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The Relationship Between Workload and the Performance of Inpatient Nurses at Poso Regional General Hospital

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ABSTRACT

Background: Nursing workload may be associated with nurse performance, but local evidence from inpatient settings is limited. Objective: To examine the association between workload and the performance of inpatient nurses at Poso Regional General Hospital. Methods: This cross-sectional study included 59 of 144 inpatient nurses selected by simple random sampling. The instruments used to assess nurses' workload and performance were questionnaires developed by previous researchers. The data were analyzed using Spearman's rank correlation. Results: Moderate workload was reported by 36 nurses (61.0%), and adequate performance by 43 (72.9%). Spearman's rank correlation showed a statistically significant association ($\rho = 0.574$, $p < 0.001$; $n = 59$). Conclusion: Workload was associated with nurse performance in this sample. Hospital leaders may review unit-level staffing distribution alongside workload data.

INTRODUCTION

Nursing workload reflects patient acuity, staffing resources, workflow, and direct and indirect care demands. Studies have linked workload and role overload with nurses' well-being, missed care, and job performance, although findings vary by setting and measurement approach (Assaye et al., 2022; Ivziku et al., 2022a, 2022b; Ni et al., 2024; Zhang et al., 2022).

Recent studies have examined workload alongside performance, burnout, and care quality (Alzoubi et al., 2024; Aung Po et al., 2024; Bae, 2024; Gündüz & Öztürk, 2025; Nantsupawat et al., 2022). Indonesian studies have also examined nursing performance, productivity, and work stress (Diana et al., 2022; Kusumawati et al., 2024; Prasetya et al., 2020). However, evidence from the inpatient units of Poso Regional General Hospital remains limited.

Nurses' workload includes patient-care and indirect duties. Studies have identified staffing resources, patient acuity, documentation, transfers, and workflow as relevant workload factors; inadequate staffing has also been associated with missed care and patient-safety outcomes (Assaye et al., 2022; Ivziku et al., 2022a, van den Oetelaar et al., 2021). The local relationship between workload and nurse performance therefore warrants assessment using clearly described measures.

Medical record data from Poso Regional General Hospital (2024) show that annual inpatient visits increased from 10,165 in 2022 to 13,662 in 2023, while the bed occupancy rate increased from 52% to 64%. Nursing Division records list 144 nurses and 206 beds in the inpatient units. Staffing calculations using the Gillies and Ministry of Health methods indicated that 26 additional nurses were needed. These local figures provide context for examining workload and nurse performance (Poso Regional General Hospital, 2024).

Interviews with head nurses and inpatient nurses indicated that several units lacked sufficient staff. Nurses described fatigue associated with their duties, and head nurses reported difficulty covering shifts when nurses were unable to work. These interviews provide contextual information and were not analyzed as study outcomes.

This study examined the association between workload and performance among inpatient nurses at Poso Regional General Hospital.

METHODS

This cross-sectional study was conducted in the inpatient units of Poso Regional General Hospital, Central Sulawesi, Indonesia, during May 2024. The population comprised 144 nurses, and 59 respondents were selected by simple random sampling. Workload and Nurse performance was measured using kuesioner developed by Pristiawati (2022). Descriptive statistics were used to summarize participant characteristics and study variables. The association between workload and performance was examined using two-tailed Spearman's rank correlation. Before participant recruitment commenced in May 2024, the study received approval from the Research Ethics Committee of Poltekkes Kemenkes Palu (Approval No. 000238/KEPK POLTEKKES KEMENKES PALU/2024).

RESULTS

1. Univariate Analysis

Table 1 Frequency Distribution of Respondent Characteristics

Age	Distribution	
	n	%
23–35 years	31	52.5
36–45 years	25	42.4
>46 years	3	5.1
Education	n	%
Diploma III	31	52.5
Bachelor's degree	13	22.0
Professional nursing qualification (Ners)	15	25.4
Length of service	n	%
<10 years	12	20.3
>10 years	47	79.7
Sex	n	%
Women	44	74.6
Men	15	25.4
Total	59	100

Source: Primary data, 2024

Table 1 shows that 31 respondents (52.5%) were aged 23–35 years, 25 (42.4%)

were aged 36–45 years, and 3 (5.1%) were reported in the oldest age category. Most respondents held a Diploma III qualification (31; 52.5%); 15 (25.4%) had a professional nursing qualification (Ners), and 13 (22.0%) held a bachelor's degree. Forty-seven (79.7%) were reported to have more than 10 years of service and 12 (20.3%) fewer than 10 years. Most respondents were women (44; 74.6%).

2. Study Variables

The distribution of workload and nurse performance is presented in Table 2.

Table 2 Frequency Distribution of Workload and Nurse **Performance in the Inpatient Units of Poso Regional General Hospital**

Workload	Distribution	
	n	%
Light	13	22.0
Moderate	36	61.0
Heavy	10	16.9
Performance	**n**	**%**
Good	13	22.0
Adequate	43	72.9
Poor	3	5.1
Total	59	100

Source: Primary data, 2024

As shown in Table 2, 36 nurses (61.0%) reported a moderate workload, 13 (22.0%) a light workload, and 10 (16.9%) a heavy workload. Most nurses were classified as having adequate performance (43; 72.9%); 13 (22.0%) were classified as good and 3 (5.1%) as poor.

The bivariate analysis examined the association between workload and nurse performance among inpatient nurses at Poso Regional General Hospital.

Table 3 **Association between workload and nurse performance among inpatient nurses at Poso Regional General Hospital (n = 59)**

			Workload	Performance
Spearman's rho	Workload	Correlation coefficient	1.000	.574**
		Sig. (2-tailed)	.	<.001
		N	59	59
	Performance	Correlation coefficient	.574**	1.000
		Sig. (2-tailed)	<.001	.
		N	59	59

Source: Primary data, 2024.

Spearman's rank correlation showed a statistically significant association between workload and nurse performance ($\rho = 0.574$, two-tailed $p < 0.001$; $n = 59$).

DISCUSSION

1. Workload among inpatient nurses at Poso Regional General Hospital

Among the 59 inpatient nurses at Poso Regional General Hospital, most reported a moderate workload (36; 61.0%). A light workload was reported by 13 nurses (22.0%), and a heavy workload by 10 nurses (16.9%).

The questionnaire responses concerned observing patients during working hours, the number and variety of tasks nurses had to perform, and families' expectations regarding patient safety. These findings should be interpreted using the verified workload instrument and scoring rules. Age, education, length of service, and sex were described but were not analyzed as predictors of workload. Their possible influence on workload perception should not be inferred from these data.

Most respondents reported moderate workload despite the staffing shortfall documented by the hospital. This descriptive pattern does not establish that staffing levels were adequate or that staffing influenced workload, because staffing exposure was not directly tested in the correlation analysis. Hospital leaders may review ward-level staffing and workload data together.

Studies have reported associations between workload, work engagement, burnout, and nurse performance, but the direction and strength vary across measures and populations (Bae, 2024; Gündüz & Öztürk, 2025; Ni et al., 2024; Zhang et al., 2022).

Workload studies have identified staffing resources, patient acuity, documentation, transfers, and workflow as relevant factors (Ivziku et al., 2022a; van den Oetelaar et al., 2021). These studies support examining workload locally but do not establish that the same factors explain the present findings.

2. Performance of inpatient nurses at Poso Regional General Hospital

In this sample, 43 nurses (72.9%) were classified as having adequate performance, 13 (22.0%) as good, and 3 (5.1%) as poor. Other studies have linked work environment and organizational resources with nurse performance or perceived care quality (Aung Po et al., 2024; Diana et al., 2022; Sarıköse & Göktepe, 2022; Winter et al., 2021).

3. Relationship between workload and the performance of inpatient nurses at Poso Regional General Hospital

A statistically significant association between workload and nurse performance was observed ($\rho = 0.574$, $p < 0.001$). The study was cross-sectional, it cannot establish temporal order or causation.

Recent studies have examined workload in relation to performance, staffing, burnout, and other work outcomes (Alzoubi et al., 2024; Bae, 2024; Ni et al., 2024; Zhang et al., 2022). The present finding is an association within this sample; unmeasured factors cannot be used to explain the coefficient.

Studies have linked staffing resources and workflow with missed care, nurse well-being, or care outcomes (Assaye et al., 2022; Ivziku et al., 2022a, 2022b; Nantsupawat et al., 2022). These findings support the relevance of staffing context but do not establish the mechanism underlying the association in this study.

Study limitations. This cross-sectional study was conducted at one hospital and cannot establish causality. The participant measures may be subject to self-report bias if self-administered.

CONCLUSION AND RECOMMENDATIONS

Workload was statistically associated with nurse performance in this sample. Hospital leaders may consider reviewing staffing distribution alongside ward-level workload data; these findings do not demonstrate that staffing changes will improve performance.

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