

The Influence of Workload, Marital Status, and Interpersonal Conflict on Work Stress Through Work Fatigue among Workers at PT PLN Indonesia Power Service Business Unit (UBP) Tello Makassar

Umayyah Marsya^{1*}, Masyitha Muis¹, M. Furqaan Naiem¹, Syamsiar S. Russeng¹, A. Arsunan Arsin², Anwar Mallongi³, Achmad Yoga Issaniyah⁴

¹Department of Occupational Safety and Health, Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

²Department of Epidemiology, Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

³Department of Environmental Health, Faculty of Public Health, Hasanuddin University, Makassar, Indonesia

⁴PT.PLN Indonesia Power Unit Tello, Makassar Indonesia

Email: umayyahmarsya30@gmail.com

*Corresponding Author

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ABSTRACT

Background: Work stress is a growing issue in various industries, including at PT PLN Indonesia Power UBP Tello Makassar. It affects workers' mental and physical health, productivity, and organizational performance. Key triggers include excessive workload, marital status, and interpersonal conflict.

Objective: This study aimed to examine the influence of these factors on job burnout and stress using a quantitative, cross-sectional approach.

Methods: Data from 215 workers were collected via questionnaires, also cocorometer to measure objective stress, the data then analyzed statistically.

Results: The study results showed a direct effect of workload on stress ($p = 0.000$) but no significant effect with the cocorometer ($p = 0.566$). Workload also indirectly affected stress through fatigue ($p = 0.006$), though not significantly with the cocorometer ($p = 0.099$). Marital status had a direct impact on stress ($p = 0.000$), but not with the cocorometer ($p = 0.710$). Interpersonal conflict showed no direct influence on stress in the questionnaire ($p = 0.899$), but was significant with the cocorometer ($p = 0.000$).

Conclusions: In conclusion, high workload, marital status, and interpersonal conflict contribute to job stress, emphasizing the need for interventions to reduce workload and improve workplace conditions.

Keywords : Job Stress, Cocorometer, Job Fatigue, Workload, Marital Status, Interpersonal Conflict.

INTRODUCTION

As times progress, individuals are confronted with a wide range of life challenges, leading to an increase in both physical and emotional pressures. This is particularly true for those employed in demanding roles. One of the most harmful consequences of these pressures is the development of anxiety disorders, commonly known as stress, which is frequently experienced by employees. Stress not only affects their mental well-being but can also have significant negative impacts on their overall productivity and health. Managing these pressures is essential to maintaining both personal and professional balance [1].

Stress can cause changes in behavior that affect both mental and physical well-being. If stress continues for an extended period, it can lead to mental health problems, increasing the risk of substance abuse, excessive alcohol use, frequent absenteeism from work, and a weakened immune system, making the body more vulnerable to infections [2]. When related to work, stress is often linked to pressures within the workplace, specifically arising from the interaction between an employee and various aspects of their job role. This interaction significantly impacts the productivity and effectiveness of employee performance [3].

A 2014 study from England's Labour Force Survey recorded 440,000 cases of work-related stress, reflecting an incidence rate of 1,380 per 100,000 employees experiencing workplace stress [4]. The National Institute of Occupational Safety and Health (NIOSH) reports that approximately 40% of employees consider their jobs to be highly stressful [5].

Work-related stress is a pressing concern in Indonesia, as evidenced by data from the Basic Health Research

(Riskesdas) by the Ministry of Health, showing that 35% of stress cases are classified as severe, while about 43% of work absences result from this issue. Additionally, the Ministry of Research and Technology reports that 55% of Indonesians experience stress, with 0.8% falling into the very high-stress category and 34.5% experiencing mild stress [6].

Additionally, occupational health and safety (K3) issues pose risks to worker safety and health, potentially leading to workplace accidents, with fatigue being a significant factor. Work fatigue refers to a state where an individual's efficiency and stamina in performing tasks decline [7]. This problem is one of the factors that is closely related to the decline in a person's performance and productivity. The long-term impact of work fatigue is that it can cause Occupational Diseases (PAK) and work accidents [8].

The World Health Organization (WHO) identifies extreme fatigue as the second leading cause of death worldwide, ranking just behind heart disease [9]. Data from the International Labor Organization (ILO) in 2018 indicates that around 32% of workers worldwide experience job-related fatigue. The rate of severe fatigue complaints among workers worldwide ranges from 18.3% to 27%, while the prevalence of fatigue in the industrial sector is notably high, at 45% [10].

Tarwaka (2014) identified various factors contributing to work fatigue, including individual characteristics such as age, gender, education level, length of service, marital status, and nutritional health. Additionally, work-related factors like monotonous tasks, duration of employment, workload, and job attitude play a role. Psychological influences also affect fatigue levels, including environmental conditions, noise, lighting, and other workplace elements [11].

Based on research conducted by [12] The workload of employees at PT PLN (Persero) ULP Galang is impacted by both internal and external factors. External factors can be categorized into three main aspects: task demands, organizational structure, and the work environment. Both mental and physical workloads have the potential to trigger stress in the workplace. Research by Pratama and Satria revealed a positive and significant relationship between workload and employee stress levels. [13].

Too heavy and excessive workload will accelerate muscle contractions in the body, so this can also accelerate a person's fatigue. [13]. Marital status is an individual characteristic that can contribute to work stress, as married individuals often face greater responsibilities and family demands, which can increase mental strain and emotional burden [14].

Based on the research, respondents with married status tend to have more work stress compared to unmarried workers. This study indicates that marital status causes problems in the household which may make workers less focused on work. [15]. Marital status is also a fundamental aspect of an individual's needs, serving as a positive attribute in managing daily activities. Married individuals often experience higher life satisfaction, which can positively impact their overall quality of life [16].

Work stress can happen to anyone, both women and men, both married and unmarried individuals can also experience work stress. Working women or women who have dual roles are women whose jobs are not only taking care of the household, but also have other jobs in an organization or agency. [17]. Women who have dual roles tend to experience greater fatigue than women who only have a single role [18].

Interpersonal conflict (conflict between employees) in an organization can affect stress levels, if the conflict is not resolved and continues when an individual interacts with his/her tasks and other individuals. Thus, conflict is one of the sources of work stress. [19]. Employees working at PLN consist of several parts that carry out different but interconnected tasks, and from these parts there are many differences in the company ranging from salary income, working conditions, quality of supervision, task challenges. If each of these problems cannot be resolved properly, it will be able to reduce work performance. [20].

Work stress is a prevalent health issue frequently reported by workers across various countries. Factors such as workload, marital status, and interpersonal conflict contribute to work stress, often through the intermediary effect of work fatigue [21]. Workers who are subject to too many demands in the organization and misunderstandings occur, feelings of envy arise among fellow workers, there is a feeling of distrust towards other parties and there is deviant behavior by workers for individual interests can cause fatigue which can trigger work stress [22].

PT PLN Indonesia power unit business service (UBP)-Tello is one of the power generation units located on Sulawesi Island, especially in South, Southeast and West Sulawesi (Sulselrabar) which aims to carry out the mission of generating, distributing and distributing electricity. PLN is a national vital object where in their work workers are required to be disciplined in facing work dynamics to achieve work targets set by the Company. (R. Hidayat & Situmorang, 2019). Therefore, it is important to maintain a conducive work environment. Seeing these conditions, the author is interested in conducting research as a final assignment with the title "The Effect of Workload, Marital Status, and Interpersonal Conflict on Work Stress Through Work Fatigue in Workers at PT. PLN Indonesia Power Unit Business Service (UBP)-Tello Makassar".

MATERIALS AND METHODS

The study used a quantitative, cross-sectional design to investigate the effects of workload, marital status, and interpersonal conflict on work-related stress, with work fatigue as a mediating factor, among employees at PT

PLN Indonesia Power Unit Business Service (UBP) Tello Makassar. From a population of 215 employees, a sample of 155 was selected through proportionate stratified random sampling using Slovin's formula.

Data collection involved structured questionnaires measuring mental and physical workload, marital status, interpersonal conflict, work fatigue, and work stress. Additionally, objective stress levels were measured using the cocorometer, which assesses physiological stress by analyzing α -amylase concentration in saliva samples collected at specific work intervals.

Path analysis with Smart PLS software was used to evaluate the direct and indirect effects of independent variables on stress. Univariate, bivariate, and multivariate analyses further detailed relationships among the variables. This approach combined subjective (questionnaire) and objective (cocorometer) stress measures, offering a nuanced understanding of factors influencing work-related stress and the mediating role of work fatigue.

RESULTS

Path Analysis

The following is a picture of the construction of the path analysis model. In this model, the work fatigue variable becomes a mediating variable in modeling workload, marital status and interpersonal conflict on work stress.

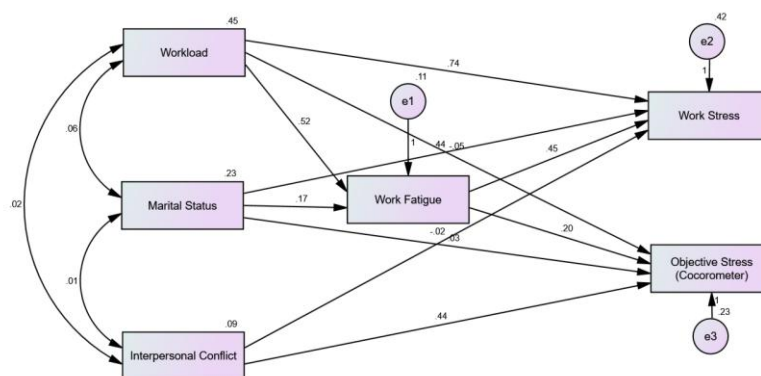


Figure 1. Path Analysis Model Construction

Characteristics of 155 workers who were respondents in this study. For the age of respondents, it is known that the majority are ≥ 35 years old, namely 87 workers (56.1%). For the work unit, it is known that the majority work in the UBP section, namely 95 workers (61.3%), some others work in the PLTD and PLTG units, each as many as 29 and 32 workers. For gender, the majority are male, namely 148 workers (95.4%) and only 7 workers are female. For employment status, most have the status of TAD, as many as 45 workers (30.3%), some others have the status of employees, security, cleaning services, administration and drivers. For marital status, the majority of workers are married, as many as 101 workers (65.2%) and 54 others are not married.

The hypothesis testing results for the direct effects of workload, marital status, interpersonal conflict, work fatigue, and subjective work stress, as measured by a questionnaire, as well as objective work stress, which was assessed using a cocorometer. The estimation details, including the standard error (S.E.), critical ratio (C.R.), and p-value, indicate the impact of each independent variable on the dependent variables. The data in Table 1 show that workload has a significant effect on both work fatigue and work stress, with estimated values of 0.525 and 0.742, respectively, and a p-value of 0.000, confirming the statistical significance of these effects.

Moreover, marital status significantly affects both work fatigue and work stress, with estimated values of 0.170 and 0.439, respectively. The low p-values (0.002 and 0.000) suggest that certain marital statuses are associated with higher levels of work fatigue and work stress. However, not all variables in the table demonstrate a significant impact. For instance, neither workload nor marital status significantly affects objective work stress, as measured by the cocorometer, indicated by p-values well above 0.05. This finding suggests that although workload and marital status influence subjective experiences of work fatigue and stress, they do not significantly impact objective measures of work stress recorded by the cocorometer.

Furthermore, while interpersonal conflict does not significantly affect subjective work stress, it does have a positive and significant influence on objective work stress, as measured by the cocorometer, with an estimated effect of 0.438 and a p-value of 0.000. Additionally, work fatigue significantly impacts work stress, with an estimated effect of 0.454 and a p-value of 0.005. These findings highlight that both physical and mental fatigue from work contribute to increased levels of work stress. (See Table 1)

Table 1. Parameters and Testing of Direct Effect Hypothesis

	Estimate	S.E.	C.R.	p-value
Workload → Work Fatigue	0,525	0,040	13,253	0,000*
Workload → Job Stress	0,742	0,116	6,369	0,000*
Workload → Cocorometer	-0,050	0,086	-0,574	0,566
Marital Status → Work Fatigue	0,170	0,056	3,043	0,002*
Marital Status → Work Stress	0,439	0,116	3,795	0,000*
Marital Status → Cocorometer	0,032	0,086	0,371	0,710
Interpersonal Conflict → Work Stress	-0,023	0,179	-0,127	0,899
Interpersonal Conflict → Cocorometer	0,438	0,133	3,300	0,000*
Work Fatigue → Cocorometer	0,199	0,120	1,655	0,098
Work Fatigue → Work Stress	0,454	0,162	2,802	0,005*

*p-value < 0.05 : There is a significant influence

Table 2. Results of Indirect Effect Hypothesis Testing with the Sobel Test

	t-statistics	Std. Error	p-value
Workload → work fatigue → Cocorometer	1,645	0,063	0,099
Marital Status → work fatigue → Cocorometer	1,455	0,023	0,145
Workload → work fatigue → Work Stress	2,741	0,086	0,006*
Marital Status → work fatigue → Work Stress	2,059	0,037	0,033*

*p-value < 0.05 : There is a significant influence

Based on Table 2, it is clear that the workload and marital status variables indirectly influence work stress through the work fatigue variable. The results of the Sobel Test for testing the indirect effect hypothesis reveal several noteworthy findings that warrant further discussion. The purpose of this test was to assess whether work fatigue acts as a mediator between workload and marital status concerning two outcome variables: objective work stress, measured using a cocorometer, and subjective work stress, assessed through a questionnaire.

The indirect effect of workload on objective work stress, as measured by the cocorometer through work fatigue, was not statistically significant, with a p-value of 0.099, exceeding the 0.05 threshold. This suggests that fatigue caused by workload does not significantly impact cocorometer-measured work stress. Similarly, the indirect influence of marital status on objective work stress through work fatigue was also insignificant, with a p-value of 0.145, indicating that marital status does not meaningfully affect work stress via fatigue.

On the other hand, the indirect effect of workload on work stress through work fatigue was significant, with a p-value of 0.006. This implies that fatigue resulting from heavy workloads significantly increases work stress, meaning that greater workloads tend to induce fatigue, which in turn raises stress levels. Likewise, the indirect influence of marital status on work stress via work fatigue was also significant, with a p-value of 0.033, suggesting that marital status contributes meaningfully to heightened work stress through its impact on fatigue.

DISCUSSIONS

The Effect of Workload on Job Fatigue

The study findings reveal a significant positive relationship between workload and work fatigue, with an estimated value of 0.246. This means that for each unit increase in workload, work fatigue rises by 0.246 units, assuming other factors remain constant. The low standard error (S.E.) of 0.049 indicates high confidence in the estimate. A critical ratio (C.R.) of 4.999, well above the 1.96 threshold, confirms statistical significance at the 95% confidence level. Additionally, the p-value of 0.000 reinforces the strong impact of workload on work fatigue. These results align with prior research, such as Ihsan et al. (2020), who found a significant workload-fatigue link ($p = 0.018$). A Cox & Snell R^2 of 0.218 further suggests that workload accounts for 21.8% of the variance in work fatigue, with other factors contributing to the remainder.[23].

High workload, particularly in the form of extended working hours, non-ergonomic working postures, and insufficient physical activity, significantly contributes to the onset of occupational fatigue among workers. When workers are required to labour for extended periods without adequate rest, their bodies are continuously strained

without the opportunity to recover, accelerating the onset of fatigue and muscle injuries. Poor working posture exacerbates the physical strain on muscles and joints, intensifying the effects of fatigue and increasing the risk of chronic injuries [24–26]. Furthermore, a lack of physical activity outside of work diminishes overall physical fitness, rendering workers more susceptible to the adverse effects of a heavy workload. The combination of these factors leads to substantial occupational fatigue, which not only reduces productivity but also elevates health risks for workers [27].

The Effect of Marital Status on Job Burnout

The study's findings indicate that marital status significantly and positively affects work fatigue. An estimated effect of 0.170 suggests that married individuals are more likely to experience higher levels of work fatigue compared to those who are unmarried or have different marital statuses. The standard error (S.E.) of 0.056 reflects the estimate's precision, showing minimal random variation. The Critical Ratio (C.R.) of 3.043, which exceeds the threshold of 1.96, confirms that this effect is statistically significant at the 5% level. With a p-value of 0.002, the results underscore a strong link between marital status and work fatigue, supporting the conclusion that marital status plays a significant role in influencing fatigue levels at work.

The positive effect of marital status on work burnout may be due to a variety of factors, such as the additional responsibilities that married individuals often have, including family responsibilities and household chores that can increase the overall workload. Married individuals may have to balance work demands and personal responsibilities, which can be an additional source of burnout. Therefore, it is important for management to consider work flexibility, work-life balance support, and employee wellness programs that can help reduce work burnout, especially for married employees. [28].

The Effect of Job Fatigue on Subjective Job Stress (Questionnaire)

The study's findings indicate that work fatigue significantly and positively affects work stress. An estimated effect of 0.454 suggests that each one-unit increase in work fatigue raises work stress by 0.454 units. The standard error (S.E.) of 0.162 suggests the estimate is stable and minimally impacted by random variation. Furthermore, the Critical Ratio (C.R.) of 2.802, which exceeds the 1.96 threshold, confirms statistical significance at the 5% level. The p-value of 0.005 reinforces this, indicating that the effect is unlikely due to chance and confirming that work fatigue notably contributes to heightened work stress.

The findings of this study align with numerous prior studies that identify work fatigue as a key factor in escalating work stress levels. For example, a study by Rhamdani and Wartono (2019), a study at the Asy-Syifa Sumbawa Barat Regional Hospital found a significant relationship between work fatigue and work stress among nurses, with a p-value of 0.022. Nurses who experienced work fatigue showed higher levels of work stress, with 93.1% of nurses who were very tired experiencing work stress. This is due to the high workload and low ratio of nurses to patients, which causes nurses to become very tired and more susceptible to stress. This study emphasizes the importance of managing work fatigue to reduce stress and improve nurse well-being [29].

The Effect of Work Fatigue on Objective Work Stress (Cocorometer)

The study's results reveal that work fatigue does not have a significant impact on objective work stress levels, as measured by the cocorometer. Although the estimated effect of 0.199 indicates a positive correlation between work fatigue and objective work stress, the relationship lacks statistical strength. The standard error (S.E.) of 0.120 suggests variability in the data, potentially affecting the estimate's precision. With a Critical Ratio (C.R.) of 1.655—below the threshold of 1.96—and a p-value of 0.098, which surpasses the 0.05 significance level, the findings confirm that the relationship is not statistically significant at the 5% level. Thus, the study concludes that work fatigue does not significantly influence objective work stress levels, based on cocorometer measurements.

The findings of this study differ from previous research by [30], which examined Indonesian civil pilots and found a significant correlation between work fatigue and work stress, measured through the enzyme α -amylase in saliva as a biomarker of stress. That study revealed that pilots with more than 6,624 flight hours and who flew sector flights exhibited higher levels of salivary α -amylase (median 0.899) compared to those with fewer than 6,624 flight hours and no sector flight duties (median 0.689). A Mann-Whitney test confirmed the difference as statistically significant, with a p-value of 0.006, suggesting that greater fatigue corresponded with elevated α -amylase levels, indicating higher stress levels among fatigued civil pilots.

The Effect of Workload on Subjective Work Stress (Questionnaire)

The study's results show that workload has a significant positive impact on work stress, with an estimated effect of 0.742. This implies that for each one-unit increase in workload, work stress rises by 0.742 units. The standard error (S.E.) of 0.116 indicates that this estimate is both stable and reliable. Furthermore, the Critical Ratio (C.R.) of 6.369, well above the threshold of 1.96, confirms that the effect is statistically significant at the 5% level. The p-value of 0.000 further supports this finding, indicating that the result is highly unlikely to be due to chance. Thus,

it can be concluded that workload significantly affects work stress levels.

These findings have important implications for organizational management and employee well-being. High workloads have been shown to significantly increase work stress, which can negatively impact employees' physical and mental well-being. Excessive work stress can result in a variety of problems, such as decreased productivity, increased absenteeism, low motivation, and even serious health problems such as hypertension or mental disorders [31]. Therefore, it is important for management to monitor and manage employee workloads effectively. Steps such as fairer task allocation, adjustment of work targets, and provision of emotional support and relaxation facilities in the workplace can help reduce the level of stress experienced by employees.

Effect of Workload on Objective Job Stress (Cocorometer)

The study's findings indicate that workload does not have a significant impact on objective work stress, as measured by the cocorometer. An estimated effect of -0.050 suggests that each one-unit increase in workload is associated with a slight reduction in objective work stress, though this effect is minimal and statistically insignificant. A standard error (S.E.) of 0.086 reflects considerable data variability, which reduces the stability of this estimate. With a Critical Ratio (C.R.) of -0.574, well below the ± 1.96 threshold, and a p-value of 0.566, these results confirm that this effect is not significant at the 5% level.

This finding suggests that workload does not significantly impact objective work stress as measured by the cocorometer. This may indicate that the cocorometer lacks sensitivity to workload changes, or that other factors more strongly influence objective work stress. The results also imply that increased workload does not always result in measurable stress levels on the cocorometer, potentially due to individual stress management, a supportive work environment, or the tool's responsiveness to different stress types. A previous study [32] supports this, showing that while workload significantly affected work stress via questionnaire ($p = 0.003$), it had no significant effect with the cocorometer ($p = 0.696$). This highlights that subjective perceptions may be more sensitive to workload-related stress than physiological tools like the cocorometer.

The Influence of Marital Status on Subjective Work Stress (Questionnaire)

The study finds that marital status significantly increases work stress, with an estimated impact of 0.439. Married individuals experience higher stress levels than those who are single or of other marital statuses. A standard error (S.E.) of 0.116 indicates estimate stability, and a Critical Ratio (C.R.) of 3.795, above the 1.96 threshold, confirms significance at the 5% level. A p-value of 0.000 further supports the impact, showing it is unlikely due to chance. The increased stress may stem from married individuals' dual responsibilities, such as family care and household management, adding to work-related stress. To help, organizations could implement work-life balance policies—like flexible hours, family leave, or mental health support—to reduce stress for married employees.

The result of this study is consistent with prior research by [15] at PT. Tri Teguh Manunggal Sejati in Tangerang City, which identified a significant link between marital status and work stress among production workers. A Chi-Square test produced a p-value of 0.004, indicating that married workers are more susceptible to elevated stress levels compared to their unmarried counterparts. The study found that 24 out of 45 married respondents reported severe work stress, possibly due to household challenges that interfere with their concentration and emotional well-being.

The Effect of Marital Status on Objective Job Stress (Cocorometer)

The study finds no significant relationship between marital status and objective work stress, as measured by the cocorometer. The effect size of 0.032 is negligible, and the high standard error (S.E.) of 0.086 indicates variability. A Critical Ratio (C.R.) of 0.371, well below the ± 1.96 threshold, and a p-value of 0.710 confirm a lack of statistical significance at the 5% level. Thus, marital status does not appear to influence objective work stress as measured by the cocorometer.

These results suggest that factors like work environment, social support, or individual coping may have a greater impact on objective work stress than marital status. Additionally, the cocorometer may lack sensitivity in detecting stress differences related to marital status. With no prior studies on this specific relationship, these findings add to the literature and highlight areas for future research. Further studies could explore other variables—such as personality type, coworker support, or workload—that may more significantly influence objective work stress.

The Influence of Interpersonal Conflict on Subjective Work Stress (Questionnaire)

The study findings indicate that interpersonal conflict does not significantly influence work stress. The estimated effect of -0.023 suggests a very weak and even negative association between interpersonal conflict and work stress, but the value is minimal and lacks statistical significance. The standard error (S.E.) of 0.179 points to substantial variability in the data, which may affect the stability of the estimate. With a Critical Ratio (C.R.) of -0.127, falling well below the critical threshold of ± 1.96 , and a p-value of 0.899, the relationship is not statistically significant at the 5% level. Therefore, it can be concluded that interpersonal conflict does not significantly impact work stress.

levels in the studied population [33,34]. These findings imply that interpersonal conflict may not be the primary factor driving work stress in this study's context. Other factors, such as workload, social support, or working conditions, may play a more significant role in influencing work stress levels. Furthermore, the results could indicate that individuals in this study possess effective coping strategies or adaptive mechanisms for managing interpersonal conflict, which prevents it from significantly impacting their stress levels at work.

The Effect of Interpersonal Conflict on Objective Job Stress (Cocorometer)

The study reveals that interpersonal conflict significantly raises objective work stress, with an estimated effect of 0.438. A low standard error (S.E.) of 0.133 indicates estimate stability, while a Critical Ratio (C.R.) of 3.300—above the 1.96 threshold—and a p-value of 0.000 confirm strong statistical significance, ruling out random chance. Interpersonal conflict, involving disputes, strained relationships, and competition, is a major contributor to workplace stress. Unmanaged conflict can lead to heightened stress, reduced productivity, and poorer work quality. Previous research also links unresolved interpersonal issues to increased mental and physical health risks, reduced job satisfaction, and lower morale. Factors like poor communication, differing values, and high work pressure often intensify conflict, leading to symptoms of burnout, cynicism, and a sense of ineffectiveness, all of which harm employee performance and well-being [35].

The Influence of Marital Status on Subjective Work Stress (Questionnaire) through Work Fatigue

The analysis shows that marital status significantly impacts work fatigue, which in turn affects subjective work stress. A t-statistic of 2.059 (above the 1.96 threshold) and a p-value of 0.033 (below 0.05) confirm this relationship's statistical significance. The low standard error (0.037) underscores the stability and reliability of these findings.

Job stress is a critical issue in human resource management, especially in high-demand professions like nursing. Factors such as marital status can contribute to job stress, with job burnout often mediating the relationship between personal factors and stress. Studies show that married women frequently face role conflicts between work and family responsibilities, leading to higher stress levels and potential declines in job performance. This stress is often due to an imbalance between work and family demands. While work stress alone may not always impact performance significantly, when combined with role conflicts, it can substantially reduce job performance among female employees. [36–38].

Difficulty in achieving work-life balance often causes individuals to feel more tired, which can then increase levels of work stress. Married individuals may face dual stress from work and home. Fatigue arising from heavy workloads can be exacerbated by home stress, which overall increases levels of work fatigue. An individual's ability to handle stress from multiple sources (work and home) can affect their level of work fatigue. Inability to manage stress well can lead to increased fatigue and ultimately increased work stress. [39].

The Influence of Status on Objective Work Stress (Cocorometer) through Work Fatigue

The statistical analysis reveals that the indirect effect of marital status on work stress through work exhaustion is not statistically significant. A t-statistic of 1.455 and a p-value of 0.145 indicate a lack of sufficient evidence to confirm that marital status plays a meaningful mediating role in this relationship. While the low standard error (0.023) suggests the coefficient estimate is precise, the relationship remains too weak to reach statistical significance.

The practical implication of these results is that organizations need to be careful in linking marital status to levels of work stress. Since the relationship is not significant, management should consider other factors that may be more influential, such as the work environment, flexible work arrangements, and support from coworkers. Thus, stress management strategies should be more individualized and tailored to the specific needs of each employee, rather than focusing solely on marital status.

The Effect of Workload on Subjective Work Stress (Questionnaire) through Work Fatigue

The statistical analysis results showed a significant indirect effect of workload on subjective work stress, with work fatigue serving as a mediator. A t-statistic of 2.741, which exceeds the critical threshold of 1.96, indicates the strength of this relationship. The p-value of 0.006, below the 0.05 significance level, confirms that work fatigue significantly mediates the connection between workload and subjective work stress. Moreover, the small standard error (0.086) suggests that the estimate is precise and reliable [40–42].

Workload is one of the factors that greatly influences work stress. Excessive workload can cause excessive mental and physical stress on workers, which can ultimately trigger work stress. Research shows that excessive workload can trigger increased stress because workers feel pressured to complete tasks in a limited time and with limited resources. [2].

Job fatigue acts as a mediator in the relationship between workload and job stress, emerging when employees experience severe physical and mental exhaustion from demanding job responsibilities. Research conducted at the Kendari Bay Bridge Project identified a significant correlation between job fatigue and job stress, with a p-value

of 0.000. This finding suggests that job fatigue significantly increases the likelihood of workers encountering job stress [43].

The Effect of Workload on Objective Work Stress (Cocorometer) through Work Fatigue

The world of work is increasingly dynamic and demanding, workload is often a significant factor affecting employee well-being. This study examines the indirect effect of workload on objective work stress levels, measured using the Cocorometer, by considering work fatigue as a mediating variable. The statistical analysis indicates an indirect effect with a t-statistic of 1.645 and a standard error of 0.063, suggesting that while work fatigue may mediate the relationship between workload and objective work stress, the effect is not statistically significant. The p-value of 0.099, exceeding the 0.05 significance threshold, reinforces this conclusion. Thus, the evidence is insufficient to confirm that work fatigue serves as a significant mediator in the connection between workload and objective work stress [44,45].

The findings of this study highlight the need for a comprehensive approach to enhancing employee well-being. Although reducing workload is essential, organizations should also address other influential factors on stress, such as coworker social support, fostering individual coping strategies, and implementing work-life balance policies. In situations where work burnout does not significantly mediate the relationship between workload and stress, broader and more diverse interventions may be needed to effectively address work stress issues.

CONCLUSION

This study found that workload, marital status, and interpersonal conflict significantly influence work stress both directly and through work fatigue as a mediating variable. Heavy workloads were shown to cause fatigue, which in turn increased work stress. Additionally, married employees tend to experience higher levels of work stress compared to unmarried employees, largely due to the added responsibilities of family life. Interpersonal conflict also had a significant impact on work stress, particularly when measured objectively using a cocorometer, although subjective measurements did not show a significant effect.

The difference between the results of subjective and objective measurements highlights the complexity of understanding work stress. The use of the cocorometer provided a clearer picture of the objective stress experienced by employees, especially in relation to interpersonal conflict. Therefore, this study concludes that a dual approach to measuring work stress offers deeper insights into the contributing factors and provides practical implications for companies in designing programs that support work-life balance and effective conflict management to improve employee well-being.

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