Original Research

Relationship Between Workload and Burnout Syndrome Among Inpatient Nurses at a Military Hospital in Ambon, Indonesia

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Abstract

Burnout among nurses is characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment and is associated with adverse outcomes in both the quality of patient care and healthcare organizations. Workload is one of the most frequently identified occupational factors contributing to burnout among nurses, particularly in inpatient settings. This study aimed to analyze the relationship between workload and burnout syndrome among nurses working in the inpatient wards of Rumkit TK II Prof. Dr. J. A. Latumeten Ambon. An analytic observational study with a cross-sectional approach was conducted involving 71 inpatient nurses. Data were analyzed using the Fisher's exact test to determine the association between workload and burnout syndrome. The findings showed that nurses with a light workload predominantly experienced low levels of burnout, whereas those with a heavy workload were more likely to experience high levels of burnout. Among nurses with a heavy workload, 90.9% experienced high levels of burnout, and the association between workload and burnout syndrome was statistically significant (p = 0.001). These findings indicate that workload is significantly associated with burnout syndrome among inpatient nurses. Therefore, effective workload management, appropriate staffing, and psychological support are essential strategies for preventing burnout and promoting the well-being of nurses and the quality of hospital nursing services..

Keywords: Workload; Burnout syndrome; Nurses; Inpatient ward; Hospital

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INTRODUCTION

Burnout syndrome is a psychological condition characterized by emotional, mental, and physical exhaustion resulting from prolonged exposure to chronic occupational stressors. Although workplace stressors are commonly associated with industrial occupations, they are also prevalent among professionals in the service sector, particularly healthcare workers. Registered nurses working in hospital settings are especially vulnerable to burnout syndrome due to the high intensity of patient interactions, substantial workload, and continuous emotional and physical demands. These occupational factors contribute significantly to an increased risk of both mental and physical exhaustion (Membrive-Jiménez et al., 2022) .

A growing body of evidence has identified workload as a key determinant of burnout among nurses. In Indonesia, significant associations between workload and burnout have been consistently reported among hospital inpatient nurses across several regions, including Semarang, Sidoarjo, Surabaya, Riau, Tangerang, Southeast Sulawesi, and Batam (Desti Puswati & Titin Wahyunani, 2026; Rohmah et al., 2025; Yestiana et al., 2019) . These findings are consistent with the international literature demonstrating that high workload is significantly associated with burnout among nurses. Furthermore, this association may be mediated by work-related stress and moderated by factors such as shift type, clinical care setting, and the availability of workplace resources(Vargas-Benítez et al., 2023).

Nevertheless, the relationship between workload and burnout is not necessarily linear and is not confined to nurses experiencing extremely high workloads. Evidence from a study in Sidoarjo demonstrated that most nurses with moderate workloads nevertheless reported moderate to high levels of burnout, with emotional exhaustion representing the predominant dimension of the syndrome(Rohmah et al., 2025). Emerging evidence further suggests that nurse burnout is influenced by a range of organizational and individual factors, including working hours, social support, motivation, rewards and recognition, organizational commitment, work schedule policies, and the work environment. Accordingly, workload should not be viewed in isolation but rather as one component of a broader organizational context that shapes the risk of burnout (Juanamasta et al., 2024; Muhamad Nor Mudhofar & Yoanita Hijriyati, 2026).

The impact of burnout among nurses extends beyond individual well-being and has significant implications for workforce performance, patient safety, work motivation, and the quality of healthcare delivery. Evidence indicates that burnout is associated with an increased likelihood of unsafe clinical practices, diminished nursing performance, and reduced organizational commitment (Purwandari et al., 2022). Therefore, identifying factors associated with burnout, particularly workload, is crucial for informing evidence-based strategies to improve nursing workforce management and promote a more sustainable healthcare workforce (Absor et al., 2025; Muhamad Nor Mudhofar & Yoanita Hijriyati, 2026).

However, the available evidence is not entirely consistent, as some studies have failed to demonstrate a significant association between workload and burnout. For example, a study among inpatient nurses at a provincial hospital in West Sulawesi found a weak, positive, but statistically non-significant correlation between workload and burnout, indicating that the development of burnout is also shaped by individual characteristics, workplace conditions, and organizational support (Suryadi et al., 2026). The inconsistent findings across previous studies highlight the need for further research examining the relationship between workload and burnout in specific hospital contexts. Differences in clinical unit characteristics, work organization, and institutional support may contribute to variations in the observed association between workload and burnout (Rohmah et al., 2025; Vargas-Benítez et al., 2023).

In Indonesia, evidence on nurse burnout remains uneven across regions and hospital types, while research conducted in non-metropolitan

hospitals, general hospitals, and specific healthcare service contexts is still emerging(Rohmah et al., 2025). Furthermore, multicenter studies in Indonesia have indicated that nurse burnout is influenced by various individual- and work-unit-related factors, including job satisfaction, motivation, age, financial incentives, professional competence, and additional responsibilities (Juanamasta et al., 2024). However, evidence specifically examining the association between workload and burnout syndrome among inpatient nurses in military hospitals in Ambon remains limited. This gap is particularly relevant because military hospitals may have distinct organizational structures, work discipline, and service demands compared with civilian healthcare institutions.

Therefore, this study was conducted to examine the association between nursing workload and burnout syndrome among inpatient nurses in a military hospital in Ambon, Indonesia. The findings are expected to contribute contextual evidence on nurse burnout in Indonesia and provide a basis for developing workload management strategies, psychological support programs, and organizational policies aimed at reducing burnout risk and improving the quality of nursing care..

RESEARCH METHOD

This quantitative analytic observational study used a cross-sectional design and was conducted in seven inpatient units of Prof. Dr. J. A. Latumeten Hospital, Ambon, Indonesia, from July 8 to August 5, 2024. The study population comprised 87 nurses, of whom 71 were selected using proportional stratified random sampling.

Nursing workload was assessed through direct observation using a 72-item instrument based on a time-and-motion approach, covering direct nursing care, indirect nursing activities, non-nursing activities, and additional tasks. Workload was categorized as light (<60%), moderate (60–80%), or heavy (>80%). Burnout syndrome was assessed using the 22-item Maslach Burnout Inventory-Human Services Survey (MBI-HSS), which evaluates emotional exhaustion, depersonalization, and personal accomplishment. Burnout was categorized as low or high based on a median cut-off score of 55.

Data were collected after participants provided written informed consent. The collected data were edited, coded, entered into a computerized database, and checked for completeness and accuracy. Univariate analysis was used to describe participant characteristics and the distribution of study variables. For bivariate analysis, workload was categorized as light and moderate-to-heavy, and Fisher's exact test was used to examine its association with burnout because of small expected cell frequencies. Statistical significance was set at $p < 0.05$. The study was conducted in accordance with ethical principles for research involving human participants. Participation was voluntary, written informed consent was obtained from all participants, and confidentiality and anonymity were maintained throughout the research process.

RESULTS

PARTICIPANT CHARACTERISTICS

A total of 71 nurses participated in this study. The majority of participants were aged 26–35 years (66.2%), followed by those aged 36–45 years (22.5%) and 17–25 years (11.3%). Most participants were female (81.7%), while 18.3% were male.

Regarding educational background, 53.5% of participants held a Diploma III in Nursing, while 46.5% held a professional nursing qualification (Ners). In terms of work shifts, 38.0% worked the morning shift, 28.2% worked the afternoon shift, and 33.8% worked the night shift. Most participants had 1–5 years of work experience (57.7%), followed by less than one year (35.2%) and more than five years (7.0%).

NURSING WORKLOAD

The distribution of nursing workload is presented in Table 1. Of the 71 nurses, 41 (57.7%) had a light workload, 27 (38.0%) had a moderate workload, and 3 (4.2%) had a heavy workload.

Table 1. Distribution of Nursing Workload Among Nurses in Inpatient Units

Nursing Workload	n	%
Ligth	41	57,5
Moderate	27	38,0
Heavy	3	4,2
Total	71	100,0

The findings indicate that more than half of the nurses experienced a light workload. However, 30 nurses (42.3%) experienced moderate-to-heavy workloads, indicating that a substantial proportion of nurses were exposed to relatively higher occupational demands.

BURNOUT SYNDROME

As shown in Table 2, 60 nurses (84.5%) were categorized as having low burnout, while 11 nurses (15.5%) were categorized as having high burnout.

Table 2. Distribution of Burnout Syndrome Among Nurses

Burnout Syndrome	n	%
Low	60	84,5
High	11	15,5
Total	**71**	**100,0**

ASSOCIATION BETWEEN NURSING WORKLOAD AND BURNOUT SYNDROME

For bivariate analysis, nursing workload was categorized into light and moderate-to-heavy groups. As shown in Table 3, among nurses with moderate-to-heavy workloads, 10 of 30 nurses (33.3%) experienced high burnout. In contrast, only 1 of 41 nurses (2.4%) with a light workload experienced high burnout.

Table 3. Association Between Nursing Workload and Burnout Syndrome

Nursing workload	Low Burnout n (%)	High Burnout n (%)	Total n (%)	p-value
Ligth	40 (97,6)	1 (2,4)	41 (100)	0.001
Moderate to heavy	20 (66.7)	10 (33.3)	30 (100)	
Total	**60 (84.5)**	**11 (15.5)**	**71 (100)**	

Fisher's exact test demonstrated a statistically significant association between nursing workload and burnout syndrome (p = 0.001). Nurses with moderate-to-heavy workloads had a substantially higher proportion of high burnout than nurses with light workloads

DISCUSSION

This study found a statistically significant association between nursing workload and burnout syndrome among nurses working in inpatient units of Prof. Dr. J. A. Latumeten Hospital, Ambon. Nurses with moderate-to-heavy workloads demonstrated a substantially higher proportion of high burnout compared with nurses with light workloads. This finding supports the view that workload is an important occupational factor associated with nurses' psychological and emotional well-being.

The majority of nurses in this study experienced a light workload. This finding may reflect the distribution of nursing activities among available staff and the collaborative nature of patient care. When tasks are distributed effectively among nurses, the time and effort required by individual nurses to complete care activities may be reduced. However, the finding that 42.3% of participants experienced moderate-to-heavy workloads remains important because workload may fluctuate according to patient volume, patient dependency, clinical complexity, staffing levels, and shift patterns.

The study also showed that most nurses experienced low burnout. This may indicate that many participants were able to adapt to their occupational demands and maintain adequate coping strategies. Teamwork, professional experience, organizational support, and effective task distribution may also contribute to maintaining lower burnout levels.

Nevertheless, 15.5% of nurses experienced high burnout. This finding should receive attention because burnout can have consequences for nurses' physical and psychological health, job

satisfaction, work performance, and quality of patient care. Even when the majority of nurses experience low burnout, a subgroup experiencing high burnout may require early identification and targeted support.

The significant association between workload and burnout observed in this study may be explained by the cumulative demands associated with nursing work. Nurses who are required to perform multiple direct and indirect care activities within limited working hours may experience increased physical and psychological strain. Prolonged exposure to such demands may reduce recovery time and contribute to emotional exhaustion.

Nursing workload in inpatient settings is not determined solely by the number of patients assigned to nurses. Patient dependency, disease severity, frequency of nursing interventions, documentation requirements, coordination with other healthcare professionals, and non-nursing activities may also contribute to the overall workload. Therefore, workload assessment should consider both quantitative and qualitative dimensions of nursing work.

The findings have practical implications for hospital management. Regular workload monitoring can help identify units or shifts in which nurses are exposed to excessive occupational demands. Staffing decisions should consider not only the number of nurses but also patient acuity, workload intensity, and the complexity of nursing care. Equitable distribution of tasks and reduction of unnecessary non-nursing responsibilities may also contribute to reducing workload-related stress.

Preventive strategies to address burnout should include adequate staffing, appropriate workload allocation, opportunities for rest and recovery, supportive leadership, effective communication, and access to psychological support when needed. Such strategies may help maintain nurses' well-being while simultaneously supporting patient safety and quality of care.

This study has several limitations. First, the cross-sectional design does not allow causal relationships between workload and burnout to be established. Second, the study was conducted in a single hospital, which may limit the generalizability of the findings to other healthcare institutions. Third, burnout was assessed using self-reported measures, which may be influenced by individual perceptions and response bias. Future studies should consider longitudinal designs and multicenter samples to investigate temporal relationships between workload and burnout and to identify additional organizational and individual factors that may contribute to burnout.

CONCLUSION

This study demonstrated a significant association between nursing workload and burnout syndrome among nurses working in inpatient units of Prof. Dr. J. A. Latumeten Hospital, Ambon, Indonesia. Most nurses experienced light workloads and low levels of burnout. However, nurses with moderate-to-heavy workloads had a substantially higher proportion of high burnout compared with nurses with light workloads.

These findings highlight the importance of systematic workload assessment and effective workforce management in preventing burnout among nurses. Hospital management should consider regular monitoring of workload, appropriate staffing based on patient care needs, equitable distribution of nursing tasks, adequate opportunities for rest, and organizational support programs to promote nurses' occupational well-being. Future research should use longitudinal and multicenter designs to further investigate the causal relationship between workload and burnout and evaluate the effectiveness of workload management interventions.

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