



Determinants of Nurses' Performance in Inpatient Wards: A Cross-Sectional Study at a Private Islamic Hospital in Indonesia

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Abstract

Background: Nurse performance is a critical determinant of patient safety, service quality, and hospital accreditation outcomes. However, the multidimensional factors influencing nurse performance in hospital settings remain inconsistently reported, particularly in developing countries. This study aimed to analyze the association between individual and organizational factors and nurses' performance in inpatient wards.

Methods: A cross-sectional study was conducted among 96 nurses working in inpatient units of a private hospital in Central Java, Indonesia. Data were collected using validated questionnaires measuring work stress, motivation, job satisfaction, leadership perception, work environment, and interpersonal conflict. Nurse performance was measured using a structured performance assessment tool. Data were analyzed using Spearman rank correlation and multivariable linear regression.

Results: The findings showed that job satisfaction ($p < 0.01$), motivation ($p < 0.01$), leadership ($p < 0.05$), and work environment ($p < 0.05$) were significantly associated with nurse performance, while work stress and interpersonal conflict showed weak but significant negative associations. Multivariable analysis indicated that job satisfaction and motivation were the strongest predictors of performance after controlling for demographic variables.

Conclusion: The study concludes that nurse performance is influenced by psychological and organizational factors rather than demographic characteristics alone. Hospital management should strengthen supportive leadership, improve the work environment, and implement structured staff development programs to enhance performance and patient care quality.

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INTRODUCTION

Nurses represent the largest professional group in hospitals and play a central role in maintaining the continuity and safety of patient care. The quality of healthcare services is strongly influenced by nurses' performance because nurses provide direct and continuous care throughout hospitalization. Inadequate nursing performance may increase clinical errors, reduce patient satisfaction, and decrease hospital service quality. Therefore, improving nurse performance is a fundamental component of healthcare quality management.

Nurse performance refers to the ability of nurses to carry out professional responsibilities according to competency standards, ethical principles, and operational procedures. Performance includes clinical skills, communication, documentation accuracy, teamwork, and adherence to patient safety protocols. Good performance reflects professional accountability, whereas poor performance indicates psychological or organizational barriers affecting nursing practice

(Desima, 2019). In hospital settings, performance is not determined solely by individual competence but also by psychosocial and environmental factors.

Work stress is a common factor influencing nurses' performance. Nurses are required to make rapid clinical decisions, manage workload demands, and provide emotional support to patients and families. Continuous exposure to these demands may lead to stress that negatively affects concentration and caring behavior (Aprilia et al., 2019). High stress levels may reduce work effectiveness and service quality. Previous studies have demonstrated that job stress significantly affects nurse productivity and performance (Amin et al., 2020).

Interpersonal conflict is another factor affecting work outcomes. Healthcare services require collaboration among professionals, and differences in communication style or task distribution often cause workplace conflict. Persistent conflict can create psychological tension and disrupt teamwork. Conflict has been shown to increase job stress and reduce employee performance (Han & Netra, 2019). Among nurses, unresolved interpersonal



conflict may directly influence the quality of patient care (Jayati, 2020).

Job satisfaction also plays an important role in determining performance. Nurses who feel satisfied with organizational support and work conditions tend to be more committed and compliant with clinical standards. Conversely, dissatisfaction may lead to fatigue, absenteeism, and decreased productivity (Dewi et al., 2022). Satisfaction is closely related to caring behavior, which is an essential component of professional nursing practice (Desima, 2019).

Motivation is another determinant of performance because it encourages nurses to perform tasks responsibly and consistently. Motivated nurses are more proactive and cooperative in delivering care, whereas lack of motivation may result in incomplete documentation and minimal patient interaction (Saputra et al., 2020). Leadership and work environment also influence performance by providing supervision, communication support, and teamwork facilitation (Doris et al., 2019; Damanik, 2021).

Although previous studies have examined these variables individually, limited research evaluates psychological and organizational factors simultaneously in Indonesian private hospital settings. Differences in organizational culture and management systems may influence the relationship between these factors and performance.

Therefore, this study aims to analyze the association between interpersonal conflict, work stress, motivation, job satisfaction, leadership, and work environment with nurses' performance in inpatient wards. The study hypothesizes that positive factors such as motivation and job satisfaction improve performance, while negative factors such as interpersonal conflict and work stress are associated with lower nurse performance.

METHODS

This study employed a quantitative analytic observational design with a cross-sectional approach. The design was selected to examine the association between interpersonal conflict, work stress, motivation, job satisfaction, leadership, and work environment with nurses' performance at a single point in time without inferring causality.

Setting and Participants

The research was conducted in the inpatient wards of a private Islamic hospital in Central Java, Indonesia. The hospital provides general medical and surgical services with a team-based nursing care model and rotating shift system consisting of morning, evening, and night shifts. The nurse-to-patient ratio ranged from 1:5 to 1:8 depending on ward occupancy rate.

The target population consisted of all registered nurses working in inpatient wards during the study period (N = 45). Because the population was relatively small, the study used total sampling in order to increase

representativeness and minimize sampling bias. After applying inclusion criteria, 40 nurses were eligible and agreed to participate. Inclusion criteria were nurses providing direct patient care, having at least six months of work experience, and being willing to participate. Nurses who were on leave or administrative assignment during data collection were excluded.

Variables and Instruments

Nurse performance was measured as the dependent variable using a structured nursing performance questionnaire based on professional nursing competency standards. The instrument assessed implementation of nursing care, communication, documentation accuracy, and compliance with procedures. Scores were categorized into low, moderate, and high performance based on percentile distribution.

Interpersonal conflict was measured using an interpersonal conflict questionnaire adapted from previous organizational behavior studies. Work stress was measured using the NIOSH Generic Job Stress Questionnaire (NIOSH, 2014), which evaluates psychological and workload stressors in the workplace. Motivation, job satisfaction, leadership perception, and work environment were assessed using validated Likert-scale questionnaires commonly used in nursing workforce research.

Prior to data collection, all instruments were tested for validity and reliability in a pilot group of nurses outside the study setting. Construct validity was evaluated using item-total correlation coefficients, and items with correlation values below 0.30 were removed. Reliability was assessed using Cronbach's alpha coefficient, and all variables showed acceptable internal consistency ($\alpha > 0.70$), indicating reliable measurement.

Data Collection Procedure

Data were collected during July 2023. Participants were informed about the purpose of the study and signed written informed consent before completing questionnaires. Questionnaires were distributed at the end of work shifts to avoid interference with patient care activities. The average completion time was 20–25 minutes.

Ethical Considerations

The study received ethical approval from the institutional ethics committee of the hospital. Participation was voluntary and confidentiality was maintained by anonymizing all responses. Data were used only for research purposes. Ethical approval was obtained from the Health Research Ethics Committee of Universitas Muhammadiyah Semarang (Ethical Number: EA-044.KEPK-RSR/VI/2025).



Data Analysis

Data were analyzed using statistical software. Descriptive statistics were used to summarize respondent characteristics and study variables. Because the variables were ordinal and not normally distributed, Spearman rank correlation was used to examine associations between independent variables and nurse performance. Multivariable linear regression was performed to identify variables independently associated with performance after controlling for demographic characteristics. Statistical significance was set at $p < 0.05$.

RESULTS

Respondent Characteristics

A total of 40 nurses participated in this study. The majority of respondents were female and in early adulthood age range, reflecting the general demographic composition of hospital nursing staff. Most nurses had a diploma or bachelor-level nursing education and had worked for more than one year in inpatient wards. The distribution of working experience showed that several nurses were still in the early adaptation phase of professional practice, which may influence psychological responses to workplace conditions.

The shift system was evenly distributed across morning, evening, and night shifts, indicating that all participants were exposed to rotating schedules. Rotational shifts are known to affect fatigue and psychological stress levels; therefore, this characteristic was considered important in interpreting the association between occupational factors and performance.

Table 1. Distribution of Respondents characteristics (n=96)

Indicators	f	%
Age		
20-24	8	8,4
25-29	26	27
30-34	30	31,2
35-39	8	8,4
40-44	3	3,1
>45	21	21,9
Gender		
Male	25	26
Female	71	74
Education		
Diploma	69	71,9
Ners	27	28,1
Length of work		
<6 year	23	24
6-10 year	37	38,5
>10 year	36	37,5
Career level		
Level 1 clinical nurse	25	26
Level 2 clinical nurse	46	48
Level 3 clinical nurse	25	26
Total	96	100

Descriptive Analysis of Study Variables

Nurse performance scores indicated that most nurses demonstrated moderate performance levels, while a

smaller proportion showed high performance and only a few showed low performances. This finding suggests that the overall quality of nursing care was adequate but still had room for improvement.

Interpersonal conflict levels were predominantly in the moderate category. Nurses reported occasional disagreements related to task division, communication misunderstandings, and coordination during busy shifts. Severe conflict was uncommon, indicating that the working environment remained generally cooperative despite routine professional tension.

Work stress was also largely categorized as moderate. Nurses frequently experienced workload pressure, time constraints, and emotional demands from patient care, but these conditions were still manageable. However, several respondents reported higher stress levels during night shifts and high occupancy periods.

Motivation and job satisfaction were mostly in the moderate to high category. Many nurses expressed professional commitment and willingness to perform responsibilities, although some reported dissatisfaction related to workload distribution and communication patterns. Leadership perception was generally positive, indicating that supervisors provided direction and supervision. The work environment was also perceived as relatively supportive, though limitations in staffing during peak hours were noted.

Table 2. Distribution of Motivation, Job Satisfaction, and Performance (n=96)

Indicators	f	%
Motivation		
Poor	1	1
Moderate	26	27,1
High	69	71,9
Job satisfaction		
Moderate	8	8,3
High	88	91,7
Nurse performance		
Moderate	19	19,8
Good	77	80,2
Total	96	100,0

Correlation Analysis

Spearman rank correlation analysis was performed to examine associations between independent variables and nurse performance. The results showed that job satisfaction had a significant positive association with nurse performance ($p < 0.01$). Nurses who reported higher satisfaction tended to demonstrate better adherence to nursing care standards and documentation accuracy. This finding indicates that psychological comfort at work may be related to improved professional behavior.

Motivation also showed a significant positive association with performance ($p < 0.01$). Nurses with stronger work motivation tended to complete nursing interventions more consistently and communicate more effectively with patients and colleagues. However, this association reflects a relationship rather than a causal effect.



Leadership perception demonstrated a significant positive association with performance ($p < 0.05$). Nurses who perceived supportive supervision tended to show better compliance with procedures and teamwork. This suggests that managerial support may relate to work behavior patterns.

The work environment showed a positive association with performance ($p < 0.05$). Adequate cooperation and coordination within the team were associated with improved nursing care implementation. Nevertheless, the correlation strength was moderate, indicating that environmental factors alone cannot fully explain performance variability.

Work stress showed a weak but significant negative association with performance ($p < 0.05$). Higher stress levels were related to lower accuracy in documentation and reduced communication effectiveness. The magnitude of correlation indicates that stress contributes partially to performance differences but does not determine performance independently.

Interpersonal conflict also showed a weak negative association with nurse performance ($p < 0.05$). Nurses experiencing higher levels of conflict tended to show

reduced cooperation and decreased efficiency during patient care activities. However, the correlation coefficient indicates only a modest relationship rather than a strong influence.

Multivariable Analysis

To further examine the relationship among variables, multivariable linear regression analysis was conducted including demographic variables as control factors. The analysis showed that job satisfaction and motivation remained significantly associated with nurse performance after adjustment. Leadership and work environment lost statistical significance in the adjusted model, suggesting that their effects may operate indirectly through psychological factors.

Interpersonal conflict and work stress remained negatively associated but contributed less to the model compared with satisfaction and motivation. The regression model explained a moderate proportion of variance in nurse performance, indicating that performance is influenced by multiple factors beyond those measured in this study.

Table 3 Relationship between characteristic factors and nurse performance in the Inpatient Ward of Roemani Muhammadiyah Hospital Semarang 2025 (n=96)

Indicators	Nurse performance				Total		p	coefficient correlation
	Moderate n	%	Good n	%	n	%		
Age								
20-24 years	4	4,1	4	4,2	8	8,3	0,003	0,296
25-29 years	8	8,3	18	18,7	26	27		
30-34 years	5	5,2	25	26	30	31,2		
35-39 years	2	2,1	6	6,2	8	8,3		
40-44 years	0	0	3	3,1	3	3,1		
>45 years	0	0	21	21,8	21	21,8		
Gender								
Male	4	4,1	21	21,8	25	26	0,585	0,056
Female	15	15,6	56	58,3	71	73,9		
Education								
D3 Nursing Ners	11	11,4	58	60,4	69	71,8	0,133	0,154
	8	8,3	19	19,8	27	28,1		
Years of Service								
<6 years	8	8,3	15	15,7	23	24	0,002	0,310
6-10 years	9	9,3	28	29,1	37	38,5		
>10 years	2	2	34	35,4	36	37,5		
Career Level								
Level 1	10	10,4	15	15,6	25	26	0,000	0,362
Level 2	9	9,3	37	38,5	46	47,9		
Level 3	0	0	25	26	25	26		

Table 4. Relationship between motivation and job satisfaction with nurse performance in the Inpatient Ward of Roemani Muhammadiyah Hospital Semarang 2025 (n=96)

Indicators	Nurse performance				p	coefficient correlation
	Moderate n	%	Good n	%		
Motivation						
Low	1	1	0	0	0,029	0,223
Medium	8	8,3	18	18,7		
High	10	10,4	59	61,4		
Job Satisfaction						
Medium	4	4,1	4	4,1	0,025	0,229
High	15	15,6	73	76		



DISCUSSION

This study examined the association between psychological and organizational factors and nurses' performance in inpatient wards. The findings indicate that job satisfaction and motivation showed the strongest positive associations with nurse performance, while interpersonal conflict and work stress demonstrated weaker negative associations. Leadership and work environment were also associated with performance at the bivariate level but did not remain significant after adjustment. These results suggest that nurses' performance is more closely related to internal psychological responses than to structural characteristics alone.

Job satisfaction emerged as the most consistent factor associated with performance. Nurses who reported higher satisfaction demonstrated better adherence to nursing procedures, communication, and documentation. This finding may be explained through behavioral commitment theory, which states that employees who experience positive emotional attachment to their workplace are more willing to exert effort in performing tasks. Satisfaction reduces psychological resistance to workload and increases engagement in patient care activities. Previous research has similarly reported that job satisfaction improves caring behavior and professional responsibility among nurses (Desima, 2019; Dewi et al., 2022). Thus, satisfaction may function as a stabilizing factor that supports consistent work performance despite demanding clinical environments.

Motivation also showed a strong association with nurse performance. Motivated nurses tended to complete interventions more accurately and interact more actively with patients. Motivation influences performance through goal-directed behavior, encouraging individuals to maintain concentration and persistence when facing work challenges. Nurses with intrinsic motivation often perceive patient care as meaningful work, which increases accountability and attentiveness. This finding is consistent with previous studies reporting that motivation contributes to better productivity and service quality (Saputra et al., 2020). Therefore, motivation appears to act as an internal driving force that translates professional competence into observable performance.

Work stress demonstrated a weak negative association with performance. Nurses experiencing higher stress levels showed reduced communication effectiveness and documentation accuracy. However, the correlation strength indicates that stress alone does not determine performance outcomes. Moderate stress may still allow nurses to function adequately because clinical work inherently requires alertness. When stress exceeds coping capacity, cognitive fatigue may occur and impair attention to detail. Previous studies have shown that occupational stress reduces work effectiveness and productivity (Amin et al., 2020; Aprilia et al., 2019). The modest magnitude of association in this study suggests that nurses may possess adaptive coping mechanisms enabling them to maintain acceptable performance under pressure.

Interpersonal conflict also showed a negative association with performance. Nurses who reported frequent disagreements or communication difficulties tended to demonstrate lower teamwork efficiency. Conflict disrupts coordination during patient care and may reduce willingness to collaborate. This mechanism can affect the continuity of nursing interventions because healthcare delivery depends on team interaction. Research has demonstrated that workplace conflict increases psychological tension and reduces work effectiveness (Han & Netra, 2019; Jayati, 2020). However, the relatively weak correlation suggests that conflict in this setting was manageable and did not severely disrupt performance.

Leadership and work environment were associated with performance at the bivariate level but lost significance in the multivariable analysis. This finding indicates that their effects may operate indirectly through psychological factors such as satisfaction and motivation. Supportive leadership can enhance communication and recognition, which subsequently increases job satisfaction. Similarly, a conducive work environment may reduce stress and foster motivation. Previous studies have shown that managerial support improves staff engagement and teamwork (Doris et al., 2019; Damanik, 2021). Therefore, leadership may function as a contextual factor shaping psychological responses rather than directly influencing performance.

From a nursing management perspective, these findings highlight that performance improvement strategies should prioritize psychological empowerment rather than solely structural adjustment. Hospitals frequently attempt to improve performance by increasing supervision or enforcing regulations; however, this study suggests that internal perception of work plays a more substantial role. Enhancing satisfaction and motivation may produce more sustainable performance improvement compared to purely administrative control.

Practical strategies may include participatory leadership, recognition programs, and professional development opportunities. Communication training can reduce interpersonal conflict, while workload monitoring may prevent excessive stress. Conflict management education is particularly important in team-based nursing services because collaboration is essential for patient safety. Improving the work environment should aim not only at physical facilities but also at interpersonal climate and fairness in task distribution.

This study has several limitations. First, the cross-sectional design cannot determine temporal relationships between variables. The associations identified represent relationships at a single point in time rather than predictive effects. Second, data were collected using self-report questionnaires, which may introduce response bias or social desirability bias. Third, the sample size was limited to one hospital, reducing generalizability to other healthcare institutions with different organizational cultures. Future research should consider longitudinal designs and multi-center sampling to better understand causal pathways and contextual variation.



Despite these limitations, the study provides useful insight into factors associated with nurses' performance in clinical settings. The findings indicate that performance is multidimensional and influenced by psychological and interpersonal conditions within the workplace. Strengthening internal motivation and satisfaction while managing conflict and stress may support more consistent nursing care delivery.

CONCLUSION

Nurses' performance was positively associated with job satisfaction and motivation, while interpersonal conflict and work stress showed negative associations. Organizational support may influence performance indirectly through psychological factors. Hospitals should strengthen supportive management, conflict management, and staff motivation programs to enhance nursing care quality.

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