The Relationship Between Workload Level and Stress Level Among Nurses At H. Andi Makkarodda General Hospital

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ABSTRACT

Background : Workload is one of the major factors influencing nurses' psychological condition. Heavy workload can lead to tension and fatigue, which negatively affect nurses' mental health. If not properly managed, excessive workload may develop into work-related stress. Work stress arises when an individual perceives the work situation as a threat or burden that exceeds their coping capacity. Objective: To analyze the relationship between workload level and work stress level among nurses. Method: This study employed a quantitative approach with a cross-sectional observational design. The sample consisted of 39 nurses working at H. Andi Makkarodda General Hospital. Sampling was conducted using probability sampling with a simple random sampling technique. The instruments used were the NASA-TLX questionnaire and the DASS-21 (Depression Anxiety Stress Scales) questionnaire. Results: Pearson correlation analysis showed a p-value of 0,002 ($p < 0,05$), indicating a significant relationship between workload level and nurses' stress level at H. Andi Makkarodda General l Hospital, with a correlation strength of 0,485 (moderate) in a positive direction.
Conclusion: Workload has been proven to have a significant relationship with work stress level among nurses at H. Andi Makkarodda General Hospital

Keywords : Workload; Nurse Stress; H. Andi Makkarodda General Hospital

INTRODUCTION

Nurses are often confronted with various challenges in their work that may trigger occupational stress. According to the World Health Organization (WHO), approximately 74% of nurses worldwide experience work-related stress. Based on the Indonesian Basic Health Research (Riskesdas) in 2013, around 6.0% of healthcare workers in Indonesia experienced work stress, and this figure increased significantly to 19.8% in 2018. A survey conducted by the Indonesian National Nurses Association (PPNI) in 2017 also reported that approximately 50.9% of nurses experienced work stress (Ensiklopediaku, 2022). At the local level, data from RSKD Makassar in 2022 showed that 86.2% of nurses experienced moderate levels of stress, while at H.A. Sultan Dg. Radja Bulukumba Regional Hospital, 56.8% experienced mild stress and 43.2% moderate stress.

Work-related stress experienced by nurses not only affects their psychological condition but also impacts social relationships, physical health, and work performance. If work pressure persists for a long time without effective stress management, nurses are at risk of experiencing emotional exhaustion (burnout), decreased motivation, and an increased likelihood of errors in delivering healthcare services.

Psychologically, nurses experiencing work stress tend to be unable to complete tasks optimally due to physical and mental fatigue, reduced concentration, and a higher risk of errors in nursing procedures. This condition directly affects the quality of healthcare services and patient safety. The high workload borne by nurses is often the main factor contributing to work stress.

Nurses working in inpatient wards face patients with complex conditions, while the number of available staff is limited,only three nurses in one team, whereas the ideal standard is one nurse for every three patients. In addition to providing patient care, nurses are also burdened with administrative tasks, patient monitoring, and health education. According to Everly (in Munandar, 2001; cited by Solon et al., 2021), workload is a condition in which workers are faced with specific responsibilities within a limited time frame. Mariana (2021) further stated that an increase in workload is directly proportional to an increase in work stress, particularly among nurses working in inpatient wards with continuously increasing patient numbers.

Data from H. Andi Makkarodda General Hospital showed that out of a total of 42 nurses, 14 were assigned to the Emergency Department, divided into 4 teams (2–3 nurses per shift) with 4 regular morning staff. Meanwhile, the evacuation unit consisted of 4

nurses (1 nurse per shift), and the inpatient ward had 17 nurses (3 nurses per shift and 5 regular morning staff). The remaining nurses were assigned to the outpatient clinics.

The imbalance between heavy workload and the limited number of nurses creates additional pressure that contributes to work stress. Excessive workload reduces nurses' ability to provide quality care, increases the risk of errors, and decreases patient satisfaction. The lack of resources also hinders task implementation and worsens the psychological pressure experienced. In the long run, this situation compels many nurses to resign, as they are no longer able to endure the burden and stress of the job.

MATERIALS AND METHODS

The research design employed was a quantitative approach with a cross-sectional observational design, in which data were collected at a single point in time. This study aimed to analyze the relationship between workload level (independent variable) and work stress level (dependent variable). The study was conducted at H. Andi Makkarodda General Hospital, located on Jl. Poros Bulukumba-Sinjai, Tanete, Bulukumpa District, Bulukumba Regency, South Sulawesi Province.

The population in this study consisted of all nurses working at H. Andi Makkarodda General Hospital, totaling 42 individuals including the researcher. Based on the inclusion and exclusion criteria, 39 nurses met the eligibility requirements as respondents, while 2 did not. Thus, the sample consisted of 39 nurses. Sampling was carried out using probability sampling with a simple random sampling technique. Two questionnaires were used in this study. The NASA-TLX questionnaire was employed to assess nurses' workload based on six dimensions: mental demand, physical demand, temporal demand, performance, effort, and frustration level. The DASS-21 (Depression Anxiety Stress Scales) questionnaire was used to measure nurses' stress levels, consisting of three subscales: depression, anxiety, and stress.

Data processing was conducted according to the measurement scale and research objectives using SPSS Statistics version 22. Data analysis was performed in two stages: univariate analysis to determine proportions, and bivariate analysis to examine the relationship between the independent and dependent variables using Pearson correlation test. The level of significance was set at $p < 0.05$. This study has obtained an Ethical Clearance Letter from the Research Ethics Committee of Panrita Husada School of Health Sciences with the number: 003412/KEP Stikes Panrita Husada Bulukumba/2025.

RESULT

Based on Table 1, it can be seen that the majority of nurses were female, totaling 31 respondents (79,5%), compared to 8 male respondents (20,5%). Most respondents were in the adult age group, totaling 29 nurses (74,4%), followed by 7 nurses in the adolescent group (17,9%) and 3 nurses in the elderly group (7,7%). Regarding education, most nurses had vocational education, totaling 20 respondents (51,3%), while 19 respondents (48,7%) had professional education.

Table 1. Characteristics of Nurses at H. Andi Makkarodda General Hospital

Characteristics	Frequency (n)	Percentage %
Gender		
Male	8	20, 5
Female	31	79,5
Age		
Adolescent	7	17,9
Adult	29	74,4
Elderly	3	7,7
Education		
Vocational	20	51,3
Profession	19	48,7
Total	39	100,0

The table above shows that the mean workload score was 23,46 with a standard deviation (SD) of 7,663, while the mean work stress score was 7,74 with a standard deviation (SD) of 7,570.

Table 2. Characteristics of Workload and Stress among Nurses at H. Andi Makkarodda General Hospital

Variable	n	Mean (SD	Result
Workload	39	23,46 (7,663)	r = 0,485
Job Stress	39	7,74 (7,570)	p = 0.002

The table above shows that the p-value = 0,002 ($p < 0,05$), indicating a significant correlation between workload and work stress. The Pearson correlation coefficient (r) is 0,485, which indicates a moderate positive relationship. This means that higher workload is associated with higher work stress, while lower workload is associated with lower work stress.

DISCUSSION

The findings of this study indicate a significant relationship between workload and the level of work stress among nurses. Statistical analysis using Pearson's correlation test revealed a p-value of 0,002 ($p < 0,05$), confirming the existence of a significant association between the two variables. This result suggests that workload is an important factor that can increase stress, particularly within hospital environments that are inherently dynamic.

These findings are consistent with previous research conducted by Saefullah et al. (2023), which also demonstrated a relationship between workload and nurse stress levels in the inpatient ward of Jampangkulon District General Hospital. Similarly, the study conducted by Fadillah, R.A., & Nurmalasari, M. (2024) also confirmed the relationship between workload and nurse stress levels at the Special Eye Hospital of South Sumatera Province in 2023.

Theoretically, this relationship can be explained through Lazarus and Folkman's stress theory (1984), which posits that stress arises from the interaction between an individual and their environment. When an individual perceives environmental demands, such as workload, as exceeding their capacity, psychological pressure emerges, manifesting as stress.

In this study, a moderate correlation ($r = 0.485$) was identified, indicating that other factors besides workload also contribute to stress levels, and workload is not the sole determinant. According to Robbins & Judge (2017), work stress is influenced by multiple factors, both environmental (e.g., workload, role conflict, and time pressure) and individual (e.g., personality, social support, and coping abilities). This reinforces the present findings, suggesting that in addition to workload, other aspects—such as emotional strain in patient care, lack of support, or poor work–life balance—also play a significant role in contributing to stress among nurse.

CONCLUSION

The results of this study indicate that there is a positive relationship between workload and the level of work stress. An increase in workload is associated with higher levels of stress experienced. This study highlights that workload, particularly in the mental and emotional dimensions, plays an important role in influencing the psychological condition of nurses. Therefore, it is essential to pay attention to workload

factors in efforts to maintain the mental health of healthcare workers and to improve the quality of healthcare services.

Respondents are expected to be able to manage stress effectively in order to provide optimal health services. Future researchers are encouraged to conduct studies with a broader scope and a larger number of respondents so that the findings will be more comprehensive. For hospitals, it is important to ensure an adequate number of staff for each shift to reduce fatigue and stress among nurses. Furthermore, the results of this study are expected to serve as input for strengthening the curriculum in educational institutions, particularly in preparing healthcare professionals' mental readiness to face real-world work pressures.

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