

Factors Influencing Healthcare Worker Performance: A Systematic Literature Review Using Thematic Analysis

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Abstract.

Background: Healthcare worker performance is a critical determinant of healthcare quality, patient safety, organizational effectiveness, and health system sustainability. Despite extensive research on individual determinants of performance, evidence regarding fragmented analyses remains insufficient and inconclusive. *Objective:* This systematic literature review aimed to identify factors influencing healthcare worker performance and evaluate their interactions within organizational and professional contexts. *Methods:* A systematic literature review was conducted following the PRISMA 2020 guidelines. Literature searches were performed across multiple international databases, including Google Scholar, Scopus, Web of Science, Emerald, and Garuda. Eligible studies published between 2020 and 2025 were analyzed using thematic synthesis. Fourteen studies meeting the inclusion criteria were reviewed. *Results:* Findings indicate that healthcare worker performance is shaped by a combination of psychological, organizational, leadership, and technological factors. Emotional intelligence and spiritual intelligence demonstrated significant positive associations with performance, whereas organizational commitment and job satisfaction frequently acted as mediating variables. Leadership style particularly transformational, digital, and spiritual leadership was associated with improved motivation, adaptability, and organizational effectiveness. Organizational Citizenship Behavior (OCB), effective communication, and digital competence further enhanced healthcare worker performance. Conversely, excessive workload and workplace violence adversely affected employee well-being and productivity. Emerging evidence also highlights the influence of digital transformation and artificial intelligence readiness in modern healthcare settings. *Conclusion:* Healthcare worker performance is multidimensional and results from interactions among psychological, organizational, and leadership-related factors. Strengthening adaptive leadership, supportive organizational culture, digital readiness, and employee well-being may substantially improve workforce performance and healthcare quality. Further interdisciplinary research is recommended to support evidence-based workforce development in healthcare institutions.

Keywords: Healthcare worker performance; emotional intelligence; digital leadership; organizational commitment; job satisfaction; systematic literature review and PRISMA.

I. INTRODUCTION

Healthcare worker performance is one of the fundamental components in delivering effective, safe, and high-quality healthcare services. Optimal performance not only determines the quality of direct patient care but also influences organizational efficiency, patient safety, and the overall sustainability of the healthcare system. Amid the increasing complexity of healthcare challenges particularly during the COVID-19 pandemic and the ongoing digital transformation of healthcare services the issue of improving healthcare worker performance has become increasingly strategic and warrants comprehensive investigation.

Various national studies have demonstrated that individual internal factors, such as emotional intelligence, spiritual intelligence, and intellectual intelligence, play significant roles in enhancing the performance of nurses and other healthcare professionals. For example, Gultom (2020) reported that emotional intelligence, spiritual intelligence, and intellectual intelligence have significant positive effects on nurses' performance, collectively contributing approximately 71.5% to performance improvement. These findings are consistent with those of Waode Khofifah et al. (2024), who identified emotional intelligence as the most dominant factor influencing performance, particularly among nurses caring for older adult patients. Similarly, Ismuhadi and Muhibullah Ali Puteh (2021) emphasized the mediating role of organizational commitment in linking emotional and spiritual intelligence to healthcare worker performance.

Beyond personal attributes, organizational factors such as leadership and communication also influence employee performance. Effective leadership fosters a positive work culture, enhances motivation,

and promotes harmonious relationships among healthcare professionals, managers, and patients. Desy Resfita and Budi Hartono (2024) found that leadership and communication significantly affect healthcare workers' ability to deliver excellent services. Leaders who establish clear, adaptive, and effective communication can strengthen employee morale and reinforce commitment to high-quality patient care.

Technological advancement has further increased the complexity of modern healthcare delivery. The digitalization of healthcare systems, implementation of electronic medical information systems, and integration of artificial intelligence have made digital leadership an essential competency for contemporary healthcare organizations. Bahriyatul Ulum and Puspita Wulansari (2025) reported that digital leadership and digital competence do not directly improve employee performance; rather, their positive effects emerge when mediated by job satisfaction. This finding highlights that healthcare workers' readiness to adopt technology, managerial support, and satisfaction with the work environment are critical determinants of the effectiveness of digital transformation initiatives. Similar conclusions have been reinforced by international studies demonstrating that digital leadership plays an important role in institutionalizing the use of generative artificial intelligence, enhancing organizational efficiency, and improving decision-making quality.

In addition to internal and leadership-related factors, workload and workplace conditions substantially affect healthcare worker performance. Excessive workload often leads to burnout, reduced quality of care, and even medical errors. Waode Khofifah et al. (2024) identified a significant association between workload and performance. In contrast, dual-role conflict did not consistently show a significant effect, suggesting that occupational factors may exert a stronger influence on performance than domestic responsibilities. Internationally, workplace violence (WPV) has emerged as another critical concern. Haymore et al. (2025) found that workplace violence influences healthcare workers' perceptions of safety and organizational support, ultimately affecting both job performance and mental well-being. Therefore, organizational support through preventive and responsive strategies is essential for maintaining sustainable workforce performance.

Furthermore, organizational factors such as Organizational Citizenship Behavior (OCB) make substantial contributions to employee performance. Kharismasyah et al. (2021) reported that OCB was the most influential determinant of nurses' performance, followed by emotional intelligence, whereas work engagement showed no significant effect. These findings indicate that extra-role behaviors—such as voluntarily assisting colleagues or taking on additional responsibilities for the benefit of patients—constitute essential elements in improving the quality and effectiveness of healthcare services.

Overall, evidence from both national and international studies suggests that healthcare worker performance results from complex interactions among psychological, social, operational, organizational, and technological factors. Emotional and spiritual intelligence, various forms of leadership (including digital, transformational, and spiritual leadership), job satisfaction, organizational commitment, and readiness for digital transformation all play significant roles in shaping optimal performance within healthcare settings. Nevertheless, despite the abundance of research examining these variables individually, relatively few studies have integrated them into a comprehensive conceptual framework. Therefore, this literature review was conducted to synthesize recent research findings and develop a holistic understanding of the factors influencing healthcare worker performance in both national and international contexts.

II. METHODS

Study Design

This study employed a Systematic Literature Review (SLR) methodology. The SLR was conducted through two primary stages: a systematic review process and a structured journal identification process based on established methodological guidelines (Triandini et al., 2019). The review followed the PRISMA 2020 (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines. PRISMA provides a flow-diagram framework that assists researchers in conducting systematic reviews through four sequential stages: identification, screening, eligibility assessment, and inclusion of studies for final analysis.

Eligibility Criteria

The literature search focused on studies examining factors influencing healthcare worker performance in healthcare organizations, particularly within healthcare service settings. These criteria served as the basis for the inclusion and exclusion process.

The inclusion criteria were established to ensure that selected articles were relevant to the objectives of the review. Eligible studies included empirical research employing quantitative, qualitative, or mixed-methods approaches, thereby providing robust evidence. Publications were limited to those published between 2020 and 2025 to ensure the recency and relevance of findings, with exceptions made for classical or landmark studies that made significant theoretical or conceptual contributions.

Furthermore, studies had to be conducted in healthcare settings, including both public and private healthcare facilities such as hospitals, community health centers (*Puskesmas*), health offices, and other healthcare institutions. Selected articles were also required to evaluate healthcare worker performance either directly or through relevant indicators, including job performance, adaptive performance, work performance, or other related performance measures.

The exclusion criteria were applied to eliminate studies that did not align with the research objectives. Non-research publications, including editorials, commentaries, and opinion papers lacking empirical evidence, were excluded. Studies conducted outside the healthcare sector such as those in manufacturing, education, or banking were also excluded unless they demonstrated substantial relevance to the variables under investigation. Additionally, articles without accessible full-text versions were omitted because methodological assessment and detailed analysis could not be adequately performed.

PICO Framework

The literature search strategy was developed using the PICO (Population–Intervention/Exposure–Comparison–Outcome) framework, as summarized below:

Component	Operational Definition
Population (P)	Healthcare workers, including physicians, nurses, midwives, and other healthcare professionals employed in healthcare service facilities.
Intervention/Exposure (I/E)	Factors influencing healthcare worker performance, including individual characteristics, organizational factors, leadership, workload, work environment, motivation, competencies, and performance management systems.
Comparison (C)	No specific comparison group was required; comparisons across conditions, groups, or contexts were included when available.
Outcome (O)	Healthcare worker performance measured directly or through indicators such as job performance, work performance, adaptive performance, and quality of healthcare services.

Article Search Process

1. Topic Identification and Keyword Development

The review began by defining the research focus as factors affecting healthcare worker performance within healthcare services. Keywords were formulated using the PICO framework (Population–Exposure–Outcome).

The target population comprised healthcare workers, while exposure variables included individual and organizational determinants such as digital, transformational, and spiritual leadership; emotional and spiritual intelligence; organizational commitment; job satisfaction; workload; organizational citizenship behavior; and digital transformation. The primary outcome of interest was healthcare worker performance.

Keywords were developed in both Indonesian and English and combined using Boolean operators (AND, OR) to maximize search sensitivity and specificity.

2. Search Strategy and Data Sources

A systematic search was conducted across multiple national and international databases, including Garuda, Google Scholar, Scopus, Web of Science, and Emerald. Searches were restricted to the publication

period defined by the inclusion criteria. Search strategies were tailored to the features of each database, and all retrieved records were exported and consolidated into a single reference database to facilitate reference management and duplicate removal.

3. Screening Process

Duplicate records identified across databases were removed before screening. Initial screening was then performed by reviewing article titles and abstracts to identify studies relevant to the research topic. Articles that did not align with the research objectives or failed to meet the inclusion criteria were excluded at this stage. This systematic screening process was implemented to minimize selection bias.

4. Eligibility Assessment

Articles that passed the screening stage underwent full-text review. During this phase, studies were evaluated based on their relevance to healthcare service settings, the relationship between the investigated variables and healthcare worker performance, and their methodological quality, including research design, sample characteristics, measurement instruments, and data analysis methods. Articles failing to satisfy these eligibility criteria were excluded with documented reasons.

5. Study Inclusion and Data Synthesis

Studies meeting all inclusion and eligibility criteria were incorporated into the systematic review. The selected articles were organized into a study mapping table containing key information such as authors, publication year, study title, research objectives, methodology, and principal findings. This mapping served as the foundation for data synthesis using a thematic analysis approach in accordance with the objectives of the review and the PRISMA 2020 guidelines.

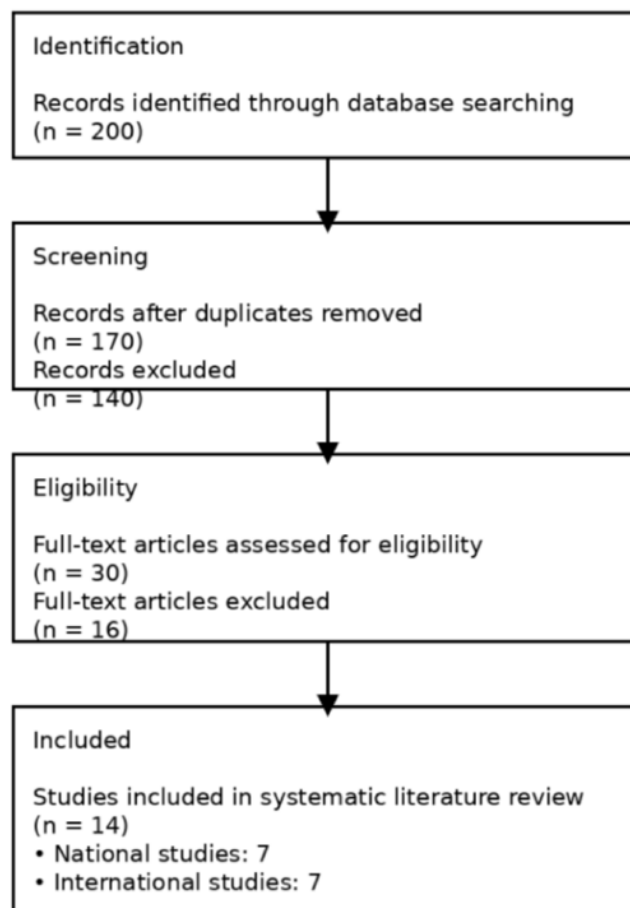


Figure 1. Preferred Reporting Items for Systematic Review and Meta Analyses (PRISMA) Flow Diagram of Study Selection

III. RESULTS

The data sources consisted of 14 national and international scientific articles that had been identified and mapped during the review process. These studies were conducted between 2020 and 2025 across various healthcare settings, including hospitals, community health centers (*Puskesmas*), and health departments.

The literature review revealed a clear thematic pattern and consistent variables across both national and international studies regarding healthcare worker performance. Broadly, the findings can be categorized into two major components: (1) bibliographic characteristics and (2) substantive research findings. The relationships among these variables demonstrate how different determinants interact to shape healthcare worker performance comprehensively.

The bibliographic characteristics included publication year, authorship, and journal source. Most national studies were published between 2020 and 2025, particularly during and after the COVID-19 pandemic, when healthcare workforce performance became an increasingly important issue. Similarly, international studies during this period emphasized themes such as digital leadership, workplace violence, and digital transformation, indicating that healthcare worker performance has become a contemporary and globally relevant research topic, particularly within the context of healthcare digitalization.

No	Author(s) and Year	Year	Title	Findings
1	Desy Resfita & Budi Hartono	2024	The Influence of Leadership and Communication on Healthcare Workers at UPTD Sipayung Public Health Center (Literature Review)	The study found a need to improve leadership and communication aspects among healthcare workers, as these significantly affect patient care and service quality. A significant relationship was identified between leadership, communication, and employee performance.
2	Elida Gultom	2020	The Influence of Emotional, Spiritual, and Intellectual Intelligence on Nurses' Performance During the COVID-19 Pandemic at Surya Insani Hospital, Pasir Pangaraian, Rokan Hulu	Partial (t-test) results showed that emotional, spiritual, and intellectual intelligence had positive and significant effects on nurses' performance. Simultaneous testing (F-test) indicated that these variables jointly positively influenced nurses' performance during the COVID-19 pandemic. The coefficient of determination showed a contribution of 71.5% to nurses' performance.
3	Bahriyahtul Ulum & Puspita Wulansari	2025	The Influence of Digital Leadership and Digital Competence on Employee Performance Mediated by Job Satisfaction in Health Services in Tarakan City	Digital leadership and digital competence did not directly influence performance. However, job satisfaction mediated their positive effects on employee performance in the Tarakan City Health Office.
4	I Gusti Agung Sasih Gayatri & I Dewa Ayu Tita Permata Tabita	2024	The Influence of Emotional and Spiritual Intelligence Through Organizational Commitment on Employee Performance at Negara Regional General Hospital, Jembrana Regency	Emotional and spiritual intelligence significantly and positively influenced organizational commitment and nurses' performance. Organizational commitment significantly affected performance and mediated the relationship between emotional/spiritual intelligence and nursing performance.
5	Waode Khofifah Endarwati, Sri Susanty & Adius Kusnan	2024	The Relationship Between Dual Role Conflict, Emotional Intelligence, and Workload on the Performance of Nurses Caring for Elderly Patients	Emotional intelligence and workload were significantly associated with nurses' performance, with emotional intelligence identified as the most influential variable. Dual role conflict showed no significant relationship with nurses' performance.
6	Ismuhadi & Muhibullah Ali Puteh	2021	The Influence of Emotional and Spiritual Intelligence on Nurses' Performance with Organizational Commitment as an Intervening Variable	Emotional intelligence had a significant positive effect on individual performance. Spiritual intelligence influenced performance through organizational commitment. Both emotional and spiritual intelligence positively affected organizational commitment, which in turn positively influenced performance.
7	Alfato Yusnar	2021	The Influence of Emotional	Emotional intelligence and Organizational

No	Author(s) and Year	Year	Title	Findings
	Kharismasyah, Ericka Esthining Tias Nami Tata & Toufan Aldian Syah		Intelligence, Organizational Citizenship Behavior, and Work Engagement on Nurses' Performance at Majenang Regional General Hospital	Citizenship Behavior (OCB) significantly affected nurses' performance, while work engagement had no significant partial effect. Simultaneously, all variables significantly influenced performance, with OCB being the strongest predictor.
8	Guangyan Luo & Katarzyna Tworek	2022	E-Leadership as a Booster of Employees' Dynamic Capabilities Influence on Job Performance	E-leadership strengthened the positive influence of employees' dynamic capabilities on job performance, particularly in organizations operating under crisis conditions during the COVID-19 pandemic.
9	Najla Abdullah Ahmed Albannai, Muhammad Mustafa Raziq Shaker Bani-Melhem & Muhammad Moazzam	2025	Digital Leadership in the Age of Generative AI: A Systematic Literature Review Using Thematic Analysis	Digital leadership institutionalizes generative AI as part of organizational routines. Human-AI collaboration enhances recruitment and customer experience while promoting sustainability and ethical governance. Adaptive leadership and interpretable AI models were highlighted as essential for long-term competitiveness.
10	Yaqin Li, Ali Nawaz Khan, Yuanyuan Zhang & Naseer Abbas Khan	2025	From Leadership to Digital Maturity in Public Healthcare: Evidence from Pakistan's Digital Transformation Journey	Digital transformational leadership positively affected employee-centered digital transformation (ECDT), which subsequently enhanced organizational digital maturity (ODM). ECDT was more effective when employees were prepared to work alongside AI-based digital technologies.
11	Alexandros Gkatsikos, Angeliki Georgaki & Panagiotis Liargovas	2025	Leading for Performance: Emotional Intelligence, Leadership Style and Organizational Outcomes in Greek Local Governments	Emotional intelligence levels were generally high. Transformational leadership was strongly associated with employee satisfaction, effectiveness, and extra effort, whereas transactional and passive leadership styles showed weaker or negative effects on performance.
12	Emmanuel Agyenim Boateng, Moses Ahomka Yeboah, Abraham Ansong & Isaac Tetteh Kwao	2025	Spiritual Leadership and Adaptive Performance Among Health Workers: The Roles of Optimism and Trust	Spiritual leadership positively influenced adaptive performance among healthcare workers. Optimism mediated this relationship, while trust, although positively associated with performance, did not moderate the relationship between spiritual leadership and adaptive performance.
13	John Haymore, Judy Sun & Dennis Barber	2025	Prepare for the Worst, Hope for the Best: A Qualitative Study on Workplace Violence in Healthcare	The study explored experiences and coping mechanisms related to workplace violence (WPV) and organizational support. Preventive and reactive organizational strategies were recommended to help employees manage WPV effectively.
14	Mouza Almazrouei & Mohammed Alnahhal	2025	Transformational Leadership and Employee Performance in UAE Public Sector: The Role of Digital Transformation and Agility	Transformational leadership significantly improved employee performance. Digital transformation and organizational agility mediated this relationship, with organizational agility showing the stronger mediating effect.

Research Gaps

The reviewed literature highlights several opportunities for future research:

1. Developing a comprehensive model that integrates digital leadership with emotional and spiritual intelligence in healthcare settings, as most existing studies examine these variables separately.
2. Conducting studies in the Indonesian context that explicitly incorporate:
 - Digital transformation and organizational agility as mediating variables.
 - Workplace violence as a contextual moderator influencing the relationship between leadership and performance.
3. Implementing longitudinal research designs to evaluate how emotional intelligence, spiritual intelligence, and digital leadership development influence healthcare worker performance over time, rather than relying predominantly on cross-sectional studies.

IV. DISCUSSION

Based on the results of the systematic literature review of 14 selected articles using the PRISMA methodology, this study provides a comprehensive overview of the influence of various forms of leadership, emotional intelligence, spiritual intelligence, and digital leadership on employee performance, particularly within healthcare organizations and public sector institutions.

The reviewed literature consisted of seven national and seven international studies, demonstrating that this topic is not only relevant in the Indonesian context but has also become a global concern. Overall, the findings indicate that employee performance is not an isolated phenomenon but is shaped by leadership, individual psychological characteristics, and organizational support.

1. The Influence of Leadership on Employee Performance

The literature consistently demonstrates that leadership plays a strategic role in improving employee performance. Several national studies indicate that effective leadership creates a conducive working environment, enhances communication, and promotes the delivery of optimal healthcare services to patients and the broader community.

International evidence reinforces these findings, particularly in relation to transformational and digital leadership. Transformational leadership has been shown to be positively associated with job satisfaction, employee effectiveness, and extra-role behaviors. Meanwhile, digital leadership contributes significantly to strengthening organizational capabilities during technological transformation, especially in times of crisis such as the COVID-19 pandemic. Consequently, leadership functions not only as a mechanism for directing organizational activities but also as a catalyst for adaptation and innovation in rapidly changing work environments.

2. The Role of Emotional and Spiritual Intelligence in Enhancing Performance

The reviewed national studies consistently reveal that emotional intelligence exerts a significant positive influence on employee performance, particularly among nurses and other healthcare professionals. Individuals with high emotional intelligence are better able to regulate their emotions, communicate effectively with colleagues and patients, and adapt to occupational stressors.

In addition to emotional intelligence, spiritual intelligence also contributes positively to performance, both directly and indirectly. Several studies suggest that spiritual intelligence enhances employees' sense of purpose, strengthens organizational commitment, and reinforces moral responsibility in delivering healthcare services.

From an international perspective, spiritual leadership has likewise been found to improve the adaptive performance of healthcare workers, particularly when mediated by optimism and trust. These findings indicate that spiritual dimensions should not be overlooked in human resource management, especially in organizations whose primary mission is service delivery.

3. The Mediating Roles of Job Satisfaction and Organizational Commitment

The literature further demonstrates that job satisfaction and organizational commitment serve as important mediating variables in the relationships between leadership, emotional intelligence, and employee performance.

Several national and international studies have found that leadership and individual competencies do not always exert direct effects on performance. However, when employees experience high levels of job satisfaction and possess strong organizational commitment, these influences become substantially more pronounced.

These findings suggest that optimal performance depends not only on employees' personal capabilities but also on the organization's ability to cultivate a sense of belonging, trust, engagement, and job satisfaction among its workforce.

4. Implications for Organizational Management and Healthcare Services

The findings of this systematic review indicate that improving employee performance requires a holistic and integrated approach, encompassing:

- Strengthening leadership quality, including transformational, digital, and spiritual leadership;

- Developing employees' emotional and spiritual intelligence;
- Enhancing job satisfaction and organizational commitment; and
- Providing organizational support to help employees adapt to change and workplace challenges.

From a practical perspective, these findings imply that leaders particularly within healthcare organizations should focus not only on achieving performance targets but also on fostering human development, recognizing employees as the organization's most valuable asset.

Overall, this systematic literature review demonstrates that employee performance is the product of complex interactions among leadership, psychological, and organizational factors. Evidence from both national and international studies complements and reinforces the conclusion that organizational success is strongly determined by the quality of leadership and the organization's capacity to manage and develop its human resources sustainably.

V. CONCLUSION

This literature review demonstrates that healthcare worker performance is influenced by a combination of psychological, organizational, and technological factors. Emotional intelligence and spiritual intelligence consistently emerge as significant determinants of improved healthcare worker performance. Leadership—including digital, transformational, and spiritual leadership plays a strategic role in fostering a productive, adaptive, and technology-oriented work culture. Organizational factors such as organizational commitment, job satisfaction, and Organizational Citizenship Behavior (OCB) further reinforce these positive effects. In addition, workload and workplace conditions, including workplace violence (WPV), remain critical considerations in efforts to enhance healthcare worker performance.

This completes the translation of the manuscript's main body. The References section consists primarily of citation entries and generally does not require translation beyond preserving the original bibliographic information.

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