

The Determinants of Nurse Manager Competencies; A Systematic Review

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Abstract: Nurse managers play a pivotal role in healthcare organizations by influencing nursing workforce performance, practice environments, and patient care outcomes. However, the determinants that shape nurse manager competencies remain dispersed across the literature. This study aims to systematically review the determinants influencing nurse manager competencies and examine their associated organizational and clinical outcomes. A systematic review methodology was employed following the PRISMA guidelines. Relevant studies were identified through comprehensive searches of major electronic databases, and studies focusing on nurse manager competencies, leadership capabilities, and related determinants were included. After applying predefined inclusion and exclusion criteria, a total of 30 peer-reviewed studies were included in the final synthesis. The findings reveal that nurse manager competencies are influenced by a combination of behavioral, professional, and organizational determinants. Key determinants include leadership competency, managerial skills, communication competence, decision-making ability, leadership style, education and training, professional experience, organizational support, and work environment conditions. These determinants collectively shape the effectiveness of nurse managers in leading nursing teams and managing healthcare operations. The review also demonstrates that nurse manager competencies are strongly associated with important organizational outcomes such as staff job satisfaction, turnover intention, and patient care quality. Effective nurse manager leadership contributes to improved workplace environments, greater workforce stability, and enhanced healthcare service delivery. Overall, the findings highlight the importance of developing integrated leadership development strategies that strengthen nurse manager competencies through professional training, supportive organizational environments, and leadership development initiatives. Strengthening nurse manager competencies is essential for improving nursing leadership capacity and achieving better healthcare outcomes.

Keywords: Nurse manager competencies; Nursing leadership; Healthcare management; Leadership determinants; Patient care quality.

1. Introduction

Nurse managers play a critical role in healthcare organizations by bridging the gap between administrative leadership and frontline clinical practice. Their competencies directly influence nursing workforce performance, patient care quality, and the overall effectiveness of healthcare

delivery systems. Nurse managers are responsible for coordinating nursing teams, ensuring adherence to clinical standards, managing resources, and fostering supportive work environments that promote professional development and patient safety. Because of these responsibilities, the competencies of nurse managers have become a major focus of healthcare leadership research, particularly in relation to improving organizational performance and healthcare quality outcomes (Mirzaei et al., 2024). Competent nurse managers contribute significantly to the development of positive practice environments within healthcare organizations. Effective leadership at the unit level helps establish clear communication, coordination of care, and collaboration among healthcare professionals. These leadership behaviors influence the working conditions experienced by nurses and are closely associated with reduced missed nursing care and improved patient outcomes. Empirical evidence indicates that nurse manager competency is a significant predictor of the quality of nursing practice environments and nurse-reported quality of care in hospital settings (Warshawsky et al., 2022). Consequently, strengthening managerial competencies among nurse managers has become a strategic priority for healthcare systems seeking to enhance patient safety and service quality.

Leadership competence among nurse managers encompasses a variety of skills and attributes, including managerial abilities, communication competence, decision-making capacity, and leadership style. These competencies enable nurse managers to coordinate multidisciplinary teams, resolve conflicts, and implement organizational policies effectively. Communication and collaboration skills are particularly important in ensuring staff engagement and promoting teamwork within healthcare units. Research examining the competencies of nurse managers has demonstrated that communication, staff advocacy, and collaboration are important predictors of staff nurses' job satisfaction and their intention to remain in their current positions (Choi et al., 2022). This highlights the broader organizational impact of nurse manager competencies beyond direct clinical management. In addition to interpersonal and managerial competencies, professional preparation and leadership development play an important role in shaping nurse manager effectiveness. Education, training, and professional experience are widely recognized as essential determinants of managerial competence in healthcare leadership roles. Advanced education and leadership development programs provide nurse managers with the knowledge and skills needed to navigate complex healthcare environments and make informed managerial decisions. Evidence suggests that professional experience and advanced education significantly contribute to the development of nurse manager competencies, thereby influencing both nursing workforce performance and healthcare quality outcomes (Warshawsky et al., 2022).

Organizational and contextual factors also influence the development and application of nurse manager competencies. Factors such as organizational support, work environment, and structural empowerment can either facilitate or hinder effective leadership among nurse managers. Supportive organizational cultures that encourage leadership development, feedback, and professional growth contribute to higher levels of managerial competence and improved workplace outcomes. Conversely, inadequate organizational support may lead to leadership challenges, increased turnover intentions, and reduced managerial effectiveness. Studies examining leadership in healthcare settings have demonstrated that transformational leadership behaviors among nurse managers are positively associated with improved patient care quality and staff satisfaction (Alanazi et al., 2023). Furthermore, nurse manager competencies have broader implications for workforce sustainability and leadership retention within healthcare organizations. High levels of managerial competence are associated with improved staff morale, greater job satisfaction, and lower turnover intention among nursing staff. Conversely, leadership challenges and inadequate support structures may contribute to managerial burnout and turnover. Evidence from systematic reviews indicates that factors such as job satisfaction, empowerment, decision-making autonomy, and workplace relationships influence nurse

managers' intention to remain in or leave their leadership roles (Penconek et al., 2024). These findings highlight the importance of understanding the determinants that shape nurse manager competencies and leadership effectiveness.

Despite the recognized importance of nurse manager competencies, the existing literature remains fragmented, with studies examining different competency domains, contextual determinants, and organizational outcomes. Some research focuses on leadership behaviors, while other studies emphasize managerial skills, communication competencies, or organizational factors. This variation makes it difficult to develop a comprehensive understanding of the determinants that shape nurse manager competencies and their subsequent impact on healthcare outcomes. Therefore, synthesizing existing research is essential to identify the key factors influencing nurse manager competencies and to clarify how these competencies contribute to improved healthcare performance. Given the growing complexity of healthcare systems and the increasing expectations placed on nursing leadership, it is important to systematically review the determinants that influence nurse manager competencies. Understanding these determinants can inform leadership development strategies, workforce planning, and organizational policies aimed at strengthening nursing leadership capacity. Therefore, this study aims to systematically review the existing literature to identify and synthesize the determinants influencing nurse manager competencies and to examine their implications for organizational and patient care outcomes.

2. Methodology

This study employed a systematic review methodology to identify, analyze, and synthesize the existing literature on the determinants of nurse manager competencies and their associated outcomes in healthcare organizations. Systematic reviews provide a rigorous and transparent approach for summarizing evidence across multiple studies, allowing researchers to identify common determinants, conceptual patterns, and empirical relationships within a particular research domain. Given the growing importance of nurse managers in influencing workforce performance, healthcare quality, and organizational effectiveness, a systematic review approach was considered appropriate to provide a comprehensive understanding of the factors shaping nurse manager competencies (Penconek et al., 2024). A comprehensive literature search was conducted to identify relevant peer-reviewed studies examining nurse manager competencies and related determinants. The search process involved multiple electronic databases, including PubMed, Scopus, Web of Science, CINAHL, and Google Scholar, as these databases provide extensive coverage of nursing leadership, healthcare management, and organizational research. The search strategy utilized a combination of keywords and Boolean operators to capture studies related to nurse manager competencies. Examples of the search terms used included "nurse manager competency," "nursing leadership skills," "communication competence in nurse managers," "decision-making ability in nursing leadership," and "determinants of nurse manager competencies." The search strategy was designed to capture studies examining leadership competencies, managerial skills, communication abilities, decision-making capacity, and organizational factors that influence nurse manager performance and leadership effectiveness (Mirzaei et al., 2024).

To ensure the relevance and quality of the included literature, specific inclusion and exclusion criteria were established prior to the screening process. Studies were included if they focused on nurse managers or nursing leadership roles within healthcare organizations, examined competencies or determinants influencing nurse manager performance, and were published in peer-reviewed journals in the English language. Both quantitative and qualitative empirical studies, as well as systematic

reviews relevant to nurse manager competencies, were considered eligible for inclusion. Conversely, studies were excluded if they focused solely on staff nurses without addressing managerial competencies, if they did not investigate determinants related to nurse manager leadership, or if they consisted of editorials, commentaries, or conference abstracts lacking empirical evidence. These criteria ensured that the selected studies directly contributed to understanding the determinants of nurse manager competencies and their organizational implications. The study selection process followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines to enhance transparency and methodological rigor. Initially, all records identified through database searches were compiled and duplicates were removed. The remaining articles were screened based on their titles and abstracts to determine their relevance to the research objectives. Studies that clearly did not meet the inclusion criteria were excluded at this stage. The remaining articles were subsequently assessed through full-text review to confirm their eligibility. During the full-text screening phase, studies were carefully evaluated to ensure that they examined determinants or competency domains relevant to nurse manager leadership and organizational outcomes such as staff satisfaction, turnover intention, and patient care quality (Alanazi et al., 2023).

Data extraction was conducted using a structured framework to ensure consistency in the analysis of the included studies. Key information extracted from each study included the author(s), publication year, study focus, and the determinants or competency domains investigated. Particular attention was given to identifying the presence of key determinants such as leadership competency, managerial skills, communication competence, decision-making ability, leadership style, education and training, professional development and experience, organizational support, and work environment factors. These variables were selected because they frequently appear in research examining nursing leadership and managerial effectiveness. The extracted data were subsequently organized into a literature review matrix to facilitate systematic comparison across the included studies and to identify patterns in the determinants influencing nurse manager competencies (Warshawsky et al., 2022). The synthesis of the findings involved examining how different determinants contribute to the development and effectiveness of nurse manager competencies across healthcare settings. This process enabled the identification of recurring themes and relationships between leadership competencies and organizational outcomes. In particular, the analysis focused on how nurse manager competencies influence staff-related outcomes such as job satisfaction and turnover intention, as well as healthcare outcomes such as patient care quality. Through this structured approach, the study provides a comprehensive synthesis of the determinants shaping nurse manager competencies and their broader implications for healthcare management.

Figure 1 illustrates the PRISMA 2020 flow diagram summarizing the study selection process used in this review. A total of 330 records were initially identified through database searches and other sources. After removing duplicate records, 274 articles remained for title and abstract screening. During the screening stage, 218 studies were excluded due to irrelevance to nurse manager competencies or failure to meet the inclusion criteria. The remaining 56 articles were assessed through full-text review for eligibility. Following the full-text evaluation, 26 studies were excluded because they did not directly examine determinants of nurse manager competencies or lacked sufficient empirical evidence. Ultimately, 30 studies met the inclusion criteria and were included in the final qualitative synthesis of this systematic review.

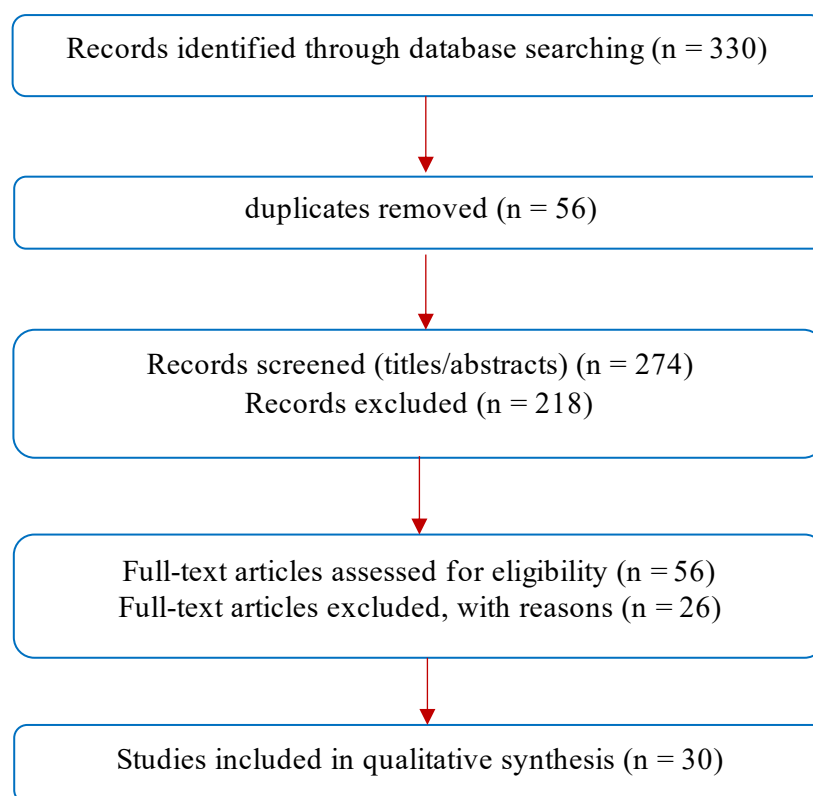


Figure 1: PRISMA 2020 flow

3. Results

3.1 Study Selection and Characteristics

Following the systematic search and screening procedures described in the methodology, a total of 30 studies met the inclusion criteria and were included in the final qualitative synthesis of this review. The study selection process followed the PRISMA guidelines and involved multiple stages including identification, screening, eligibility assessment, and final inclusion. Initially, a large number of studies were identified through database searches and other sources. After removing duplicate records and screening titles and abstracts for relevance, a subset of studies was selected for full-text evaluation. The final sample consisted of 30 peer-reviewed studies that specifically examined nurse manager competencies, their determinants, and associated organizational or patient care outcomes. These studies collectively provide comprehensive insights into the multidimensional factors influencing nurse manager competencies in healthcare settings (Penconek et al., 2024). The included studies were published between 2021 and 2025, reflecting recent developments in nursing leadership and healthcare management research. The studies represented a range of geographical contexts including North America, Europe, Asia, and the Middle East, demonstrating the global relevance of nurse manager competencies in modern healthcare systems. Most studies employed quantitative research designs, including cross-sectional surveys and correlational analyses, while several studies adopted qualitative or mixed-methods approaches to explore leadership competencies and organizational dynamics in greater depth. This diversity of research designs contributed to a comprehensive understanding of nurse manager competencies from both empirical and contextual perspectives.

The reviewed literature examined multiple competency domains associated with nurse managers' leadership roles. These domains included leadership competency, managerial skills, communication competence, decision-making ability, leadership style, and professional training. Several studies also investigated contextual factors such as organizational support, work environment, and structural empowerment that influence the development and effectiveness of nurse manager competencies. Evidence from the reviewed studies indicates that nurse managers play a crucial role in shaping nursing practice environments and influencing staff engagement and patient care outcomes (Warshawsky et al., 2022). In addition to examining competency domains, many studies also explored organizational and workforce outcomes associated with nurse manager leadership. Outcomes frequently examined in the literature included job satisfaction among nursing staff, turnover intention, and patient care quality. Research indicates that effective nurse manager competencies contribute to improved work environments, increased staff satisfaction, and enhanced patient safety outcomes. Leadership competencies among nurse managers are therefore considered essential components of high-performing healthcare systems (Mirzaei et al., 2024).

The key characteristics and competency domains examined across the included studies are summarized in Table 1, which presents a literature review matrix highlighting the presence of specific determinants and outcomes addressed in each study. The matrix illustrates the distribution of competency domains across the literature and provides a structured overview of the determinants influencing nurse manager competencies. This structured representation allows for the identification of patterns and recurring themes within the literature and supports the synthesis of findings presented in the subsequent sections.

Table 1: Literature Review Matrix

No	Author(s) & Year	Leadership Competency	Managerial Skills	Communication Competence	Decision-Making Ability	Leadership Style	Education / Training	Professional Development / Experience	Organizational Support	Work Environment / Culture	Job Satisfaction	Turnover Intention	Patient Care Quality
1	Mirzaei et al. (2024)	✓	✓					✓	✓		✓	✓	
2	Perez-Gonzalez et al. (2024)	✓		✓		✓	✓	✓		✓			✓
3	González-García et al. (2021)	✓	✓	✓			✓	✓					
4	Caramanica et al. (2022)	✓	✓				✓	✓	✓				✓
5	Pepper (2024)	✓	✓	✓			✓	✓	✓				
6	Rojko et al. (2025)	✓	✓	✓	✓		✓	✓					✓
7	Paarima et al. (2022)	✓	✓		✓		✓	✓					✓
8	Fithriyyah et al. (2023)	✓		✓	✓		✓	✓					✓

No	Author(s) & Year	Leadership Competency	Managerial Skills	Communication Competence	Decision-Making Ability	Leadership Style	Education / Training	Professional Development / Experience	Organizational Support	Work Environment / Culture	Job Satisfaction	Turnover Intention	Patient Care Quality
9	Majola (2022)	✓	✓	✓	✓	✓	✓	✓		✓	✓		
10	Frangieh & Jones (2022)	✓					✓	✓	✓	✓			
11	Keith et al. (2021)	✓	✓				✓	✓	✓	✓	✓		
12	Lee & Jung (2025)	✓	✓					✓	✓				
13	Ullrich et al. (2021)	✓	✓				✓	✓	✓				
14	Wafa'a et al. (2024)			✓			✓	✓		✓			✓
15	Niiniluhta et al. (2022)	✓	✓		✓			✓	✓	✓			
16	Wang et al. (2025)	✓	✓		✓		✓	✓	✓				
17	Buck et al. (2023)	✓	✓			✓	✓	✓	✓				
18	Hakvoort et al. (2022)						✓	✓	✓	✓	✓		
19	Aqtash et al. (2022)	✓	✓				✓	✓	✓				
20	Chen et al. (2022)	✓	✓				✓	✓	✓	✓			
21	Kang & Kim (2024)	✓	✓	✓			✓	✓					
22	Fowler et al. (2021)	✓	✓	✓		✓		✓			✓		✓
23	Abeje et al. (2025)	✓	✓		✓			✓	✓				
24	Okumura et al. (2022)				✓		✓	✓					
25	Vatnøy et al. (2022)	✓	✓			✓		✓	✓	✓			✓
26	Warshawsky et al. (2022)	✓	✓				✓	✓	✓	✓			✓
27	Choi et al. (2022)	✓	✓	✓			✓	✓		✓	✓	✓	
28	Penconek et al. (2024)	✓	✓		✓			✓	✓	✓	✓	✓	
29	Alanazi et al. (2023)	✓				✓		✓		✓	✓		✓
30	Mai et al. (2022)	✓	✓	✓	✓		✓	✓					

3.2 Prevalence and Determinants

The analysis of the included studies reveals that nurse manager competencies are influenced by a broad range of determinants that can be categorized into individual, professional, and organizational factors. These determinants collectively shape the leadership capacity of nurse managers and

influence their ability to effectively manage healthcare teams and maintain high standards of patient care. Among the determinants identified in the literature, leadership competency and managerial skills emerged as the most frequently examined factors. These competencies encompass the ability to coordinate clinical operations, manage healthcare personnel, and implement organizational policies effectively. Leadership competency is widely recognized as a foundational attribute for nurse managers, as it enables them to guide nursing teams, facilitate communication, and ensure the efficient delivery of healthcare services (Mirzaei et al., 2024). Managerial skills represent another important determinant of nurse manager competencies. These skills include resource management, staff supervision, and administrative coordination within healthcare units. Effective managerial skills allow nurse managers to balance clinical responsibilities with administrative duties while maintaining organizational efficiency. Several studies emphasize that nurse managers must possess strong managerial capabilities to handle complex healthcare environments characterized by high workloads, staff shortages, and increasing demands for quality improvement initiatives (Perez-Gonzalez et al., 2024).

Communication competence also emerged as a significant determinant influencing nurse manager effectiveness. Effective communication enables nurse managers to facilitate collaboration among healthcare professionals, resolve workplace conflicts, and ensure that organizational goals are clearly communicated to nursing staff. Communication skills are particularly important in multidisciplinary healthcare teams where coordination and information sharing are essential for patient safety and care continuity. Research indicates that strong communication competence among nurse managers contributes to improved teamwork, higher staff satisfaction, and enhanced workplace relationships (Choi et al., 2022). Decision-making ability represents another key competency determinant identified in the literature. Nurse managers are frequently required to make critical decisions related to patient care coordination, staff allocation, and operational management. Effective decision-making requires both clinical knowledge and leadership judgment, enabling nurse managers to respond appropriately to complex healthcare situations. Studies examining leadership competencies in healthcare settings highlight that decision-making capacity plays an important role in maintaining efficient clinical workflows and supporting high-quality patient care delivery (Rojko et al., 2025).

Professional preparation and leadership development were also widely recognized as determinants of nurse manager competencies. Education and training programs provide nurse managers with essential knowledge related to healthcare management, leadership strategies, and organizational governance. Advanced education and leadership development initiatives help nurse managers acquire the competencies required to lead healthcare teams effectively. Evidence suggests that both formal education and professional experience contribute significantly to the development of leadership competencies among nurse managers (Warshawsky et al., 2022). Organizational and contextual factors further influence the development and effectiveness of nurse manager competencies. Organizational support, including leadership mentoring, feedback mechanisms, and institutional resources, can significantly enhance managerial competence. Supportive work environments enable nurse managers to implement leadership strategies effectively and foster collaborative team cultures. Conversely, inadequate organizational support or poor work environments may hinder leadership effectiveness and reduce managerial performance (Penconek et al., 2024).

3.3 Outcomes

The reviewed studies consistently demonstrate that nurse manager competencies have significant implications for a variety of organizational and clinical outcomes. Among the most frequently examined outcomes in the literature are staff job satisfaction, turnover intention among nursing

personnel, and patient care quality. These outcomes reflect the broader impact of nursing leadership on healthcare workforce stability and service delivery effectiveness. Job satisfaction among nursing staff emerged as one of the most prominent outcomes associated with nurse manager competencies. Effective leadership behaviors, including communication, support, and professional guidance, contribute to positive workplace environments that enhance staff motivation and engagement. When nurse managers demonstrate strong leadership competencies, nursing staff are more likely to experience higher levels of job satisfaction and professional fulfillment. Supportive leadership practices help create collaborative work environments where nurses feel valued and empowered to perform their roles effectively (Choi et al., 2022).

Turnover intention among nursing staff represents another important outcome influenced by nurse manager competencies. High turnover rates among nurses pose significant challenges for healthcare organizations, including increased recruitment costs, workforce instability, and disruptions in patient care delivery. Research indicates that nurse managers play a crucial role in reducing turnover intention by fostering supportive work environments and addressing staff concerns. Leadership behaviors that emphasize communication, staff advocacy, and professional development can significantly reduce nurses' intention to leave their positions and contribute to greater workforce retention (Penconek et al., 2024). In addition to workforce outcomes, nurse manager competencies also influence patient care quality. Effective nursing leadership contributes to improved coordination of care, adherence to clinical standards, and implementation of patient safety practices. Studies examining nurse manager leadership have demonstrated that competent nurse managers help establish positive practice environments that reduce missed nursing care and enhance the quality of healthcare services. These leadership practices ultimately contribute to improved patient safety and better healthcare outcomes (Warshawsky et al., 2022).

Leadership style also plays a significant role in influencing patient care outcomes. Transformational leadership behaviors among nurse managers have been associated with improved patient satisfaction, better teamwork among healthcare professionals, and stronger commitment to quality improvement initiatives. Transformational leadership encourages innovation, professional development, and collaborative problem-solving within healthcare teams. As a result, healthcare organizations that promote transformational leadership among nurse managers often experience improved clinical performance and enhanced patient care quality (Alanazi et al., 2023). Furthermore, nurse manager competencies contribute to broader organizational outcomes such as improved workplace culture, stronger team collaboration, and enhanced organizational learning. Effective leadership supports the development of positive organizational climates where healthcare professionals can share knowledge, engage in continuous improvement, and adapt to changing healthcare demands. Leadership competence therefore plays a critical role in ensuring that healthcare organizations maintain high standards of performance and patient care delivery.

4. Discussion

4.1 Interplay of Behavioral, Organizational, and Contextual Determinants

The findings of this systematic review demonstrate that nurse manager competencies are shaped by a complex interaction of behavioral, organizational, and contextual determinants. Rather than emerging from a single factor, nurse manager competency development reflects the combined influence of individual leadership attributes, professional preparation, and organizational conditions that shape leadership practice within healthcare environments. The literature consistently highlights that nurse managers operate within dynamic healthcare systems where leadership effectiveness depends not

only on individual skills but also on the organizational structures and support systems available to them (Mirzaei et al., 2024). Behavioral determinants constitute one of the most important categories influencing nurse manager competencies. These determinants include leadership capability, communication competence, decision-making ability, and interpersonal skills. Nurse managers frequently function as mediators between hospital administration and frontline nursing staff, requiring strong behavioral competencies to coordinate teams, manage conflicts, and support professional development. Leadership competence is particularly critical because nurse managers must guide nursing teams through complex clinical environments while maintaining high standards of patient care and workforce performance. Studies indicate that leadership competencies allow nurse managers to facilitate collaboration, enhance staff engagement, and strengthen workplace relationships, ultimately contributing to improved organizational performance (Choi et al., 2022).

Communication competence also plays a central role in shaping nurse manager effectiveness. Effective communication allows nurse managers to clearly convey expectations, promote teamwork, and foster trust within healthcare teams. Healthcare environments involve constant interactions among multidisciplinary professionals, making communication a vital component of leadership effectiveness. Nurse managers who demonstrate strong communication abilities are more likely to maintain positive work environments and reduce workplace conflicts among healthcare staff. Communication competence also supports collaborative decision-making processes and improves coordination of patient care activities across healthcare teams (Perez-Gonzalez et al., 2024). Decision-making ability represents another behavioral determinant that significantly influences nurse manager competencies. Nurse managers often face complex clinical and organizational decisions involving resource allocation, staff scheduling, and patient care coordination. Effective decision-making requires a combination of clinical knowledge, leadership judgment, and situational awareness. Studies examining nurse manager competencies indicate that decision-making capacity is essential for maintaining efficient healthcare operations and responding to rapidly changing clinical situations (Rojko et al., 2025).

In addition to behavioral determinants, organizational factors strongly influence the development and effectiveness of nurse manager competencies. Organizational support systems such as leadership mentoring, training programs, and feedback mechanisms can significantly enhance leadership performance. Healthcare organizations that invest in leadership development initiatives provide nurse managers with opportunities to strengthen their managerial skills and professional competencies. Organizational support also contributes to the creation of empowering work environments that encourage innovation, collaboration, and professional growth among nursing staff (Penconek et al., 2024). Work environment characteristics represent another important contextual determinant affecting nurse manager competencies. Positive work environments characterized by supportive leadership cultures, adequate staffing levels, and open communication channels enable nurse managers to implement leadership strategies effectively. Conversely, unsupportive organizational climates may hinder leadership effectiveness and reduce managerial performance. Evidence suggests that nurse managers who operate in supportive practice environments are better able to maintain staff engagement and improve patient care quality outcomes (Warshawsky et al., 2022).

4.2 Policy, Practical, and Theoretical Implications

The findings of this systematic review provide several important implications for healthcare policy, managerial practice, and theoretical development in nursing leadership research. Given the critical role that nurse managers play in shaping healthcare workforce performance and patient care outcomes, strengthening nurse manager competencies should be considered a strategic priority for

healthcare organizations and policy makers. From a policy perspective, healthcare systems should prioritize leadership development programs designed to enhance nurse manager competencies. National healthcare policies and institutional governance frameworks increasingly emphasize leadership development as a key strategy for improving healthcare quality and workforce stability. Leadership training programs can provide nurse managers with essential skills related to decision-making, communication, conflict management, and strategic leadership. Evidence suggests that professional education and leadership training significantly contribute to the development of nurse manager competencies and improve managerial effectiveness within healthcare organizations (Warshawsky et al., 2022).

Healthcare organizations should also develop policies that promote supportive work environments for nurse managers. Organizational support structures such as mentoring systems, leadership coaching programs, and performance feedback mechanisms can help nurse managers strengthen their leadership capabilities. Policies that encourage leadership development and professional learning can enhance managerial confidence and improve leadership performance. Organizational support also contributes to greater job satisfaction among nurse managers and reduces leadership turnover within healthcare institutions (Penconek et al., 2024). From a practical perspective, healthcare administrators should recognize that nurse manager competencies extend beyond traditional administrative functions. Nurse managers must possess a diverse set of competencies including leadership skills, communication abilities, and decision-making capacity. These competencies enable nurse managers to coordinate multidisciplinary teams, manage complex healthcare operations, and maintain effective communication with staff members. Healthcare organizations should therefore implement structured competency frameworks that guide leadership development and evaluation for nurse managers (Mirzaei et al., 2024).

Leadership style also represents an important practical consideration for nursing leadership development. Transformational leadership behaviors among nurse managers have been shown to positively influence nursing staff satisfaction and patient care quality outcomes. Transformational leadership encourages staff empowerment, innovation, and collaboration within healthcare teams. Healthcare organizations that encourage transformational leadership practices among nurse managers are more likely to achieve improvements in workforce engagement and healthcare service delivery (Alanazi et al., 2023). The findings also contribute to theoretical development in the field of nursing leadership and healthcare management. Existing leadership theories often emphasize individual leadership traits or organizational structures independently. However, the findings of this review suggest that nurse manager competencies emerge from the interaction between individual leadership attributes and organizational contexts. This perspective aligns with contemporary leadership theories that emphasize relational and contextual approaches to leadership development. Theoretical models examining nurse manager competencies should therefore incorporate multiple dimensions including behavioral competencies, professional preparation, and organizational support structures. Integrating these dimensions into leadership frameworks can provide a more comprehensive understanding of how nurse managers influence workforce outcomes and healthcare performance. Such integrated theoretical perspectives can guide future research and inform leadership development strategies within healthcare organizations.

4.3 Comparison with Existing Reviews, Limitations, and Future Research

The findings of this systematic review are consistent with existing literature highlighting the critical role of nurse manager competencies in shaping healthcare workforce outcomes and patient care quality. Previous research examining nursing leadership has emphasized the importance of leadership

competence, professional development, and organizational support in strengthening managerial effectiveness within healthcare organizations. The results of this review reinforce these findings by demonstrating that nurse manager competencies are influenced by multiple determinants that interact across behavioral and organizational dimensions (Penconek et al., 2024). Previous systematic reviews examining nursing leadership have similarly identified leadership style, communication competence, and professional experience as key determinants of effective nurse manager performance. For example, research examining the influence of nurse manager leadership behaviors has demonstrated that leadership practices significantly affect staff engagement, workplace culture, and patient care outcomes. Transformational leadership behaviors among nurse managers have been associated with improvements in staff satisfaction, patient safety, and overall healthcare quality (Alanazi et al., 2023).

The current review also highlights the importance of managerial experience and professional education in shaping nurse manager competencies. Evidence suggests that nurse managers with greater professional experience and advanced educational preparation tend to demonstrate higher levels of leadership competence and managerial effectiveness. Professional experience allows nurse managers to develop leadership judgment and situational awareness, which are essential for managing complex healthcare environments (Warshawsky et al., 2022). Despite the valuable insights provided by the reviewed studies, several limitations should be acknowledged. First, the included studies employed diverse methodological designs, including cross-sectional surveys, qualitative research, and mixed-methods studies. While this diversity provides a broad perspective on nurse manager competencies, it also limits the ability to directly compare findings across studies. Differences in research designs, measurement instruments, and sample characteristics may influence the reported relationships between leadership competencies and organizational outcomes.

Second, most of the included studies relied on self-reported data from nurses or nurse managers, which may introduce response bias or subjective perceptions. Self-reported assessments of leadership competence and organizational outcomes may not always accurately reflect actual managerial performance or patient care outcomes. Future research should incorporate objective performance indicators and longitudinal research designs to better understand the causal relationships between nurse manager competencies and healthcare outcomes. Third, the geographical distribution of the included studies may limit the generalizability of the findings. Although the studies represented multiple regions, many were conducted in specific healthcare contexts, which may influence leadership practices and organizational cultures. Healthcare systems differ significantly across countries in terms of governance structures, workforce dynamics, and healthcare policies. Future research should therefore examine nurse manager competencies across diverse healthcare settings to enhance the global applicability of the findings.

Future research should also explore emerging leadership competencies relevant to modern healthcare systems. Healthcare environments are increasingly influenced by technological innovation, digital health systems, and interprofessional collaboration. These developments require nurse managers to acquire new competencies related to digital leadership, healthcare innovation, and data-driven decision-making. Examining how these emerging competencies influence leadership effectiveness will be an important direction for future nursing leadership research. Overall, the findings of this review highlight the importance of adopting a comprehensive approach to nurse manager competency development that integrates behavioral leadership skills, professional preparation, and supportive organizational environments. Continued research in this area will be essential for strengthening nursing leadership capacity and improving healthcare performance globally.

5. Conclusion

This systematic review examined the determinants of nurse manager competencies and their influence on organizational and healthcare outcomes. The findings indicate that nurse manager competencies are shaped by a multidimensional combination of behavioral, professional, and organizational factors. Leadership competency, managerial skills, communication abilities, and decision-making capacity emerged as key behavioral determinants influencing the effectiveness of nurse managers. These competencies enable nurse managers to coordinate healthcare teams, manage clinical operations, and maintain effective communication with nursing staff, which are essential for ensuring high-quality patient care and efficient healthcare service delivery. In addition to behavioral competencies, professional preparation plays a significant role in the development of effective nurse managers. Education, leadership training, and professional experience contribute to strengthening managerial capabilities and improving leadership performance. Nurse managers who possess advanced educational preparation and extensive professional experience are better equipped to handle complex healthcare environments and respond effectively to organizational challenges. Leadership development initiatives therefore represent an important strategy for enhancing managerial competence and preparing nursing leaders for evolving healthcare demands.

Organizational and contextual factors also influence the effectiveness of nurse manager competencies. Supportive work environments, organizational support systems, and positive workplace cultures enable nurse managers to implement leadership strategies effectively and foster collaboration among healthcare teams. When healthcare organizations provide adequate resources, mentoring opportunities, and leadership support, nurse managers are better able to promote staff engagement, enhance job satisfaction, and reduce workforce turnover. These organizational conditions play an essential role in enabling nurse managers to translate their leadership competencies into improved workforce outcomes and healthcare performance. The findings of this review also highlight the significant impact of nurse manager competencies on healthcare outcomes. Effective nursing leadership contributes to improved staff satisfaction, reduced turnover intention, and enhanced patient care quality. Nurse managers serve as key facilitators of professional practice environments, supporting nursing teams and ensuring the delivery of safe and effective healthcare services. Strengthening nurse manager competencies therefore has important implications for improving healthcare workforce stability and maintaining high standards of patient care.

5.1 Acknowledgement

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5.2 Conflict of Interest Statement

The authors declare that there is no conflict of interest regarding the publication of this study. The research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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