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Workload and job stress among emergency department nurses

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Abstract

Background: Emergency room (ER) nurses are exposed to high workloads due to the unpredictable nature of emergency services, which may increase the risk of job stress and negatively affect nursing performance.

Purpose: To examine the relationship between workload and job stress among ER nurses.

Method: A quantitative study with a cross-sectional correlational design was conducted among 30 ER nurses using total sampling. Workload was assessed using the National Aeronautics and Space Administration Task Load Index (NASA-TLX), while job stress was measured using the Expanded Nursing Stress Scale (ENSS). Data were analyzed using the Spearman Rank correlation test.

Results: Half of the respondents (50.0%) experienced a moderate workload, and 43.3% reported moderate job stress. Statistical analysis showed a significant relationship between workload and job stress among ER nurses ($p = 0.001$).

Conclusion: Workload is significantly associated with job stress among ER nurses. Appropriate workload management strategies are needed to reduce occupational stress and support nurses' well-being and performance in emergency care settings.

Keywords: Emergency Room; Job Stress; Nurses; Workload.

INTRODUCTION

Emergency department (ED) nurses play a crucial role in delivering immediate and comprehensive care to patients with life-threatening conditions (Akbar & Kaseger, 2022). Compared with nurses working in inpatient units, ED nurses are exposed to greater physical, cognitive, and emotional demands because of unpredictable patient arrivals, high patient turnover, and the need for rapid clinical decision-making (Ministry of Health of the Republic of Indonesia, 2018). These demanding working conditions increase perceived workload and may negatively affect nurses' mental health, particularly through increased occupational stress, emotional exhaustion, and reduced work performance (Elizar & Lubis, 2020).

Workload has consistently been identified as one of the major occupational factors contributing to job stress among nurses (Maghfirah, 2023). Previous studies have shown that emergency nurses frequently

experience moderate-to-high workloads because of increasing patient volume, limited staffing, and the complexity of emergency care (Ministry of Health of the Republic of Indonesia, 2019). Excessive workload may exceed nurses' physical and psychological capacities, resulting in occupational stress, burnout, decreased job satisfaction, absenteeism, and compromised quality of patient care (Pérez-Francisco, Duarte-Climents, del Rosario-Melián, Gómez-Salgado, Romero-Martín, & Sánchez-Gómez, 2020). Evidence from both Indonesian and international studies indicates that workload remains a significant predictor of psychological distress among nurses working in emergency settings (Babapour, Gahassab-Mozaffari, & Fathnezhad-Kazemi, 2022).

Although numerous studies have investigated workload and job stress among nurses, evidence from regional referral hospitals in Indonesia remains limited

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(Sihombing & Sungono, 2025). In particular, no published study has examined this relationship among emergency nurses, a major referral hospital in Bandung Regency with a high volume of emergency cases (Government of the Republic of Indonesia, 2024). Preliminary observations in this hospital suggest that increasing patient demand and limited nursing personnel may contribute to excessive workload and occupational stress among ED nurses. However, empirical evidence is required to verify this relationship (Mahawati, Yuniwati, Ferinia, Rahayu, Fani, Sari, & Bahri, 2021).

RESEARCH METHOD

A descriptive correlational study with a cross-sectional design was conducted to examine the relationship between workload and job stress among nurses working in the Emergency Department of Majalaya Regional Hospital, Bandung Regency. The study was conducted from 3 to 5 November 2025. The study population consisted of 32 emergency department nurses. A total sampling technique was used. Of the 32 nurses, 30 met the inclusion criteria and agreed to participate in the study. Two nurses were not included because one served as the head

nurse and the other was the researcher; therefore, both were excluded from the respondent group. The independent variable was workload, while the dependent variable was job stress. Data were collected using self-administered questionnaires. Workload was measured using the National Aeronautics and Space Administration Task Load Index (NASA-TLX), which assesses perceived workload across six dimensions and generates a composite score, with higher scores indicating greater perceived workload. Job stress was assessed using the Expanded Nursing Stress Scale (ENSS), which measures occupational stress experienced by nurses. Descriptive statistics were used to summarize respondents' characteristics and the distribution of the study variables. The relationship between workload and job stress was analyzed using the Spearman rank correlation test with a significance level of $p < 0.05$. This study received ethical approval from the Ethics Committee of Majalaya Regional Hospital, Bandung Regency (No. 400.7.22.1/7910/KEP). Written informed consent was obtained from all participants before data collection, and the confidentiality and anonymity of all participants were maintained throughout the study.

RESEARCH RESULTS

Table 1. Characteristics of Respondent (N= 30)

Variable	Results	P-Value	Correlation Coefficient
Age (n/%) (Mean$\pm$SD) (Range) (Year)	(34.7 $\pm$ 4.7) (30-55)		
30-35	23/76.7		
36-40	4/13.3		
≥ 40	3/10.0		
Gender (n/%)			
Male	8/26.7		
Female	22/73.3		
Workload Level (n/%)			
Very Low	1/3.3		
Low	8/26.7		
Moderate	15/50.0		
High	6/20.0		
Job Stress Level (n/%)			
Low	6/20.0	0.001	0.684

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Moderate	13/43.3
High	11/36.7

Data are presented as *n* (%), except for age, which is expressed as mean $\pm$ standard deviation (SD) and range. The respondents had a mean age of 34.7 ± 4.7 years (range: 30–55 years). The majority of participants were female (73.3%) and aged 30–35 years (76.7%). Most respondents reported a moderate workload (50.0%), while 43.3% experienced moderate job stress. Spearman's rank correlation analysis demonstrated a statistically significant positive relationship between workload and job stress among emergency department nurses ($\rho = 0.684$, $p = 0.001$), indicating that higher workload was associated with higher levels of job stress.

DISCUSSION

This study found that most emergency department nurses experienced a moderate workload, although one-fifth reported a high workload (Basalamah, Ahri, & Arman, 2021). These findings indicate that while the existing workforce is generally able to manage routine clinical responsibilities, sudden increases in patient volume, emergency situations, and complex clinical cases may substantially increase perceived workload (dela Cruz & Shajani, 2024). The predominance of mental demand among the NASA-TLX dimensions suggests that emergency nursing requires continuous concentration, rapid clinical decision-making, multitasking, and sustained vigilance. Such cognitive

the number of tasks performed and includes mental, physical, and emotional demands associated with unpredictable patient conditions and time-sensitive decision-making (Tjokro, Saputera, & Marga, 2023). These findings are consistent with previous studies reporting that excessive workload is an important occupational risk factor for psychological distress, emotional exhaustion, and burnout among nurses (Ramírez-Elvira, Romero-Bejar, Suleiman-Martos, Gomez-Urquiza, Monsalve-Reyes, Canadas-De la Fuente, & Albendin-Garcia, 2021).

The findings highlight the importance of implementing organizational strategies to promote nurses' mental well-being. Appropriate staffing, balanced workload distribution, effective communication systems, and psychological support programs may help reduce occupational stress while maintaining the quality and safety of emergency

demands are characteristic of emergency care settings and may contribute to psychological strain when maintained over prolonged periods (Kusumaningrum, Rusminingsih, & Jayadi, 2022).

Regarding job stress, nearly half of the nurses experienced moderate stress, while more than one-third reported high stress. The highest-rated stressor was insufficient time to respond to patients' families, indicating that emergency nurses face not only clinical responsibilities but also considerable emotional and interpersonal demands (Fitria, 2025). These findings emphasize that occupational stress in emergency departments is influenced by both workload and the emotional challenges of providing patient- and family-centered care. Supportive teamwork and effective communication within the emergency department may help reduce the psychological burden experienced by nurses (Janurman & Sulistianingsih, 2025).

The present study also demonstrated a statistically significant positive relationship between workload and job stress among emergency nurses (Lubis, Saragih, & Maretta, 2022). This finding indicates that nurses who perceived greater workload were more likely to experience higher levels of occupational stress. In emergency care, workload extends beyond

healthcare services (Widianti & Herlina, 2023). Interventions targeting workplace mental health are particularly important in emergency departments, where nurses are routinely exposed to high-pressure clinical environments (Junaidah, Wardhani, & Muharni, 2023).

CONCLUSION

This study demonstrated a significant positive relationship between workload and job stress among nurses working. Most respondents experienced moderate levels of workload and job stress, indicating that occupational demands in the emergency setting contribute to nurses' psychological burden. These findings suggest that increasing workload is associated with higher levels of job stress. Therefore, hospital management should implement effective workload management strategies, optimize nurse

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staffing, and strengthen psychosocial support programs to promote nurses' mental well-being and maintain the quality and safety of emergency healthcare services.

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