

# Occupational Safety and Health (K3) Program in Improving Employee Productivity through Employee Work Discipline

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**ABSTRACT:** This study aims to explain and analyze the effect of occupational safety and health programs on employee productivity through employee discipline to bridge the gap. The population in this study were employees of PT Wisma Karya Andalas totaling 300 employees. The sample used in this study were all employees of PT Wisma Karya Andalas amounting to 300 employees / respondents, using area sampling or multi-stage sampling, namely the use of several random sampling methods simultaneously in a study efektif and efficient. The analysis technique used for hypothesis testing is to apply the method (Path Analysis) using the help of the SPSS Ver.-2023 For IOS (Mac) software program. The results showed that the occupational safety and health program indirectly (indirect effect) had a significant effect on employee discipline. Furthermore, occupational safety and health programs directly (direct effect) have a significant effect on employee productivity. And employee discipline both directly and indirectly (direct and indirect effect) has a significant effect on employee work productivity.

**Keywords :** *Occupational Safety and Health Program, Employee Work Discipline and Employee Work Productivity*

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## 1. INTRODUCTION

The company is one of the organizations that brings together people who are commonly referred to as employees or employees to carry out the company's production household activities. Every company realizes that professional, trusted, competent and diligent human resources are the key for the company in achieving its goals and to raise the work productivity of a company (Kiran, 2020). That the key to a company's success lies not only in technological excellence and the availability of funds, but the Human Resources factor is one of the most important factors as well (Widarni, et al, 2020).

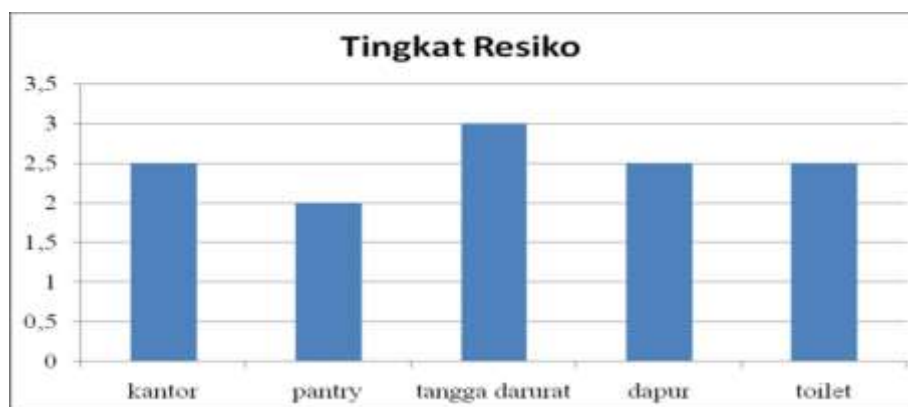
The Occupational Safety and Health (OHS) program is a system of programs made for workers and employers as an effort to prevent occupational accidents and diseases due to work relations in the work environment by recognizing things that have the potential to cause work accidents and anticipatory actions if this happens (Grabowski, 2020). In connection with the dangers that will arise at work, discipline at work becomes one of the highlights when negligence that occurs can affect employee safety. Work discipline is an attitude, behavior

that is carried out voluntarily and with full awareness and conditions to follow the rules that have been set by the company both written and unwritten (Krings, et al, 2020).

Discipline is one of the operative functions of the manager because the more disciplined the employee, the higher the work performance he can achieve and will create quality and high-productivity employees (Roger, 2020). Without good employee discipline, it is difficult for company organizations to achieve optimal results. Employee work discipline can be seen from the presence of employees every day, the accuracy of working hours, wearing work clothes in accordance with company regulations such as protective clothing, and other protective equipment, and identification, as well as employee compliance with regulations. Loss of discipline will affect work effectiveness and productivity.

The Occupational Safety and Health (K3) program is a program system made for workers and employers as an effort to prevent occupational accidents and diseases due to work relations in the work environment by recognizing things that have the potential to cause work accidents and anticipatory actions if this happens (Tamers, et al, 2020).

PT Wisma Karya Andalas' Treasure Island Centra Point Makassar (CPI) Development Project in implementing the Occupational Safety and Health (OHS) program is divided into two parts, namely the office area for employees and the construction area of PT Wisma Karya Andalas' Treasure Island Centra Point Makassar (CPI).



Source: *Hazard Identification, Risk Analysis & Risk Control form, 2022*

**Figure 1. Risk level of work accidents in the Wisma Karya Andalas office**

In the figure above, the highest level of risk is found in emergency stairs reaching 3%, then each office, kitchen and toilet with 2.5% risk, and pantry with 2% risk level that can be caused. As a result of these work accidents, namely minor injuries (first aid), moderate material losses and lost work days, material losses are quite large. (Source: From the results of interviews and data "Hazard Identification, Risk Analysis & Risk Control (HIRARC) Form (Pramudya, et al, 2022).

In the building construction area of PT Wisma Karya Andalas there are several activity locations, namely the work section, security post, excavation work, (shors ceat work) material mixing and shorscreat spraying, (structural work) casting, and (precast installation) erection of columns and beams. In the area of building construction, opportunities for work accidents may occur and are likely to occur. As a result of these work accidents, minor injuries (first aid), moderate material losses and lost work days are quite large losses.

Some studies that link occupational safety and health programs to employee work discipline, occupational safety and health programs to employee work productivity and employee work discipline to employee work productivity include The Effect of occupational safety and health and work discipline on employee performance in the environmental services of Yogyakarta City to determine the effect of occupational safety and health and work discipline on employee performance at the Yogyakarta City Environmental Service both partially and simultaneously (Watoni, 2019). Furthermore, Implementation of Occupational Safety and Health (K3) for Increasing Employee Productivity This study aims to test and analyze the effect of the implementation of occupational safety and health programs on employee productivity at PT Pertamina (Persero) Regional VII

Sulawesi, the data source used in this study is primary data. Primary data from this study were obtained from questionnaires filled out by employees at PT Pertamina. Data analysis using validity test, reliability test, multiple linear regression analysis, partial test, simultaneous test, and determination test (Ahmad and Firman, 2022). The effect of work motivation and discipline on employee productivity at PT Anugerah Agung in Jakarta This study aims to determine the effect of work motivation and discipline on employee productivity at PT Anugerah Agung in Jakarta, the method used is explanatory research with a sample of 85 respondents. The analysis technique uses statistical analysis with regression, correlation, determination and hypothesis testing (Sutrisno and Denok, 2019).

## 2. CONCEPTUAL MODELS AND HYPOTHESES

### a) Occupational Safety and Health Program

In human resource management, the concepts of occupational safety and health are always combined and discussed together, despite the fact that occupational safety and health are two different issues. According to the linguistic definition of safety, security means being safe from danger, natural disasters and calamities. Good health of the whole body and its parts (free from disease (Quinn, 2020).

In the human resources debate, the concept of occupational safety and health can be understood as an activity that aims to prevent any type of accident related to the work environment and situation in the Engineering Society and American Safety (ASSE) (Duryan, et al., 2020).

The opinion of Salguero-Caparrós, et al (2020) in terms of occupational safety and health is an idea and effort to ensure the integrity and physical and mental perfection, especially of workers and society in general, the results and culture of work towards justice and a prosperous society. The view of Johnstone et al (2022) states that occupational safety and health is an effort to prevent accidents in the workplace and provide security to workers by taking into account aspects of the environment, field, machinery and equipment and humans themselves. . .

Occupational safety and health refers to the physiological, physical and psychological conditions of workers due to the work environment provided by the company. If a company implements effective workplace health and safety measures, fewer workers will suffer short-term or long-term injuries or illnesses as a result of working in the company. Physiological and physical conditions include occupational diseases and accidents such as death or loss of limbs, repetitive motion injuries, back pain, carpal tunnel syndrome, cardiovascular diseases, various cancers, various cancers such as lung cancer and leukemia, emphysema, and arthritis. . Other conditions known to result from unhealthy work environments include white lung disease, brown lung disease, black lung disease, infertility, central nervous system damage, and chronic bronchitis. Psychological conditions are caused by work stress and poor quality of work life (Mehrdad, 2020).

### b) Work Discipline

The word discipline itself comes from the Latin "discipline" which means "training or education in politeness and spirituality and character development". "Discipline arises as an effort to correct individual behavior in accordance with the principles and always comply with applicable rules or standards. Discipline is defined as employees who always come and go home on time, carry out all work properly and comply with all applicable company regulations. regulations. And employee work discipline requires rules and sanctions, these regulations are very necessary in guiding and guiding employees in creating good rules and regulations in business (Roger, 2020).

This will support the achievement of company and employee goals. It is difficult for a company to achieve its goals if its employees do not comply with company regulations. The discipline of a company is said to be good if the majority of its employees respect the applicable regulations. Work discipline can be understood as a management practice that strengthens organizational guidelines (Saputra, et al, 2022). Discipline is essentially the ability to control oneself by not taking actions that are inappropriate and contrary to what has been determined and by doing something that supports and protects what has been determined (Haryadi, 2022).

Work discipline according to Bakti et al (2022) concerns employees who are obedient and obedient in carrying out work rules both oral and written in groups or companies. Discipline is also an important function in human resource management and is the key to achieving goals, because without discipline it is difficult to achieve maximum goals (Ulantini, et al, 2022).

From discipline also arises the desire and awareness to obey organizational regulations and social norms. However, the application of this discipline is still being monitored. According to other experts, work discipline is a person's awareness and willingness to obey all company regulations and applicable standards (Nasution, et al, 2022).

### **c) Work Productivity**

Productivity can also be understood as a measure of how efficiently and effectively each resource is used in the production process. Productivity is a combination of efficiency and effectiveness (Kiran, 2020).

Efficiency focuses more on the ease of use of resources, namely saving and eliminating all unnecessary waste, so as to save energy, thoughts, time and costs during production. Efficiency is an understanding of the extent to which resources, with the least sacrifice, can provide the best results. From this description it can be said that efficiency pays more attention to the wise use of resources (McCann, et al, 2020).

Efficiency includes the implementation of tasks to achieve the goal of using resources to bring useful results, as well as how to use resources in accordance with their functions so that they can bring maximum benefits. Efficiency focuses on results, so it shows the extent to which results are achieved by using existing resources to achieve optimal results (outcomes), therefore efficiency can be interpreted as how to use resources appropriately (Dyer, 2023).

### **Hypothesis**

#### **Occupational Safety and Health Program on Work Discipline**

The indirect impact of occupational health and safety programs has a significant effect on work discipline. This shows that there is an indirect impact of occupational safety and hygiene on workers' work discipline. Research in this direction shows that the influence of occupational safety and health and work discipline has a positive and significant effect on the work performance of employees of the Yogyakarta City environmental service, both partially and simultaneously (Watoni and Hibbul, 2019). . In addition, research on the work environment, work discipline and work safety has a significant influence on occupational safety and health (Saputra, et al, 2022). As well as research on the influence of the physical work environment, occupational safety, occupational health and work discipline have a clear influence on employee productivity (PT Employee Research. PLN (Persero) Central Java & D.I.Y Distribution Control Area "by (Rahmi, et al, 2019).

#### **H.1: Occupational Safety and Health Program has a significant effect on Work Discipline**

#### **Occupational Safety and Health Program on Work Productivity**

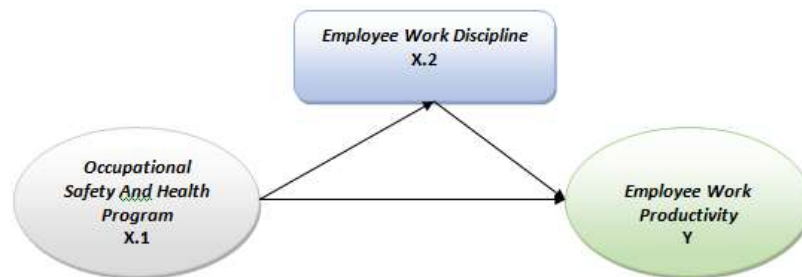
The direct impact of occupational health and safety programs has a significant impact on labor productivity. This shows that occupational safety and hygiene has a direct effect on worker productivity. Research in this direction shows that the implementation of occupational safety and hygiene programs has a significant impact on employee productivity at PT Pertamina (Persero) Region VII Sulawesi (Ahmad and Firman, 2022). Furthermore, research on occupational health and safety (OHS) programs has a significant and significant impact on employee productivity and organizational performance in Zimbabwe. It is imperative to ensure employee well-being in the workplace. In Zimbabwe, where workplace accidents and injuries are common, OHS programs are becoming increasingly important (Shabani, et al., 2023). As well as research on the effect of occupational health and safety on employee performance and examining the role of job satisfaction as a mediator between occupational health and safety and employee performance (Ekowati et al., 2018).

#### **H.2: Occupational Safety and Health Program has a significant effect on Work Productivity**

### **Work Discipline on Work Productivity**

The direct impact of the work discipline program has a significant impact on work productivity. This shows the direct impact of work discipline on employee productivity. Research in this direction shows that the influence of motivation and work discipline has a large and significant influence on employee productivity at PT Anugerah Agung in Jakarta by (Sutrisno, 2019). Then research on the influence of work stress, workload, compensation and work discipline has a significant influence on the work productivity of employees of PT, Tokio Marine Life Insurance Indonesia (Pawirosumarto, 2018). And employee productivity is a very important factor supporting the success of the company's business, where the influence of training and work discipline has a very large and clear impact on the work productivity of workers at PT. Anugerah Agung in Jakarta by (Halomoan and Kristian, 2020).

**H.3: Work Discipline has a significant effect on Work Productivity**



Source: Data processed by the Path Analysis Program, 2023

**Figure 2. Conceptual Framework of Relationship Between Variables**

**3. RESEARCH METHOD**

The research was conducted at PT Wisma Karya Andalas. This location was chosen because PT. Wisma Karya Andalas has a high level of risk in the world of work, especially for those who work in the field and require attention to improve work discipline and productivity. The study population consisted of staff of PT Wisma Karya Andalas, with 300 employees. The sampling technique was carried out using area sampling or multi-stage area sampling (Multi Stage Sampling), which effectively uses multiple random sampling methods simultaneously in a study and savings (Taherdoost, 2016). The sample used includes all staff of PT Wisma Karya Andalas, having 300 employees / respondents. The unit of analysis used in this research is SPSS Ver.-2023 For iOS (Mac) Software by applying the (Path Analysis) method, employees from management, staff and employees of PT Wisma Karya Andalas with classification based on gender and education / employee experience in the office and field.

**4. RESULTS AND DISCUSSION**

**Result**

At the initial stage, the validity and reliability of the data were tested as follows:

**Table 1. Validity Test**  
**Correlations**

		Occupational Safety And Health Program	Employee Work Discipline	Employee Work Productivity
Occupational Safety And Health Program	Pearson Correlation	1	.403**	.426**
	Sig. (2-tailed)		.000	.000
	N	300	300	300
Employee Work Discipline	Pearson Correlation	.403**	1	.851**
	Sig. (2-tailed)	.000		.000
	N	300	300	300
Employee Work Productivity	Pearson Correlation	.426**	.851**	1
	Sig. (2-tailed)	.000	.000	
	N	300	300	300

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Source: Data processed SPSS Program Ver, 2023

Table 1 of the validity test above shows all elements of questions / statements to measure the variables of occupational safety, health (X.1), work discipline (X.2) and employee productivity (Y) in this table. This study has a correlation coefficient greater than t table = 0.165 (t table value for n = 300). Thus it can be concluded that all elements of the question/question index for the variables of safety, work hygiene (X.1), work discipline (X.2) and employee productivity (Y) have value.

### Reliability Test

**Table 2. Reliability Test**  
**Reliability Statistics**

Cronbach's Alpha	N of Items
.873	3

**Item-Total Statistics**

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Occupational Safety And Health Program	79.1767	55.885	.433	.888
Employee Work Discipline	78.4700	55.628	.451	.797
Employee Work Productivity	66.6533	39.351	.423	.758

Source: Data processed SPSS Program Ver, 2023

Table 2 of the reliability test results above shows that the questions/statements on the items with the variable values of occupational safety and health, work discipline and employee productivity are valid, Cronbach Alpha is 0.873, Cronbach's Alpha if the deletion is greater than 0.7 and greater than the value in the table. is 0.09 (table value for n = 300) so that it can be ascertained that the elements of the questions/statements on the variables of occupational health and safety, work discipline and worker productivity can be used as data collection and measurement tools.

### Classical Assumption Test

In this second stage, classical assumption testing is carried out, in order to obtain accurate data results between occupational safety and health, work discipline and work productivity.

**Table 3. Normality Test**  
**One-Sample Kolmogorov-Smirnov Test**

		Occupational Safety And Health Program	Employee Work Discipline	Employee Work Productivity
N		300	300	300
Normal Parameters <sup>a</sup>	Mean	32.9733	32.6800	45.4967
	Std. Deviation	4.26300	4.19452	4.56722
Most Extreme Differences	Absolute	.104	.180	.201
	Positive	.104	.153	.135
	Negative	-.051	-.180	-.201
Kolmogorov-Smirnov Z		1.795	1.116	1.474
Asymp. Sig. (2-tailed)		.006	.007	.008

a. Test distribution is Normal.

Source: Data processed SPSS Program Ver, 2023

From Table 3 above, it can be concluded that the results of testing the normality of data using Kolmogorov-Smirnov by comparing the probability value or Asymp. Sig (2-tailed) has a significance level of 0.05 or 5%, with decision making if the significance value is less than 0.05 or 5%, the data distribution is not normal. Based on the calculation of SPSS Ver.-2023 above, the probability value or asymptotic number. Sig (2-tailed) has a significance level greater than 0.05 or 5%, so the data is declared normally distributed.

**Table 4. Autocorrelation Test**  
**Model Summary<sup>a</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.855 <sup>a</sup>	.732	.730	2.37305	1.503

a. Dependent Variable: Employee Work Productivity

Source: Data processed SPSS Program Ver, 2023

The results in Table 4 show that the autocorrelation test above produces a Durbin-Watson value of 1.503. This value is not less than -2 and not more than 2 so it can be concluded that there is no autocorrelation in this study.

**Table 5. Heteroscedasticity Test**  
**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.704	1.140		3.248	.001		
	Occupational Safety And Health Program	.024	.026	.057	.909	.364	.838	1.194
	Employee Work Discipline	.086	.035	.156	.932	.213	.838	1.194

a. Dependent Variable: RES2

Source: Data processed SPSS Program Ver, 2023

The results in Table 5 show that each work safety and hygiene variable (X.1) has Sig 0.364, work discipline (X.2) has Sig 0.213, each variable (Sig.) > 0.05 or greater than 0.05, it can be concluded that this has not occurred. Symptoms of heteroscedasticity.

### Indirect Testing

In the third stage, indirect effect between occupational safety and health on work discipline is tested.

**Table 6. F-Simultaneous Test**  
**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	495.243	1	495.243	57.739	.000 <sup>a</sup>
	Residual	2556.037	298	8.577		
	Total	3051.280	299			

a. Dependent Variable: Employee Work Discipline

Source: Data processed SPSS Program Ver, 2023

Based on Table 6 above, testing simultaneously together shows a regression value of 495,243, residual of 2,556,036 df 1, mean square of 495,243. The f value is 57.739 with a sign of 0.000, which means that occupational safety and health together indirectly have a significant influence on work discipline.

**Table 7. Partial t-test**  
**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	23.725	1.321		17.961	.000		
	Occupational Safety And Health Program	.302	.040	.403	7.599	.000	1.000	1.000

a. Dependent Variable: Employee Work Discipline

Source: *Data processed SPSS Program Ver, 2023*

Based on the results of the path analysis in Table 7, the structural equation can be formulated as follows:

$$X.2 = 0.403 X1 e1$$

This structural equation can be interpreted, namely:

(1) The digital transformation variable has a coefficient of 0.403, meaning that occupational safety and health indirectly has a significant effect on work discipline, meaning that if occupational safety and health increases, discipline at work also increases.

The following are the calculation results from the direct test analysis results in table 8 as follows.

### Direct Testing

In the fourth stage, direct effect between occupational safety and health and work discipline on employee productivity is tested.

**Table 8. F-Simultaneous Test**

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4564.476	2	2282.238	405.271	.000 <sup>a</sup>
	Residual	1672.521	297	5.631		
	Total	6236.997	299			

a. Dependent Variable: Employee Work Productivity

Source: *Data processed SPSS Program Ver, 2023*

Based on Table 8 above, testing simultaneously together shows a regression value of 4,564,476, residual of 1,572,521, df 2, mean square of 2,282,238. The f value is 405.271 with a sign of 0.000, which means that together safety, occupational health and work discipline have a significant influence on worker productivity.

**Table 9. Partial t-test**  
**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.951	1.545		1.910	.057		
	Occupational Safety And Health Program	.107	.035	.100	3.036	.003	.838	1.194
	Employee Work Discipline	1.159	.047	.810	24.686	.000	.838	1.194

a. Dependent Variable: Employee Work Productivity

Source: *Data processed SPSS Program Ver, 2023*

Based on the results of the path analysis in Table 9, the structural equation can be formulated as follows:

$$Y = 0.100 X1 + 0.810 X2 e1$$

This structural equation can be interpreted, namely:



(1) The work safety and hygiene variable has a coefficient of 0.100, meaning that work safety and hygiene have a significant direct effect on worker productivity, meaning that if work safety and hygiene increases, worker productivity will increase. . will increase.

(2) The work discipline variable has a coefficient value of 0.810, meaning that work discipline has a direct effect on employee productivity, meaning that the increase in work discipline will affect worker productivity. In this study, the effect of safety, health and work discipline on employee productivity was calculated using the SPSS Ver.- for iOS (Mac) program.

**Table 10. Test Coefficient of Determination**

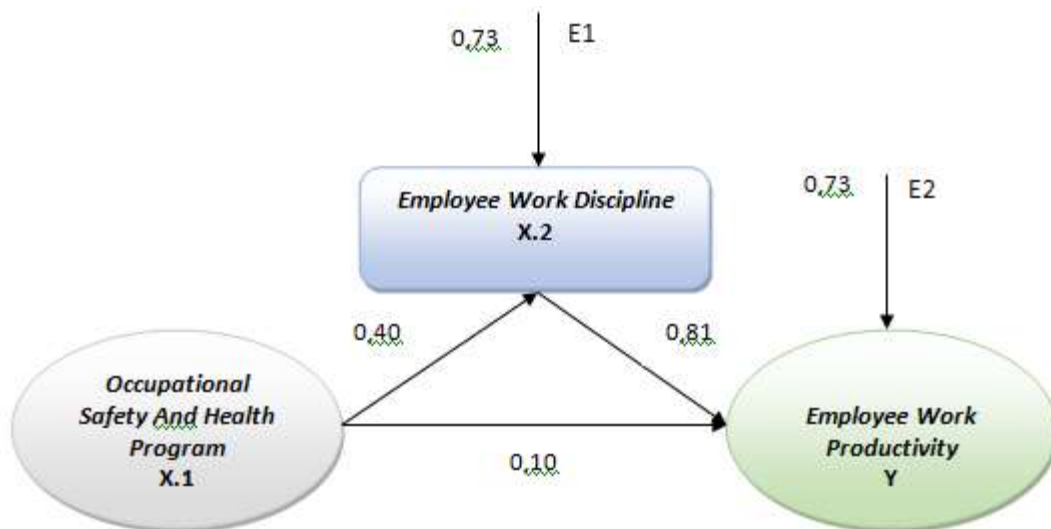
**Model Summary<sup>a</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.855 <sup>a</sup>	.732	.730	1.37305

a. Dependent Variable: Employee Work Productivity

Source: Data processed SPSS Program Ver, 2023

By calculating the total value of the coefficient of determination obtained of 0.855, it is concluded that 85.5% of the work productivity variable of PT staff. Wisma Karya Andalan is influenced by occupational safety and hygiene and work discipline, while the remaining 14.5% is influenced by other factors not included in the research model or outside the research model.



Source: Data processed by the Path Analysis Program, 2023

**Figure 3. Results of Direct and Indirect Relationships**

**Description:**

X1 : occupational safety and health

X2 : Work Discipline

Y : Work Productivity

P : Path coefficient

E1, E2 : residual variables/factors

X3 : endogenous variable

X1 and X2 : exogenous variables

Px3X1: coefficient of direct causal relationship between X1 and X2

Px3X2: coefficient of direct causal relationship between X2 and Y

Structure equation:  $Y = Px3X1 + Px3X2 + E1$

E1: residual coefficient calculated by the formula

$$E_1 = \sqrt{(1 - R^2)} \text{ (Pearl, 2022)}$$

**Tabel 11. Evaluasi Parameter Estimasi**

No	Uraian	B	Std.Error	Beta	Prob.	Ket
1.	Occupational Safety and Health	0,302	0,040	.403	.000	Significant
2.	Work Discipline	0,107	0,035	.100	.003	Significant
3.	Employee Productivity	1,159	0,047	.810	.000	Significant
	SMC 1			0,000		
	SMC 2			0,213		

Source: *Estimation Results of SPSS Program Ver,-2023*

The regression equation that can be proposed by looking at Figure 2 and Table 11 is as follows:

**Work Discipline** = 0.535 digital transformation X1 e1

Employee Productivity = 0.430 occupational safety and health X1 + 0.560 work discipline X2 e1

The value of 0.403 is the standard regression coefficient of occupational safety and hygiene on work discipline (in SPSS denoted by Beta). The value of 0.100 is the standard regression coefficient of occupational safety and hygiene on worker productivity (in SPSS denoted as Beta) and the value of 0.810 is the standard regression coefficient of work discipline on worker productivity (in SPSS denoted as Beta).

The value of 0.855 is the squared multiple correlation coefficient between safety, occupational hygiene and work discipline on worker productivity (in SPSS denoted R2). This value is the simultaneous influence between the variables of safety, occupational health and work discipline on employee productivity. The squared multiple correlation coefficient or R2 of employee productivity of 0.855 means that 85.5% means that differences in employee productivity can be explained by occupational safety and health variables in the workplace and work discipline. The magnitude of R2 which ranges from 0.3 to 0.6 according to Jenkins et al (2020) indicates a fairly strong explanatory power from exogenous to endogenous variables.

When viewed from the weight of the estimated coefficient, it can be explained that the indirect effect of occupational safety and health on work discipline and the direct effect of occupational safety and health and work discipline on workers' work productivity are relatively stronger.

### Hypothesis Testing

To prove the formulation of the problem and the hypothesis above, it is necessary to test the hypothesis as follows:

#### Hypothesis 1

Based on the hypothesis test, this is supported by the t-count value of 3.557 > 1.96 with a significance probability of 0.000 < 0.05 (5%), this shows that occupational safety and hygiene has a significant effect on work discipline, meaning that the first hypothesis is accepted.

#### Hypothesis 2

Based on hypothesis testing, this is supported by the t-count value of 3.718 > 1.96 with a significance probability of 0.001 < 0.05 (5%), this shows that occupational safety and hygiene has a significant effect on worker productivity, meaning that the second hypothesis is accepted.

#### Hypothesis 3

Based on hypothesis testing, this is supported by the t-count value of 4.848 > 1.96 with a significance probability of 0.000 < 0.05 (5%), indicating that work discipline has a significant effect on employee productivity, meaning that the third hypothesis is accepted.

## Discussion

### The Effect of Occupational Safety and Health on Work Discipline

The results showed that occupational safety and hygiene had an indirect effect on work discipline with an R2 value of 0.803 with an R square of 0.623 with a t value of 7.599 > 1.96 with a probability of <0.000. This means that if work safety and hygiene are implemented, it will affect workers' work discipline. Achieving discipline in the workplace is inseparable from ensuring occupational safety and health. Occupational safety and health includes the work environment, machinery, work tools and people. If you see the results of the study show that occupational safety and hygiene affects work discipline, then occupational safety and hygiene must ensure work discipline for employees of PT Wisma Karya Andalas by being present at work, working according to procedures, obeying and obeying, work space and equipment are always maintained, using effective and efficient work equipment and using breaks on time.

The final results of indirect testing (indirect effect) of occupational safety and health variables with indicators of the work environment, machinery and work tools and humans. Employee work discipline variables consist of indicators of being present at work, working according to procedures, obeying and obeying, work space and equipment are always maintained, using effective and efficient work equipment and using breaks on time. In line with several studies, among others, the results showed that partial testing of occupational safety and health variables (X1) and work discipline (X2) had a significant effect on employee performance (Y) at the Yogyakarta City Environmental Service. While testing simultaneously the variables of occupational safety and health (X1) and work discipline (X2) have a significant effect on employee performance (Y) at the Yogyakarta City Environmental Service by (Watoni and Hibbul, 2019). In addition, the findings of this literature review article are as follows:

1) The work environment affects work safety; 2) The work environment affects occupational health; 3) Work discipline affects work safety; 4) Work discipline affects occupational health; and 5) work safety affects occupational health (Saputra et al., 2022). And the results of research and data analysis using multiple linear regression analysis show that:

(1) Physical work environment has a positive and significant effect on employee productivity (2) Physical work environment has a positive and significant effect on employee productivity (3) Work safety has a positive and significant effect on employee productivity (4) Work Discipline has a positive and significant effect on worker productivity. The significance of this research is to continue to improve the productivity of staff and managers of PT PLN (Persero) APD Central Java and Yogyakarta Special Region will maintain and improve various policies related to efforts and improvement of the physical work environment, occupational safety, occupational health careers and employee discipline here (Rahmi, et al, 2022).

### Effect of Occupational Safety and Health on Employee Productivity

The results showed that occupational safety and hygiene had a direct impact on employee productivity with an R2 value of 0.855 with an R square of 0.732 with a t value of 3.036 > 1.96 with a probability of <0.003. This means that if occupational safety and hygiene is applied, it will affect worker productivity. Achieving employee productivity is inseparable from ensuring occupational safety and health. Occupational safety and health includes the work environment, machinery, work tools and people. If you see the results of the study show that occupational safety and hygiene affects worker productivity, then occupational safety and hygiene must ensure the productivity of PT Wisma Karya Andalas workers with work attitudes, skill levels, worker relationships with organizational leaders, productivity management, labor efficiency and entrepreneurial spirit. The final results are in the form of direct impact on work safety and hygiene variables with indicators on the work environment, machinery, work tools and people. Worker labor productivity variables include indicators of work attitude, skill level, labor relations with organizational leaders, productivity management, and labor performance, labor and entrepreneurial spirit. Along with a number of studies related to the effect of occupational safety and hygiene on work productivity, the results showed that occupational safety and hygiene had a positive impact on the variable of worker productivity at PT PERTAMINA (PERSERO) Makassar Fuel Terminal. At the same time, work safety programs have a major impact on employee productivity (Ahmad

and Firman, 2022). In addition, the OHS program was found to have a positive impact on employee productivity and organizational performance. This research shows that implementing an OHS program in an organization can reduce work accidents and injuries, which in turn can increase productivity and reduce absenteeism. This research shows that OHS programs can improve employee morale and job satisfaction, leading to increased retention and improved organizational performance. However, the research also highlights some of the challenges organizations face in implementing effective OHS programs in Zimbabwe. These challenges include lack of resources, inadequate training, and lack of employee awareness of the importance of OHS. The article concludes by providing recommendations for organizations that want to implement an effective OHS program first (Shabani, et al., 2023). And the results showed that occupational health and safety had no effect on employee performance and job satisfaction could mediate the relationship between occupational health and safety and employee performance (Ekowati, et al, 2018).

### **The Effect of Work Discipline on Employee Productivity**

The results showed that work discipline has a direct impact on employee productivity with an R2 value of 0.855 with an R square of 0.732 with a t value of  $24.686 > 1.96$  with a probability of  $< 0.000$ . This means that if work discipline is applied, it will affect employee productivity. This means that if work discipline is applied, it will affect employee productivity. The achievement of employee productivity cannot be separated from the work discipline applied by employees. Work discipline includes attendance at work, working according to procedures, being obedient and compliant, always maintaining work space and equipment, and using work equipment effectively and efficiently, and using rest time properly. If seeing the results of the study shows that work discipline affects employee productivity, then work discipline must ensure the productivity of employees of PT Wisma Karya Andalas with work attitudes, skill levels, worker relationships with organizational leaders, productivity management, labor efficiency and entrepreneurial spirit.

The final results of direct testing (direct impact) of work discipline variables with indicators: Being present at work, Working according to procedures, Obedience and submission, Always maintaining work space and equipment, Using work equipment effectively and efficiently, and Utilizing breaks at work time. time. Change. Employee work productivity variables include work attitude indicators, skill levels, labor relations with organizational leaders, productivity management, labor efficiency and business inspiration. Along with research linking the effect of work discipline on work productivity, the results of this study provide a significant influence on employee productivity by 48.6%, hypothesis testing obtained a mean significant level of  $0.000 < 0.05$ . Work discipline has a significant effect on employee productivity by 44.6%, hypothesis testing obtained a significance level of  $0.000 < 0.05$ . Motivation and work discipline simultaneously have a significant influence on employee productivity by 56.2%, hypothesis testing reached a significance level of  $0.000 < 0.05$  each (Sutrisno, et al, 2019). In addition, the results showed that work stress has no effect on employee productivity with a p-value of 0.488. Workload has no effect on employee productivity with a p-value of 0.726. Compensation affects employee productivity with a p-value of 0.000 and work discipline has no effect on employee productivity with a p-value of 0.923 (Pawirosumarto, et al, 2018). In addition, the results of this study training has a significant effect on employee productivity by 34.0%, hypothesis testing obtained a significance level of  $0.000 < 0.05$ . Work discipline has a significant effect on employee productivity by 42.6%, hypothesis testing obtained a significance level of  $0.000 < 0.05$ . Vocational training and work discipline at the same time have a significant influence on worker productivity up to 50.5%, testing the hypothesis with a significance of  $0.000 < 0.05$  each (Halomoan and Yan Kristian, 2020).

## **5. CONCLUSION**

Based on the test results and discussion above, the conclusion of this study is that work safety and hygiene indirectly (direct and direct effect) has a clear and significant influence on work discipline and worker productivity through indicators of work environment and machinery. and work. tools and people. . Direct work discipline (direct effect) has a clear and significant impact on worker productivity through indicators of work participation, working according to procedures, and obedience and obedience, regular maintenance of work

space and equipment, efficient and effective use of work equipment and using rest time on time. . In addition to being able to improve various indicators of employee productivity with work attitudes, skill levels, employee relations with organizational leaders, productivity management, labor efficiency and entrepreneurial spirit at PT Wisma Karya Andalas.

Researchers' suggestions for increasing employee productivity through company guarantees to employee families continue to motivate employees to continue to work professionally in an innovative, effective, efficient and economical manner.

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