



Factors that Contribute to the Fatigue of Midwives and Nurses in the Patient Installation of Solok Selatan Hospital

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ABSTRACT

According to the World Health Organization (WHO), severe fatigue will become the second killer disease after heart disease. In 2021, there were 31,801 cases of work accidents, an increase of 16.96% from the previous year, according to the BPJS Employment of West Sumatra Region. The purpose of this study was to determine the factors that contribute to nurse and midwife fatigue in the Inpatient Installation of South Solok Hospital. This study used an analytic cross-sectional survey approach with a sample of 84 people. Data were obtained through questionnaire sheets and direct observation. Data were processed using a computer, and the results were displayed in the form of frequency distribution tables. The results showed that the p value of workload ($0.05 = \alpha$ with OR = 2.625), work climate ($0.003 < \alpha$ with OR = 4.278), work stress ($0.001 < \alpha$ with OR = 5.600), and fatigue work tired 59.5%, heavy workload 60.7%, and long service 53.6%. Thus, it can be concluded that there is a significant relationship between workload and work climate. It is hoped that maintaining a balance between personal life and work is the key to overcoming work fatigue. To stay healthy in the long run, try to lead a regular and healthy lifestyle.

Keywords: Fatigue, Burden, Climate, Stress

INTRODUCTION

The World Health Organization identifies heart disease as the leading cause of death globally, while fatigue has emerged as a significant occupational health concern affecting worker productivity and safety. Fatigue not only reduces physical performance but also impairs cognitive function, increasing the risk of errors and workplace accidents. A study conducted by the Japanese Ministry of Manpower involving approximately 16,000 workers across 12,000 companies reported that 65% of employees experienced physical fatigue, 28% experienced mental fatigue, and 7%



reported stress accompanied by a sense of social isolation (Gaol, 2018). These findings highlight the widespread nature of fatigue in occupational settings.

In Indonesia, occupational accidents remain a critical issue, particularly in high-risk sectors such as healthcare. Data from the Ministry of Manpower recorded 96 workplace accident cases in West Sumatra in 2017, resulting in 410 lost working days. Furthermore, reports from BPJS Ketenagakerjaan indicate a significant increase in occupational accidents, from 23,313 cases in 2018 to 114,000 cases in 2019, and rising sharply to 177,000 cases in 2020. This upward trend suggests that occupational safety challenges are becoming increasingly complex and require serious attention.

Hospitals represent one of the most demanding work environments due to their complex organizational systems, high workload, and reliance on advanced medical technology. Healthcare workers, particularly nurses and midwives, are required to maintain continuous patient care, often under physically and emotionally demanding conditions. These factors make them highly susceptible to fatigue, which can ultimately impact service quality and patient safety.

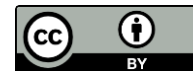
Data from South Solok Regional General Hospital show an increase in work accident cases caused by human error, from 5 cases in 2021 to 12 cases in 2022. This indicates a potential relationship between worker fatigue and the occurrence of workplace incidents. A preliminary survey conducted in August 2023 involving nurses and midwives further revealed that many respondents experienced symptoms of fatigue, such as excessive drowsiness, decreased concentration, reduced alertness, difficulty thinking clearly, and lack of enthusiasm in carrying out their duties.

One of the contributing factors to this condition is the reduction in workforce due to regional employment policies, including restrictions on contract workers, BLUD staffing limitations, and the discontinuation of volunteer personnel due to budget constraints. This situation increases the workload on existing staff, thereby elevating the risk of work fatigue. In addition, factors such as workload, work environment, job stress, and work experience are considered important variables influencing fatigue among healthcare workers.

Based on the issues described above, this study aims to analyze the factors influencing fatigue among nurses and midwives in the inpatient installation of South Solok Regional Hospital. The findings of this study are expected to contribute to improving occupational health and safety, particularly in reducing fatigue and preventing workplace accidents among healthcare professionals.

METHODS

This study is an example of an analytical survey that employs a cross-sectional method to research design. Through the use of techniques, observations, or simultaneous data collection, approach cross-sectional research enables the investigation of the dynamics of the link between risk factors and effects. 84 nurses and midwives who worked at the South Solok Regional General Hospital Inpatient Installation (RSUD) participated in this study. Samples are some of the traits and population sizes that are mentioned. The sample size in this study, which was 84 individuals, matched the population size (Made et al., 2021).



The purpose of univariate analysis is to characterize or explain each variable that was seen in the study. The present study aims to examine the frequency distribution of weariness, the dependent variable, and the independent variable among healthcare workers employed in South Solok Regional Hospital's inpatient installation.

The independent variable and dependent variable are evaluated through this bivariate analysis. The chi-square test with a confidence level of 95% and $\alpha = 0.05$ was used. There is a significant relationship between the independent variable and the dependent variable if $p \leq \alpha$, and there is no relationship if $p \geq \alpha$.

RESULTS

The results of this study are presented through both univariate and bivariate analyses to provide a comprehensive understanding of the data. The univariate analysis is used to describe the distribution and characteristics of each variable, including work fatigue, workload, work climate, and work stress among respondents. Meanwhile, the bivariate analysis is conducted to examine the relationships between independent variables and the dependent variable using the Chi-square test with a significance level of 0.05. This approach allows for the identification of statistically significant associations and helps to determine which factors are most strongly related to work fatigue.

1. Univariate Analysis

The distribution of respondents based on work fatigue levels in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is presented in Table 1.

a. Work Fatigue

Table 1. Frequency Distribution of Work Fatigue in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

Work Fatigue	F	%
Tired	50	59.5
Not Tired	34	40.5
Total	84	100

Table 1 shows that out of 84 respondents, the majority experienced work fatigue, with 50 respondents (59.5%) categorized as tired, while 34 respondents (40.5%) were not tired. This finding indicates that more than half of the healthcare workers in the inpatient installation of South Solok Regional General Hospital experienced fatigue. This condition may be influenced by workload, working hours, and psychological pressure in hospital settings.

b. Work Load

The distribution of respondents according to workload in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is shown in Table 2.

Table 2. Frequency Distribution of Work Loads in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

Work Load	F	%
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Heavy	51	60.7
Light	33	39.3
Total	84	100

Based on Table 2, most respondents had a heavy workload, accounting for 51 respondents (60.7%), while 33 respondents (39.3%) had a light workload. This result suggests that the majority of workers are exposed to high job demands, which can potentially affect their physical and mental conditions, leading to fatigue.

c. Work Climate

The distribution of respondents based on perceived work climate in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is presented in Table 3.

Table 3. Frequency Distribution of Work Loads in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

Work Climate	F	%
Not Safe	47	56
Safe	37	44
Total	84	100

Table 3 shows that 47 respondents (56%) perceived their work climate as unsafe, while 37 respondents (44%) considered it safe. This indicates that more than half of the respondents work in conditions they perceive as less safe or less supportive, which may contribute to discomfort, stress, and decreased productivity.

d. Work Stress

The distribution of respondents according to work stress levels in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is shown in Table 4.

Tabel 4. Frequency Distribution of Work Stress in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

Work Stress	F	%
Heavy	45	53.6
Light	39	46.4
Total	84	100

From Table 4, it was found that 45 respondents (53.6%) experienced heavy work stress, while 39 respondents (46.4%) experienced light stress. This shows that work stress is relatively high among healthcare workers, likely due to workload pressure, responsibility for patient care, and workplace conditions.



2. Bivariate Analysis

Bivariate analysis was conducted using the Chi-square test with a significance level of $\alpha = 0.05$ to determine the relationship between independent variables (workload, work climate, and work stress) and the dependent variable (work fatigue).

a. The Relationship between Workload and Work Fatigue in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

The relationship between workload and work fatigue among respondents in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is presented in Table 5.

Table 5. The Relationship between Workload and Work Fatigue in the South Solok Regional General Hospital (RSUD) Inpatient Installation in 2023

Work Load	Work Fatigue						p Value	OR CI 95%
	Tired		Not Tired		Total			
	n	%	n	%	N	%		
Heavy	35	68,6	16	31,4	51	100	0,05 (1.062-6.490)	2.625
Light	15	45,5	18	54,5	33	100		
Amount	50	59,5	34	40,5	84	100		

The results in Table 5 indicate that among respondents with a heavy workload, 35 individuals (68.6%) experienced fatigue, while 16 individuals (31.4%) did not. In contrast, among those with a light workload, only 15 respondents (45.5%) experienced fatigue, while 18 respondents (54.5%) were not fatigued.

The statistical test shows a p-value of 0.05, indicating a significant relationship between workload and work fatigue. The Odds Ratio (OR) value of 2.625 (95% CI: 1.062–6.490) suggests that respondents with a heavy workload are approximately 2.6 times more likely to experience work fatigue compared to those with a light workload. This finding confirms that workload is an important factor contributing to fatigue among hospital workers.

b. The relationship between work climate and work fatigue in the South Solok Regional General Hospital (RSUD) Inpatient Installation in 2023

The relationship between work climate and work fatigue among respondents in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is shown in Table 6.

Tabel 6. The Relationship between Work Climate and Work Fatigue in the South Solok Regional General Hospital (RSUD) Inpatient Installation in 2023

Work	Work Fatigue						P Value	OR CI 95%
	Tired		Not Tired		Total			
	n	%	n	%	N	%		



Not Safe	35	74.5	12	25.5	47	100		
Safe	15	40.5	22	59.5	37			4.278
					100		0.003	(1.692-10.817)
Amount	50	59.5	34	40.5	84	100		

Based on Table 6, among respondents who perceived the work climate as unsafe, 35 individuals (74.5%) experienced fatigue, while only 12 individuals (25.5%) did not. Meanwhile, among respondents who perceived the work climate as safe, only 15 individuals (40.5%) experienced fatigue, while 22 individuals (59.5%) did not. The Chi-square test result shows a p-value of 0.003, indicating a statistically significant relationship between work climate and work fatigue. The Odds Ratio (OR) of 4.278 (95% CI: 1.692–10.817) means that respondents working in an unsafe work climate are about 4.3 times more likely to experience fatigue than those in a safe work environment. This suggests that a supportive and safe work climate plays a crucial role in reducing fatigue among healthcare workers.

c. The relationship between work stress and work fatigue in the South Solok Regional General Hospital (RSUD) Inpatient Installation in 2023

The relationship between work stress and work fatigue among respondents in the inpatient installation of the South Solok Regional General Hospital (RSUD) in 2023 is presented in Table 7.

Tabel 7. Relationship between Work Stress and Work Fatigue in the Inpatient Installation of the South Solok Regional General Hospital (RSUD) in 2023

Work	Work Fatigue						P Value	OR CI 95%
	Tired		Not Tired		Total			
	N	%	n	%	N	%		
Heavy	35	77,8	10	22,2	45	100		
Light	15	38,5	24	61,5	39	100	0.001	5,600
								(2,157-14,538)
Amount	50	59,5	34	40,5	84	100		

Table 7 shows that among respondents with heavy work stress, 35 individuals (77.8%) experienced fatigue, while only 10 individuals (22.2%) did not. Conversely, among respondents with light stress, 15 individuals (38.5%) experienced fatigue, while 24 individuals (61.5%) were not fatigued. The statistical analysis indicates a p-value of 0.001, showing a strong and significant relationship between work stress and work fatigue. The Odds Ratio (OR) is 5.600 (95% CI: 2.157–14.538), meaning that respondents experiencing heavy work stress are 5.6 times more likely to experience fatigue compared to those with lower stress levels. This result highlights that work stress is the most dominant factor associated with fatigue among the variables studied.



DISCUSSION

1. Work Fatigue

The findings of the univariate analysis showed that 50 (59.5%) of the 84 patients at South Solok Regional Hospital fell into the work tiredness category. Theoretically, fatigue is described as a state marked by a reduction in productivity and stamina during labor. Physical, visual, and nervous tiredness, as well as fatigue from fixed and monotonous situations, are the main causes of fatigue. Reduced productivity, missed work, higher material and medical expenses, and lower-quality work are all consequences of fatigue (Yelvita, 2022).

Researchers found that of the 50 nurses and midwives who responded, half reported feeling fatigued. This is because they frequently get headaches, feel sleepy or heavy in their shoulders, yawn, have trouble focusing, lack confidence, and have stiff or heavy shoulders. All of this depletes energy and impairs productivity. Every RSUD employee, especially those who work in inpatient rooms, is recommended to always maintain their job intensity in order to maintain body immunity and work productivity. Lightly stretch your muscles while working to keep them flexible rather than rigid. Since there is no stretching done while working, this can help avoid work tiredness.

2. Work Load

The findings of univariate analysis showed that 51 (60.7%) of the 84 patients at South Solok Regional Hospital had a high workload. Menpan (2020) defines workload as an assortment of duties that an employee or firm has to finish in a specific amount of time. Additionally, work measurement is a technique used to gather information regarding the effectiveness and efficiency with which a job holder carries out their work in a systematic manner. Excessive or intense work can accelerate the weariness process.

51 nurses and midwives (60.7%) reported having high workloads due to a mismatch between work capacity and job aptitude, such as patient administration responsibilities and family safety. One instance of disinformation between professions interfering with medical procedures is one type of work-related weariness brought on by workload. Make a consistent schedule for your time throughout the day and steer clear of last-minute jobs if you want to get more organized. Assign duties to coworkers or team members whenever feasible; use technology, such as task management calendars, to promote productivity; engage in physical activity and get adequate sleep to boost energy; educate yourself on stress management to become more competent and self-assured; and maintain equilibrium.

3. Work Climate

The univariate analysis's findings indicated that 47 (56%) of the 84 employees at South Solok Regional Hospital fell into the category of having an unsafe work environment. The work climate theory holds that an employee's environment affects the tasks they are given. Generally speaking, though, the setting in which workers perform their duties is referred to as the work climate. When people can work as efficiently, safely, healthily, and comfortably as possible, they are in good or adequate working conditions. Longer term effects of a suitable work environment can be observed



since inefficient work environments can necessitate more effort and take longer to construct, making it more challenging to create an effective work system (Riansah and Sari 2019). The researcher's hypothesis states that nurses who work in rural hospitals are employed in a special setting where illness can spread quickly. Of those who responded, 47 (or 56%) felt that working as a nurse or midwife was dangerous. The questionnaire's results indicate that more respondents than usual answered, which indicates that coworkers are not harmonious, that they struggle to communicate with one another, and that the dynamic between superiors and subordinates makes them anxious for one another. It is imperative to promote collaboration among nurses and midwives within their respective teams in the meantime. A cordial working relationship will arise from this. A healthy work environment includes the leader's attention to and handling of issues pertaining to appropriate task division, employee participation, and understanding of responsibility.

4. Work Stress

The findings of the univariate analysis showed that 45 (53.6%) of the 84 patients at South Solok Regional Hospital had significant work stress.

The findings of the univariate analysis showed that 45 (53.6%) of the 84 patients at South Solok Regional Hospital had significant work stress. Theoretically, a state in which an individual is under constant physical, emotional, and mental strain is known as work stress. Ineffective stress management can harm a person's capacity to interact positively with their surroundings, both at work and in the community. Long-term stress can have a detrimental effect on an employee's capacity to do their duties and operate in the workplace (Farisi & Pane, 2020). According to researchers, stress causes the body to react by activating a response and using more energy, which affects how tired people feel at work.

According to researchers, stress causes the body to react by activating a response and using more energy, which affects how tired people feel at work. Severe stress was reported by 45 responders (53.6%) in total. It's crucial to recognize that work stress might result in burnout. This is due to a number of factors, including the fact that nurses and midwives are expected to perform more work than they are used to, that they lack the expertise and training needed to perform their professions effectively, and that they are given numerous virtually unmanageable responsibilities.

5. The Relationship between Workload and Work Fatigue of Nurses and Midwives in the Inpatient Institution of South Solok Regional Hospital

It is possible to conclude that there is a relationship between the workload and work tiredness of nurses and midwives in the inpatient ward of South Solok Regional Hospital based on statistical tests that were conducted. The p value is $0.05 = 0.05$. Further analysis yielded an OR value of 2.625, indicating that respondents in the heavy category had three times more work tiredness than those in the fatigued category.

Workload is defined as the total amount of physical and mental labor assigned to employees, according to workload theory. Every employee is accountable for the work they do, and they are all capable of finishing extra jobs on top of their assigned duties. The majority of the time, people



who work are subjected to conditions and environments that cause them bodily and mental stress. environmental, chemical, biological, ergonomic, and psychological factors Workload is the amount of time an individual can work without becoming fatigued or impaired. You will quickly tire out if you work too hard and too long. The work pulse illustrates the low workload. et al., Firdani (2023).

According to the study's findings, 35 respondents, or 68.6%, reported feeling both overworked and exhausted at work. This is because nurses are accountable for carrying out their duties. Every job has a cost to the person performing it. In question is a physical, mental, or social hardship. Every workforce is capable of handling different workloads in a different way. While some are more suitable for social tasks, others are better suited for physical workloads. Fifteen responders (45.5%) with light workloads can be influenced by age and energy consumption considerations.

Age affects a person's physical endurance in doing work. As a person gets older, their physical abilities will decrease and their energy intake will decrease, which increases the risk of work fatigue. On the other hand, younger age groups with adequate calorie intake and robust physical endurance may have an impact on respondents who report a high workload but only minor work tiredness.

6. The Relationship between Work Climate and Work Fatigue of Nurses and Midwives in the Inpatient Institution of South Solok Regional Hospital

The relationship between work climate and work fatigue of nurses and midwives can be inferred from statistical tests conducted on the inpatient ward of South Solok Regional Hospital. The p value = 0.003 is less than 0.05, indicating that the two variables are related. Further investigation yielded an OR value of 4.278, indicating that the respondent's work environment is riskier than job tiredness falling under the Tired group. According to the belief, nurses genuinely desire a cheerful workplace. Organizational climate is directly tied to the process of establishing a positive work environment that permits harmonious interactions and cooperation between each member of the human resources department in a business (Hubert et al., 2022). The term "work environment" refers to everything that can directly or indirectly impact an employee's performance while they are at work.

Additionally, according to researchers, a pleasant workplace is one in which employees are cooperative, respectful of one another, and at ease. Ideal working environments, on the other hand, promote cooperation and trust, which are critical elements of motivation and information sharing and can lessen burnout among nurses and midwives. The majority of nurses and midwives might believe that their workplace provides all the necessary tools for them to perform better and in accordance with standards, such as having a quiet workspace. Researchers believe that as a result, nurses and midwives perceive a higher degree of safety in their workplace than do other professions. The work of nurses and midwives is facilitated by the availability of health amenities in the workplace. Nonetheless, several midwives and nurses worry about their connections of superiority and subordination as well as the lack of collaboration between them. Conflicts like schedule adjustments or irregular shift changes consequently persist in causing discordant relationships amongst coworkers.



Businesses that value their employees' well-being and make an effort to foster a supportive work environment will offer social support, rewards and recognition, autonomy over tasks, transparent communication, a manageable workload, strong leadership, and a happy, healthy work environment that can lessen fatigue and enhance employee wellbeing.

7. The Association Between Work Stress and Work Fatigue Among Nurses and Midwives at South Solok Regional Hospital's Inpatient Institution

The inpatient ward of South Solok Regional Hospital had tests conducted to determine the relationship between work stress and work fatigue of nurses and midwives. The results showed that the two variables were related, with a p value of $0.001 < 0.05$. Further research reveals that the OR = 5.600 value means that respondents in the severe category have six times more work stress than respondents in the fatigued category have work tiredness. According to theory, nurses' experiences of work-related stress are directly correlated with their levels of work-related weariness. Work tiredness can be the cause of some conditions, such as lower productivity. Work tiredness is a contributing factor in almost 60% of workplace accidents (Oksandi & Karbito, 2020).

According to researchers, stress is the body's general response to particular duties or tasks. A stressful task or heavy weight can be experienced by someone who is unable to finish it. Stress at work may emerge from the body's incapacity to perform the task. Work stress occurs when nurses and midwives are faced with a workload that is too much for them to handle or finish. Researchers further assume that patient characterization, patient assessment, and upsetting aspects of the work environment can lead to job stress for nurses and midwives. They think that this can assist nurses in addressing concerns related to patient rescue, task execution efficiency, and crowded rooms. Physical elements like the quantity of patients and the type of sickness, as well as mental factors like managerial responsibilities, patient families, and personal issues, all have an impact on work stress. Given that weariness serves as the body's defense against additional harm, it follows that work fatigue may contribute to stress at work for nurses. Stress is a physical and mental response to demands that causes tension and upsets the regular order of life. Stress can be brought on by fatigue.

CONCLUSIONS

Based on the description above, the researcher concluded that the level of work fatigue in the fatigue category at the inpatient facility of the South Solok Regional Hospital reached 59.5% of 50 people. The workload in the heavy category at the facility was 60.7%, with a total of 51 people. The unsafe work climate reached 56%, with 47 people. Work stress in the heavy category was recorded at 53.6%, with 45 people. In addition, there was a significant relationship between workload and work fatigue with a p value = α (0.05) and an odds ratio (OR) of 2.625. A significant relationship was also found between work climate and work fatigue with a p value $< \alpha$ (0.003) and an OR of 4.278. Likewise, a significant relationship between work stress and work fatigue with a p value $< \alpha$ (0.001) and an OR of 5.600.



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