IJAMESC, Vol. 2 No. 4, August 2024
DOI: https://doi.org/10.61990/ijamesc.v2i4.309 e-ISSN 2986-8645

THE EFFECT OF NON-PHYSICAL WORK ENVIRONMENT AND WORK STRESS ON THE PERFORMANCE OF AUTO 2000 EMPLOYEES OF RADEN INTAN

Hendri Dunan[1]*, Jenita Sari[2]
[1.2]Faculty of Economics and Business, Bandar Lampung University, Indonesia
*Corresponding Author:
hendri.dunan@ubl.ac.id

Abstract
The influence of the non-physical work environment and stress levels on employee performance are the main objectives of this research, especially in the organizational environment of Auto 2000 Raden Intan, a corporate entity operating in the automotive industry sector. This study used a quantitative approach. Because the non-physical work environment does not have a direct impact on the company but on employees if not managed properly, the relationship between employees and superiors is very important to achieve company goals. A total of 35 employees were included in the study population. The sample that took only the mechanical part was 35 employees from 111 total population at PT. Astra International Tbk. Auto 2000 Raden Intan. In the research analysis required to achieve this, multiple linear equations were used, and the results showed that work stress along with non-physical work environments can affect the good level of employee performance. The determinant coefficient R2 of 62.8% means that performance (Y) is affected by the non-physical work environment (X1) as well as work stress (X2) is 62.8%. While the remaining portion of 37.2% was influenced by additional components or variables outside this study.

Keywords: Employee performance, Non-Physical Work Environment, Work Stress

1. Introduction

Human resources mark an irreplaceable foundation in the structure of any organizational entity or company. Their presence is a vital force that drives corporate operations with proficiency and efficiency. The conceptualization of human resource management (HRM) reflects a systematic approach to human asset management strategies in an effort to achieve the goals set by organizational entities or companies (Dunan, Rahmawati, &; Redaputri, 2020a). Research has illustrated that the implementation of successful strategies in human resource management (HRM) and increasing the level of job satisfaction have a good influence on the performance produced by employee team members (Iskandar, 2018).

The performance of individuals or groups must be aligned with the responsibilities and authorities given to them in order for the achievement of organizational objectives to be realized legitimately, within the limits set by law, and consistent with applicable ethical standards and norms (Muis in (Nyappur, 2023)). Non-physical work environments can provide a boost to employees to improve their work results, which optimally helps them carry out their duties and responsibilities. Siagian in (Mahmudah, 2019) said a healthy relationship between employees and their leaders in the workplace is known as a non-physical work environment.

Stress can also have an effect on the performance of non-physical work environments. In general, stress is a factor or condition that causes stress and causes physical and

psychological demands on a person (Imelisa, Roswendi, Wisnusakti, &; Ayu, 2021). Work stress is defined as the guarantee of a worker to face certain hazards, which results in various reactions and adaptations (Limbong, 2018). Work stress not only contributes to poor performance, but can also benefit performance (Suprihadi in (Buulolo, Dakhi, &; F.Zalogo, 2021)). Positive stress can encourage people to try better than failure and improve their abilities by controlling the level of stress we face (P2PTM Kemenkes RI, 2018).

2. Theoretical Background

The performance of a team member reflects his success in achieving the role or target set, which is determined by his own actions and efforts (According to (Dunan, Rahmawati, &; Redaputri, 2020b)). Performance according to Basri and Rivai in (Rahman, 2023) refers to the achievement or level of achievement of individuals in completing tasks within a specified time limit, compared to various other alternatives, including performance standards, set targets, goals, or previously agreed criteria. In this sense, the theory about performance, also known as "achievement work", is a psychological theory of how a person acts in his work to achieve his desired goals. In addition to this, the same individual can work in different ways in various conditions (Yuliawan &; Laksono, 2021). This shows that the two main factors that can have an influence on performance are individual factors as well as situation factors.

2.1 Employee Performance

Performance, according to Muis et al. (Nyappur, 2023) refers to the achievements that a group or person is able to obtain in an organizational entity. This achievement is in line with the responsibility and authority they carry to realize the goals of the organization legally, in accordance with established standards, and within limits that do not violate the law, in line with applicable norms and ethics.

2.2 Non-Physical Work Environment

According to the presentation stated (Mahmudah, 2019), all conditions related to the dynamics of relationships in the scope of work, including interactions with subordinates, colleagues, or leaders, can be categorized as components in a non-physical work environment.

2.3 Work Stress

According to Hasibuan in (Supriyanto &; Nadiyah, 2022), work stress is defined as the level of tension that disrupts a worker's psychological balance and has an impact on the way they think, emotions, and their condition. According to (Buulolo et al., 2021), work stress not only plays a role in damaging performance but work stress can also be helpful or functional in performance

2. Methods

Quantitative method research is applied during the implementation of this research. According to quantitative research, according to the book Physical Education Quantitative Research Methodology (Nugroho, 2018), is a type of research that is carried out systematically, planned, and structured. The strategy used is an association strategy. According to (Sugiyono, 2019), association research refers to identifying relationships between two or more variables. Association research strategies are utilized in determining the extent to which variable X, or has an effect on variable (Y) or employee performance

as a dependent variable, either separately or simultaneously. The object of this research is an employee of the Auto 2000 mechanical section Raden Intan.

Primary and Secondary Data Sources are interpreted as two types of data that can be taken and processed for a study. The primary data consists of interview answers as well as answers from questionnaires given to all workers in the Auto 2000 Raden Intan mechanical section. Secondary data consists of previous research journals and books related to research variables including work stress, employee performance, and non-physical work environment in the mechanical part of Auto 2000 Raden Intan.

Population according to (Sugiyono, 2019), defined as the scope of generalization refers to the selection of the domain of objects or subjects by researchers to be investigated before conclusions can be drawn. Conversely, population can be defined as all people who will be the object of research (Arikunto, 2017). The total population of all Auto 2000 Raden Intan employees is 111 employees.

According to (Sugiyono, 2019), both the population number and its characteristics consist of samples. Arikunto stated that subjects are better taken as a whole if their number is less than 100, So, this study is a population study. An increase in the number of subjects can occur up to 10–15% or 20–25% of the population.

The sample used was only mechanical parts totaling 35 employees from 111 total population in Auto 2000 Raden Intan.

Data collection techniques applied during the implementation of research include the Literature Study approach and the application of Questionnaires / Questionnaires. In literature study research, the author establishes one of the literature study methods to collect data. This method is done through reading journals, websites, and previous research books on employee performance, work stress, and non-physical work environments. The purpose of this process is to obtain scientific and theoretical data and information to be used as a reference in research. Questionnaire / Questionnaire is research conducted by distributing research questionnaires. The type of questionnaire used is a closed questionnaire, where answer choices have been provided that must be filled in by respondents (Sugiyono, 2014). The study utilized a Likert scale questionnaire for scoring. The weights of the assessment are:

Scale	Score
Strongly Agree (SS)	5
Agree (S)	4
Disagree (KS)	3
Disagree (TS)	2
Strongly Disagree (STS)	1

3. Results and Discussion

In the study, the representation that will be used to carry out hypothesis testing to present data through utilizing respondent demographic data, such as length of work, last education, gender, and age, is intended to provide a description of the respondent's condition in the study. Description of Respondent Characteristics in This study was conducted on 35 employees of Auto 2000 mechanical parts Raden Intan to prove the research hypothesis. The demographic data of Auto 2000 Raden Intan employees consists of 35 men with a percentage of 100%, and 0 women with a percentage of 0%. Age data consists of 29 employees aged 18 to 30 years with a percentage of 83%, and 6 employees aged 31 to 40 years with a percentage of 17%. Education data consists of 31 employees in SMA/SMK with a percentage of 89%, 0 employees in D3 with a percentage of 0%,

and 4 employees in S1 with a percentage of 0%. Data shows 9 employees with a percentage of less than 1 year of service with a percentage of 26%, 14 people with a percentage of 40% from 1 to 3 years, and 12 people with a percentage of 34% more than 3 years.

3.1 Results of the validity test

Table 1 Results from the Non-Physical Work Environment Validity Test (X1)

Item	R Hitung	R Tabel	Keputusan
X1.1	.525**	0,2826	Valid
X1.2	.538**	0,2826	Valid
X1.3	.479**	0,2826	Valid
X1.4	.745**	0,2826	Valid
X1.5	.366*	0,2826	Valid
X1.6	.415*	0,2826	Valid
X1.7	.489**	0,2826	Valid
X1.8	.540**	0,2826	Valid
X1.9	.519**	0,2826	Valid
X1.10	.540**	0,2826	Valid

Source: Processed Test Results, 2024

Table 1 illustrates the results obtained from processing the X1 validity test using statements related to non-physical work environments. That the results of this study indicate r count > from r table (0.2826). Therefore, all statements relating to a work environment that are non-physical are considered valid.

Table 2. Results of the Work Stress Validity Test (X2)

Item	R Hitung	R Tabel	Keputusan
X2.1	.512**	0,2826	Valid
X2.2	.380**	0,2826	Valid
X2.3	.658**	0,2826	Valid
X2.4	.528**	0,2826	Valid
X2.5	.570**	0,2826	Valid
X2.6	.658**	0,2826	Valid
X2.7	.472**	0,2826	Valid
X2.8	.679**	0,2826	Valid
X2.9	.479**	0,2826	Valid
X2.10	.525**	0,2826	Valid

Source : Processed Test Results, 2024

Table 2 illustrates the results obtained from the X2 validity test performed by making statements about work stress. The results showed that r calculated > from r table (0.2826). Therefore, conclusions can be drawn on each statement about stress at work such data is considered valid.

Table 3. Results of the Employee Performance Validity Test (Y)

Item	R Hitung	R Tabel	Keputusan
Y.1	.444**	0,2826	Valid
Y.2	.700**	0,2826	Valid
Y.3	.515**	0,2826	Valid
Y.4	.540**	0,2826	Valid
Y.5	.523**	0,2826	Valid
Y.6	.404**	0,2826	Valid
Y.7	.751**	0,2826	Valid
Y.8	.587**	0,2826	Valid
Y.9	.381**	0,2826	Valid
Y.10	.647**	0,2826	Valid

Source: Processed Test Results, 2024

Table 3 illustrates the results obtained from the Y validity test conducted by making statements related to Employee Performance. The value of r calculated > from r table (0.2826) is obtained in the test results. Therefore, all statements regarding Employee Performance are considered valid.

3.2 Results of reliability tests

The following are the results of evaluating the reliability of the questionnaire using the Cronbach alpha method, with reference to data analysis using the SPSS 25.0 statistical program, namely, among others:

Table 4. Results from Reliability Tests

Tabel Keluaran Pengujian Reliabilitas		
Elemen	**A**	**Keluaran**
Lingkungan Kerja Non Fisik (X1)	.690	Reliabilitas Tinggi
Stres Kerja (X2)	.720	Reliabilitas Tinggi
Kinerja Karyawan (Y)	.740	Reliabilitas Tinggi

Source: Processed Reliability Test Results, 2024

In table 4 the reliability data shows that the non-physical work environment variable has a Cronbach alpha value of 0.690, indicating that the data has a high level of reliability. Conversely, the non-physical work environment variable has a reliability value of 0.720, which shows that the processing results have a high level of reliability, and the performance variable has a reliability value of 0.740.

DOI: https://doi.org/10.61990/ijamesc.v2i4.309 e-ISSN 2986-8645

3.3 Multiple Linear Regression Analysis Trial Results

Non-physical work environment (X1), work stress (X2), and performance (Y) were the indicators used in this study. This trial was carried out through the use of SPSS 25.0 software. The following are the results of multiple linear regression test processing on these variables:

Table 5. Multiple Linear Regression Test Results

	Correlation Value R	R Square R2
1	.793a	.628

Source: Test results processed in 2024

Table 5 of the processing results using multiple linear regression tests above shows that the correlation coefficient (R) of 0.793 indicates that there is a strong positive relationship between non-physical work environment variables (X1), work stress (X2), and performance (Y). With a coefficient of determination R2 (R Square) of 0.628, we can conclude that the degree of relationship between X1 and X2 affects performance (Y) by 62.8%, and other factors not included here affect 37.2% of the total.

Table 6. Regression Coefficient Test Results

Coefficients[a]

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	2.777	3.974
	Lingkungan Kerja Non Fisik (X1)	.413	.152
	Stres Kerja (X2)	.505	.155

Source: processed regression coefficient test results, 2024

The regression equation is:

Y = a + b1X1 + b2X2

Y = 2.777 + 0.413 X 1 + 0.505 X 2

Information:

Y = Performance
a = Constant
b = Regression Coefficient
Et = Error tram/error element
X1 = Non-Physical Work Environment
X2 = Work Stress

Here is an explanation of the regression equation formula, with a constant of 2.777 indicating a performance of 2.77 in cases where there is no work stress and a non-physical work environment. With a regression coefficient of 0.413 for X1, an increase of one unit of work stress would increase the performance level by 0.41, while the regression coefficient X2 of 0.505 shows that each increase of one unit in a non-physical work environment will increase the performance level by 0.505.

3.4 Test Results Hypothesis Test Results t

Determining the significance of independent variables and constants, in processing the data can use the t test. The observed value of t (t count) is compared to the value of t in the distribution table t (t table) and the levels of sig and alpha (0.05). Critical value t through real or alpha level 5% bidirectional test and free degree df (n-{k-1}) = (35-{3-1}) = 35-2 = 33, result in t table (33; 0.05/2) = (38; 0.025) = 2.034. The criteria test is

DOI: https://doi.org/10.61990/ijamesc.v2i4.309 e-ISSN 2986-8645

performed by processing the t-test data. The decision-making criterion is that a sig value below 0.05 Ho is rejected and a sig value above 0.05 Ha is accepted.

Table 7. Test Results t

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.777	3.974		.699	.490
	Lingkungan Kerja Non Fisik (X1)	.413	.152	.395	2.723	.010
	Stres Kerja (X2)	.505	.155	.473	3.261	.003

a. Dependent Variable: Kinerja karyawan (Y)

Source: t processed test results, 2024

From table 7 shows the results of t-test processing on non-physical work environment variables (X1) shows that the non-physical work environment obtained a calculated t value of 2.723 and a sig value of 0.010. Then a comparison is made to ensure that, if the calculated t value and the table t are the same, which is 2.723 > of 2.034, H0 is rejected and accepted from the data. In addition, by comparing significance and alpha, it was found that, since the sig values were 0.010 < 0.05, that from such results H0 was rejected and accepted. This matter shows that the non-physical work environment affects the performance of employees in the mechanical section of Auto 2000 Raden Intan.

In the results of the t test processing for the F value, calculate 3.261 and the sig value 0.003 for the work stress variable (X2). Next, the calculated t value and the table t value are compared, showing that H0 is rejected and Ha is accepted, because the calculated t value is 3.261 > of 2.034. In addition, a comparison of significance and alpha was carried out, which showed that, because the sig value of 0.003 < 0.05, from the results of processing on these variables it can be concluded that Ha is accepted and rejected. This indicates that work stress affects employee performance in the mechanical section of Auto 2000 Raden Intan.

3.5 Results of the F Test

Employee performance (Y), as the dependent variable, is influenced by the non-physical work environment (X1) and work stress (X2). The purpose of the F test is to evaluate both. To test the research hypothesis, the F test is used to compare the levels of sig and alpha (0.05). The critical value t for the two-way test, or real grade, is 5%, and the free degree df (n-k) = (35-2) = 35-2 = 33, so that F table is obtained (33; 0.05/2) = (33; 0.025) = 3.28.

Ho: Employee performance (Y) is not affected by the non-physical work environment (X1) and work stress (X2).

Ha: Worker performance (Y) is affected by non-physical work environment (X1) and work stress (X2) According to the criteria, Ho is rejected and Ha is accepted if the Sig value < 0.05 and the Sig value > 0.05

DOI: https://doi.org/10.61990/ijamesc.v2i4.309 e-ISSN 2986-8645

Table 8. F Test Results

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	880.967	2	440.484	27.017	<,001[b]
	Residual	521.719	32	16.304		
	Total	1402.686	34			
a. Dependent Variable: Kinerja Karyawan (Y)						
b. Predictors: (Constant), Lingkungan Kerja Non Fisik (X2), Stres Kerja (X1)						

Source: F test results processed, 2024

From the processing of the results of table 8, it shows a calculated F value of 27.017 and a sig value of 0.001. Then a comparison of the values of F is calculated and F of the table, which indicates that H0 is rejected and Ha is accepted, which is 27.017 > from 3.28. In addition, a significance comparison was made, and the results showed that alpha was (0.001 > 0.05), which showed that H0 was rejected and Ha was accepted. So, X1 and X2 affect the variable mechanical performance of employees (Y) in Raden Intan 2000 Auto.

3.6 Discussion

1) The Effect of Non-Physical Work Environment on Employee Performance

From the processing results in the linear regression test shows data on the impact of non-physical work environment impacts on employee performance, with a significance level of 0.003 < 0.05. In this case it significantly implies that working conditions unrelated to physical (X1) affect performance (Y). Supervisor-subordinate interactions, horizontal relationships between co-workers, and cooperation in the workplace are some examples of non-physical elements of the work environment that have an impact. As quoted by Dr. Mahmudah (2019: 54), the non-physical work environment includes aspects of work related to interactions between individuals in the workplace, such as the relationship between managers and subordinates, as well as overall aspects of work dynamics.

2) The Effect of Work Stress on Employee Performance

The results of processing the influence of variables on work stress on employee performance variables are shown in the regression coefficient test table, with sig. 0.01 <0.05. These results show that work stress (X2) has a positive and significant impact on performance (Y). The study found that work stress always negatively impacts performance, but also suggests that stress can increase productivity and increase motivation in some situations. according to Festinahati (2021), work stress not only contributes to decreased performance, but can also benefit performance.

3) The Effect of Non-Physical Work Environment and Work Stress on Employee Performance

The results of the hypothesis trial indicate that non-physical work environment conditions and work stress levels can affect employee performance in the Auto 2000 Raden Intan mechanical division. Therefore, Auto 2000 Raden Intan is recommended to improve non-physical work environments and manage work stress efficiently. It is expected that employee performance will improve as a result of these actions, which in turn will affect the overall work results of the company.

4. Conclusion

Based on the process of reviewing data and testing hypotheses conducted on the impact of the impact of work pressure and non-physical work environment factors on the performance of Auto 2000 Raden Intan, the results indicate that work pressure has a large impact and has a real effect. The findings of this study also suggest that conflict among employees and excessive workload due to the absence of compensation are factors that cause job stress. As a result, it was concluded that better working conditions for employees correlated with better performance. The findings of this study indicate that occupational pressure and non-physical working environment conditions have a positive impact, as well as a real effect. Therefore, there are still employees whose performance decreases due to things like not feeling appreciated by the company and lack of relationships with superiors and friends. Therefore, increased work stress correlates with a decrease in the performance of the workers; However, an increase in non-physical work environments correlates with improved employee performance.

From the results of data processing, companies are expected to help their employees cope with stress through activities such as stress management courses, joint recreation or sports, and social events. Future research researchers can expand the scope by utilizing variables using the latest statistical theories, indicators, and other approaches to achieve more optimal results.

References

Arikunto, S. (2017). Development of Research Instruments and Program Assessment. Yogyakarta: Student Library. Asih, G. Y. (2018). Work Stress.

Buulolo, F., Dakhi, P., &; F.Zalogo, E. (2021). The effect of work stress on employee performance at the Aramo Sub-district Office, South Nias Regency. South Nias Student Scientific Journal, 4(2), 191–202.

Dunan, H., Rahmawati, D., &; Redaputri, A. P. (2020a). The Influence of Organizational Culture and Competence on Employee Performance at PT Angkasa Pura I (PERSERO). Ejournal.mercubuana.

Dunan, H., Rahmawati, D., &; Redaputri, A. P. (2020b). The Influence of Organizational Culture and Competence on Employee Performance at PT Angkasa Pura I (PERSERO). Influence of Organizational Culture 119 JPSB, 8(2), 119–128.

Imelisa, R., Roswendi, A. S., Wisnusakti, K., &; Ayu, I. R. (2021). Nursing Psychosocial Mental Health. EDU PUBLISHER.

Iskandar, D. (2018). Corporate Performance Improvement Strategy through Human Resource Management and Job Satisfaction and Its Impact on Employee Productivity [JOUR]. Asian Scientific Journal of Business and Economics, 12(1), 23–31.

Limbong, S. S. (2018). Differences in Learning Outcomes of Time Measurement Using CTL Model with RME in Grade V Elementary School. E-JIPSD, 6(2). https://doi.org/http:// dx.doi.org/10.24036/e-jipsd.v6i2.4080

Mahmudah, E. (2019). Human Resource Management. Surabaya: UBHARA Management Press.

Nugroho, U. (2018). Physical Education Quantitative Research Methodology. Nyappur, N. (2023). Journal of Community Service. 2(1).

P2PTM Ministry of Health RI. (2018). There Are 2 Stress Reactions, Namely Positive and Negative, How Do Healthy Friends React to Stress?

Rahman, M. A. (2023). The Effect of Work Conflict, Work Stress, and Work Environment on Employee Performance (Case Study on Employees at Yos Soedarso University). Yos Soedarso Economics Journal, 5(2), 13–37.

Rizal, V. F. (2023). The Effect of Work Stress and Communication on the Performance of Muyang Kute Bener Meriah Hospital Employees.

Sudarman, M. (2005). HR Performance and Work Assessment. Jakarta: Intan Pariwara Jakarta.