



Survey-Based Analysis of Work Environment's Effect on Employee Stress at PT Indoneptune Manufacturing

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ABSTRACT

Purpose: The purpose of this study was to determine how much influence the work environment has on the work stress of netting employees at PT Indoneptune Manufacturing. **Methodology:** This research uses an associative quantitative approach by conducting a survey to the field. The population in this study were employees who worked at PT Indoneptune Manufacturing. **Results:** Work environment affects work stress. **Findings:** That respondents are responding to the current working environment in the company to create a more comfortable working environment.. **Novelty:** The research uses the production section as the research sample. **Originality:** This study uses production employees as a sample to examine the effect of work environment on work stress. **Conclusion:** The researcher found that employees often leave due to illness, which is an indicator of work stress. **Type of Paper:** This paper is an empirical research paper.

INTRODUCTION

The work environment is one of the important factors that influence the well-being and performance of employees in an organisation. A conducive work environment can increase productivity and job satisfaction, while an unsupportive work environment can lead to work stress that has a negative impact on individuals and organisations (Robbins & Timothy A, 2018).

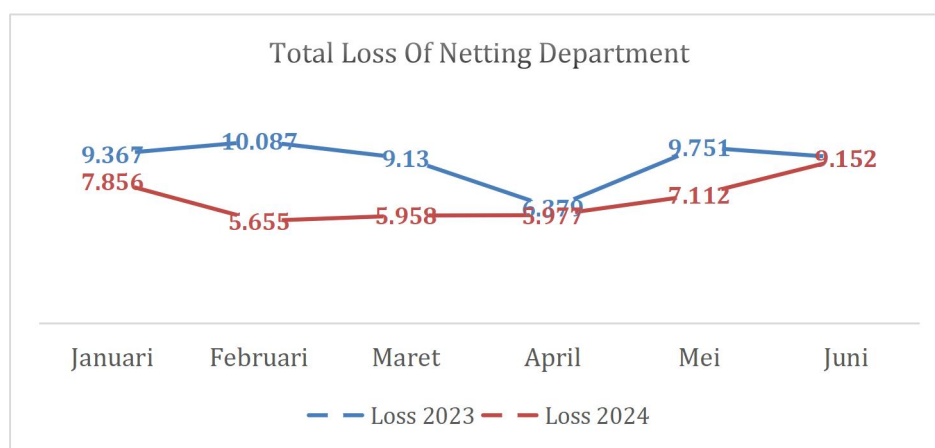
Job stress itself begins when an employee experiences excessive pressure due to high job demands, poor social relationships, or uncomfortable workplace conditions. Poorly managed job stress can lead to decreased performance, increased absenteeism, or even physical and mental health problems (Hasibuan, 2020). In various industries and work sectors, the phenomenon of work stress is increasingly becoming a concern. A report from the World Health Organisation (WHO) states that work stress is one of the main factors affecting the productivity and mental health of workers worldwide. Some of the phenomena that often occur due to work stress include burnout syndrome, employee turnover, decreased productivity, physical and mental health problems and work-life imbalance (Triana, 2022).

PT Indoneptune's Netting Department is the hub of other departments, starting from the processing of raw goods into finished manufactured goods, for example, from the entry and

manufacturing of fishing nets to completion often involves a harsh working environment, long working hours, and pressure to meet high production targets. The health of workers in the netting department can be affected by the many pressures and demands of work, both physical and non-physical. Physical exhaustion can lead to work stress, while non-physical stress can lead to fatigue (Octasylla & Musyaffa, 2023) . Other factors that can affect job stress are poor interpersonal relationships and lack of social support at work, in some cases, this can even worsen an employee's condition and stress.

Some important factors that can increase work stress levels and negatively impact work performance and the mental and physical health of Netting Department employees are an unconducive work environment, including excessive workload, uncomfortable workplace conditions, disharmonious interpersonal relationships, and lack of support. PT Indoneptune Net Manufacturing also experiences productivity problems, namely experiencing instability in the development of production results and losses every year starting from 2023-2024, as shown in the data table on the development of the number of product losses that experience an increasing rate which causes instability in the number of products.

Figure 1. Comparison of the Number of Losses in the Netting Department in 2023-2024



The table above shows the recap data of the Netting Department's losses for the past two years, the amount of losses generated in the first half of 2024 in May and June increased significantly. The minimum loss is five thousand dollars per month. Nevertheless, the percentage results show that the resulting losses exceed the maximum limit that has been set. To reduce the amount of loss, employees of PT Indoneptune Net Manufacturing must have a comfortable workplace, good work environment, good workload, and harmonious interpersonal relationships. A worker's work environment can be defined as all the tools used, the place where a worker works, his work style, and the influence of his work both individually and in groups (Mangkunegara, 2017).

Among the work environment problems found by the researcher during the observation were inadequate work facilities, disharmonious interpersonal relationships, low room temperature, and lack of support from superiors, all of which caused discomfort and stress. The researcher found that employees often leave due to illness, which is an indicator of work stress. Further research is needed to determine how much the work environment affects employee work stress. In the same way, this research was conducted to find out how much influence the work environment has on job stress in employees of PT Indonesia Netting Department. A business can implement more efficient strategies and policies with the aim of creating a healthy and productive work environment by understanding the components of the work environment that contribute to stress levels. This is expected to improve the long-term health and success of the company.

The purpose of this study was to determine how much influence the work environment has on the work stress of netting employees at PT Indoneptune Manufacturing. As a reference material in this study, researchers took several previous studies as literature related to the work

environment and work stress, including from Octasylla & Musyaffa (2023), Triana (2022), Gandung & Sunarsi (2024), Sahsabilla et al., (2022), Akbar et al., (2024), Hartati (2022), Saputri et al., (2024), Wardani (2020), Fitriani Rizka & Fuad (2025), Widhi Kurniawan et al., (2023).

Work Stress

Work stress is defined as a person's feelings towards their work that is accompanied by tension, strain, anxiety, worry, emotional exhaustion, and pressure that affects their emotions, processes, thinking, and conditions (Hasibuan, 2020). The indicators of work stress according to (Hasibuan, 2020) :

1. Difficult and excessive workload. If employees' physical abilities, skills, and time are not proportional to the number of tasks they have to complete, it will be a heavy burden for them.
2. Leadership pressure and attitudes that are not fair and reasonable. When leaders and their subordinates have an unhealthy relationship, this can lead to conflict. An example is when a leader assigns work to employees that is not in their field and asks them to complete it within a limited time.
3. Inadequate time and equipment. Most employees have the necessary expertise, experience, and time to complete the tasks assigned by the office or company.
4. Interpersonal conflict with leaders.
5. Rewards that are too low. If an employee receives adequate compensation for what they do for the company, they will be able to work calmly and diligently, and they will always strive to perform to the best of their ability. However, if employees feel that the compensation they receive is inadequate, it can lead to job stress.

Work Environment

The work environment can be defined as all the tools a worker faces, his or her working methods, the influence of his or her work both individually and in groups, as well as the temperature, humidity, ventilation, lighting, cleanliness of the workplace, and the adequacy of work equipment (Afandi, 2018). The work environment indicators according to Afandi (2018) :

1. Lighting. In other words, sufficient and non-dazzling illumination is necessary for work that requires precision.
2. Air Temperature, the human body has a perfect body system to adjust to changes outside the body and maintain a normal state.
3. Noise, a busy workplace can be distracting.
4. Decoration/Space Organisation, in other words, the layout, colouring and cleanliness of each room will have an impact on how employees perform their tasks.
5. Employee Relations, the movement of employees between organisations is one example of a human resource management task.

METHOD

Metode Analisis

The object of research is the production department at PT Indoneptune Net Manufacturing. This research uses an associative quantitative approach by conducting a survey to the field. The population in this study were employees who worked at PT Indoneptune Manufacturing as many as 237 people, using the Simple Random Sampling technique. In this case the error rate, in social research the maximum error rate is 10% or (0.01). Determination of the sample in this study the author used the Slovin method, therefore the sample the author used was 70 samples. The research instrument consisted of a questionnaire distributed to participants using a Likert measurement

scale. The 'Method of Successive Interval' was used to convert interval data to ordinal data (Suryani et al., 2022).

In this study, the Likert scale was used to determine attitudes by expressing agreement or disagreement with certain subjects, objects, or events. The Likert scale divides the variables to be measured into variable indicators, which are then used as a starting point for creating instrument items, which can be in the form of questions or statements (Sugiyono, 2022). Data testing techniques and data analysis in this study through several stages of testing such as MSI, data validity test, data reliability test, correlation coefficient, coefficient of determination, simple regression and hypothesis testing.

RESULTS AND DISCUSSION

Results

Respondent Data Analysis

The data for this study came from questionnaires given to 70 respondents. The researcher categorised the respondents into four groups based on gender, age, education, and tenure. The data collected based on these groups is presented below:

Table 1 Responden Data Analysis

	Characteristics	Total	Percentage
Gender	Male	30	43%
	Female	40	57%
Education	Junior High School	3	4%
	Senior High Scholl	65	93%
	Diploma	2	3%
Age	21-30	7	10%
	31-40	25	36%
	41-50	35	50%
	>51	3	4%
Period of Service	<10 years	37	53%
	10-20 years	30	43%
	>20 years	3	4%

Source: Processed Data, 2024

According to the table above, the characteristics of respondents based on gender show that the majority of respondents are female (40.57 percent) and male (30.43 percent). This shows that the majority of respondents are female. A total of 65 respondents attended senior high school. The age level of respondents for ages 21-30 is 7 people or equivalent to 10%, at the 31-40 level there are 25 people or equivalent to 36%, the age level 41-50 is 35 people or equivalent to 50%, and for ages over 50 years as many as 3 people or equivalent to 4%. So based on the results of the data processing above, the largest number of respondents is at the age level of 41-50 with a total of 35 people. The characteristics of respondents based on the working period of 0-10 years were 37 people (53%), with a working period of 10-20 as many as 30 people (43%), while the working period of more than 20 years was 3 people (4%). So the most respondents based on the working period are at the working age of 0-10 years, namely 37 people (53%).

Validity Test and Reliability Test

All variables in this study were declared valid because all Rcount values on each question item were greater than the Rtabel. The Work Environment variable has a Cronbach Alpha value of 0.884, and the Work Stress variable has a value of 0.886. The table above shows that Cronbach Alpha is reliable because the significant level is greater than 0.6.

Data Analysis Technique

Coefficient of Determination

The following table shows the results of the coefficient of determination based on the results of data processing:

Table 2 Coefficient of Determination

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.402 ^a	.161	.149	5.219

a. Predictors: (Constant), X

Source: Data processed, 2024

From the table above, we can see that the coefficient of determination, or R square, is 0.161. This R square value comes from squaring the correlation coefficient value, which is $0.402 \times 0.402 = 0.161$. The R square value is 0.161, or 16.1%, which indicates that the effect of the work environment on work stress is 16.1%. Other factors that do not affect working conditions are 83.9%.

Coefficient of Regression

Based on the data from the previous analysis test, we found that the significant value of 0.001 is smaller than 0.05, indicating that the work environment has a significant effect on job stress. In the table above, the constant value (a) is 44.823, while the value of work environment is -0.480, so we can write the regression.

$$Y = 44,823 + -0,480 X$$

Hypothesis Test

The test results show that the Work Environment variable has a t_{count} value of 3.616 with a significant $0.001 < 0.05$, and the t_{table} value is 1.668, which indicates that $t_{\text{(count)}}$ is greater than t_{table} ($3.616 > 1.668$). Therefore, the hypothesis decision, H_0 , is rejected, and the H_a value is accepted. Thus, it can be concluded that work environment affects work stress at PT Indoneptune net manufacturing.

Discussion

The results showed that the independent and dependent variables were partially shown. According to the table of correlation coefficient test results obtained, with an R value of 0.377, the work environment at PT Indoneptune Net Manufacturing greatly affects the work stress of Netting Department employees. According to the provisions of the coefficient interval, this level is said to have a moderate attachment relationship between the work environment variable and work stress. The company's work environment is very important in influencing employee work stress.

In addition, a work environment that allows employees to do their jobs optimally, healthily, safely, and comfortably is considered good or appropriate. In this study, the hypothesis H_0 is rejected and H_a is accepted, because the work environment has a sig level < 0.05 and a $t_{\text{(calculated)}}$ value $> t_{\text{table}}$ ($3.616 > 1.668$). Thus, it can be concluded that workplace stress is influenced by the work environment of PT Indoneptune Net Manufacturing.

In line with previous research findings Sartina et al., (2023) , Fitriani Rizka & Fuad (2025) found that the work environment has a significant influence on workplace stress. In addition, a good work environment at PT Indoneptune Net Manufacturing can help employees feel comfortable at work.

CONCLUSION

This study examined the effect of work environment on work stress among 70 employees in the Netting Department of PT Indoneptune Net Manufacturing. The results indicate that the work environment variable had an average score of 14.97, while work stress averaged 24.19. Correlation analysis revealed an R-value of 0.377, indicating a moderate relationship between the two variables. The coefficient of determination ($R^2 = 0.161$) shows that the work environment accounts for 16.1% of work stress variation, with other factors influencing the remaining 83.9%. Regression analysis confirmed a significant effect ($t_{\text{count}} = 3.616 > t_{\text{table}} = 1.668$; Sig. = $0.001 < 0.05$), leading to rejection of H_0 and acceptance of H_a . It is concluded that the work environment significantly affects employee work stress, with inadequate equipment identified as a notable concern requiring improvement.

REFERENCES

- Afandi. (2018). *Manajemen Sumber Daya Manusia (Teori, Konsep dan Indikator)*. Nusa Media.
- Akbar, A. A., Kurniawan, M., & Usman, B. (2024). Pengaruh Lingkungan Kerja Dan Stres Kerja Terhadap Kinerja Karyawan Pada Hotel Batiqa Palembang. *Jurnal Media Wahana Ekonomika*, 20(4), 637–649.
- Fitriani Rizka, A., & Fuad, N. (2025). Pengaruh Lingkungan Kerja Dan Beban Kerja Terhadap Stres Kerja Guru : Sebuah Kajian Literatur Review. *Journal on Education*, 07(02).
- Gandung, M., & Sunarsi, D. (2024). Pengaruh Lingkungan Kerja Fisik Dan Stres Kerja Terhadap Kinerja Karyawan PT. Trans Retail Indonesia (Carrefour) Cabang Ciputat. *Jurnal Ilmiah Wahana Pendidikan*, 10(13), 879–894. <https://doi.org/10.5281/zenodo.13141056>
- Hartati. (2022). Pengaruh Lingkungan Kerja dan Stres Kerja Terhadap Kinerja Pegawai Kantor Kecamatan. *Jurnal Kewirausahaan*, 8(4).
- Hasibuan, M. S. P. (2020). *Manajemen Sumber Daya Manusia* (Edisi Revisi). PT. Bumi Aksara.
- Mangkunegara, A. P. (2017). *Manajemen Sumber Daya Manusia Perusahaan*. Remaja Rosdakarya.
- Octasylya, A. R. P., & Musyaffa, A. B. (2023). Analisis Tingkat Stres Kerja, Dampak Terhadap Kesehatan dan Kinerja Kerja Karyawan di PT. X. *Jurnal IPTEK*, 7(2), 8–12.
- Robbins, S., & Timothy A, J. (2018). *Perilaku Organisasi* (12th ed.). Salemba Empat.
- Sahsabilla, M., Selfiah, R., & Veranita, M. (2022). Lingkungan Kerja terhadap Stres Kerja pada Pegawai. *Journal of Management and Bussines (JOMB)*, 4(1), 634–647. <https://doi.org/10.31539/jomb.v4i1.3510>
- Saputri, R. E., Barima, H., & Supriatin, D. (2024). Analisis Pengaruh Stres Kerja Dan Lingkungan Kerja Terhadap Kinerja Karyawan PT Indomarco Adi Prima Tegal. *DFAME Digital Financial Accounting Management Economics Journal*, 2(2), 36–43.
- Sartina, Kurniawan, A. W., Musa, C. I., Dipootmodjo, T. S., & Haeruddin, M. I. W. (2023). Pengaruh Lingkungan Kerja Terhadap Stres Kerja Karyawan PT. Midi Utama Tbk Makassar. *Jurnal Ilmu Manajemen, Bisnis Dan Ekonomi*, 1(4), 233–240.
- Sugiyono. (2022). *Metode Penelitian Kuantitatif Kualitatif dan R & D*. Alfabeta.
- Suryani, I., Syahrudin, M., & Yohanes, F. (2022). Pengaruh Pengendalian Intern Terhadap Efektivitas Biaya Perjalanan Dinas. *Jurnal Ilmu Akuntansi*, 15(2), 16. <https://doi.org/10.15408/akt.v14i1.28659>
- Triana, S. S. (2022). Pengaruh Lingkungan Kerja terhadap Stres Kerja dan Kepuasan Kerja Serta Dampaknya terhadap Turnover Intention Karyawan. *Jurnal Pendidikan Dan Konseling*, 4(5), 7867–7880.
- Wardani, R. (2020). Pengaruh Beban Kerja Dan Lingkungan Kerja Terhadap Stres Kerja Pada Karyawan Puskesmas Kediri Lombok Barat NTB. *Jurnal Akuntansi Dan Keuangan Syariah (ALIANSI)*, 4.