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The Effect of Work Safety and Health on Employees Performance Moderated by Job Satisfaction at PT. SS

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Abstract: This study aims to determine and analyze the extent to which job satisfaction moderates the effect of work safety and health on employee performance at PT. SS. The method used is associative with a quantitative approach, employing moderation regression analysis. The sample size is 92 individuals, and data analysis was conducted using moderation regression tests, the coefficient of determination, and hypothesis significance testing (t-test). The results of the study indicate that work safety and health have a significant impact on employee performance at PT. SS. Therefore, the company must implement work safety and health measures. However, job satisfaction does not moderate the effect of work safety and health on employee performance. Job satisfaction has not strengthened the impact of work safety and health on performance, meaning the rates of workplace accidents and occupational diseases have not been reduced by the interaction of job satisfaction with work safety and health on employee performance.

Keywords: Work Health, Work Safety, Job Satisfaction, Employee Performance.

INTRODUCTION

Human Resources (HR) plays a crucial role as the workforce that contributes to the planning, directing, and organizing activities of a service company, determining production factors, taking off, and advancing the company. If there are not enough qualified HR, the company will automatically fail to achieve its desired goals. Even with ample facilities, infrastructure, and excessive funding, without the support of skilled HR, the company's activities will not be executed and completed effectively. This indicates that HR is a crucial key that must be attended to with all its needs to achieve high performance.

Performance is the outcome of the functions or activities of an individual or group within an organization, influenced by various factors to achieve organizational goals within a specific period. The work functions or activities referred to here are the execution of tasks or activities of an individual or group that fall under their authority or responsibility within an organization. In striving to achieve its goals, Selamat Sampurna, Tbk needs to be supported by good employee performance within the company. According to Sutrisno (2019: 46), performance is the success of an individual in carrying out tasks, the results that can be

achieved by an individual or group in an organization according to their respective authority and responsibilities, or how an individual is expected to function and behave according to the tasks assigned to them, including the quantity, quality, and time used in performing tasks. The employee performance assessment at Selamat Sampurna, Tbk can be seen in the following table:

Tabel 1. Employee Performance Assessment of Selamat Sampurna, Tbk for the Year 2023

Parameter	Score	Results
Responsibility	77,6	Good
Agility in completing tasks	72,2	Good
Initiative	63,6	Enough
Discipline	50,2	Enough
Teamwork	61,3	Enough
Total	247,3	
Average Result	61,83	Enough

Source: Selamat Sampurna, Tbk, 2024

Based on the table above, it is shown that the employee performance at Selamat Sampurna, Tbk is not yet fully optimal, with an average score of 61.83%. There are negative impacts that will occur if employee performance is below the job standard of 61.83%. Although this is categorized as adequate, it is not favorable for the company's stability and will hinder the achievement of the company's production targets. Employee performance is generally influenced by two factors: internal and external factors (Novanda et al., 2023). Internal factors originate from within the employees, such as job satisfaction, while external factors come from outside the employees, such as the implementation of occupational safety and health measures established by the company.

Several factors that can influence employee performance include the implementation of occupational safety and health measures (Saputra et al., 2023) and job satisfaction within the company (Elbudrah, 2018; Novanda et al., 2023; Rumambi Tampi Koroh Lolong et al., 2023). One significant factor affecting employee performance in a company is occupational safety and health. Employee performance will not achieve good quality or quantity if their safety and health are compromised. This will affect the results provided to the company (Hendiani & Wediawati, 2023). Recognizing the importance of implementing occupational safety and health programs as a fundamental right of employees and an effort to improve employee performance, the company needs to prioritize and take serious steps to ensure employees feel safe and protected in terms of occupational safety and health. When employees feel safe and protected, they will work comfortably, ultimately maximizing their performance (Suyatno & Pancasasti, 2023).

In 2022, there were 265,334 reported cases of workplace accidents, an increase of 13.26% from the previous year, which had 234,270 cases, including 6,552 fatal cases. This figure increased by 5.7% compared to 2020. In 2019, the number of workplace accidents reached 210,789 cases. Occupational safety and health are fundamental and essential rights for every worker. Proper implementation of occupational safety and health is expected to reduce the number of workplace accidents, work-related illnesses, and occupational diseases, which in turn should enhance productivity, comfort, and worker satisfaction, thereby improving employee performance in the company. Another factor that can influence performance is job satisfaction. Job satisfaction is the level of pleasure a person feels as a positive assessment of their job and the work environment (Hasibuan, 2021). Employees often complain about dissatisfaction in their work, whether related to income, work results, or the work environment. Satisfaction is a subjective state resulting from a comparison between what employees receive from their job and what they expect, desire, and consider their right.

Each employee subjectively determines how satisfying the job is (Rumambi Tampi Koroh Lolong et al., 2023).

Five aspects of job satisfaction are measured: the work itself (related to responsibility, interest, and growth), quality of supervision (related to technical assistance and social support), relationships with coworkers (related to social harmony and respect), promotion opportunities (related to further development opportunities), and pay (related to adequate compensation and perceptions of fairness) (Luthans, 2006, in Novanda et al., 2023).

The issue of performance may be influenced by the implementation of occupational safety and health measures and job satisfaction. Research on these issues has been conducted previously. For example, Saputra et al. (2023) found that the implementation of occupational safety and health affects employee performance. Conversely, Indra et al. (2023) found that the implementation of occupational safety and health does not significantly affect performance. Similarly, job satisfaction studies by Novanda et al. (2023), Waruwu & Khoiri (2023), and Cristian et al. (2021) show an influence of job satisfaction on employee performance, whereas studies by Azhari et al. (2021), Fauziek & Yanuar (2021), and Elbudrah (2018) indicate that job satisfaction does not significantly affect employee performance.

The research problem formulation in this study is as follows:

1. How does health effect employee performance at PT. SS?
2. How does work safety effect employee performance at PT. SS?
3. How does job satisfaction moderate the effect of health on employee performance at PT. SS?
4. How does job satisfaction moderate the effect of workplace safety on employee performance at PT. SS?

METHOD

Based on the problem formulation, objectives, and hypotheses established, this study uses an associative method that is causal in nature with a quantitative approach. According to Sugiyono (2019:92), an associative problem formulation is a research problem that questions the relationship between two or more variables. Furthermore, Sugiyono (2019:93) adds that a causal relationship is a cause-and-effect relationship, which involves independent variables (variables that influence) and dependent variables (influenced variables). According to Sugiyono (2019:35-36), the quantitative approach is: "A research method based on the philosophy of positivism, used to examine specific populations or samples, collecting data using research instruments, analyzing data quantitatively/statistically, with the aim of testing established hypotheses."

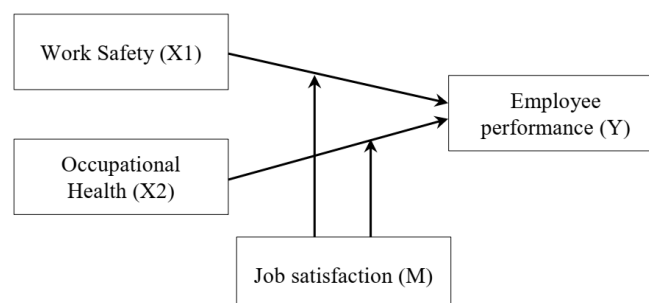


Figure 1. Research Constellation

The sample in this study consists employees at PT. SS. The sample taken is 92 respondents, using the Slovin sampling technique. Data analysis in this study is assisted by statistical software, namely SPSS V.24. The first step is to test the data quality, including validity and reliability tests, followed by the data analysis technique using moderation

regression. This technique determines the correlation between a criterion variable and a combination of two or more predictor variables.

In moderation regression, prediction errors can be minimized because other influencing variables (factors) are included in the prediction. The general form of this moderation regression analysis is:

$$Y = a + bX1 + bX2 + e \quad (1)$$

$$Y = a + bX2 + bX2 + bM + bX1 * M + bX2 * M + e \quad (2)$$

Description :

\hat{Y}	= Work Productivity Prediction
X1	= Work Healthy
X2	= Work Safety
X1*M	= Interaction of Occupational Health with Job Satisfaction
X2*M	= Interaction of Work Safety with Job Satisfaction
a	= Constant Value
ϵ	= epsylon (Other Factor that's not analyze)

The next step involved conducting a coefficient of determination test to determine the percentage contribution of the simultaneous influence of independent variables on the dependent variable. The formula to calculate the coefficient of determination with three independent variables is:

$$KD = r^2 \times 100\%$$

Additionally, hypothesis testing was conducted with a significance probability value set at 5% or 0.05 in the output, to decide whether to reject or accept the null hypothesis (H_0):

H_0 : If the significance probability value exceeds 0.05 (the chosen confidence level), then the null hypothesis (H_0) is accepted, and the alternative hypothesis (H_a) is rejected.

H_a : If the significance probability value is less than 0.05 (the chosen confidence level), then the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted.

RESULTS AND DISCUSSION

This study utilized SPSS version 24 software for data analysis. The input was provided by 92 respondents. Based on gender, all respondents were male. Regarding age, the majority were aged between 25-30 years, constituting 39% of the sample. In terms of employment status, the majority were contract employees, making up 66% of the respondents. As for the highest level of education, 74% of respondents had either a high school diploma or vocational school education.

The initial stage involved testing data quality using SPSS, which included validity and reliability assessments. Below are the results of the validity tests:

Tabel 2. Validity Testing Results

Variabel	Item	r calculate	r critical	Description
Work Safety (X1)	X11	0,506	0,300	Valid
	X12	0,423	0,300	Valid
	X13	0,480	0,300	Valid
	X14	0,140	0,300	Not Valid
	X15	0,637	0,300	Valid
	X16	0,542	0,300	Valid
	X17	0,422	0,300	Valid
	X18	0,523	0,300	Valid
	X19	0,130	0,300	Not Valid
	X110	0,350	0,300	Valid
	X111	0,509	0,300	Valid
	X112	0,481	0,300	Valid
Work Healthy (X2)	X21	0,484	0,300	Valid
	X22	0,344	0,300	Valid

Variabel	Item	r calculate	r critical	Description
	X23	0,415	0,300	Valid
	X24	0,458	0,300	Valid
	X25	0,439	0,300	Valid
	X26	0,464	0,300	Valid
	X27	0,368	0,300	Valid
	X28	0,431	0,300	Valid
	X29	0,541	0,300	Valid
	X210	0,329	0,300	Valid
Work Satisfaction (M)	M1	0,478	0,300	Valid
	M2	0,471	0,300	Valid
	M3	0,410	0,300	Valid
	M4	0,593	0,300	Valid
	M5	0,544	0,300	Valid
	M6	0,410	0,300	Valid
	M7	0,522	0,300	Valid
	M8	0,594	0,300	Valid
	M9	0,606	0,300	Valid
	M10	0,503	0,300	Valid
Employee Performance (Y)	Y1	0,597	0,300	Valid
	Y2	0,493	0,300	Valid
	Y3	0,409	0,300	Valid
	Y4	0,663	0,300	Valid
	Y5	0,594	0,300	Valid
	Y6	0,609	0,300	Valid
	Y7	0,456	0,300	Valid
	Y8	0,428	0,300	Valid
	Y9	0,651	0,300	Valid
	Y10	0,510	0,300	Valid

Source: Output SPSS, Analyze Data, 2024

The validity test results using the Pearson Correlation instrument for the Occupational Safety variable (X1), consisting of 12 items, show that statements 1, 2, 3, 5 to 8, 10 to 12 are considered valid because the calculated r (correlation) value is greater than the critical r (0.300). However, statements 4 and 9 are deemed invalid as the calculated r (correlation) value is less than the critical r (0.300). The invalid statements will be eliminated and not included in the analysis, resulting in the use of 10 questionnaire items for the Occupational Safety variable.

Meanwhile, all statement items for the Health at Work, Job Satisfaction, and Employee Performance variables are considered valid as the calculated r (correlation) value is greater than the critical r (0.300). Reliability testing in this study utilized the Cronbach's Alpha formula, and the results of the test using SPSS are as follows:

Tabel 3. Reliability Testing Results

Variabel	Cronbach Alpha	Description
Work Safety (X1)	0,698	High Reliabel
Work Healthy (X2)	0,610	High Reliabel
Work Satisfaction (M)	0,694	High Reliabel
Employee Performance(Y)	0,734	High Reliabel

Source: Output SPSS, Data Analyze, 2024

The results of the reliability test for Work Safety, Work Healthy, Job Satisfaction, and Employee Performance show that the Cronbach's Alpha values with coefficients > 0.600 indicate high reliability levels.

Based on regression testing, the following results can be obtained:

Tabel 4. Results of Regression Test Equation 1

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	5.465	3.090		1.769	.080
	Work Safety	.639	.096	.582	6.670	.000
	Work Healthy	.190	.090	.184	2.110	.038

a. Dependent Variable: Employee Performance

Source: Output SPSS, 2024

1. From the SPSS output above, it is known that the coefficient value for Work Safety is 0.639, and the significance value is $0.000 < 0.05$. Therefore, it can be concluded that Work Safety significantly influences Employee Performance. According to Hariandja (2007), occupational safety is an important aspect in efforts to improve employee welfare and productivity. When the level of work safety is high, accidents leading to illness, disability, and death can be minimized. Conversely, low work safety will negatively impact health, resulting in decreased productivity. The results of this study indicate that Work Safety has a significant impact on Employee Performance at PT. SS. Therefore, the company cannot overlook the implementation of Work Safety at PT. SS.
2. Furthermore, the coefficient value for Health at Work is 0.190, and the significance value is $0.038 < 0.05$. It can be concluded that Health at Work significantly influences Employee Performance. Health at Work has a significant impact on Employee Performance at PT. SS. Therefore, the company cannot ignore the implementation of Health at Work at PT. SS, even though the contribution of Health at Work to Employee Performance is relatively smaller. A safe workplace according to SSLK standards (Work Environment Requirements) includes a workspace free from cigarette smoke, sterile from dust, dirt, gas fumes, machine vibrations, radiation, and noise, as well as being safe from electrical currents, adequate lighting, and sufficient air circulation. Supporting physical and mental health on-site, as well as providing complete facilities and infrastructure, can support employee health at work, allowing employees to focus on improving their performance.

These research findings align with Saputra et al. (2023); Suyatno & Pancasasti (2023), who state that health at work positively and significantly impacts employee performance. The more employees adhere to health at work programs while adhering to SOPs, which include work accidents when operating machinery or other production activities, the more their performance can improve, as they can avoid work accidents, making employees feel safe and comfortable during their work activities.

Based on the coefficient of determination test, the following results can be obtained:

Tabel 5. Coefficient Detemination Testing Results

Model Summary				
Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.689a	.475	.463	3.27904

a. Predictors: (Constant), Work Healthy, Work Safety

Source : Output SPSS, 2024

From the above SPSS output, it is known that the R-square value is 0.475, which means that the combined influence of the Work Safety and Health at Work variables on Employee Performance is 47.50%

Tabel 6. Results of Regression test Equation 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	25.688	15.602		1.646	.103
	Work Safety	-.012	.593	-.011	-.020	.984
	Work Healthy	-.115	.518	-.111	-.222	.825
	Work Satisfaction	-.313	.465	-.330	-.673	.503
	Work Safety*Work Satisfaction	.013	.017	.793	.787	.433
	Work healthy*Work Satisfaction	.006	.016	.358	.383	.702

a. Dependent Variable: Employee Performance

Source: Output SPSS, 2024

From Table 4 above, it is noted that the significance value of the interaction variable between Work Safety and Job Satisfaction is 0.433, which is greater than 0.05. Therefore, it can be concluded that the Job Satisfaction variable is unable to moderate the influence of the Work Safety variable on Employee Performance. If the risk caused by work accidents is high, then job satisfaction has not been able to provide a positive stimulus for employees to perform their activities very carefully and to adhere to the SOPs of activities that may

1. lead to work accidents. Thus, job satisfaction has not been able to strengthen the impact of Work Safety on Performance, resulting in work accidents not being reduced by the interaction of Job Satisfaction with Work Safety on Employee Performance. The current low job satisfaction leads employees to work less optimally in complying with work procedures related to work safety, as unsatisfied employees may exhibit negative behavior that can lead to counterproductive employee behavior.
2. Similarly, with a significance value of the interaction variable between Health at Work and Job Satisfaction at 0.702, which is greater than 0.05, it can also be concluded that the Job Satisfaction variable is unable to moderate the influence of the Health at Work variable on Employee Performance at PT. SS. Human resource performance is determined by how well the existing systems in the company support and satisfy the desires of all parties. However, in this case, job satisfaction among employees is still low, and they are not encouraged to take the initiative to regularly check their physical and mental health.

CONCLUSION

Work Safety can significantly influence Employee Performance at PT. SS. If the level of work safety is high, accidents that cause illness, disability, and death can be minimized. Conversely, low work safety will have a negative impact on health, resulting in decreased productivity.

Health at Work can also significantly influence Employee Performance at PT. SS. Therefore, the company must implement Health at Work practices. Having a safe workplace according to SSLK standards and providing physical and mental health support on-site, as well as having complete facilities and infrastructure, can support employee health at work, ultimately leading to employees focusing on improving their performance.

Job Satisfaction is unable to moderate the impact of Work Safety and Health at Work variables on Employee Performance. Job satisfaction has not been able to strengthen the influence of Work Safety and Health at Work on Performance, thus work accident rates and work-related illnesses have not been reduced by the interaction of Job Satisfaction with Work Safety and Health at Work on Employee Performance.

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