

The Relationship Between Perceived Staffing Adequacy and Burnout Levels Among Nurses in the Inpatient Units of RSPAD Gatot Soebroto Hospital

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ABSTRACT

Burnout among nurses is a persistent occupational problem that may compromise nurses' well-being and the quality of patient care. One contributing factor is perceived staffing adequacy, particularly in inpatient settings where workload intensity is high. Insufficient staffing may increase emotional exhaustion and work-related stress among nurses. Purpose: This study aimed to examine the relationship between perceived staffing adequacy and burnout levels among nurses in the inpatient units of RSPAD Gatot Soebroto Hospital.

Methods: A quantitative correlational study with a cross-sectional design was conducted involving 57 inpatient nurses selected using purposive sampling. Perceived staffing adequacy was measured using the Nurse Perceived Adequacy of Staffing Scale (NPASS), while burnout levels were assessed using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS). Data were analyzed using the Chi-square test with a significance level of 0.05.

Results: The findings showed that most nurses perceived staffing adequacy as moderate (39%), while 31% perceived it as adequate and 30% as inadequate. Burnout levels were categorized as low (33%), moderate (37%), and high (30%).

Statistical analysis revealed a significant relationship between perceived staffing adequacy and burnout levels among nurses ($p = 0.017$). Nurses who perceived staffing as inadequate tended to experience higher levels of burnout.

Conclusion: There is a significant relationship between perceived staffing adequacy and burnout among inpatient nurses. Improving staffing allocation and addressing nurses' perceptions of workload adequacy may help reduce burnout and promote a healthier work environment in hospital inpatient units.

Keywords: Staffing adequacy, Burnout, Nurses.

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INTRODUCTION

Burnout among nurses has become a critical issue in healthcare systems worldwide. Nurses, particularly those working in inpatient units, play a central role in providing continuous and comprehensive patient care. High job demands, complex patient conditions, and sustained emotional pressure may lead to physical and psychological exhaustion. Burnout is defined as a syndrome characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment resulting from chronic work-related stress, especially in human service professions (Maslach & Leiter, 2016).

Previous studies have demonstrated that nurse burnout negatively affects not only individual well-being but also the quality of nursing care and patient safety. Nurses experiencing burnout are more likely to report decreased job satisfaction, increased work-related stress, and a higher intention to leave their profession (Dall'Ora et al., 2020). These outcomes pose a significant challenge for hospitals in maintaining service quality and workforce sustainability. Staffing adequacy has been identified as one of the key factors contributing to nurse burnout. Adequate staffing involves not only sufficient numbers of nurses but also appropriate staff distribution in relation to workload and patient needs. Inadequate staffing may increase workload intensity, reduce recovery time, and heighten stress

levels among nurses, thereby increasing the risk of burnout. Nurses' perceptions of staffing adequacy are considered particularly important, as they reflect actual working conditions encountered in daily clinical practice.

Evidence suggests that nurses who perceive staffing levels as inadequate tend to experience higher levels of burnout and lower job satisfaction. Perceived staffing adequacy has been widely associated with nurse outcomes and is often regarded as an early indicator of occupational stress and burnout in hospital settings (Twigg et al., 2021).

In inpatient units, nursing workload is often intensive and unpredictable, requiring constant monitoring, timely interventions, and coordination with other healthcare professionals. When staffing levels are perceived as insufficient, nurses may feel overwhelmed and unable to meet professional care standards, which can further exacerbate stress and burnout (van der Mark et al., 2023).

Although the relationship between staffing adequacy and burnout has been extensively studied internationally, evidence focusing on military referral hospitals in Indonesia remains limited. Organizational characteristics, management systems, and workload patterns may differ across hospital settings, highlighting the need for context-specific research. Therefore, this study aimed to examine the relationship between perceived staffing adequacy and burnout levels among nurses working in the inpatient units of RSPAD Gatot Soebroto Hospital. The findings are expected to provide evidence-based insights to support nursing management in developing effective staffing strategies and promoting nurses' well-being.

RESEARCH AND METHODOLOGY

This study employed a quantitative analytical design with a cross-sectional approach to examine the relationship between perceived staffing adequacy and burnout levels among nurses. This approach allows the independent and dependent variables to be measured simultaneously in order to assess their association efficiently.

The study was conducted in the inpatient units of RSPAD Gatot Soebroto Hospital. The study population consisted of nurses working in inpatient units, with a total sample of 57 nurses selected using purposive sampling based on predefined inclusion criteria. This sampling technique was applied to ensure that participants were relevant to the research objectives. Perceived staffing adequacy was measured using the Nurse Perceived Adequacy of Staffing Scale (NPASS), which assesses nurses' perceptions of staffing sufficiency in clinical practice. Burnout levels were assessed using the Maslach Burnout Inventory–Human Services Survey (MBI-HSS), which evaluates emotional exhaustion, depersonalization, and personal accomplishment.

Data analysis began with a normality test using the Kolmogorov–Smirnov test. The relationship between perceived staffing adequacy and burnout levels was analyzed using the Chi-square test, with a significance level set at 0.05. Ethical approval was obtained prior to data collection, and written informed consent was secured from all participants.

RESULT

A total of 57 nurses participated in this study. Most respondents were under 30 years old and predominantly female. Based on educational background, respondents consisted of nurses with Diploma III in Nursing (D3) and those who had completed the Professional Nurse Program (Ners) after obtaining a bachelor's degree in nursing. The majority of nurses had more than one year of working experience in inpatient units. Detailed respondent characteristics are presented in table 1.

Table 1. Characteristics of Respondents (n = 57)

CHARACTERISTICS	CATEGORY	%	n
Age	□ 30 years	23 (40%)	57
	> 30 years	34 (60%)	
Gender	Female	50 (88%)	57
	Male	7 (12%)	
Education background	Diploma III nursing	32 (56%)	57
	Ners	25 (44%)	
Length of work	□ 1 years	57 (100%)	57
	> 1 years	0 (0%)	

Perceived Staffing Adequacy

The results showed that nurses' perceptions of staffing adequacy were mostly categorized as moderate (39%), followed by adequate (31%) and inadequate (30%). These findings indicate that a considerable proportion of nurses perceived staffing levels as insufficient to fully support nursing care activities in inpatient units. The distribution of perceived staffing adequacy is presented in Table 2.

Table 2. Distribution of perceived staffing adequacy

Perceived staffing adequacy	n = 57	%
Adequate	18	31 %
Moderate	22	39 %
Inadequate	17	30 %

Burnout Levels Among Nurses

Burnout levels among nurses were primarily categorized as moderate (37%), followed by low (33%) and high (30%). This result suggests that burnout remains a significant occupational issue among inpatient nurses, regardless of educational background. The distribution of burnout levels is shown in Table 3.

Table 3. Distribution of Burnout Levels Among Nurses

Burnout Level	n = 57	%
Low	19	33 %
Moderate	21	37 %

High	17	30 %
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Relationship Between Perceived Staffing Adequacy and Burnout

Bivariate analysis using the Chi-square test demonstrated a significant relationship between perceived staffing adequacy and burnout levels among nurses ($p = 0.017$). Nurses who perceived staffing adequacy as inadequate were more likely to experience higher levels of burnout compared to those who perceived staffing as adequate or moderate. The results of the association analysis are presented in Table 4.

Table 4. Relationship Between Perceived Staffing Adequacy and Burnout

Perceived staffing adequacy	Low	Moderate	High	Total	p-Value
Adequate	3 (5,3%)	6 (10,5%)	9 (15,8%)	18 (13,6%)	0,017
Moderate	12 (21,1%)	5 (8,8%)	5 (5,5%)	22 (38,6%)	
Inadequate	4 (7,0%)	10 (17,5%)	3 (5,3%)	17 (29,8%)	
Total	19 (33,3%)	21 (36,8%)	17 (29,8%)	57 (100%)	

DISCUSSION

The results of this study demonstrate a significant relationship between perceived staffing adequacy and burnout levels among nurses working in inpatient units of RSPAD Gatot Soebroto Hospital. Nurses who perceived staffing levels as inadequate tended to experience higher levels of burnout. This finding reinforces the view that staffing adequacy is a critical factor influencing nurses' psychological well-being and their ability to deliver safe and effective nursing care.

In inpatient settings, nurses are required to manage continuous patient care, complex clinical conditions, and high workloads. When staffing levels are perceived as insufficient, nurses may experience increased work pressure, limited recovery time, and sustained emotional demands, which contribute to emotional exhaustion and depersonalization. These conditions are well-recognized components of burnout and have been consistently reported in previous studies examining nurse workload and staffing adequacy (Maslach & Leiter, 2016)

The findings of this study are consistent with previous research indicating that nurses' perceptions of staffing adequacy are strongly associated with burnout outcomes. Twigg et al. (2021) reported that inadequate nurse staffing was linked to higher burnout levels and reduced job satisfaction among hospital nurses. Similarly, van der Mark et al. (2023) emphasized that perceived staffing adequacy serves as an important indicator of work environment quality and nurse well-being. The present study extends this evidence by confirming the association within the context of an Indonesian military referral hospital.

Differences in educational background, including Diploma III nurses (D3) and professional nurses (Ners), may further influence the experience of burnout under conditions of inadequate staffing. Professional nurses (Ners) typically assume broader responsibilities, such as clinical decision-making, care coordination, and supervision, which may increase psychological demands when staffing

is insufficient. Conversely, Diploma III nurses often engage in more task-oriented and physically demanding activities, which may lead to physical fatigue and emotional strain. When staffing levels are inadequate, both groups are vulnerable to burnout, albeit through different workload and responsibility mechanisms.

The predominance of moderate burnout levels observed in this study suggests that nurses may be experiencing ongoing work-related stress without adequate organizational support or staffing adjustments. Although moderate burnout may not immediately result in severe consequences, prolonged exposure to such conditions can escalate burnout severity over time and negatively impact nurse retention, performance, and patient outcomes. This highlights the importance of early identification and intervention related to staffing adequacy perceptions.

Overall, the findings underscore the need for nursing management to consider staffing strategies that account for both the number of nurses and their educational background. Balanced staffing allocation that aligns workload with nurses' competencies and responsibilities may help reduce burnout risk among both Diploma III nurses and professional nurses. Improving staffing adequacy and addressing nurses' perceptions of workload may contribute to healthier work environments and improved quality of nursing care in inpatient units.

CONCLUSION

This study concludes that there is a significant relationship between perceived staffing adequacy and burnout levels among nurses working in inpatient units of RSPAD Gatot Soebroto Hospital. Nurses who perceived staffing adequacy as inadequate were more likely to experience higher levels of burnout compared to those who perceived staffing as adequate or moderate. These findings indicate that staffing adequacy plays an important role in maintaining nurses' psychological well-being.

Differences in educational background, including Diploma III nurses (D3) and professional nurses (Ners), do not eliminate the risk of burnout when staffing is perceived as insufficient. Both groups are vulnerable to burnout due to high workload demands and sustained professional responsibilities. Therefore, nursing management should consider adequate staffing allocation and balanced task distribution based on nurses' competencies to reduce burnout risk and improve the quality of nursing care in inpatient units.

REFERENCES

- Aiken, L. H., Sloane, D. M., Bruyneel, L., Van den Heede, K., Griffiths, P., Busse, R., ... Sermeus, W. (2014). Nurse staffing and education and hospital mortality in nine European countries: A retrospective observational study. *The Lancet*, 383(9931), 1824–1830. [https://doi.org/10.1016/S0140-6736\(13\)62631-8](https://doi.org/10.1016/S0140-6736(13)62631-8)
- Dall'Ora, C., Ball, J., Reinius, M., & Griffiths, P. (2020). Burnout in nursing: A theoretical review. *Human Resources for Health*, 18(1), 1–17. <https://doi.org/10.1186/s12960-020-00469-9>
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2(2), 99–113. <https://doi.org/10.1002/job.4030020205>
- Maslach, C., & Leiter, M. P. (2016). Understanding the burnout experience: Recent research and its implications for psychiatry. *World Psychiatry*, 15(2), 103–111. <https://doi.org/10.1002/wps.20311>

- Twigg, D., Kutzer, Y., Jacob, E., & Seaman, K. (2021). A quantitative systematic review of the association between nurse skill mix and nursing-sensitive patient outcomes. *Journal of Advanced Nursing* 77(8), 3155–3170. <https://doi.org/10.1111/jan.14837>
- van der Mark, D., Hagens, S., Steege, L. M., & Hoonakker, P. (2023). Perceived staffing adequacy and its association with nurse burnout and job outcomes. *Journal of Nursing Management*, 31(1), 1–9. <https://doi.org/10.1111/jonm.13758>