



## FACTORS INFLUENCING NURSES' PERFORMANCE IN HOSPITAL SETTINGS: A SYSTEMATIC REVIEW

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### ABSTRACT

Nurse performance is a key indicator of healthcare quality in hospitals because it directly relates to patient safety, nursing care effectiveness, and organizational performance. Therefore, a comprehensive synthesis of scientific evidence is needed to understand the determinants of nurse performance in hospital settings. To identify and synthesize scientific evidence related to factors that influence nurse performance in hospitals. This systematic review was prepared following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines. A literature search was conducted in PubMed/MEDLINE, Scopus, and CINAHL databases for English-language articles published between 2021 and 2025. A total of 378 articles were identified initially. After removing duplicates and screening titles, abstracts, and full texts based on the PICOS criteria, seven cross-sectional studies met all inclusion criteria. Data were systematically extracted and analyzed using a narrative synthesis approach. The synthesis identified three main categories of factors influencing nurse performance. First, psychological factors and personal capacities, such as self-efficacy, grit, work engagement, and secondary traumatic stress, showed a significant relationship with nurse performance. Second, organizational and practice environment factors, including a supportive work environment, social support, leadership, workload, and reward systems, played a significant role in enhancing or degrading performance. Third, demographic characteristics and physical conditions, such as length of service, education level, health status, and overtime work habits, also influenced nurses' work effectiveness in hospitals. Nurse performance in hospitals is the result of a complex interaction between individual, psychological, and organizational factors. These findings underscore the importance of a holistic approach to nursing management, focusing not only on nurses' clinical competence but also on creating a supportive work environment and organizational policies that are responsive to the needs of the nursing workforce.

Keywords: hospitals; nurse performance; organizational factors; psychological factors

### How to cite (in APA style)

Seriwidhayanti, N. L. P., & Rossa, E. M. (2026). Factors Influencing Nurses' Performance in Hospital Settings: A Systematic Review. *Indonesian Journal of Global Health Research*, 8(3), 321–330. <https://doi.org/10.37287/ijghr.v8i3.1357>.

## INTRODUCTION

Nurse performance is a key component of the hospital care system, directly impacting service quality, patient safety, and overall organizational performance. As frontline healthcare workers, nurses play a strategic role in providing safe, effective, and patient-centered nursing care (Alrubaysh et al., 2022). Optimal nurse performance contributes to improved service quality, patient satisfaction, and the achievement of hospital performance indicators. While low performance can lead to increased adverse events, decreased service quality, and health system inefficiency (Kari et al., 2022; Zhang et al., 2023).

Nurse performance is a multidimensional concept encompassing clinical skills, adherence to practice standards, communication effectiveness, interprofessional collaboration, and professional responsibility in the delivery of nursing care (Lo et al., 2023). In the hospital context, nurse performance is influenced not only by individual competency but also by various organizational and work environment factors (Qtait, 2023). Previous research has shown that factors such as workload, the nursing practice environment, managerial support, leadership, scheduling systems, and resource

availability play a significant role in determining nurse performance levels (Alsadaan et al., 2023; Shan et al., 2023).

In addition to organizational factors, psychological and individual aspects also significantly influence nurse performance. Factors such as work motivation, job satisfaction, job stress, burnout, self-efficacy, and work engagement have been reported to be associated with variations in nurse performance across hospital settings (Alsadaan et al., 2023). Demanding work environments, high emotional stress, and excessive administrative demands can reduce nurses' capacity to maintain optimal performance, especially in crisis situations or resource constraints (Egerod et al., 2020).

From the perspective of nursing and organizational theory, nurse performance is understood as the result of a dynamic interaction between individuals and the systems in which they work. Systems theory approaches and nursing work environment models emphasize that professional performance is influenced by organizational structure, work culture, managerial processes, and interpersonal relationships within the healthcare team (Stamboglis & Jacobs, 2020). Models such as the Nursing Work Environment Framework and the Job Demands–Resources Model explain that the balance between job demands and available resources is crucial for nurses' ability to maintain effective and sustainable performance (Bolme et al., 2020; Goldsby et al., 2020).

Although the importance of nurse performance has been widely recognized, efforts to improve and maintain nurse performance in hospitals still face various challenges. Hospitals in many countries face nursing shortages, high workloads, staff turnover, and pressure to meet quality and efficiency indicators (Retnaningsih & Dwiantoro, 2020). These conditions are often exacerbated by limited organizational support, varying management systems, and differences in healthcare contexts, ultimately resulting in inconsistent nurse performance across hospital settings (Tartila et al., 2020).

Despite the growing body of empirical research on nurse performance, the available scientific evidence remains fragmented. These studies employ diverse research designs, employ different performance measurement instruments, and examine a wide range of determinants, from individual to psychosocial to organizational (Alharbi et al., 2021). This diversity makes it difficult to draw comprehensive conclusions and develop consistent, evidence-based recommendations for hospital managers, nursing leaders, and policymakers (Alharbi et al., 2021).

Therefore, a systematic review is needed to systematically synthesize the available scientific evidence regarding the factors that influence nurse performance in hospital settings. This systematic review aims to (1) identify individual, psychological, and organizational factors reported to be associated with nurse performance in hospitals, and (2) summarize the main findings from cross-sectional studies regarding the direction and strength of the relationship between these factors and nurse performance. The results of this review are expected to provide a scientific basis for the development of nursing management strategies, improvement of the work environment, and the formulation of policies that support the improvement of nurse performance and the quality of hospital services.

## **METHOD**

### **Study Design**

This study used a systematic review design to identify and synthesize scientific evidence related to factors influencing nurse performance in hospital settings. The reporting process for this systematic review was structured and reported following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure transparency, rigor, and replicability in the study search, selection, and reporting process (Page et al., 2021).

### **Literature Search Strategy**

A systematic literature search was conducted in several major electronic databases, namely PubMed/MEDLINE, Scopus, and CINAHL. Articles identified were limited to English-language publications published between 2011 and 2025 to capture relevant and up-to-date empirical evidence.

The search strategy was developed based on the research questions by combining keywords and synonyms related to the nurse population, nurse performance, and the factors that influence it. The Boolean operators "AND" and "OR" were used to broaden the search scope without reducing the relevance of the results. The keywords used included terms representing nurses (e.g., nurse, staff nurse, registered nurse), performance concepts (e.g., nurses' performance, job performance, clinical performance, work performance), and factors related to performance (e.g., work environment, workload, leadership, job satisfaction, work engagement, burnout, organizational factors, psychological factors). The search strategy was adapted to the characteristics and syntax of each database.

In addition to the electronic database search, additional searches were conducted through bibliographic searches of articles meeting the inclusion criteria to identify other relevant studies that may not have been detected in the initial search.

### **Inclusion and Exclusion Criteria**

Inclusion and exclusion criteria were established using the PICOS (Population, Exposure, Comparator, Outcomes, Study design) framework.

- Population (P): Nurses who work in hospital settings, including nurses in inpatient units, outpatient units, emergency units, and special care units.
- Exposure (I): Factors reported to influence nurse performance include individual factors (e.g. demographic characteristics, motivation, self-efficacy), psychological factors (e.g. work stress, burnout, work engagement), and organizational and work environment factors (e.g. workload, nursing practice environment, managerial support, leadership).
- Comparator (C): A comparison group is not required; non-comparative studies reporting relationships or associations between specific factors and nurse performance may still be included.
- Outcomes (O): Nurse performance, measured as job performance, clinical performance, or other relevant performance indicators, whether based on self-reported assessment, superior assessment, or standard instruments.
- Study design (S): Original research with cross-sectional design.  
Studies included in this systematic review were limited to the last 5 years (2021-2025). Studies were excluded if they were not conducted in a hospital setting, did not involve nurses as the primary subjects, did not report outcomes related to nurse performance, used a design other than cross-sectional, or were non-original articles such as reviews, editorials, opinion pieces, research protocols, case reports, and conference abstracts without full text.

### **Study Selection and Data Extraction Process**

All search results were compiled and duplicates removed using reference management software. The study selection process was conducted in two stages by two independent reviewers. The first stage involved screening titles and abstracts to assess initial compliance with the inclusion criteria. The second stage involved a full-text review to ensure appropriateness for the hospital context, nurse population characteristics, variables studied, and reporting of nurse performance outcomes. Disagreements between reviewers were resolved through discussion until consensus was reached. Data from studies meeting the inclusion criteria were extracted using a standardized data extraction form that included: study identity (author, year of publication, country), setting and type of hospital, study design, sample size and characteristics, factors studied, nurse performance measurement instruments, statistical analysis methods, and key study findings.

## Data Synthesis

Data synthesis was conducted descriptively using a narrative synthesis approach, taking into account variations in hospital context, sample characteristics, factors studied, and the nurse performance measurement instruments used. Results are presented by grouping factors influencing nurse performance into main categories, such as individual, psychological, and organizational factors. Key findings from each category are summarized to provide a comprehensive overview of the determinants of nurse performance in the hospital setting.

## RESULT

### Study Selection

A total of 378 articles were identified through a systematic search of PubMed/MEDLINE, Scopus, and CINAHL databases. After deduplication, 96 articles were excluded due to duplication, leaving 282 articles for the title and abstract screening stage. During the title and abstract screening stage, 243 articles were excluded because they were irrelevant based on inclusion criteria to the research focus, were not conducted in a hospital setting, did not involve nurses as the primary subjects, or did not address factors influencing nurse performance. Thus, 39 articles were deemed to meet the initial criteria and proceeded to the title and abstract, also full-text review stage. During the full-text review stage, 32 articles were excluded. Ultimately, 7 articles met all inclusion criteria and were included in this systematic review. The complete study selection process is presented in the PRISMA flow diagram (Figure 1), while the main characteristics of the included studies are summarized in Table 1.

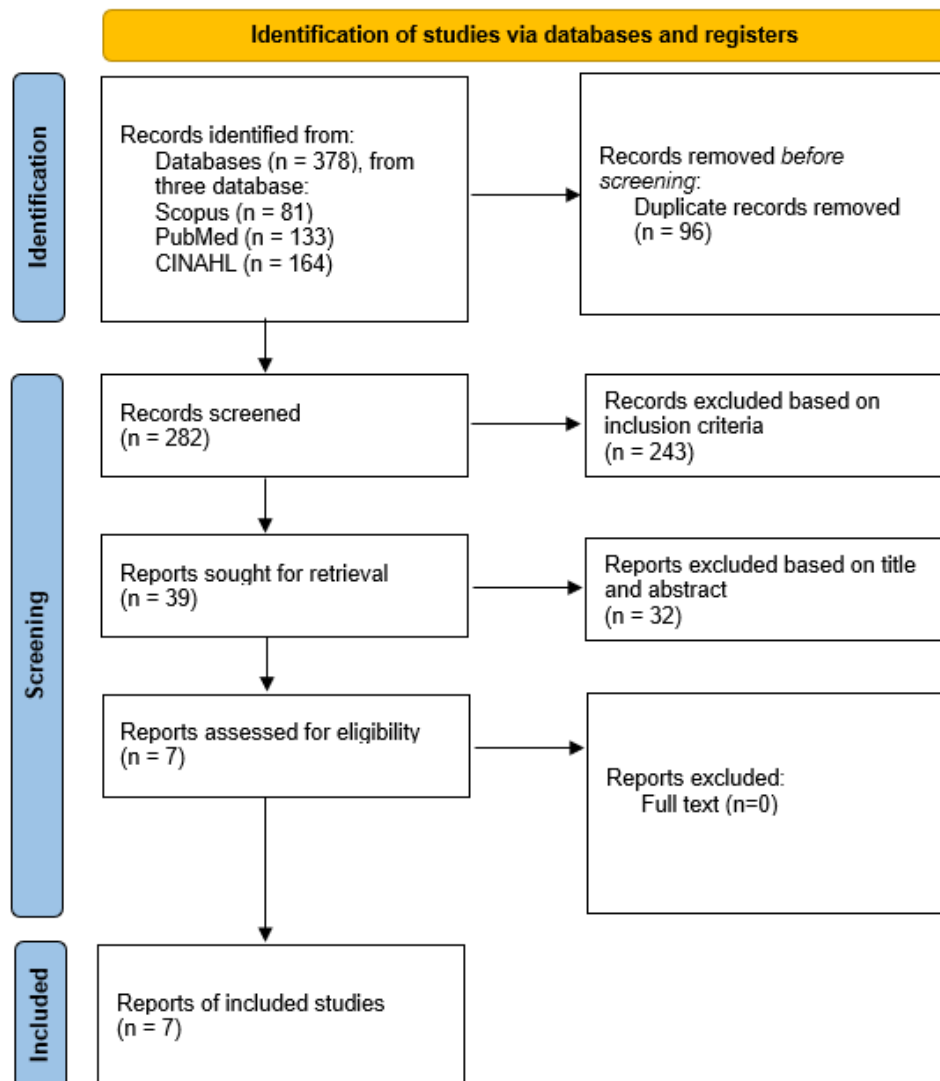


Figure 1. PRISMA Flow Diagram

Table 1.  
Data Extraction

Authors, year	Purpose	Design	Samples	Variables	Key Results
(Cha & Lee, 2024)	Determining factors that influence nurse performance during the COVID-19 pandemic.	<i>Cross-sectional.</i>	314 nurses in tertiary and general hospitals in South Korea.	Independent: Self-efficacy, work environment, knowledge, attitude, experience. Dependent: Nurse performance.	Self-efficacy and attitude were the most significant predictors (43% of variance); knowledge did not significantly predict performance.
(Subih & Al-amer, 2024)	Identifying predictors of clinical performance in emergency nurses.	<i>Cross-sectional predictive.</i>	251 emergency nurses from three health sectors in Jordan.	Secondary traumatic stress (STS), sociodemographic variables (BMI, smoking, chronic diseases), and nurse performance.	Nurse performance was below average; significant predictors were high BMI, smoking, chronic illness, overtime, and STS.
(Lateef et al., 2025)	Testing the relationship between the practice environment and nurses' job performance.	<i>Descriptive cross-sectional correlational.</i>	168 nurses in medical and surgical units in two hospitals in Egypt.	Nurse practice environment (PES-NWI) and job performance (checklist observation).	There is a strong and significant positive relationship between a supportive practice environment and nurses' job performance ( $r = 0.824$ ).
(Heikkilä et al., 2025)	Describe the level of nurse involvement and identify the driving factors.	<i>Analytical cross-sectional multicentre(4-year time series).</i>	24,653 nurses (staff, midwives, assistant managers) in Finnish hospitals.	Level of involvement, background variables (unit type, position, education), and factors driving involvement.	The proportion of unengaged nurses increased dramatically (25.5% to 50.0%); all driving factors were significantly associated with engagement.
(Shin, 2023)	Identifying factors that influence job performance in Korean and Mongolian nurses.	<i>Descriptive cross-sectional.</i>	129 Korean nurses and 131 Mongolian nurses (Total 260) from tertiary hospitals.	<i>Grit</i> (perseverance), social support, burnout, and job performance.	<i>Grit</i> significantly influenced performance in both countries; social support was significant for Korean nurses (41% variance).
(Shen et al., 2022)	Understanding the performance of male nurses in China and identifying its risk factors.	<i>Cross-sectional.</i>	599 male nurses from 26 tertiary general hospitals in Hunan Province, China.	Length of service, relationship status, education, department, reasons for choosing nursing, family attitudes, and performance.	Influencing factors include length of service, education, marital status, department, and enthusiasm for the profession.
(Daba et al., 2024)	Assessing the level of job performance of nurses in an adult emergency department.	<i>Facility-based cross-sectional.</i>	166 nurses in five public hospitals in Addis Ababa, Ethiopia.	Workload, remuneration, rewards, clarity of goals, appraisal feedback, and performance.	70.5% of nurses performed well; workload, remuneration, recognition, and feedback were the main predictors.

The thematic analysis in this systematic review aims to identify various dimensions that significantly influence the effectiveness of nurses' work in hospitals. Nurse performance does not exist in isolation, but rather results from a complex interaction between individual psychological capacity, supportive work environments, organizational reward systems, and the nurses' physical and demographic conditions. The following is an in-depth narrative of these factors, based on the results of extracting relevant scientific sources:

### **1. Psychological Factors and Personal Capacity**

Internal factors within nurses are the strongest determinants of care quality, particularly in crisis situations or high-pressure environments. Self-efficacy, or belief in one's abilities, and a positive attitude toward infectious disease management have been shown to be key predictors of nurse performance, far more significant than theoretical knowledge (Cha & Lee, 2024). Furthermore, personal characteristics such as "grit," or persistence in achieving long-term goals, consistently improve nurse performance across cultures, as they help them remain focused and motivated despite challenging circumstances (Bayarsaikhan & Shin, 2023). However, this psychological dimension is highly susceptible to emotional distress; nurses experiencing secondary traumatic stress due to persistent exposure to patient suffering tend to experience a drastic decline in productivity (Subih et al., 2024). Therefore, building nurse resilience and emotional engagement is crucial to preventing a sustained decline in morale (Heikkilä et al., 2025).

### **2. Practice Environment and Organizational Culture**

A supportive work environment creates an atmosphere that allows nurses to perform at their optimal level. Good collaborative relationships, particularly collegial relationships between nurses and physicians, are among the most valued aspects of this environment and have a direct impact on the smooth running of clinical tasks (Lateef et al., 2025). Practice environments with strong governance structures and participatory leadership enable nurses to feel autonomous in making care decisions (Lateef et al., 2025; Heikkilä et al., 2025). Conversely, the downward trend in nurse engagement in recent years has often been driven by a lack of management support and an environment that is unresponsive to staff needs, which can ultimately lead to a desire to leave the profession (Heikkilä et al., 2025). Social support from colleagues also acts as a buffer, mitigating the detrimental effects of occupational stress (Bayarsaikhan & Shin, 2023).

### **3. Human Resource Management, Compensation, and Feedback**

Organizational policies related to human resource management have a significant motivational impact on nurses' work output. Good performance is strongly influenced by clear goals or work targets to be achieved, where nurses who understand organizational expectations tend to work more focused (Daba et al., 2024). Furthermore, extrinsic factors such as competitive remuneration and rewards for hard-working nurses significantly increase their motivation to provide the best service (Daba et al., 2024). Performance appraisal systems should also be more than just administrative; providing constructive and regular feedback is essential to help nurses identify their weaknesses and continuously improve their competencies (Daba et al., 2024; Heikkilä et al., 2025).

### **4. Demographic Characteristics and Physical Load**

Nurses' work capacity is also limited by their physical condition and professional background. Demographically, nurses with more experience, higher education (Master's/Doctorate), and older age generally demonstrate greater clinical maturity and stable performance (Shen et al., 2022; Cha & Lee, 2024). On the other hand, physical health factors are often overlooked barriers; high Body Mass Index (BMI), smoking habits, and the presence of chronic diseases have been identified as negative predictors that reduce nurses' ability to perform physically demanding tasks (Subih et al., 2024). This problem is exacerbated by excessive workloads and overtime work systems that not only drain physical energy but also reduce concentration and increase the risk of medical errors (Subih et al., 2024; Daba et al., 2024). The match between department placement and nurses' interests and expertise also determines how much enthusiasm they bring to their daily work (Shen et al., 2022).

## **DISCUSSION**

This systematic review synthesizes seven cross-sectional studies examining various factors influencing nurse performance in hospital settings. Overall, the results indicate that nurse performance is a multidimensional phenomenon influenced by a combination of individual,

psychological, organizational, and managerial factors. No single factor dominates performance, but rather a dynamic interaction between these factors within the hospital work context. These findings reinforce the view that efforts to improve nurse performance require a systemic approach that considers working conditions and available resources.

Individual and psychological factors emerged as important determinants of nurse performance in most of the included studies. Variables such as work motivation, self-efficacy, job satisfaction, and work engagement consistently showed a positive relationship with nurse performance levels (Huang et al., 2025). Nurses who felt confident in their professional abilities and felt emotionally engaged in their work tended to demonstrate greater conscientiousness, responsibility, and quality of care (Zhao et al., 2025). These findings align with the Job Demands–Resources (JD–R) framework, which emphasizes that personal resources serve as drivers of motivation and performance in high-demand work environments (Rahnfeld et al., 2016).

Conversely, negative psychological factors such as work stress, emotional exhaustion, and burnout have been reported to negatively impact nurse performance. Prolonged work pressure can reduce concentration, decision-making skills, and adherence to nursing practice standards. In a hospital setting, this condition has the potential to increase the risk of errors and reduce the quality of patient care (Zong et al., 2024). Therefore, managing nurses' mental health and well-being is a crucial component of performance improvement strategies (Yosep et al., 2024).

Organizational and work environment factors also play a significant role in influencing nurse performance. High workloads, limited resources, and unbalanced nurse-to-patient ratios are consistently associated with decreased performance (Yosep et al., 2023). An unsupportive work environment can limit a nurse's ability to provide optimal care, even if they possess adequate competencies. Conversely, a safe, collaborative, and well-structured work environment enables nurses to work more effectively and efficiently (Prosdociami Menegat & Witt, 2018).

Organizational support, including effective supervision, access to training, and professional development opportunities, has also been found to contribute to improved nurse performance. Nurses who feel supported by their organization tend to have higher work commitment and a positive attitude toward their work (Osman et al., 2023). This support creates a sense of security and appreciation, which in turn enhances intrinsic motivation and job performance. These findings emphasize that the organization's role extends beyond providing services to facilitating nurses' professional performance (Buabeng & Adomah-Afari, 2023).

The role of nursing leadership and management has emerged as a contextual factor that indirectly influences nurse performance. Several studies have shown that a supportive and communicative leadership style is associated with increased nurse motivation and job satisfaction (Alencastro et al., 2020; Alsadaan et al., 2023). Ward heads or nursing managers who are able to create a fair and participatory work climate help reduce conflict and improve team coordination. This allows nurses to focus more on providing quality nursing care (Yalcinkaya & Ünsal, 2025).

The implications of this review's findings indicate that nurse performance has a direct impact on service quality and patient safety. Nurses with good performance are better able to maintain continuity of care, communicate effectively with the healthcare team, and adhere to patient safety standards. Therefore, improving nurse performance is a strategic element in efforts to improve the overall quality of hospital services. This strengthens nurses' position as key actors in the healthcare system.

However, this systematic review also identified several limitations in the available literature. All included studies used cross-sectional designs, so the relationships found were associative and did

not allow for causal conclusions. Furthermore, the use of self-report instruments to measure nurse performance increases the potential for perceptual and social bias. Variations in definitions and performance measurement tools across studies also pose challenges to a more comprehensive synthesis.

Based on these findings, the practical implications of this systematic review emphasize the importance of a multidimensional approach to improving nurse performance. Hospitals need to develop policies that focus not only on improving technical competence but also on workload management, psychological support, and strengthening managerial systems. For further research, longitudinal and intervention studies are needed that can explain the causal relationships between factors that influence nurse performance. This approach is expected to generate stronger scientific evidence to support evidence-based decision-making in nursing management.

## **CONCLUSION**

This systematic review shows that nurse performance in hospital settings is influenced by various interacting factors, including individual, psychological, organizational, and managerial factors. Evidence from seven cross-sectional studies analyzed consistently indicates that positive psychological factors, such as self-efficacy, work engagement, and motivation, play a significant role in improving nurse performance. Conversely, job stress, burnout, excessive workload, and suboptimal physical condition have been shown to correlate with decreased performance. These findings confirm that nurse performance cannot be understood in isolation but rather as a result of a balance between personal capacity and a supportive work environment.

In addition to individual factors, the nursing practice environment and organizational support have been shown to be significant contextual determinants of nurse performance. A supportive work environment, participatory leadership, a fair remuneration and reward system, and clear performance feedback mechanisms contribute to increased nurse motivation and work effectiveness. However, most of the available evidence is associative due to the limitations of cross-sectional designs and the predominance of self-report instruments, so interpretation of causal relationships requires caution. Therefore, future research is recommended to use longitudinal or intervention designs to strengthen causal evidence, while developing comprehensive and sustainable nursing management policies to improve nurse performance and hospital service quality.

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