

**The Relationship Between Work Attitude With Work Fatigue at PT. “IK” Madiun  
Finishing Division 2021**

---

**Fheby Cahyati Nababan<sup>1(CA)</sup>, Budi Yulianto<sup>2</sup>, Sunaryo<sup>3</sup>, Vincentius Supriyono<sup>4</sup>**

<sup>1(CA)</sup>Environmental Health Department, Health Ministry Polytechnic of Surabaya Campus Magetan,  
fhebyn@gmail.com

<sup>2</sup>Department Of Environmental Health ,Health Polytechnic Ministry Health Surabaya,  
Surabaya;budyul@gmail.com

<sup>3</sup>Department Of Environmental Health ,Health Polytechnic Ministry Health Surabaya,  
Surabaya;naryo3481@gmail.com

<sup>4</sup>Department Of Environmental Health ,Health Polytechnic Ministry Health Surabaya,  
Surabaya;vincsupriyono@gmail.com

---

**ABSTRACT**

Work fatigue is characterized by the weakening of the workforce in carrying out work so that it can increase errors at work, reduce work productivity and be able to cause work accidents. This is due to an unergonomic work attitude. This study aims to determine the relationship between work attitude and work fatigue on employees of PT. “IK” (Persero) Madiun Finishing Division. This type of research is an observational analytic study with a cross sectional approach. The population in this study were 70 employees. Samples were taken by simple random sampling method with a sample size of 60 employees. The research instrument used a Subjective Feeling questionnaire and the Rapid Entire Body Assessment (REBA) observation sheet. The results showed that most of the employees' work attitude, namely 88.3%, experienced a moderate level of work attitude risk and most of the employees' work fatigue, namely 56.7%, experienced a moderate level of work fatigue. From the results of the study showed that the statistical test of *Kendall's tau* value was 0.000 (0.05), it can be concluded that there is a relationship between work attitude and work fatigue on employees of PT. IK (Persero) Madiun finishing division in 2021. Employees should get used to stretching muscles such as moving limbs on the sidelines of work or during breaks with the aim that the body is not in a static state for too long which can cause employees to get tired quickly.

**Keywords:** *Work Attitude, Work Fatigue, Employees,*

**INTRODUCTION**

Work fatigue is one of the risks of decreasing the health status of workers. Work fatigue is characterized by a weakening of the workforce in carrying out work or activities so that it will increase errors in doing work and the fatal result is the occurrence of work accidents.(Umiyati. *et.all.*,2019).

Fatigue itself is influenced by several factors, namely individual factors (age, gender, years of service, work attitude, health status and nutritional status), workload factors (working time, type of work, monotonous work, excessive work and company regulations). and work environment factors (lighting, noise, temperature).(Batara *et.all.*, 2020)

Work attitudes that are not ergonomic can cause fatigue to workers, currently there are still many workers who are working not paying attention to their attitude or work position so they get tiring quickly. Some of the problems found were that most of the work methods were not carried out ergonomically, such as the squatting position, incorrect load lifting techniques and the fast nature of the work because workers were required to pursue targets so that they risked experiencing work fatigue. The results of research conducted by (Ardiani, 2011) also prove that 60% of transport workers with poor work attitudes experience fatigue in general.(American Journal of Sociology, 2019).

The results of the preliminary study were carried out on December 28, 2020 at PT. IK (Persero) Madiun in the Finishing Division, respondents from this study were employees who worked in that place as many as 70 people of which 27 employees were used as respondents for a preliminary study that aims to measure fatigue in these employees by using a measuring instrument in the form of a Subjective Feelings of Theory Theory questionnaire. Fatigue (Tarwaka, 2015) and using simple random sampling method. From the results of the questionnaire, it was found that 6 respondents experienced low fatigue, 15 respondents (55.6%) experienced

moderate fatigue, 5 respondents (18.5%) experienced high fatigue and 1 respondent (3.7%) experiencing extreme fatigue.

The results of the preliminary study show that the employees of PT. "IK" (Persero) Madiun Finishing Division as much as 55.6% experienced moderate level of work fatigue. According to (Tarwaka, 2015) moderate levels of fatigue have the interpretation of "action may be needed in the future" namely additional hours of rest and regular health checks which of course will be a burden for the company and can be detrimental to the company because it will reduce the company's productivity. Based on the fatigue problem that occurs in the finishing division employees of PT. "IK" (Persero) Madiun, it is necessary to conduct research to determine the causes of work fatigue in employees.

### METHODS

This type of research is an observational analytic study with a cross sectional approach. The population in this study was 70 employees. Samples were taken by simple random sampling method with a sample size of 60 employees. The research instrument used a Subjective feeling questionnaire and the Rapid Entire Body Assessment (REBA) observation sheet. Analysis of the data used in this study using univariate and bivariate analysis. Univariate analysis in this study included age, last education, marital status and work attitude. Bivariate analysis is an analysis conducted to determine the relationship between two variables. The research hypothesis used by the researcher is the hypothesis ( $H_0$ ) or there is no relationship between work attitude and work fatigue. To test the hypotheses that have been set and to determine the relationship between work attitude and work fatigue in employees, the Kendall's tau statistical test was carried out using the SPSS application.

### RESULTS

#### 1. General Daya

##### a. Last Education

**Tabel 4.1**

**Frequency Distribution of Respondents Based on the Last Education Level of Employees of PT. "IK" (Persero) Madiun Finishing Division 2021**

No	Education	Amount	%
1	Primary	0	0
2	Secondary	57	95,0
3	High	3	5,0
<b>Amount</b>		60	100

*Source: Research Result Data at PT. I"KI" (Persero) Madiun Finishing Division 2021*

Based on Table 4.1 shows that most of the employees are graduates of secondary education as many as 57 employees (95%) and a small proportion are graduates of higher education as many as 3 employees (5%)

##### b. Marital Status

**Tabel 4.2**

**Frequency Distribution of Respondents Based on Marital Status on Employees of PT. "IK" (Persero) Madiun Finishing Division 2021**

No	Marital Status	Amount	%
1	Single	36	60,0
2	Get married	24	40,0
<b>Amount</b>		60	100

*Source: Research Result Data at PT. "IK" (Persero) Madiun Finishing Division 2021*

Based on Table 4.2 shows that most of the marital status of employees at PT. "IK" (Persero) Madiun finishing division is unmarried as many as 36 respondents or 60.0%

c. Age

**Tabel 4.3**  
**Frequency Distribution of Respondents by Age on Employees of PT. “IK” (Persero) Madiun Finishing Division 2021**

No	Age	Amount	%
1	21 – 28	41	68,0
2	29 – 36	4	6,7
3	37 – 44	0	0
4	45 – 53	15	24,9
<b>Amount</b>		60	100

Source: Research Result Data at PT. “IK” (Persero) Madiun Finishing Division 2021

Based on Table 4.3 shows that most employees aged 21-28 years are 41 employees (68.0%) and a small proportion of employees aged 29-36 years are 4 employees (6.7%).

2. Specific Data

a. Work Attitude

The results of research on the frequency distribution of respondents based on work attitudes at PT. “IK” (Persero) finishing division are as follows:

**Tabel 4.4**  
**Frequency Distribution of Respondents Based on Work Attitudes in Employees of PT. “IK” (Persero) Madiun Finishing Division 2021**

No	Work Attitude	Amount	%
1	Very Low	0	0
2	Low	0	0
3	Medium	53	88,3
4	High	6	10,0
5	Very High	1	1,7
<b>Amount</b>		60	100

Source: Research Result Data at PT. “IK” (Persero) Madiun Finishing Division 2021

Based on Table 4.4 shows that most of the employees at PT. “IK” (Persero) Madiun finishing division has a moderate level of work attitude risk as many as 53 employees (88.3%) and a small portion has a very high work attitude risk level of 1 employee (1.7%)

b. Work Fatigue

The results of the study on the frequency distribution of respondents based on work fatigue on employees at PT. “IK” (Persero) Madiun 2021 Finishing Division are as follows:

**Tabel 4.5**  
**Frequency Distribution of Respondents Based on Work Fatigue on Employees of PT. “IK” (Persero) Madiun Finishing Division 2021**

No	Work Fatigue	Amount	%
1	Low	16	26,7
2	Medium	34	56,7
3	High	8	13,3
4	Very High	2	3,3
<b>Amount</b>		60	100

Source: Research Result Data at PT. “IKI” (Persero) Madiun Finishing Division 2021

Based on Table 4.5 shows most of the employees at PT. “IK” (Persero) Madiun finishing division has a moderate level of work fatigue as many as 34 employees (56.7%) and a small number of employees have a work fatigue level of 2 employees (3.3%)

c. *Crosstabs* Work Attitude with Work Fatigue

The results of cross tabulation of Work Attitude with Work Fatigue on employees at PT. “IK” (Persero) Madiun 2021 Finishing Division are as follows:

**Tabel 4.6**  
**Crosstabs Work Attitude With Work Fatigue on Employees of PT. “IK” (Persero) Madiun Finishing Division 2021**

No	Work Attitude	Work Fatigue								Amount	
		Low		Medium		High		Very High			
		Σ	%	Σ	%	Σ	%	Σ	%	Σ	%
1	Very Low	0	0	0	0	0	0	0	0	0	0
2	Low	0	0	0	0	0	0	0	0	0	0
3	Medium	16	30,2	31	58,5	5	9,4	1	1,9	53	100
4	High	0	0	3	50,0	3	50,0	0	0	6	100
5	Very High	0	0	0	0	0	0	1	100	1	100
<b>Amount</b>		16	26,7	34	56,7	8	13,3	2	3,3	60	100

Based on Table 4.6 shows that of the 53 employees who have a moderate level of work attitude risk there are 16 employees (30.2%) who experience a low level of work fatigue, there are 31 employees (58.5%) who experience a moderate level of work fatigue, there are 5 employees (9.4%) experienced a high level of work fatigue and there was 1 employee (1.9%) who experienced a very high level of work fatigue. Of the 6 employees who have a high level of work attitude risk, there are 3 employees (50.0%) who experience a moderate level of work fatigue and there are 3 employees (50.0%) who experience a high level of work fatigue. And all employees (100%) who have a very high level of work attitude risk also experience a very high level of work fatigue.

## DISCUSSION

### 1. Work Attitude

The factors that influence the work attitude of this study are static postures and are not carried out ergonomically. Factors that influence work attitudes according to (Bridger, 2013) are workers working with a bent work posture for long periods of time, workers using the maximum range, workers working in a sitting or standing position for long periods of time with the head, neck, chest and legs in an inclined working posture

This is in line with research conducted by Abdul Rahman (2017) which shows that 81.8% of respondents who work with a moderate level of work attitude risk. This is because the process is fast and sometimes carried out by more than 1 person. In addition, there is also no awkward attitude/posture in the adjacent timeframe.

## 2. Work Fatigue

The factors that affect work fatigue in this study are workload, age, work attitude, physical environment. Meanwhile, according to Tarwaka (2014) the factors that affect work fatigue are internal factors and external factors. Internal factors include age, gender, health status, nutritional status and work attitude, while external factors include workload, physical environment, work period and work shifts.

This is in line with research conducted by Linda Prastika (2019) which found that 68.9% of respondents experienced moderate work fatigue. This is due to age, years of service and gender.

## 3. Relationship between Work Attitude and Work Fatigue on Employees of PT. "IK" (Persero) Madiun Finishing Division

From the results of the statistical test Kendall's tau shows a p value of 0.000 (0.05) and a correlation coefficient of .464 which means that the correlation is quite strong, then  $H_0$  is rejected. Thus it can be concluded that there is a relationship between work attitude and work fatigue on employees of PT. "IK" (Persero) Madiun finishing division in 2021.

This is in line with research conducted by Kristina Dede (2017) which shows that there is a relationship between work attitude and work fatigue in tailors. This is because the length of sitting of workers who work more than 8 hours / day for a long time will also cause boredom and fatigue, awkward posture / posture and monotonous (repeated) nature of work can cause complaints of pain in the neck, back, shoulders, feet and hands. Because the longer a person works, the longer a person is exposed to the risk of experiencing muscle pain complaints.

The results of research on employees of PT. "IK" (Persero) Madiun finishing division shows that there is a relationship between work attitude and work fatigue caused by the type of work that is monotonous and carried out continuously and also because most of the employees' work attitudes are not ergonomic. This makes employees experience fatigue.

## 4. Research Weakness

The weakness or deficiency in this research is that researchers cannot do research optimally because of the Covid-19 pandemic conditions.

For the work fatigue variable, it was done online using a google form so that employees could not immediately fill out the questionnaire due to limited time. And for the work attitude variable when the direct survey to the field is given a time limit so that it is not optimal in its implementation

## CONCLUSION

### 1. Conclusion

The results of the research on employee work attitudes at PT. "IK" (Persero) Madiun finishing division showed that the majority of employees experienced a moderate level of risk working attitude as many as 53 employees (88.3%). The results of research on employee work fatigue at PT. "IK" (Persero) Madiun finishing division showed that the majority of employees experienced moderate levels of work fatigue as many as 34 employees (56.7%). The results of the Kendall's tau statistical test show a p value of 0.000 (0.05) so it can be concluded that there is a relationship between work attitude and work fatigue in employees of PT. "IK" (Persero) Madiun finishing division in 2021.

### 2. Suggestion

Suggestions to employees, especially those who work in the finishing division, should get used to stretching muscles such as moving the head, hands and feet between work or during breaks with the aim that the body is not too long in a static state which can cause employees to get tired quickly.

## REFERENCES

- Aditya. (2017). *Theoretical Basis of Works Attitude PT. Telkom Solo*. 6–27.
- American Journal of Sociology. (2019). Work Fatigue . *Journal of Chemical Information and Modeling*, 53(9), 1689–1699.
- Batara, P. T., Bogor, I., Zaeni, M. A., & Ginanjar, R. (2020). *With Work Productivity in Production Section Workers Introduction*. 2(3).

THE 4<sup>th</sup> INTERNATIONAL CONFERENCE ON HEALTH POLYTECHNICS OF SURABAYA (ICOHPS)  
1<sup>st</sup> International Conference of Environmental Health (ICoEH)

---

- Deyulmar, B. A., Suroto, & Wahyuni, I. (2018). *Analysis of Factors Associated with Work Fatigue on Opak Cracker Maker Workers in Ngadikerso Village, Kab. Semarang*. 6.
- Hermawan, B., Soebijanto, S., & Haryono, W. (2017). *Attitudes and workloads, and work fatigue on aluminum production factory workers in Yogyakarta*. *Public Medicine News*, 33(4), 213. <https://doi.org/10.22146/bkm.16865>
- Izzati, T., & W, D. A. (2018). *Analysis of Subjective Fatigue Based on The Work Attitude of Sewers in The Convection Industry*. August 2017, 291–299. <https://doi.org/10.20473/ijosh.v7i3.2018.291>
- Mahardika, P. (2017). *Factors Associated with Work Fatigue in Workers Filling LPG Tubes at PT. Pertamina (Persero) MOR VII Makasar*. *естник о здравнадзора*, 4, 9–15.
- Mahardika, P. (2017b). *Factors Associated with Work Fatigue on Workers Filling LPG Tubes at PT. Pertamina (Persero) Mor Vii Makassar Year 2017*.
- Moleong. (2017). *Research on menopausal women in Blerong Village, Kec. Guntur Kab. Demak*. 22–29.
- Muizzudin, A. (2013). *Weaving Departement Labour*.
- Nursalam. (2019). *The Effect of Basic Life Support Health Education on Student Knowledge in Providing Emergency AID Help in Case of Heart Appreciation in 2019*. Odi, K. D., Purimahua, S. L., & Ruliati, L. P. (2018). *Relationship between work attitude, lighting and temperature on work fatigue and eye fatigue in tailors in Solor village, Kupang 2017*. *Ikesma*, 14(1), 65. <https://doi.org/10.19184/ikesma.v14i1.10408>
- Prabaswari, A. (2020). *Work Posture Analysis at REBA Companies*. XIV(2), 181–192.
- Purwaningsih. (2017). *Fatigue With Work Attitude*. 3–23.
- Ramdan, M. (2020). *Work Fatigue on Traditional Weavers of Samarinda Sarongs*.
- Silastuti, A. (2006). *Labor Productivity in The Sewing Departement of PT Bengawan Solo Garment Indonesia*.
- Sitohang, Y.N. (2019). *Poltekkes Ministry of Health Yogyakarta*.
- Subhi. (2017). *Journal of Work Examination Sulaiman, F., & Sari, Y. P. (2016). Work Posture Analysis of Workers*. 03, 16–25.
- Suma'mur. (2014). *Occupational Health in the Perspective of Occupational Health & Safety*. In Erlangga. [https://doi.org/10.1016/S0140-6736\(10\)62352-5](https://doi.org/10.1016/S0140-6736(10)62352-5)
- Tarwaka. (2014). *Occupational Safety and Health, Management and implementation of Occupational Health and Safety at work*. In Surakarta: Harapan Press.
- Tarwaka. (2015). *Industrial Ergonomics, Knowledge Fundamentals and Workplace Applications*. 2nd Edition. In Surakarta: Harapan Press.
- Trinofiandy, R., Kridawati, A., & Wulandari, P. (2018). *Analysis of the Relationship between Individual Characteristics, Work Shifts, and Work Period with Work Fatigue on Nurses at X Hospital, East Jakarta*. 2(2), 204–209.
- Umiyati, A., Febianti, E., & Kurniawati, A. (2019). *Analysis of Relationship of Fatigue With Work Productivity in The Engineering Division*. 4(2), 106–111.