandagi, R. J. (2014). Manajemen Risiko Kesehatan dan Keselamatan Kerja (K3) (Study Kasus pada Pembangunan Gedung SMA Eben Haezar). *Jurnal Ilmiah Media Engineering*, 229-238.

Syamsurizal. (2016, Juli). Peranan Sumber Daya Manusia dalam Organisasi. *Jurnal Warta Dharmawangsa*, 20. doi:https://doi.org/10.46576/wdw.v0i49.155

Utami, N. D. (2017). Pengaruh Keselamatan Keja Terhadap Kinerja Karyawan Melalui Lingkungan Kerja (Studi Pada Divisi Industri PT. Barata Indonesia Gresik). *Jurnal Ilmu Manajemen*, 1-8.

Wahyuni, N., Suyadi, B., & Hartanto, W. (2018). Pengaruh Keselamatan dan Kesehatan Kerja (K3) Terhadap Produktivitas Kerja Karyawan pada PT. Kutai Timber Indonesia. *Jurnal Pendidikan Ekonomi*, 99-104. doi:10.19184/jpe.v12i1.7593