

FACTORS AFFECTING WORK STRESS AMONG EMPLOYEES AT PT. MARINDA UTAMAKARYA SUBUR DELI SERDANG BRANCH

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Abstract

Work stress is a global problem with around 450 million people affected according to WHO, with stress levels in the Asia Pacific region reaching 48%. This study aims to analyze the factors that influence work stress in employees of PT. Marinda Utamakarya Subur, Deli Serdang Branch. The research method uses an analytical study with a quantitative approach and cross-sectional design. The study population includes all employees of PT. Marinda Utamakarya Subur, Deli Serdang Branch with a total sampling technique, so that the sample size is 36 people. Data analysis uses the Mann Whhitney, Kruskal Wallis, and Spearman tests. The results showed that there was no significant correlation between age and work stress ($r = -0.028$; $p = 0.871$) and education level with work stress ($p = 0.190$). While there was a significant correlation between workload and work stress ($r = 0.410$; $p = 0.013$) with a moderate negative correlation, gender with work stress ($p = 0.042$) where male employees tend to experience higher work stress, and length of service with work stress ($p = 0.015$) with a tendency for employees who work more than 4 years to have higher stress levels. The conclusion of the study shows that gender, length of service and workload are significant factors that influence work stress and age and education status do not have a significant effect on work stress in employees of PT. Marinda Utamakarya Subur, Deli Serdang Branch.

Keywords: *woarkload, work stress, office workers, occupational health.*

INTRODUCTION

According to data from the World Health Organization (WHO), around 450 million people worldwide experience stress. In the Asia-Pacific region, work-related stress exceeds the global average, which is around 48%. The high percentage of work-related stress in Indonesia is influenced not only by domestic factors but also by individual and job-related aspects. According to the American Institute of Stress, 80% of workers feel stressed at work, and nearly half of them say they need help managing stress. Over time, stress has become an inseparable part of a person's life, as it can be experienced by anyone. When someone experiences a high level of stress, it can endanger both their physical and mental health (Sulhijrah et al., 2025).

Office employees often face various problems that lead to stress in the workplace, thereby reducing their ability to think clearly or stay focused (Arifin et al., 2025). This is due to the fact that most of their time is spent indoors with heavy workloads, mental pressure, demands to achieve goals, and a lack of support. The negative impacts of work stress include decreased performance and increased absenteeism, which can harm the company. Excessive workload is one of the main reasons why employees show negative behavior and experience reduced clarity and focus (Rachmad et al., 2023).

According to the International Labour Organization (ILO) in 2019, work-related stress is considered a risk to the safety and health of workers when the job exceeds their capabilities and capacity. According to the Health and Safety Executive, stress is a negative human reaction to excessive pressure or other types of demands. Stress can become a positive thing if managed properly, but if not managed well, it can lead to health problems (Riandy & Ernawati, 2024).

One of the most common factors causing workplace stress is workload. Excessive tasks drain energy and lead to overstress. Other stress factors in the workplace include working conditions, working hours, and the amount of workload. If someone experiences a heavy workload, they may resign because they cannot continue (Sulastri & Onsardi, 2020).

According to Mahawati *et al.* (2021), workload refers to various physically and psychologically demanding tasks that fall under job responsibilities. Hermawati & Syofian (2021) classify workload into two types. First, quantitative workload, which relates to the volume of tasks, work intensity during working hours, and continuous interaction with work. Second, qualitative workload, which includes the difficulty of tasks, the amount of responsibility, high expectations from superiors regarding work quality, and limitations in employee capabilities and understanding in achieving targets.

Based on a preliminary survey conducted, several employees at PT. Marinda Utamakarya Subur, Deli Serdang Branch, reported discomfort at work suspected to be caused by high workloads. Employees, especially those in operational roles, often face heavy workloads due to responsibilities that span from planning to execution under managerial supervision. Efforts to meet company targets often require them to work beyond normal working hours, which poses psychological risks.

A study conducted by Dwi Novita Sari *et al.* (2022), titled “The Influence of Workload and Work Stress on Employees,” found a significant impact of workload and stress on employee performance. If employees face a high workload, it can increase their level of perceived stress.

Age is one factor that can influence the level of work stress. Wahyuni *et al.* (2021) found that younger workers are more vulnerable to stress compared to older workers. This is mainly due to their lack of experience in handling work pressure and suboptimal stress adaptation skills. Meanwhile, more experienced workers generally exhibit lower stress levels because they have developed strategies and experience in managing work-related pressure.

Gender also plays a role in work stress levels. A study by Prasetyo & Hidayati (2022) revealed that women tend to experience higher levels of stress than men in the workplace. This is due to the dual burden of job demands and domestic responsibilities. However, other studies show that work stress levels are not only determined by gender but also by the type of job and the existing work environment (Fadilah *et al.*, 2023).

Length of service also significantly affects work stress levels. According to Rahmawati *et al.* (2023), employees with longer working tenures tend to be better at coping with stress compared to new employees. This is due to their adaptation to the work environment and experience in dealing with job challenges. However, employees with too long a tenure may also experience burnout, which potentially increases work stress.

Moreover, educational background can also influence one's stress level at work. A study by Susanto & Wijaya (2024) indicated that employees with higher education levels tend to have better coping strategies for managing work stress than those with lower education levels. Higher-educated workers are also more likely to hold better job positions with different levels of work pressure compared to less-educated workers.

Based on the explanation above, it can be concluded that age, gender, length of service, education level, and workload significantly influence employees' work stress levels. This is the rationale behind conducting this research at PT. Marinda Utamakarya Subur, titled: “Factors Affecting Work Stress Among Employees at PT. Marinda Utamakarya Subur, Deli Serdang Branch.”

METHOD

This type of research is an analytical study with a quantitative approach. The study design used is cross-sectional, where the research is conducted at one point in time to observe the correlation between existing variables. In other words, looking for data on factors related to the dependent variable studied at the same time as the research object (Adiputra Sudarma and Trisnadewi, Ni Wayan 2021).

In this study, data was collected through a questionnaire that had been tested for validity and reliability and a direct survey of research subjects, as well as secondary sources obtained accidentally from materials related to the research. Data analysis in this study uses data analysis techniques using the Pearson Product Moment test to determine the correlation between independent variables (age, gender, length of service, educational status, and workload) with the dependent variable (work stress). This research began in January and is expected to be completed by the end of the journal compilation in 2025 at PT. Marinda Utama Karya Subur, Deli Serdang Branch. The subjects of this study were workers at PT. Marinda Utama Karya Subur, Deli Serdang Branch.

The population in this study involved all workers at PT Marinda Utamakarya Subur, Deli Serdang Branch. The sampling technique used total sampling, namely the entire population became the sample of this study. So that the sample used in this study was all workers with a total of 36 workers.

RESULTS AND DISCUSSION

1. RESULTS

Responment The normality test is conducted to test whether a regression model of an independent and dependent variable or both has a normal or abnormal distribution (Ghozali, 2018). The following are the results of the normality test in this study:

Table 1. Normality test results

Variable	Method	Sig Test (p-value)	Conclusion
Worker Age	Kolmogorov-smirnov	0.200	Normal
Gender	Kolmogorov-smirnov	0.000	Not Normal
Length of Work	Kolmogorov-smirnov	0.000	Not Normal
Education	Kolmogorov-smirnov	0.000	Not Normal
Workload	Kolmogorov-smirnov	0.118	Normal
Job Stress	Kolmogorov-smirnov	0.200	Normal

Based on the results of the normality test using Kolmogorov-Smirnov, the significance value of each variable is greater than 0.05. This indicates that the data is normally distributed, so that the normality assumption is met and the data can be further analyzed using parametric methods.

Spearman Analysis Results

The description of the correlation between independent variables and work stress in respondents at PT. Marinda Utamakarya Subur, Deli Serdang Branch, is obtained as follows:

Table 2. Spearman Correlation Analysis

Characteristics	Job Stress	
	R count	Sig. (2-tailed)
Age of Workers	- 0.028	0.871
Length of Work	0.396	0.015
Workload	0.410	0.013

Based on Table 2 which shows the Spearman analysis of employee respondents at PT. Marinda Utama Karya Subur, Deli Serdang Branch involving 36 employee respondents. In the age variable, the p value > 0.05 is $0.871 > 0.05$, indicating that there is no significant correlation with work stress.

In the length of service variable, the p value < 0.05 is $0.015 < 0.05$, indicating that there is a significant correlation with work stress. The calculated r value for the length of service variable is (0.396), meaning a weak correlation between length of service and work stress. There is a positive and significant correlation between length of service and work stress. This shows that the longer a person works in a place, the tendency to experience work stress also increases.

In the workload variable, the p value < 0.05 is $0.013 < 0.05$, indicating that there is a significant relationship with work stress. The calculated r value for the workload variable is (0.410), meaning a moderate correlation between workload and work stress. There is a positive and significant correlation between workload and work stress. This means that the higher the workload received by employees, the higher the level of work stress they experience.

Mann Whitney Analysis Resultss

Table 3. Mann Whitney Analysis

Gender	Number of Samples (N)	Average Rank	Number of Ranks
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Male	19	21.87	415.50
Female	17	14.74	250.50
Test Statistics		Value	
Mann-Whitney U		97.500	
Z-Score		-2.029	
Sig (p-value)		0.042	

Based on the results of the Mann-Whitney test, the U value = 97,500 and the significance value (p-value) of 0.042 (<0.05) were obtained. This shows that there is a significant difference between men and women. Thus, there is a difference between male and female gender.

Kruskal Walis Analysis Resultss

Table 4. Kruskal Walis Analysis	
Number of Samples (N)	Average Rank
0	0
0	0
44	9.50
7	18.93
25	19.82
Test Statistics	
Value	
Kruskal Walis	3.326
Df	2
Sig (p-value)	0.190

The Kruskal-Wallis test results show a value of 3,326 with a degree of freedom (df) of 2 and a significance of 0.190 (> 0.05). Because the p value > 0.05 , there is no significant correlation between the education levels of workers.

1. DISCUSSION

This study aims to analyze the factors that influence work stress in employees at PT. Marinda Utamakarya Subur, Deli Serdang Branch. Based on the results of the bivariate analysis, several factors were found to have a significant correlation with work stress, including age, gender, length of service, and workload, while educational status did not show a significant.

Correlation between Age and Work Stress

Based on the results of the Spearman correlation analysis, the sig. value is 0.871. Because the sig. value is greater than the significance level ($\alpha = 0.05$), it can be concluded that there is no significant relationship between age and work stress in employees at PT. Marinda Utamakarya Subur, Deli Serdang Branch. This means that the difference in employee age is not a factor that influences the level of work stress they experience.

This finding indicates that work stress experienced by employees is likely to be more influenced by other aspects, such as the work environment, organizational culture, workload, and individual ability to manage work

pressure. In general, older employees are often assumed to have higher levels of stress due to increased responsibilities and job demands. Conversely, younger employees can experience stress in the process of adapting to the work environment. However, in this study, the age factor was not proven to play a significant role in determining the level of work stress.

This study differs from the results of the study (Hairil Akbar et al., 2024), which concluded that there is a correlation between age and work stress in PDAM employees in Regency X. The results of this study are in line with a study conducted by Setiawan & Lestari (2020), which concluded that age is not the main factor in determining the level of work stress. The study found that work stress is more influenced by work environment conditions, work pressure, and organizational policies than by differences in employee age.

Correlation between Gender and Work Stress

Based on the results of the Mann-Whitney test conducted in this study, it is known that the gender variable has a p-value of 0.042, which is below the significance level of 0.05. This finding indicates that there is a statistically significant difference between gender and work stress levels. In the SPSS data coding process, female respondents were coded higher than male respondents. Therefore, the lower the gender code (namely male), the higher the level of work stress experienced. This means that male employees at PT. Marinda Utamakarya Subur tend to experience higher work stress than female employees. This condition reflects the reality in the field, especially in the company's operational division. Male employees are generally placed in positions that have higher levels of pressure, such as supervising the distribution process, arranging logistics, and handling technical constraints directly. One of the cases found in this study involved a male employee who had worked for more than four years in the distribution division. He was responsible for arranging delivery schedules, supervising fleet movements, resolving technical constraints, and being a liaison between the field and central management. In this study, the employee said that she often felt stressed due to an unbalanced workload, excessive working hours, and demands from her superiors to resolve various problems quickly and accurately. She also felt that expectations of her were higher than those of her female colleagues in the administration division, who were considered to have a lighter workload and a more conducive work environment.

The employee admitted to experiencing symptoms of stress such as difficulty sleeping, mental fatigue, and loss of work motivation, but felt that she did not have enough space or support from management to manage the pressure. She realized that in a work environment that still upholds traditional values, men are often expected to remain strong and not show weakness. As a result, a lot of stress is kept to herself, and this gradually increases the risk of chronic work stress. These results are in line with research conducted by Prasetyo & Hidayati (2022), which found that in work fields that demand high responsibility and quick decision-making, men tend to experience greater stress than women. Another study by Fadilah et al. (2023) also showed that social norms and work culture that position men as the ones who must be resilient and able to solve all problems, are actually factors that exacerbate their stress levels in the workplace.

Correlation between Length of Service and Work Stress

Based on the results of Spearman's analysis, it was found that the length of service variable has a significant correlation with the level of work stress, indicated by a p-value of 0.015 (<0.05) and a correlation coefficient (r) of 0.396. This positive correlation indicates that the longer a person works in a company, the higher the level of work stress that may be experienced.

One real case found in the operational section is an employee with a work period of more than 5 years who is tasked with overseeing the distribution and delivery of goods to various regions. This employee is responsible for ensuring that the entire logistics process runs according to schedule, starting from checking goods in the warehouse, coordinating with drivers, to confirmation of receipt from the client. During the years of working in this position, this employee revealed that there was increasing pressure from management to speed up the distribution process, especially when market demand was high. However, this pressure was not always followed by the addition of personnel or adequate supporting facilities. As a result, he often had to work beyond normal working hours, face technical obstacles in the field, and receive complaints from customers if there were delays. This slowly triggered physical and emotional fatigue, and lowered work enthusiasm. The work stress experienced by the employee was exacerbated by the feeling that his work was starting to lose its challenges due to its monotonous and repetitive nature. He also felt that his loyalty and long work experience were not sufficiently appreciated by the company in the form of career development or promotion. This condition shows that the length of service that is not accompanied by an increase in career levels or a variety of tasks can actually worsen the psychological stress of employees in the operational department.

This case is in line with the research results of Rahmawati et al. (2023) which stated that workers with long work duration are at risk of burnout due to repetitive workloads and lack of task refreshment. In addition, Susanto & Wijaya (2024) also explained that senior employees often face higher expectations, but are not always accompanied by an adequate organizational support system. Therefore, to reduce work stress in operational employees who have been working for a long time, companies need to implement job rotation, new skills training programs, and rewards for work loyalty. This is important so that employees feel cared for, empowered, and remain motivated, even though they have worked for a long time.

Correlation between Educational Status and Work Stress

According to the Kruskal-Wallis test, the educational status variable shows a p-value of 0.190, indicating that there is no significant correlation with work stress. Although this value indicates a positive relationship between education level and work stress, namely the higher a person's education level, the higher the level of work stress they experience. This finding suggests that although workers with higher education may face greater work expectations or demands, they also tend to have better intellectual abilities and coping strategies, so that this pressure does not cause a significant increase in work stress.

This indicates that work stress is more influenced by other factors such as the work environment, organizational culture, and job pressure. Although employees with higher education usually have better stress management skills, they also often face higher work demands, so the risk of work stress remains. In contrast to the results of the study (Pramono & Paramananda, 2024) which stated that the level of education has a significant influence on individual work behavior. The higher the level of education a person has, the more positive the work behavior they show. The results of this study are in line with the study conducted by (Mustakim & Putri, 2023). Based on the results of this study, it can be proven that there is no correlation between education level and stress events.

Correlation between Workload and Job Stress

In this study, the number of old respondents was 8 people, while the number of young respondents was 28 people. The dominance of this young age group reflects that the majority of the workforce at PT. Marinda Utamakarya Subur, Deli Serdang Branch consists of individuals who are still in the early or middle stages of their careers. This group is generally faced with the challenge of adapting to the work environment, achieving targets, and efforts to prove themselves, all of which can trigger an increase in work stress.

The results of the Spearman correlation test showed that there was a significant correlation between workload and work stress levels, with a correlation coefficient (r) of 0.410 and a p-value of 0.013. Because the p value < 0.05 , it can be concluded that workload has a significant correlation with work stress in the PT environment. The positive direction of the correlation indicates that the higher the workload felt by employees, both in the form of responsibility, time demands, and work volume, the higher the level of work stress experienced.

This condition is clearly visible in the field, where many employees have to complete various jobs in a limited time, face target pressure, and multitask without adequate resource support. In the context of PT. Marinda Utamakarya Subur, Deli Serdang Branch, several employees also admitted that they often bring work outside of formal working hours, which has an impact on reducing rest time and personal life. This situation can certainly cause physical and psychological fatigue, and affect the mental well-being of employees. Heavy workloads can also lead to decreased work productivity, increased errors in carrying out tasks, and the emergence of emotional symptoms such as irritability, anxiety, or loss of motivation. This phenomenon is in line with the findings of Handayani (2020), which states that excessive work pressure can trigger psychological stress, emotional disorders, and decreased work enthusiasm. In her research, Handayani emphasized that the greater the workload received, the higher the level of stress felt by employees, which will ultimately have a negative impact on work performance and quality.

CONCLUSION

The findings indicate a significant correlation between gender, length of service, and workload on work stress at PT. Marinda Utamakarya Subur, Deli Serdang Branch. Conversely, the study shows that there is no correlation between age and education on work stress within the same company. Based on the findings of this research, it is recommended that the management of PT. Marinda Utamakarya Subur, Deli Serdang Branch conduct routine evaluations of workload to prevent task imbalances that can trigger stress, as well as develop stress management programs specifically for employees with more than four years of service and male employees who tend to experience

higher levels of stress. Furthermore, future research is suggested to explore other factors such as leadership, social support, and organizational culture that may also influence work stress.

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