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Exploring the Impact of Work Environment and Work Stress on Employee Performance: A Case Study at PT. XYZ

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ABSTRACT

This study investigates the impact of work discipline and motivation on employee performance at PT. XYZ, South Sumatra, utilizing a descriptive quantitative method. Data, collected through employee questionnaires, were processed and analyzed using SPSS version 22.0. The findings reveal a positive and significant influence of Work Environment and Work Stress on employee performance, supported by t-table values (3.119 > 2.048) and (5.845 > 2.048) respectively. The f-test indicates that Work Environment and Work Stress collectively exert a significant influence on employee performance, with an f-count of 77.992 surpassing the f-table value of 3.32, and a significant value of 0.000 below 0.05. The coefficient of determination (Adj R2) at 0.837 signifies that 83.7% of the variation in employee performance can be explained by the work environment and work stress variables, leaving 16.3% influenced by external factors not covered in this study. This research contributes valuable insights into the relationship between work discipline, motivation, and employee performance, aiding in the development of effective organizational strategies.

Keywords: *Work Environment, Work stress, Employee performance*

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1. | INTRODUCTION

Increasingly competitive industrial environments impact both manufacturing and service sectors. Companies must enhance productivity and deliver quality products. The ability to produce quality products is intrinsically tied to human resources, a pivotal element within an organization. Humans play a crucial role as promoters and determinants of organizational processes, emphasizing the need for a positive organizational direction (Paais & Pattiruhu, 2020).

Employee performance significantly influences organizational success, with every company aspiring to have successful employees, contributing substantially to overall performance (Ali & Anwar, 2021). Exceptional employees enhance company performance and address human resource challenges often faced by companies. Effective human resource management is essential, as the success of management relies on the quality of human resources. A company's continuity is contingent upon the effective functioning of its human resources. Achieving desired employee performance is challenging due to various influencing factors, including motivation, job satisfaction, stress levels, physical work conditions, compensation systems, and job design (Dziuba et al., 2020; Hassan et al., 2020; Parker et al., 2017).

The work environment itself is a notable factor impacting employee performance (Dubbelt et al., 2019; Hartinah et al., 2020). The work environment, where employees conduct daily activities, significantly influences their performance. Effective human resource management is crucial for balancing employee needs with organizational capabilities. The physical work environment, representing working conditions, aims to provide a comfortable atmosphere, facilitating employees in achieving company goals.

Another factor influencing employee performance is the level of stress experienced by company employees (Kumar et al., 2021; Wong et al., 2021; Yu et al., 2021). Stress, resulting from work pressures, can impact an individual's emotions, thought processes, and physical condition (Daniel, 2019; Lazarus, 2020; Ramlawati et al., 2021). Elevated work stress among employees can disrupt overall company productivity, making stress a prominent issue in the modern era (Yuan et al., 2021). Islamic teachings offer various methods to alleviate psychological conflicts arising from stress. The work environment and employee work stress significantly influence employee performance, a key factor in company development (Chanana & Sangeeta, 2021; Davidescu et al., 2020; Ingsih et al., 2021; Kurniawaty et al., 2019). Employee performance is assessed based on aspects such as quality, quantity, work time, and collaboration, all contributing to the achievement of organizational goals (Sabuhari et al., 2020; Saffar & Obeidat, 2020; Sitopu et al., 2021; Ibrahim, 2018).

This research was conducted at CV PT. XYZ, a business in the industrial and manufacturing equipment sector that receives orders from several large manufacturing companies. The company produces various spices of the archipelago, such as ginger, pepper, chili, and more. As the company recently opened a new branch with a new building, and the existing facilities are not yet adequate, the author selected this company as the research subject. The study aims to empirically demonstrate the significant influence of work environment and work stress variables on employee performance. Focusing on analyzing the impact of both variables on employee performance, this study investigates whether a favorable work environment and low levels of work stress contribute to improved employee performance in the company. Thus, this research provides a more in-depth understanding of the factors influencing employee performance in the specific context of this company.

2. | METHODS

The type of research used in this study is quantitative, which involves creating findings through systematic procedures or other quantitative methods using numerical data. The quantitative approach aims to determine the magnitude of variables influencing the level of labor productivity at PT. XYZ in South Sumatra.

The research population consists of objects determined through specific criteria and categorized into research subjects, such as people, documents, or records. The population, in this case, comprises employees at PT. XYZ, totaling 31 employees. The sampling technique employed is Nonprobability sampling, using the saturated sampling method. Nonprobability sampling does not provide equal opportunities

for each population element to be selected. Saturated sampling involves using the entire population as samples, which, in this relatively small study, includes all 31 employees. The analysis was performed using SPSS version 22.

3. | RESULTS

The respondent data, successfully collected from 31 participants, includes information on (a) Gender, (b) Age, (c) Last Education, and (d) Length of Service. Based on Table 1, it can be concluded that out of the 31 respondents, the majority were male, constituting 23 individuals (74.2%), while the remaining 8 individuals (25.8%) were female. In terms of education, the sample primarily consisted of respondents with junior high school education, accounting for 12 individuals (38.7%), followed by those with high school education, comprising 16 individuals (51.6%). The remaining 3 respondents (9.7%) had attained S1 education. Furthermore, in relation to the length of service, the majority of the 31 respondents had tenures of 1-5 years, totaling 12 individuals (38.7%), followed by those with tenures of 6-10 years, amounting to 10 individuals (32.3%). Additionally, there were 5 respondents (16.1%) with tenures of 11-15 years, and the remaining 4 respondents (12.9%) had tenures of less than 1 year.

Table 1. Characteristics of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Gender	Male	23	74.2	74.2	74.2
	Women	8	25.8	25.8	100.0
	Total	31	100.0	100.0	100.0
Education	Junior High School	12	38.7	38.7	38.7
	Senior High School	16	51.6	51.6	90.3
	Bachelor	3	9.7	9.7	100.0
	Total	31	100.0	100.0	100.0
Tenure	<1	4	12.9	12.9	12.9
	1-5	12	38.7	38.7	51.6
	6-10	10	32.3	32.3	83.9
	11-15	5	16.1	16.1	100.0
	Total	31	100.0	100.0	100.0

Source: *data processed SPSS 22.0 (2021)*

The normality test aims to assess whether the data in this study follows a normal distribution. The Kolmogorov-Smirnov test is utilized for this purpose, and the results will be presented. Examining the Asymptotic Significance (Asymp. Sig) value in Table 2 reveals a value of 0.074. This indicates that the Asymp. Sig value exceeds 0.05, as specified. Therefore, it can be concluded that the Kolmogorov-Smirnov test suggests the data in this study adheres to a normal distribution. Furthermore, the multicollinearity test is employed to identify the occurrence of multicollinearity in the data. This test involves checking the tolerance value (should be greater than 0.1) and the Variance Inflation Factor (VIF) value (should be less than 10). The results of the multicollinearity test are presented in Table 3.

The results indicate that the tolerance value for the work environment (X1) and work stress (X2) is 0.461, which is greater than 0.10, and the VIF value is 2.171, which is less than 10.00. These findings imply that the variables meet the classic assumption of multicollinearity, as the tolerance values are above 0.10, and the VIF value is below 10.00. Therefore, it can be concluded that there is no multicollinearity present between the variables of Work Environment (X1) and Work Stress (X2).

The heteroscedasticity test is conducted to determine whether there is similarity or unequal variance between observations in a regression model. In this study, the heteroscedasticity test utilizes a scatterplot graph. If a specific pattern is observed in the scatterplot graph, it indicates multicollinearity; conversely, if the points on the scatterplot graph are scattered around the number 0 on the Y-axis, multicollinearity is not identified. The scatterplot graph, as depicted in Figure 1 - Heteroscedasticity Test Results, indicates that this study is free from heteroscedasticity assumptions. The data points do not exhibit a discernible pattern and are evenly spread both above and below, or around, the number 0 on the Y-axis.

Table 2. Kolmogrov Smirnov test results

One-Sample Kolmogorov-Smirnov Test

|		Unstandardized Residual
N		31
Normal Parameters[a,b]	Mean	.0000000
	Std. Deviation	.89582638
Most Extreme Differences	Absolute	.150
	Positive	.092
	Negative	-.150
Test Statistic		.150
Asymp. Sig. (2-tailed)		.074[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Table 3. Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.269	2.004		.134	.894		
	lingkungan kerja	.400	.125	.348	3.199	.003	.461	2.171
	setres kerja	.764	.131	.635	5.845	.000	.461	2.171

a. Dependent Variable: kinerja

Source: *data processed SPSS 22.0 (2022)*
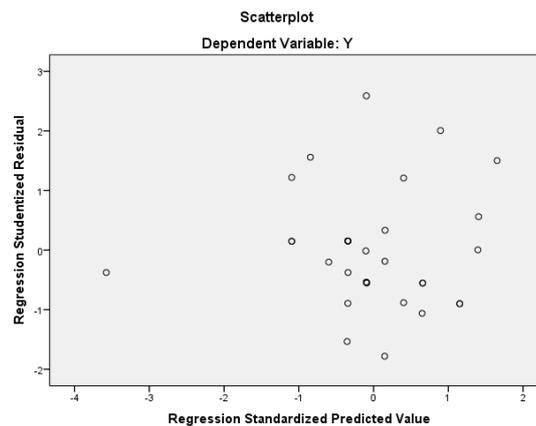
Source: data processed SPSS 22.0 (2022)
Figure 1. Heteroscedasticity Test Results

The analysis of linear regression aims to predict the value of the dependent variable based on increases or decreases in the independent variable. Additionally, it is employed to ascertain the direction of the relationship between the independent variable and the dependent variable, determining whether each independent variable is positively or negatively related to the variable in question. Multiple linear regression analysis is specifically utilized to examine the impact of two or more independent variables on a single dependent variable. Table 4 presents the results of data processing conducted using SPSS Version 22.

Table 4. Multiple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.269	2.004		.134	.894
	lingkungan kerja	.400	.125	.348	3.199	.003
	setres kerja	.764	.131	.635	5.845	.000

a. Dependent Variable: kinerja

Table 5. F Test Results (Simultaneous)

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	134.118	2	67.059	77.992	.000[b]
	Residual	24.075	28	.860		
	Total	158.194	30			

a. Dependent Variable: kinerja

b. Predictors: (Constant), setres kerja, lingkungan kerja

The F-test is employed to determine whether all independent variables collectively have a significant impact on the dependent variable. The decision-making criteria for the F-test are based on a significance level (α) of 5%, with degrees of freedom (df2) equal to 31-2-1 + = 28, resulting in a critical T-table value of 3.32. The acceptance conditions for the hypothesis are as follows:

- If t-table > t-count and significance < 0.05, then Ho is accepted, and Ha is rejected.
- If t-table < t-count and significance < 0.05, then Ho is rejected, and Ha is accepted.

Referring to Table 5, the F-sig. value is 0.000, indicating that the p-value < α or 0.000 < 0.05. Comparing F-count and F-table, with t-count at 77.992 using a confidence level of 95%, α = 5%, df2 (4-2 = 2), and df1 (31-2-1 = 28), the resulting T-table value is 3.32. Since F- count > F-table (77.992 > 3.32), the results suggest that there is a significant influence of both the work environment and work stress on employee performance. Moreover, there is a significant relationship between the work environment and work stress concerning employee performance at this company.

The research results indicate a significant influence of the work environment and work discipline on employee performance. The data, gathered from 31 respondents in the field, are deemed valid and reliable. Data validity is established when the r-count for each variable surpasses the required r-table value of 0.339, and the significance level for each statement is below 0.05. Data reliability is confirmed when the Cronbach's alpha value for each variable exceeds 0.60.

For the work environment variable, the first statement's r-count is 0.576, the second statement is 0.741, the third statement is 0.468, the fourth statement is 0.801, the fifth statement is 0.681, with a Cronbach's alpha value of 0.658. For the work discipline variable, the first statement's r-count is 0.376, the second statement is 0.506, the third statement is 0.692, the fourth statement is 0.865, the fifth statement is 0.572, with a Cronbach's alpha value of 0.657. For the employee performance variable, the first statement's r-count is 0.551, the second statement is 0.758, the third statement is 0.677, the fourth statement is 0.777, the fifth statement is 0.767, the sixth statement is 0.383, with a Cronbach's alpha value of 0.740.

Regarding the F-test results, the independent variables of the work environment (X1) and work stress (X2) collectively exhibit a significant influence on the dependent variable Performance (Y). The F count of 77.992 exceeds the F-table value of 3.32, with a significance value of 0.000, which is less than the probability value of 0.05. Therefore, the study confirms a

relationship between the work environment and work stress, both simultaneously and partially, indicating a positive influence on employee performance.

4. | CONCLUSION

Based on the data analysis that has been carried out regarding the work environment, work stress, and employee performance at PT. XYZ, several conclusions can be drawn. First, partially, the work environment variable has a significant effect on employee performance with a tcount value greater than the ttable (3.119 > 2.048) and a significance of 0.003. This means that the work environment has a significant impact on employee performance. Second, the work stress variable also has a significant effect on employee performance partially, with a tcount (5.845) which is greater than the t table (2.048) and a significant 0.000. Thus, work stress individually also has a significant effect on employee performance. Furthermore, third, simultaneously, work environment and work stress together have a significant effect on employee performance, indicated by the results of the F test (88.270 > 3.29) and significant 0.000. These results indicate that work environment and work stress variables have a joint impact on employee performance. The fourth conclusion, all these significant test results support that there is a relevant relationship between work environment, work stress, and employee performance in the company.

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