

## The Influence of Physical Work Environment and Non-**Physical Work Environment on Employee Job** Satisfaction in Bogor District (Study On Pt. X)

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Abstract. Human resource management is crucial to the success of the company's accomplishments in reaching its objectives. The goal of this study is to determine the degree to which the physical and non-physical work environments affect the job satisfaction of PT. X workers, since the work environment is now one of the most important issues facing the organization. This study used a quantitative approach to research. There were 121 persons in the study population that worked for PT. X. In this study, non-probability sampling is used. SPSS version 25 was used in this investigation, with a sample size of 33. A questionnaire was sent in order to collect data. Based on studies demonstrating that PT. X employees' job happiness is positively and significantly impacted by both their physical and non-physical work environments concurrently.

Keywords: Physical Work Environment, Non-Physical Work Environment, Employee Job Satisfaction.

#### 1 Introduction

In today's modern era, human resources in companies are an important factor and the main key for companies or organisations to achieve goals [1]. Human resource management is critical to the company's goals being successfully achieved. Relationship management, both the science and the art, and the role of labor in human resource management allow organizations to effectively and efficiently assist their workforce, employees, and society at large in achieving their goals [2].

Realising this, PT. X needs human resources, namely a reliable and skilled workforce, to carry out its production activities. PT. XY, as a mineral water company, was first inaugurated by the managing director, Mr. Rusli, in Caringin- Bogor on July 24, 2004, and at that time there were 50 employees. Based on the results of interviews, over time, in July 2023, the number of employees in the company was 121, as well as in the previous year. Based on the results of interviews, the workforce at PT. XY produces a minimum of 1,800 galon bottles per hour with workmanship according to SOP.

Table 1. Number of employees of PT. XY

| Number of Employees Year | Number of Employees | Year |
|--------------------------|---------------------|------|
|--------------------------|---------------------|------|

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| 101 | 2023 |
|-----|------|
| 121 | 2023 |
|     |      |

Source: Chemical Physics Analyst Employee, Dept. Lab

There are two types of work environments: the physical work environment and the non-physical work environment. The term "physical work environment" refers to everything that is physically present and might directly or indirectly affect individuals at work [3].

The work environment is now one of the most crucial issues in the company. The work environment determines the impression of a sense of comfort, not employees against the work environment. As in government regulation article 103 of Law 13 of 2003 concerning labour, "work protection aims to ensure the continuation of the work relationship system without pressure from the strong against the weak." The development of passion at work is one of the advantages of the workplace, and job happiness may be impacted by the workplace [4].

Insufficient pay and working conditions are among the issues that PT. X employees deal with, particularly for temporary daily workers. Noise from machine tools and other sources during work or the production process is the root of the issue in the physical work environment; long-term consequences might have negative impacts on health and reduce opportunities for job-related communication. In addition, inadequate compensation is the root cause of other issues in non-physical work environments. This is particularly true for casual daily workers (PHL), who work no more than 20 days under a monthly compensation schedule, and generally for all employees who receive inadequate compensation considering their work pace. Staff work satisfaction may be impacted by this. However, the workplace may have an impact on workers' productivity and level of happiness [5]. In creating a skilled and highly motivated workforce, the company tries to come up with new innovations, such as rewards, and improve the welfare of casual workers.

Work satisfaction may be defined as an employee's perspective on their working environment, their coworkers, a benefit they get, and issues pertaining to their physical and mental health [6]. A person may be somewhat content with one part of their work yet not be at all content with one or more other aspects of it due to the wide nature of job satisfaction, which cannot be reduced to a single idea [7]. The following are just a few ways that employee job satisfaction may affect the business: contented workers are more likely to be productive and contribute more; they are also more likely to stay with the company longer; they are also more likely to support business expansion; and they are more likely to produce high-quality work.

Employee performance may be enhanced by the workplace, which will impact job satisfaction [8]. A Research by Irma, A., and Yusuf, M. (2020) found a connection between the work environment and employee job satisfaction. as well as research by Muskson, M., and Lubis, R. (2022), which found that employees' job satisfaction was influenced by both physical and virtual work environments. A positive work environment may increase employee job satisfaction, while a negative work environment may hinder employees' abilities to do their duties and reduce job happiness [9]. Therefore, it is essential for employers to be aware of and sensitive to both the physical and non-physical work environments in order to meet employee needs and achieve optimum job satisfaction.

This definition has led scholars to wish to collaborate on research in order to get a deeper understanding of the factors that affect employee job satisfaction, including the partial and simultaneous effect of the non-physical and physical work environment variables. Companies may also use this study to assess the physical and virtual work environments as well as the steps that must be taken to improve employee job satisfaction. is "THE EFFECT OF PHYSICAL The research project's title WORK ENVIRONMENT AND NON-PHYSICAL WORK ENVIRONMENT ON EMPLOYEE JOB SATISFACTION IN BOGOR DISTRICT (STUDY ON PT. X)"

## 2 Literature Review

**Physical Work Environment.** A worker's physical work environment includes all tangible surrounds to which they may be exposed at work, whether such surroundings are encountered directly or indirectly [12]. Everything that is physically present in an office and has the potential to impact workers is called the physical work environment [13]. According to the previously given definition, which takes into account the opinions of two experts, the physical work environment is made up of all observable components that are in close proximity to employees and have the capacity to directly or indirectly affect them. Indicators in the physical work environment from previous research, namely research by Kristanti 2017 and Ade 2014 in (Fitriani and Nurlaela, 2019) include; 1) lighting, 2) air circulation, 3) noise, 4) room coloring and 5) odors.

**Non-Physical Work Environment.** The non-physical work environment includes all situations involving workplace interactions, whether with supervisors, coworkers, or subordinates [12]. In the non-physical workplace, interactions among employees may be broadly classified into two categories: personal (individual) relationships and collective ties [13]. According to this interpretation, the non-physical work environment encompasses everything around an employee's place of employment that has non-physical attributes, such their interactions with supervisors, colleagues, and subordinates.

According to Wursanto in (Wati and Yusuf, 2020) The following are signs of an intangible work environment: 1) oversight; 2) work environment; 3) reward structure; 4) feeling of security; and 5) connections with coworkers.

**Job Satisfaction.** A person might appreciate and love their work if they have a positive emotional attitude towards it. Discipline, accomplishment, and work morale all reflect this mindset [14]. The attitude that workers have towards their jobs, their coworkers, a reward they get there, and issues pertaining to physiological and psychological aspects are all considered aspects of their job satisfaction [6]. Basically, Due to the personalized character of work satisfaction, each person's degree of satisfaction varies based on their own value system. [18].

Several theories of job satisfaction to include [17]:

*Balance Theory (Equity Theory).* Adam created it, and its components include equityin-equity, comparison person, result, and input. According to balance theory, workers' comparison of their own input-outcome to that of other employees may lead to feelings of satisfaction or dissatisfaction.

*Difference Theory (Discrepancy Theory).* Proter is credited with starting the trend of assessing employee happiness by figuring out how much differs between expectations and actual experiences. Employee satisfaction is a direct result of meeting expectations; on the other hand, dissatisfaction indicates that demands are not being addressed.

*Need Fulfillment Theory*. This theory explains that employees will feel satisfied depending on whether their needs have been met or not.

*Herzberg's two-factor theory.* This hypothesis makes reference to Maslow's theory. Feelings of contentment or discontent may be attributed to two primary variables: 1) maintenance considerations, which include things like working conditions, salaries, job security, quality of supervision, and relationships with supervisors; and others; 2) business administration and policies. 2) Motivating elements, such as incentive for accomplishment, acknowledgment, advancement, the task itself, accountability, and another.

*Group View Theory (Social Reference Group Theory.* In addition to being correlated with job satisfaction, needs may also be influenced by the beliefs and viewpoints of other groups that workers look up to. If the outcomes of their job align with the requirements and interests of their reference group, then the workers will feel fulfilled in this manner.

*Expectancy Theory (Exceptancy Theory).* The theory developed by Vroom, which was also expanded by Porter, Lawler and Davis. Motivation is a product of a person's desire for something, and the judgment that a person gives permission to perform certain actions in determining that thing. When the strength of a person's desire to achieve something (valence) is multiplied by hope (the possibility of achieving something with certain actions, thus giving rise to motivation (an urge towards a certain goal). The results that can be achieved primarily are promotions and higher salaries. So secondary results such as higher status, reintroduction, decisions to purchase products and services that the family desires. In this way the drive to achieve satisfaction becomes greater.

**Conceptual Framework.** In this study, the conceptual framework is used as areference in determining systematic steps with the aim that the discussion in the first stage can provide a basis for the next step of discussion, as follows:



Fig. 1. Conceptual Framework

**Hypothesis.** Based on the discussion above in the introduction and theoretical basis, the hypothesis formulation proposed to be tested in this study is:

H1: It is suspected that there is an influence of the physical work environment on employee jobsatisfaction at PT. X

H2: It is suspected that there is an influence of the non-physical work environment on employee job satisfaction at PT. X

H3: It is suspected that there is an influence of the physical work environment and the non-physical work environment on employee job satisfaction at PT. X

## 3 Research Methods

This study used a quantitative approach to research. The information that has been gathered is presented as a list or sequence of numbers. There were 121 persons in the study population that worked for PT. X. Non-probability sampling is used in this investigation. When using a non-probability sampling technique, members of the population selected for the sample do not all have the same opportunity. [26]. A study's optimal sample size should range from 30 to 500 respondents [10]. 33 samples were used in this investigation, and SPSS version 25.0 was used to ensure that the processing numbers in the research findings were accurate.

The use of data analysis techniques is an essential phase in the research process, as it aids in the determination of findings. Furthermore, the process of data analysis culminates in the formulation of research conclusions. Validity testing and reliability tests are often used data analysis processes. The primary objective of the validity test conducted in this research is to assess the extent to which the questionnaire used is able to accurately measure the intended constructs [11]. The legitimacy of a questionnaire is contingent upon the alignment between the questions posed and the assessable aspects they want to measure. The validity or legitimacy of a questionnaire is determined by the extent to which the questions within the questionnaire provide measurable responses.

The assessment of validity is achieved via the process of comparing item scores with the total score of all items that currently exist. The reliability test is a quantitative assessment instrument used in questionnaires that encompasses many indications or components (15). The reliability of a questionnaire may be determined by assessing the consistency of respondents' replies to the questions over a period of time (15). The present study employed various data analysis techniques, including validity testing, reliability testing, classic assumption testing (specifically normality testing, multicollinearity assessment, and heteroscedasticity examination), hypothesis testing, multiple linear regression analysis, simultaneous testing (using the F test), partial testing (using the t test), and coefficient of determination testing ( $R^2$ ).

## 4 Results and Discussion

#### 4.1 Research Instrument Test

**Validity Test.** In order to ascertain the validity of a questionnaire, researchers conduct a validity test (15). The legitimacy of a questionnaire is contingent upon the alignment between the questions posed and the assessable aspects they want to measure. In order to determine the validity of an item, it is necessary to examine the correlation coefficient of each item using the r Product Moment table, employing a significance threshold of 5% or (0.05). The following criteria are used for this purpose.

- a. If r count > r table, then it can be stated that the question is valid
- b. If r count < r rable, then it can be stated that the question is invalid

The value of the r table may be determined by referring to the r table distribution table, which is based on the degree of freedom (DF). The calculated value of N - 2, where N is equal to 33, is determined to be 31. This number is associated with a significance level of 0.5. Consequently, the corresponding value in the r table is identified as 0.355. The results of the validity tests conducted for each variable are shown below:

Table 2. Variable Validity Test X1, X2, Y

| variables Question R count R table Description |
|--|
|--|

|   | X1.1 | 0,510 | 0,355 | Valid |
|---|------|-------|-------|-------|
|   | X1.2 | 0,685 | 0,355 | Valid |
| Physical Work   | X1.3 | 0,573 | 0,355 | Valid |
| Environment (X1)                                      | X1.4 | 0,796 | 0,355 | Valid |
|   | X1.5 | 0,721 | 0,355 | Valid |
| Non-Physical Work<br>Environment (X2)<br>Employee Job | X2.1 | 0,663 | 0,355 | Valid |
|   | X2.2 | 0,647 | 0,355 | Valid |
|   | X2.3 | 0,748 | 0,355 | Valid |
|   | X2.4 | 0,583 | 0,355 | Valid |
|   | X2.5 | 0,578 | 0,355 | Valid |
|   | Y1   | 0,402 | 0,355 | Valid |
|   | Y2   | 0,369 | 0,355 | Valid |
|   | Y3   | 0,573 | 0,355 | Valid |
|   | Y4   | 0,630 | 0,355 | Valid |
| Satisfaction (V)                                      | Y5   | 0,693 | 0,355 | Valid |
| Satisfaction (Y)                                      | Y6   | 0,727 | 0,355 | Valid |
|   | Y7   | 0,374 | 0,355 | Valid |
|   | Y8   | 0,625 | 0,355 | Valid |
|   | ¥9   | 0,592 | 0,355 | Valid |
|   | Y10  | 0,645 | 0,355 | Valid |

Source: Processed Primary Data (2023)

The value of r count > r table (0.355) is evident from the data processing results in Table 2 above. It follows that every question item derived from the aforementioned variables is deemed legitimate and appropriate for use in subsequent assessments.

**Reliability Test.** A measuring instrument on a questionnaire made up of variables or construct indicators is called a reliability test [15]. If a respondent's response to a questionnaire is constant or steady over time, it might be considered dependable. The reliability test in this research used the Cronbach Alpha technique with a threshold of 0.60 for decision-making. A Cronbach Alpha rating of more than 0.60 indicates that the questionnaire is deemed credible or consistent.

| Table 3. Reliability | Test Results |
|----------------------|--------------|
|----------------------|--------------|

| Variables | Alpha<br>Cronbach's | Alpha Coeffi-<br>cient | Description |
|-----------|---------------------|------------------------|-------------|
|-----------|---------------------|------------------------|-------------|

| Physical Work Envi-<br>ronment (X1)   | 0,649 | 0,60 | Realible |
|---------------------------------------|-------|------|----------|
| Non-Physical Work<br>Environment (X2) | 0,634 | 0,60 | Realible |
| Job Satisfaction (Y)                  | 0,732 | 0,60 | Realible |

Source: Processed Primary Data (2023)

The data shown in Table 4.1.2 indicates that the job satisfaction variable has a Cronbach Alpha coefficient of 0.732, while the non-physical work environment variable exhibits a coefficient of 0.634, and the physical work environment variable demonstrates a coefficient of 0.649. Consequently, all of the aforementioned variables possess a Cronbach Alpha coefficient over 0.60, indicating their reliability and suitability for testing purposes.

### 4.2 Classical Assumption Test

#### **Normality Test**

| Variable                    | Asymp. Sig<br>(2-tailed) | Standart | Description               |
|-----------------------------|--------------------------|----------|---------------------------|
| UnstandardizedRe-<br>sidual | 0,200                    | > 0,05   | Normally distributed data |

Table 4. Normality Test Results

Source: Processed Primary Data (2023)



Fig. 2. Normal P.Plot Graph

According to table 4. above, the unstandardized residual's significant value for the asymptotic significance (two-tailed) is 0.200>0.05. This indicates that the distribution of the data is normal.

**Multicolinearity Test.** To analyze the presence of multicollinearity, researchers often examine tolerance values and the variance inflation factor (VIF). A threshold of 0.10 for tolerance levels or a threshold of 10 for VIF values is frequently used to identify the occurrence of multicollinearity [15].

The findings of the multicollinearity test are as follows:

|   | Unstandardize                              | d Coeffic | eients            | Standard-<br>ized Co-<br>efficients | t     | Sig. | Collir<br>Stati     | nearity<br>istics |
|---|--|-----------|-------------------|-------------------------------------|-------|------|---------------------|-------------------|
|   | Model                                      | В         | Std.<br>Erro<br>r | Beta                                |       |      | Tol-<br>er-<br>ance | VIF               |
| 1 | (Constant)                                 | 12.541    | 5.667             |                                     | 2.213 | .035 |                     |                   |
|   | Physical Work<br>Environment<br>(X1)       | .700      | .290              | .374                                | 2.414 | .022 | .814                | 1.228             |
|   | Non-Physical<br>Work Environ-<br>ment (X2) | .633      | .255              | .385                                | 2.480 | .019 | .814                | 1.228             |

 Table 5. Multicollinearity Test Results

Source: Processed Primary Data (2023)

With respect to the aforementioned Table 4.2.2, it can be seen that the Variance Inflation Factor (VIF) values for the physical and non-physical work environment variables are 1,228. The tolerance value is 0.814. Based on the condition that the tolerance value exceeds 0.10 and the VIF value of the aforementioned two variables is below 10, it may be inferred that there is an absence of multicollinearity in the second independent variable mentioned.

**Heteroscedasticity Test.** The regression model, which is homoscedastic and lacks heteroscedasticity, is deemed to be excellent. One way to test for heteroscedasticity is to see if there is a pattern. This can be done by looking at the scatterplot graph between the dependent variable (ZPRED) and the residual (SRESID), where the X axis represents the residual (Y prediction minus Y actual), where the residual has been studentized. As per [15], the fundamental analysis looks like this:

1. When a certain pattern (waves, widening, then narrowing) appears on a regular basis, heteroscedasticity has taken place.

2. The data points exhibit dispersion both above and below the zero point on the Y axis, and the absence of heteroscedasticity is shown by the lack of any observable pattern.



Fig. 3. Heteroscedasticity Test Result

It can be inferred from the scatterplot output picture above that there is no heteroscedasticity in the study data since the dots exhibit irregular patterns when they spread above and below 0 on the Y axis.

## 4.3 Hypothesis Testing

**Multiple Liniar Regression Analysis.** The use of multiple linear regression analysis is employed to determine the impact of many independent factors, including both physical and non-physical work environments, on the dependent variable of job satisfaction.

|   | Unstandardize                        | d Coeffic | eients            | Standard-<br>ized Co-<br>efficients | t     | Sig. | Collin<br>Stati     | earity<br>stics |
|---|--------------------------------------|-----------|-------------------|-------------------------------------|-------|------|---------------------|-----------------|
|   | Model                                | В         | Std.<br>Erro<br>r | Beta                                |       |      | Tol-<br>er-<br>ance | VIF             |
| 1 | (Constant)                           | 12.541    | 5.667             |                                     | 2.213 | .035 |                     |                 |
|   | Physical Work<br>Environment<br>(X1) | .700      | .290              | .374                                | 2.414 | .022 | .814                | 1.228           |

Table 6. Multiple Liniar Regression Analysis Results

| Non-Physical  | .633 | .255 | .385 | 2.480 | .019 | .814 | 1.228 |
|---------------|------|------|------|-------|------|------|-------|
| Work Environ- |      |      |      |       |      |      |       |
| ment (X2)     |      |      |      |       |      |      |       |
|               |      |      |      |       |      |      |       |

Source: Processed Primary Data (2023)

Then, from the results of the multiple linear regression analysis, it is explained that: a. In the case of a constant value of 12,541, this indicates that the value of job satisfaction (Y) = 12,541 if the non-physical work environment (X2) = 0 and the physical work environment (X1) = 0.

b. With a regression coefficient (X1) of 0.700, it is evident that job satisfaction and the physical work environment are positively correlated. This suggests that a one-unit increase in the physical work environment variable (X1) will translate into a 0.700-unit rise in the job satisfaction variable (Y), assuming that the other independent variables stay unchanged.

c. According to the regression coefficient (X2) of 0.633, there is evidence to suggest that the non- physical work environment positively influences job satisfaction. This finding indicates that a one-unit increment in the non-physical work environmentvariable (X2) is associated with a 0.633 rise in the job satisfaction variable (Y), while holding all other independent variables constant.

**Simultaneous Test (Test f).** The objective of the F test is to evaluate the joint impact of the independent variables, which are the physical and non- physical work environments, on the dependent variable of job satisfaction. A null hypothesis (H0) is considered rejected if the observed count of is greater than the critical value obtained from the f table and the significance level is less than 0.05. This rejection suggests that there might be an independent variable-induced contemporaneous influence on the dependent variable.

|   | Model      | Sum of<br>Squares | df | Mean<br>Square | F      | Sig.              |
|---|------------|-------------------|----|----------------|--------|-------------------|
| 1 | Regression | 232.449           | 2  | 116.225        | 10.516 | .000 <sup>b</sup> |
|   | Residual   | 331.551           | 30 | 11.052         |        |                   |
|   | Total      | 564.000           | 32 |                |        |                   |

Table 7. Simultaneous Test Resuts

Source: Processed Primary Data (2023)

According to table 4.3.2 above, the significance is shownfor the two independent variables with respect to the dependent variables, namely, 0 < f tabel < 0.05 and 10.516 < 3.31 for the f hitung variable. Accordingly, there is a significant influence on variables

X1 and X2 with respect to Y, or the working environment, as well as the working environment that is not physical, i.e., it has an impact on simultaneous work output.

**Partial Test (T-Test).** To assess the independent variable's partial impact on the dependent variable, utilize the t-test. The establishment of statistical significance occurs when the influence of the independent variable on the dependent variable is considered noteworthy, often when the significance threshold is fixed at 0.05 ( $\alpha$ =5%). Then the calculated t-value is less than the crucial t-value or when the computed t-value exceeds the critical t-value, both at a significance level below 0.05.

Using a sample size of 33 participants, the calculation of degrees of freedom (df) may be performed using the first formula, which is df = n (number of participants) - k (number of independent variables) - 1. In this case, the calculation would be df = 33 - 2 - 1 = 30. By doing the analysis, a t-table value of 0.042 is obtained at a confidence level of 5% (or 0.05).

| Unstandardized Coefficients |  |        | Standard-<br>ized Co-<br>efficients | t    | Sig.  | Collin<br>Stati | earity<br>stics     |       |
|-----------------------------|--|--------|-------------------------------------|------|-------|-----------------|---------------------|-------|
|                             | Model                                      | В      | Std.<br>Erro<br>r                   | Beta |       |                 | Tol-<br>er-<br>ance | VIF   |
| 1                           | (Constant)                                 | 12.541 | 5.667                               |      | 2.213 | .035            |                     |       |
|                             | Physical Work<br>Environment<br>(X1)       | .700   | .290                                | .374 | 2.414 | .022            | .814                | 1.228 |
|                             | Non-Physical<br>Work Environ-<br>ment (X2) | .633   | .255                                | .385 | 2.480 | .019            | .814                | 1.228 |

| Fable 8. Partial Test (T-Te |
|-----------------------------|
|-----------------------------|

Source: Processed Primary Data (2023)

1. The impact of the physical work environment on job satisfaction is statistically significant (p < 0.05), with a t-value of 2.414, which exceeds the critical t- value of 2.042, as shown in the provided t-test table. Therefore, it can be said that job satisfaction is favorably and considerably impacted by the physical work environment.

2. The non-physical work environment has a substantial influence on job satisfaction (p < 0.05), and the t value (2.480 > t table, 2.042) may be obtained by referring to the t test table provided above. Therefore, it can be said that job satisfaction is influenced in a positive and statistically significant manner by the intangible aspects of the work environment.

**Test Coefficient of Determination (R<sup>2</sup>).** The coefficient of determination (R<sup>2</sup>) is used to measure the extent to which the independent variable contributes to the dependent variable. The coefficient of determination (R<sup>2</sup>) is calculated using the SPSS 25.0 program, and the resulting value is found in the Model Summary table as follows:

| Table 9. Test Re | sults of the Coe | fficient of Deter | rmination (R <sup>2</sup> ) |
|------------------|------------------|-------------------|-----------------------------|
|------------------|------------------|-------------------|-----------------------------|

|       |       |          | Adjusted | Std. Error of |
|-------|-------|----------|----------|---------------|
| Model | R     | R Square | R Square | the Estimate  |
| 1     | .642ª | .412     | .373     | 3.32441       |

Source: Processed Primary Data (2023)

The data shown in Table 4.3.4 demonstrates that the corrected R square, sometimes referred to as the coefficient of determination, is 37.3% or 0.373. The dependent variable, job satisfaction (Y), is influenced by two distinct elements, namely the physical work environment (X1) and the non- physical work environment (X2), as shown by the observed coefficient of 37.3%. The remaining 62.7% of the influence may be attributed to extra factors that were not included in the regression equation or other variables being studied.

### 4.4 Effect of Physical Work Environment on Employee Job Satisfaction

The survey results indicate that the physical work The The work environment at PT. X has a significant influence on the job satisfaction of casual daily workers. At a probability level of less than 0.05, the t-test produced a t-value of 2.414 and a significance level of 0.022, suggesting a statistically significant result. A beta coefficient value of 0.374 indicates that the hypothesis about the positive and significant influence of the physical work environment on job satisfaction is validated. A more physical work environment may lead to happier employees, while a less physical work environment may result in less satisfaction. The positive or unidirectional link suggests that a more physical work environment may lead to happier employees at PT. X.

The physical work environment needs improvement, particularly in addressing noise problems. Common noise issues, such as machine tool noise, can interfere with employees' work during production and make it difficult to understand work details. To address this, employees should be allowed to ask for a glimpse of work in a loud tone or another way to avoid disturbance. If noise is poor, employees may assess the low physical work environment negatively, potentially affecting job satisfaction. Addressing these issues can help create a more comfortable and productive work environment.

# 4.5 The Effect of a Non-Physical Work Environment on Employee Job Satisfaction

The non-physical work environment at PT. X has a positive and significant impact on workers' job happiness, according to the research's data processing findings. This includes details on how job happiness, especially for casual daily workers, is impacted by the non-physical work environment. This is evident from the results of the t test, which gave rise to a t-count value of 2.480, a sig value of 0.019, and a t-table of 2.042 with a 5% alpha in the statistical table. The hypothesis that "the non-physical work environment has a positive and significant effect on job satisfaction in employees of PT. X" is acceptable may be tested using the probability value of 0.019 <0.05 and the t- count> t-table value of 2.480> 2.042. A positive or unidirectional link is indicated by the positive beta coefficient value of 0.385. Employees of PT. X may thus be more satisfied with their jobs in the event of an improved physical work environment, while employees especially those who work on a casual basis may be less satisfied with their jobs in the event of an inferior physical work environment.

This means that the reward system must pay attention to and consider several factors in providing rewards, namely how to provide rewards in accordance with job duties and responsibilities and the specific working time of casual workers, which can be in accordance with applicable government regulations, applicable government agency regulations, and the timeliness of providing reward systems such as salaries and others to employees. If this becomes a problem for employees, especially casual workers, their job satisfaction can decrease.

#### 4.6 Effect of Physical Work Environment and Non-Physical Work Environment on Employee Job satisfaction

The study reveals that both physical and virtual work environments significantly impact employee job satisfaction at PT. X, especially for casual daily workers. The data processing findings indicate that both environments positively and significantly affect job happiness. The F test results, with an F-count value of 10.516, a sig value of 0.000, and an F-table of 3.31, support the hypothesis that both physical and non-physical work environments positively and significantly affect job satisfaction in PT. X employees.

With standardized regression coefficients, or beta coefficients as they are often known, it is possible to identify the independent variable that has the most impact on the dependent variable. It is believed that the variable with the largest magnitude is the most dominant. Based on the analysis results, the variable that represents the physical work environment has a value of 0.385, and the beta value of the standardized coefficient is 0.374. It seems from this data that attempts to improve job happiness among employees are more heavily influenced by the non-physical than by the physical work environment. The non-physical work environment (0.385) has the greatest ability to affect employee job satisfaction compared to the physical work environment (0.374).

## 5 Conclusion

Based on the results of research on respondents at PT. X, several things can be concluded, namely:

1. The result show employee job satisfaction at PT. X is positively and significantly impacted by the physical work environment.

2. The result show employee job satisfaction at PT. X is positively and significantly impacted by the non-physical work environment.

3. According to study findings, employee job satisfaction at PT. X is positively and significantly impacted by both the physical and non-physical work environments combined (simultaneously). The test findings demonstrate that there is a favorable and substantial impact on work satisfaction for both (simultaneously). One may argue that in both these variables are interconnected and can affect job satisfaction. where employee job satisfaction can be achieved properly and in accordance with what the company expects.

Job satisfaction is influenced by the physical and non- physical work environment characteristics by 37.3%, as shown by the coefficient of determination (R2) value of 0.373, or 37.3%. Other factors under study or variables not included in this regression equation account for the remaining 62.7% of the variation.

## References

- 1. Eri Susan. (2019). 'Manajemen Sumber Daya Manusia', Jurnal Manajemen Pendidikan Islam, 2nd ed., vol. 9.
- 2. H. M. Hasibuan. (2019). Manajemen Sumber Daya Manusia, Revisi. Jakarta: PT. Bumi Aksara., 2019.
- 3. Sedarmayanti. (2018). Tata Kerja dan Produktivitas Kerja. Bandung : CV. Mandar Maju
- S. N. Fadillah, C. Rakhmat, and A. Sutrisna. (2022). "The Influence of Competence and Work Environment on the Work Spirit of BPBD Members of Tasikmalaya City," Journal of Indonesian Management (JIM), vol. 2, no. 3, pp. 781–794.
- 5. E. Sanusi. (2020). Peningkatan Kinerja SDM, Cetakan Pertama. Media Pustaka.
- 6. E. Sutrisno. (2019). Manajemen Sumber Daya Manusia, 10th ed. Yogyakarta: Kencana Prenadamedia Group.
- 7. A. Kinicki and M. Fugate. (2021). Organizational behavior: A practical, problem-solving approach. McGraw-Hill Education.
- 8. U. P. Lestari, E. A. Sinambela, R. Mardikaningsih, and D. Darmawan. (2020). "Pengaruh Efikasi Diri dan Lingkungan Kerja terhadap Kepuasan Kerja Karyawan," Jesya (Jurnal Ekonomi Dan Ekonomi Syariah), vol. 3, no. 2, pp. 529–536.
- 9. B. McGowan, (2001). "Self-reported stress and its effects on nurses," Nursing Standard (through 2013), vol. 15, no. 42, p. 33.
- P. D. Sugiyono, (2019). "Metode Penelitian Pendidikan (Kuantitatif, Kualitatif, Kombinasi, R&d dan Penelitian Pendidikan)," Metode Penelitian Pendidikan, vol. 67.
- 11. Sugiyono. (2018). Metode Penelitian Kuantitatif. Bandung: Alfabeta.
- 12. I Ilhamsyah and Hj. Maliah. (2020). "PENGARUH LINGKUNGAN KERJA FISIK DAN LINGKUNGAN KERJA NON FISIK TERHADAP KEPUASAN KERJA KARYAWAN PADA PT.PLN (PERSERO) WILAYAH SUMATERA SELATAN," vol. 9, no. 2.
- H. Surijadi and Y. Idris. (2020). "Dampak Lingkungan Kerja Fisik dan Lingkungan Kerja Non Fisik Terhadap Kepuasan Kerja Karyawan," Public Policy (Jurnal Aplikasi Kebijakan Publik & Bisnis), vol. 1, no. 1, pp. 14–32.
- F. T. Oktafianus, S. Hendriani, and Y. Maulida. (2022). "Pengaruh Lingkungan Kerja dan Disiplin Terhadap Kepuasan Kerja dan Kinerja Karyawan pada PT. Andalas Agro Lestari Kabupaten Kuantan Singingi," Jurnal Daya Saing, vol. 8, no. 2, pp. 177–191.
- 15. I. Ghozali. (2018). "Aplikasi Analisis Multivariete Dengan Program IBM SPSS 23. Badan Penerbit Universitas Diponegoro. Semarang," Universitas Diponegoro.
- 16. Wursanto. (2009). Dasar-Dasar Ilmu Organisasi. Yogyakarta: Andi.

- Mangkunegara, A.A., dan Prabu, A. (2011). Manajemen Sumber Daya Manusia Perusahaan. Bandung: PT. Remaja Rosda Karya.
- Rivai. (2009). Manajemen Sumber Daya Manusia untuk Perusahaan, Edisi dua, Jakarta: Raja Grafindo Persada.

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