Original Research

Impact of Nurse Leaders Behaviors on Nursing Staff Performance: A Systematic Review of Literature

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Abstract

Nursing leadership is critical in facilitating and improving nurse performance, which is essential for providing quality care and ensuring patient safety. The aim of this study is to explore the relationship between nursing leadership and nurse performance by understanding the leadership behaviors and factors that motivate nurses to perform well. To study the factors that nurses believe motivate them to perform better, a systematic review was undertaken, correlating these factors to leadership behaviors/styles. The PRISMA guidelines were followed to identify relevant articles. After applying the selection criteria, 11 articles were included in the final analysis. Overall, 51 elements that influence nurses' motivation to perform better were found and categorized into 6 categories, including autonomy, competencies, relatedness, individual nursing characteristics, relationships and support, and leadership styles/practices. It has been discovered that both direct and indirect nursing leadership behaviors affect nurses' performance. A better understanding of the factors that motivate nurses to perform well and facilitating them in the work environment through leadership behaviors/styles can improve nurses' performance. There is a need to increase research on nurse leadership and nurses' performance in the current innovative and technologically integrated work environment to identify new factors of influence.

Keywords

leadership, performance, motivation, systematic review, nurse

What do we already know about this topic?
Effective leadership in nursing can have a positive impact on nurse performance, job satisfaction, and patient outcomes.

How does your research contribute to the field?
It can provide new insights and understanding of how different leadership styles and practices impact nurse performance and patient outcomes

What are your research's implications toward theory, practice, or policy?
To identify effective leadership practices that promote positive work environments, better nurse performance, and ultimately better patient outcomes, thus leading to improved patient contentment, safety, and care quality.

Introduction

Nurses are essential resources in hospitals as they spend more time with patients than any other healthcare personnel. Therefore, they play a significant role in ensuring quality care and patients' safety by improving their performance. Despite accounting for 50% of the global healthcare workforce,[1] there is a severe shortage of nursing personnel in almost all countries. Developed countries such as the USA need an additional 275 000 nurses from 2020 to 2030.[2]

According to the International Council of Nurses, there is a need for 13 million nurses globally to fill the shortage gap in the future.[3]

The shortage of nurses has resulted in an increasing workload for existing nurses, significantly affecting their work life and performance, which can have a direct impact on the quality of care delivered.[4] Nursing performance is influenced by cognitive, physical, and organizational factors.[5] Various factors such as high workloads, lack of technological support,[6] skills and competencies (eg, problem-solving ability, nursing informatics competencies),[7] communication skills and confidence,[8] commitment,[9] quality of work life,[10] job stress,[11] and motivation[12] can significantly influence nursing performance. It is interesting to observe that most of these factors are a part of leadership management, focusing on providing training and support and addressing the issues affecting nurses.

Quality leadership was identified to be one of the major factors for promoting behaviors among the nurses for exhibiting greater responsibility and physical activity.[13] Similarly, workplace incivility from supervisors was identified to be negatively related to nursing performance.[14] Nursing leadership behaviors play a crucial role in shaping nursing performance, thereby achieving the organizational goals of ensuring the delivery of quality care and achieving better patient outcomes.[15-17] Considering the nursing leadership theories, transformational and transactional leadership styles[18,19] and their impact on nurses' satisfaction, burnout, and resilience have received lot of attention.[17,18,20] However, most of the studies investigated the leadership styles influence on the factors affecting the nursing performance, but very few studies have focused on the leadership factors influencing the nurses' motivation to perform well. An attempt in this aspect was made in a study[21] through the systematic review, but it only included studies till 2006. However, major changes have been observed in the factors influencing nursing performance in the past decade. The use of the internet and telecommunication technologies have significantly changed the quality of work of nurses, and led to the new forms of remote practices such as telenursing.[22] Furthermore, advanced innovative technologies such as artificial intelligence, intelligent systems such as IoTs[23,24] have significantly contributed to the nursing practice.[25,26] Additionally, due to the sudden surge of patients caused by the recent Covid-19 pandemic, nurses have experienced heightened levels of burnout,[27] which has significantly affected nurses work-life balance and their performance.[28,29] Furthermore, the COVID-19 pandemic

has rendered the nursing shortage a critical issue on a global scale, according to the ICN study report 2023.[30] There are issues including understaffing and low job satisfaction, as well as an aging nursing workforce and a lack of young individuals entering the profession. The report highlighted that nurses' shortage has grown significantly from 30.6 million in 2019 after the pandemic began. Furthermore, it identified that key research from surveys and reviews in the past 3 years, after the emergence of Covid-19 pandemic, there is a significant increase in nurses burn-out. This has resulted in burn-out nurses either leaving their employment or reducing their work hours, which has led to additional burden of work, increasing levels of stress among the resilient working nurses.[30] Therefore, significant changes in the factors that influence nurses' motivation to perform well might have occurred. Considering these developments, it is necessary to extend the review conducted in Brady Germain and Cummings,[21] to identify the new developments in the research arena. For that, the purpose of this study is to conduct a systematic review for examining the factors related to nurses' leadership and nurses' performance. To achieve this objective, the following research questions are formulated.

RQ1: What factors do nurses think affect their drive to excel in their work? The ambition and aptitude of the nurses to achieve their companies' objectives of high-quality care and patient safety serve as the benchmarks for performance in this context.

RQ2: Which leadership traits are associated with strong nurse performance? In this context, behaviors are described as the traits or tactics used by leaders to control nurses' performance in order to accomplish organizational objectives, such as patient safety and high-quality care.

Materials and Methods

The protocol for this study is registered with PROSPERO (registration number: CRD42023387324), the registration date 15/01/2023.

Design

Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines[33] was used for conducting the systematic review of recent literature and reporting the

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findings relating to nursing leadership attributes and nursing performance.

Search Methods

Various databases, including CINAHL, Cochrane, EMBASE, HealthSTAR, Medline, and PsychINFO, were utilized to search for relevant studies. The search terms "nursing performance," "nurse motivation," "nursing leadership," and "nursing leadership behaviors" were combined using Boolean operators "AND" and "OR." To improve search sensitivity, keywords from the identified studies were also used in the search process. Only studies published in English were considered. Additionally, studies published within the last 20 years were included to ensure the search was current and covered new literature since the previous study by 23. Therefore, those studies before 2003 are excluded. Inclusion and exclusion criteria, as presented in Table 1, were applied for selecting studies. Figure 1 provides a detailed overview of the search strategy used to select studies.

Quality Appraisal

Two methods were used to rate the methodological quality of the chosen studies. The PRISMA[31] methodological quality criterion, which contains 27 elements, was used to systematic reviews. TREND[32] was used to evaluate quasi-experimental studies. TREND[32] comprises 22 criteria. The last criterion received a "yes," a "no," or a "unclear" rating. The "yes" items were added up to create a total score for each study, which ranged from zero to the total number of items that were examined. Studies with low methodological quality were deemed to be omitted from the review if they received a score of less than or equal to 50% on the evaluated items. Studies were deemed to be of medium or high quality and included in the review if they scored more than 50% on the analyzed items.

Data Extraction

Quantitative studies were the source of data, which encompassed details such as the author, publication year, research aim, sample size, methodology employed, independent and dependent variables, measurement criteria, reliability and validity of the measures, analytical techniques, and findings. The number of studies examined and the key conclusions were retrieved for systematic reviews.

Results

Search Outcomes

Initially, 1632 articles were identified from different electronic databases, and 16 articles were identified through manual searching of journals, resulting in a total of 1648 articles. After removing 587 duplicates, 1061 articles were screened for titles and abstracts. Out of these, 984 articles were excluded based on title and abstract assessment, and 77 articles were selected for full-text reviews. After reviewing the full-text articles, 64 articles did not meet the inclusion criteria and were excluded. Finally, 13 articles were deemed eligible for quality assessment. Two articles did not meet quality criteria and were excluded resulting in 11 articles that are included in this review (See Figure 1).

Study Characteristics

Table 2 exhibits the attributes of the studies that were incorporated in this review. It can be observed that 6 studies were published recently (1 study in 2020, 3 studies in 2021, and 2 studies in 2022). Majority of the participants in most of the studies were females and were aged above 30 years with high work experience.

Focusing on the leadership styles, 3 studies considered the effect of different leadership styles on nursing performance, 2 studies exclusively focused on transformational leadership, one each on sustainable leadership, entrepreneurial leadership, and servant leadership. There were 10 studies that have adopted quantitative approach of survey in data collection, and different analysis techniques were utilized in these studies. Only one systematic review was included that focused on the leadership attributes and nursing performance.

Theoretical Framework

Theories in research provides a rationale for developing hypothesis and testing the relationship between the variables,[44] and therefore it is important that the research studies should be guided by theoretical framework or a model that either confirmation of existing theory or generating new theories. Ten out of the 11 studies in this review were guided by a theoretical framework or a model. Six studies[33-37,45] in this review adopted leadership theories or developed a model for testing the leadership attributes on nursing performance. Social exchange theory and self-determination theories were used in Kül and Sönmez,[38] supporting the role of servant leadership in developing the innovative behavior of nurses (guided by social exchange) and motivating them in improving their performance by developing autonomy, competence and relatedness (self-determination theory: extrinsic motivation from leaders leading to intrinsic motivation among nurses).[39] Another study conducted by Salanova et al[40] emphasized the significance of social interactions in the work environment in improving self-efficacy by adopting social cognitive theory, where self-efficacy is considered as the primary personal resource, and transformational leadership as contextual resource for motivating nurses. In extending the leadership theories, another study[41] linked it with Innovative work behavior theory.

This theory contends that while functional competences give entrepreneurial nursing leaders the ability to inspire

Table 1. Inclusion and Exclusion Criteria.

Inclusion	Exclusion
Experimental and quasi experimental studies that focus on nursing leadership and nursing performance	Opinion based articles; Studies that include nursing students as sample
Qualitative studies and reviews on the subject with a rigorous systematic methodology	Studies that included nurses who work in outpatient and home settings
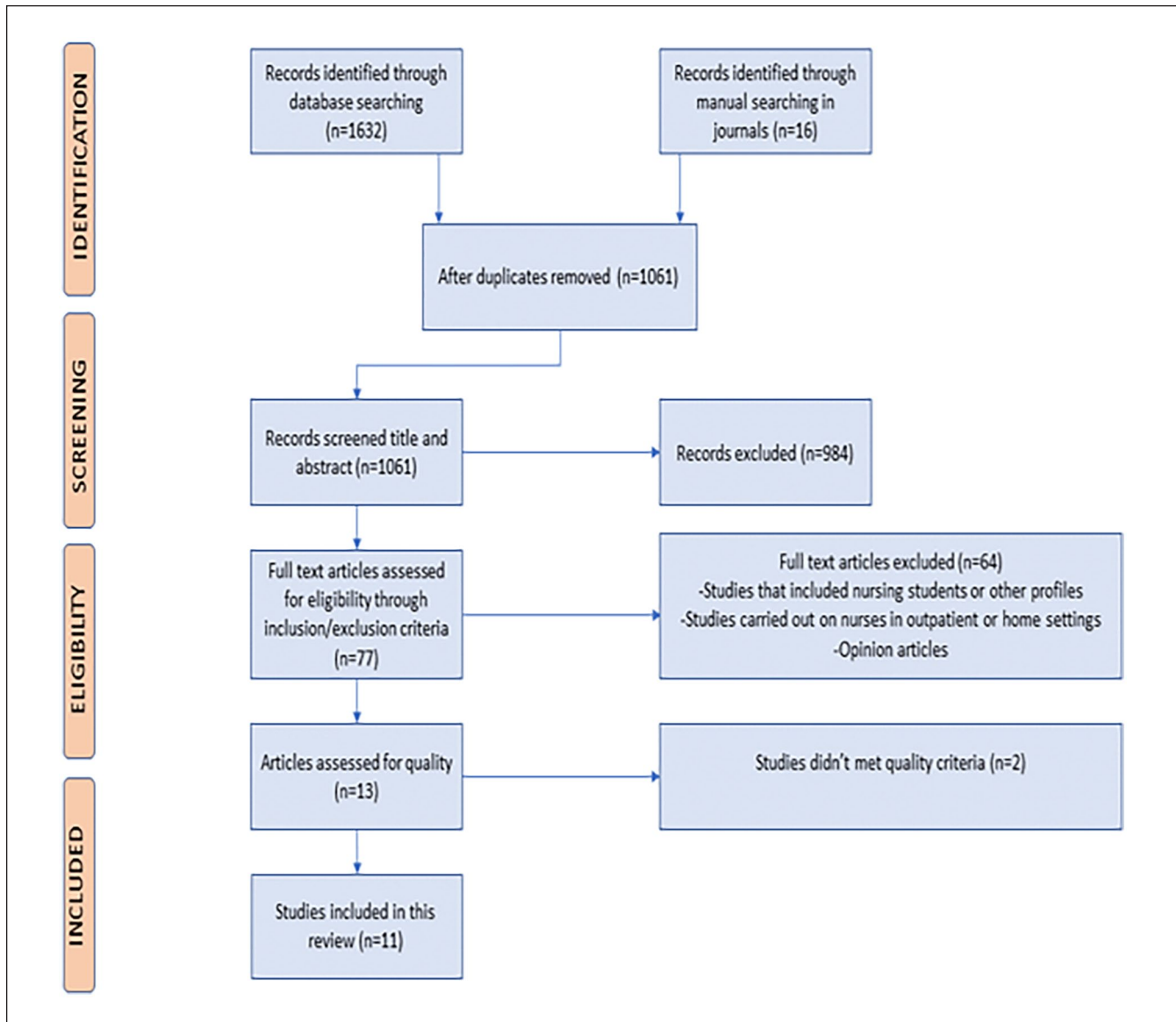
Figure 1. PRISMA flow diagram.

nurses to take innovative action while providing care, personal competencies enable them to establish an innovative vision. This builds confidence and commitment to adopting new ideas.[42,43] Wang et al[37] argued that leadership is a position that can be achieved by gaining skills, which contradicts leadership theories that suggest some people are born leaders. This also contradicts psychological theory that women have low aggressiveness and avoid leadership positions[46,47] However, recent studies focus on theories relevant to changes in the nursing industry, including the introduction of innovative technologies and new business models such as gig economy and eHealth. Many frameworks continue to focus on leadership styles such as transformational and transactional styles and relevant attributes that have been extensively researched

Table 2. Summary of Study Characteristics Included in This Review.

Author	Study purpose	Study type	Sample	Measure of leadership/ work factors	Measures of nurse performance	Instruments	Reliability and validity	Analysis	Outcomes	Level of evidence	Quality assessment
Kim and Sim[33]	To analyze the effect of nursing leadership on nursing practice behaviors	Quantitative	N = 284; 270 F, 14 M; Average age = 42.9 years	Conditions for work effectiveness including access to opportunities, resources, information, and support. Caring efficacy	Time spent on nursing care, self-efficacy; relationship between empowerment and self-efficacy	Conditions for Work Effectiveness–II; Caring Efficacy Scale; Manager's Activities Scale; Nurse Activity Scale	Reported as satisfactory	Multigroup path analysis	Nursing leadership contributed to the empowerment and self-efficacy on practice behaviors; Nursing leadership contributed to the 46% of the variance in nursing practice behaviors overall.	Primary evidence/ information from surveys	TREND Statement: 18/22
El-Azim et al[34]	To examine the structural relationship among clinical nurses' communication ability, self-leadership, self-efficacy, and nursing performance	Quantitative	168 nurses (145 staff nurses; 23 nurse managers); 157 F, 11 M; More than 70% participants >30 years	Action oriented strategies, self-reward strategies, constructive thinking	Nursing attitudes, nursing competency, application of nursing process, Leading communication, interpretation ability, self-expression ability, understanding others' perceptions, nursing ethics, communicating with patients, knowledge of clinical skills	The questionnaire consisted 68 items identified from previous studies, including 9 items on demographic and general characteristics, 16 items on communication ability, 13 items on self-leadership, 16 items on self-efficacy, and 14 items on nursing performance.	Skewness and kurtosis, Cronbach alpha values reported	The error mean square root (RMSEA), the incremental fit index (RMR), the fit index (GFI), the comparative fit index (CFI), and the non-standard fit index (TLI)	Significant effect was identified in the relationship between communication ability and self-leadership; communication ability and self-efficacy. Nurses' communication ability affected nursing performance through self-efficacy	Primary evidence/ information from surveys	TREND Statement: 20/22
Ariani et al[35]	To determine the relationship between head nurses' leadership styles and nurses' job performance	Quantitative	110 staff nurses aged between 20 and 40 years	Transactional (Contingent rewards, management by exception) and transformation leadership (idealized influence, inspirational motivation, intellectual simulation, individual consideration) styles	Courtesy, respect, communication, comfort, responsiveness, team work, professionalism	Leadership Questionnaire; Nurses' Performance Evaluation (Observation Checklist)	Cronbach's alpha = 0.96; reliability value (r = .68, P < .001)	Correlation analysis	No statistically significant relationship was found between leadership styles and nurses' performance	Primary evidence/ information from surveys	TREND Statement: 21/22
Fing et al[36]	To determine the effect of servant leadership on nurses' innovative behavior and job performance	Quantitative	885 staff nurses	Ethical, humanistic, empathic, mutual benefit and service-oriented approaches	Nursing competency, application of nursing process, Leading communication, interpretation ability, self-expression ability	Servant leadership questionnaire; Innovative work behavior scale; Nurses' Performance Evaluation questionnaire	Reported as satisfactory	Descriptive tests; correlation analysis; and linear and hierarchical regression analyses	Nurse managers' servant leadership behaviors were statistically significantly related with the nurses' innovative behaviors and job performances	Primary evidence/ information from surveys	TREND Statement: 14/22

(continued)

Table 2. (continued)

Author	Study purpose	Study type	Sample	Measure of leadership/ work factors	Measures of nurse performance	Instruments	Reliability and validity	Analysis	Outcomes	Level of evidence	Quality assessment
Wang et al[37]	To analyze the link between supervisors' transformational leadership and staff nurses' extra-role performance as mediated by nurse self-efficacy and work engagement.	Quantitative	280 nurses; 17 nurse managers; Women >70%; Mean age = 34 years	Inspirational motivation, Intellectual stimulation, Individualized consideration, Idealized attributes, Idealized behavior	Self-efficacy, work engagement, extra-role performance	Multifactor Leadership Questionnaire; self-constructed scale for self-efficacy and extra role performance	Reported as satisfactory	Path analysis; Structural Equation modeling (SEM)	Transformational leadership positively influenced work engagement and contributed to extra-role performance by improving elf-efficacy of nurses.	Primary evidence/ information from surveys	TREND Statement: 19/22
Kül and Sönmez[28]	To determine the effect of the leadership style of nurse managers on nurse performances and job satisfaction of staff nurses	Quantitative	N = 70 (nurse managers and staff nurses), predominantly female	Transformational, transactional, laissez-faire, democratic, autocratic styles	Low/high performance; recognizing patients' needs and providing appropriate care and solutions	Generic Job Satisfaction Scale, self-developed questionnaire for nursing performance.	Reported as satisfactory	Correlational analysis	All leadership styles were significantly correlated with job satisfaction and nursing performance; Only transformational, transactional, and democratic leadership styles were significantly correlated with nursing performance.	Primary evidence/ information from surveys	TREND Statement: 14/22
Ryan and Deci[39]	To examine the influence of entrepreneurial leadership on nurses' innovation work behavior and its dimensions.	Quantitative	273 nurses; 80% F, 20% M; Average age = 33 years (range: 20-58 years)	Including innovation, driving innovation, risk-taking, passion for work	Idea exploration, idea generation. idea championing, idea implementation	Innovative work behavior questionnaire; Entrepreneurial Leadership questionnaire	IWB (α = .92)	Confirmatory Factor Analysis and Correlations	Entrepreneurial leadership had a significant positive impact on nurses' innovation work behavior and most strongly improved idea exploration, followed by idea generation, idea implementation, and idea championing.	Primary evidence/ information from surveys	TREND Statement: 20/22
Salanova et al[40]	Analyze the impact of work environment, nurses' performance, behavior, problem-solving skills, and transformational role on sustainable nursing leadership	Quantitative	N = 205 (118 nurse managers, 54 nurses, 12 director nurses, 21 methodologist nurses); 196 F, 9 M; 90% >30 years	Knowledge and awareness	Caring and support, monitoring and controlling, planning and scheduling	Self-developed questionnaire	Reported as satisfactory	Correlation analysis, and multiple linear regression analysis.	Behavior and problem-solving, positively contributed to nursing leadership; Work environment and performance nurse manager did not positively contribute to nursing leadership; transformational ability majorly contributes to the sustainability of nursing leadership.	Primary evidence/ information from surveys	TREND Statement: 16/22

Table 2. (continued)

Author	Study purpose	Study type	Sample	Measure of leadership/ work factors	Measures of nurse performance	Instruments	Reliability and validity	Analysis	Outcomes	Level of evidence	Quality assessment
Bagheri and Akbari[41]	To analyze the effect of the leadership on nurses' performance	Quantitative	N = 66; 46 F, 20 M; 68% >40 years	Paternalistic leadership, laissez-faire leadership	Complying with standards, decision-making, ability to accept criticism and suggestions, caring and attentive	Self-developed questionnaire	Reported as satisfactory	Univariate analysis, bivariate analysis, and multivariate analysis	Paternalistic leadership style was identified to be dominant than laissez-faire leadership in improving the nursing performance.	Primary evidence/ information from surveys	TREND Statement: 17/22
Gupta et al[42]	To examine the relationship between nurse managers' transformational leadership and nurses' job performance	Quantitative	N = 792 (73 nurse managers, 719 nurses)	Idealized influence, inspirational motivation, intellectual simulation, individual consideration	Self-efficacy, work engagement, psychological safety	Transformational leadership questionnaire; Self-developed questionnaire	Reported as satisfactory	Correlation analysis	Positive correlation existed between transformational leadership, psychological safety, and job performance	Primary evidence/ information from surveys	TREND Statement: 19/22
Leitch et al[43]	To explore leadership factors that influence nurse performance and particularly, the role that nursing leadership behaviors play in nurses' perceptions of performance motivation.	Systematic review	Eight studies were included in the review	Autonomy, working relationships, managing resources, individual consideration, caring attitudes	Nurses' perceptions on performance such as empowerment	N/A	Quality Assessment and Validation Tool for Correlational Studies, Effective Public Health Practice Quality Assessment Tool, Critical Appraisal Skills Program Tool	Descriptive analysis	Nursing leadership behaviors were found to influence both nurses motivations directly and indirectly via other factors; autonomy, work relationships, resource accessibility, nurse factors, and leadership practices;	Secondary/ Filtered information	PRISMA:22/27

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over the past few decades.[21] However, new leadership attributes such as nursing informatics leadership, in light of growing influence of technology and industry policies in the quality care sector, have been neglected.

Measures of Nurse Performance

Twenty-two distinct measurement instruments were employed to evaluate the various factors that influence nursing performance in relationship with nursing leadership attributes. Five studies used questionnaires developed by authors for measuring nurses' performance in relation to different aspects such as motivation, engagement, self-efficacy, performance, problem solving skills, and job satisfaction. Multifactor leadership questionnaires or its components were used in 3 studies focusing on different leadership styles and their impact on nursing performance as a part of the study model designed by respective authors.[34,35,40] Other major instruments used for measuring nurses' performance related attributes include Caring Efficacy Scale, nurses' activity scale,[45] Nurses performance evaluation checklist,[34,38] Innovative work behavior scale,[38] generic job satisfaction scale,[35] and innovative work behavior questionnaire.[41]

Factors Influencing Nurses' Performances

A total of 51 different factors that affected the nurses' performance were identified from the studies included in the review (Table 3). These factors were grouped into 6 categories including autonomy, competencies, relatedness, individual nurse characteristics, relationships and support, and leadership practices.

Autonomy

Three studies[33,38,45] examined the influence of autonomy related factors on nurses' performance. Manojlovich[45] identified that strong nursing leadership behavior can contribute to the empowerment and self-efficacy on practice behaviors of the nurses, indicating that nursing leaders should provide more access to structural empowerment factors for nurses and exhibit unit-level nursing leadership. Kim and Sim[33] suggest that utilizing action-oriented and self-reward strategies, along with constructive thinking, can improve self-efficacy and empower individuals, leading to a significant improvement in their performance.

However, it is also observed that nursing performance can be affected by their communication abilities, indicating that in developing autonomy, communication skills play a significant role. Kül and Sönmez[38] identified that servant leadership attributes, such as being humanistic, empathetic, mutually beneficial, and service-oriented, can empower nurses to develop innovative behavior, which can improve their job performance. Innovative behaviors reflect an autonomy in nurses' attitudes, where they autonomously take decisions in developing new ideas and new ways of delivering care, thereby improving the performance.

Competencies

Four studies[37,36,41,48] examined the influence of competencies related factors on the nurses' performance. Few of these studies reflected new approaches in leadership and their impact on new areas of performance. For instance, Bagheri and Akbari[41] found that entrepreneurial leadership has positively influenced nurses' innovation work behavior such as ideas exploration, generation, implementation, and championing, which can improve the overall performances and can support the achievement of organizational goals such as sustainability. Similarly, by creating a positive work environment and effectively managing resources and transformational leadership practices, nurse managers can significantly improve sustainability of nursing leadership. Moreover, Fing et al[36] found that competencies such as treating employees like family members, guiding them, and letting them make independent decisions have led to improvements in several areas that can impact nurses' performance. These improvements include decision-making, the ability to accept criticism and suggestions.[36] Wang et al[48] found that leaders' skills, such as idealized influence and intellectual stimulation, have a significant positive impact on nurses' self-efficacy and work engagement.

Relatedness

Relatedness reflects how the nurse managers relate them to nurses and vice versa, which is reflected in their behavior toward each other. The study conducted by El-Azim et al[34] was the only study that did not find a significant statistical relationship between nursing leadership styles and nurses' performance.

Individual Nurse Characteristics

Two studies have identified individual nursing characteristics related to nurses' performance. The interest of nurses' in taking up extra roles in addition to the existing roles supported by the nurse managers supported by transformational leadership practices through increased work engagement.[40] The findings of this study indicated that through supportive leadership practices, extra-role performance can be enhanced which in turn increases hospital efficacy. Wang et al[48] identified that psychological safety (a belief that nurses won't be punished or humiliated for sharing ideas, concerns, and issues) could effectively improve nurses' performance.

Relationships and Support

Wang et al[37] assessed the impact of nursing performance on nursing leadership along with other variables. They found that a caring and supportive work environment can positively affect nurses' behavior and performance, and in turn, nursing leadership. This emphasizes the need for support from nursing leaders.[37]

Table 3. Factors Affecting Nurses' Performance.

Leadership factors	Findings	Work factors	Findings	Studies
Autonomy: Behaviors that foster or create autonomy, confidence among nurses, empowerment	Positive	Innovative behavior, competency, application of nursing process, Leading communication, interpretation ability, self-expression ability	Positive	Ariani et al[35]
		Time spent on nursing care, self-efficacy	Positive	Manojlovich[45]
		Nursing attitudes, application of nursing process, competency, Leading communication, interpretation ability, self-expression ability, understanding others' perceptions, nursing ethics, communicating with patients, knowledge of clinical skills	Positive	Kim and Sim[33]
Competencies: Skills that support nurses management and improve their performance	Positive	Idea exploration, idea generation, idea championing, idea implementation	Positive	Kül and Sönmez[38]
		Caring, supportive, monitoring and controlling, planning and scheduling	Positive	Ryan and Deci[39]
		Complying with standards, decision-making, ability to accept criticism and suggestions, caring and attentive	Positive	Salanova et al[40]
		Self-efficacy, work engagement	Positive	Bagheri and Akbari[41]
Relatedness: relationship between nurses and nurse managers	Not Significant	Courtesy, respect, leading communication, comfort, responsiveness, team work, professionalism	Not Significant	El-Azim et al[34]
Individual nurse characteristics	Positive	Extra-role performance	Positive	Fing et al[36]
		Psychological safety	Positive	Bagheri and Akbari[41]
Relationships and support	Positive	Caring, supportive, monitoring and controlling, planning and scheduling	Positive	Ryan and Deci[39]
Leadership styles/practices	Positive	Providing training and support, providing rewards, Adopting cooperative culture	Positive	Wang et al[37]
		Treating co-employees as family members, letting nurses to make their own decisions	Positive	Salanova et al[40]
		Humanistic, empathic, mutual benefit and service-oriented approaches	Positive	Ariani et al[35]
		Driving innovation, risk-taking, passion for work	Positive	Kül and Sönmez[38]

Leadership Styes/Practices

Although leadership practices were considered in most of the studies, significant approaches can be analyzed from 3 studies. Firstly, as discussed in the autonomy section, servant leadership approaches, such as humanistic, empathic, mutual benefit, and service-oriented approaches, can improve nurses' competencies and skills, especially their ability to express themselves, communicate, and apply innovative ideas. Secondly, both transformational and transactional approaches, such as motivation, support, contingent rewards, and intellectual stimulation, can improve nurses' satisfaction levels and job performance.[35] Thirdly, paternalistic leadership practices, such as treating nurses as family members, and laissez-faire practices, such as enabling nurses to make independent decisions, were identified as improving nurses' performance. However, paternalistic approaches were found to be more influential than laissez-faire approaches. Fourthly, entrepreneurial leadership practices, such as driving innovation, risk-taking, and passion for work, were identified as promoting innovative behavior among nurses, which can improve their performance.

Discussion

This study mainly focused on examining the link between nursing leadership and nurses' performance by assessing the factors that nurses believed had an impact on their motivation to perform well; and the leadership behaviors that correlate with nurses' performance. There has been a significant rise in the identification of number of factors that nurses perceive to be influencing their performance in the recent literature. This study has identified 51 such factors from research studies published since 2005, compared to a study conducted by Ronquillo et al[23] which included studies from 1995 to 2006, identifying 25 factors. This development indicates that significant progress can be observed in the research related to nurses' leadership and nurses' performance. One of the interesting findings in the review is that most of the studies (10 out of 11) were quantitative and adopted survey strategy for data collection; and only one study adopted systematic review approach, indicating the gaps in adoption of different methodological approaches in the research, which can contribute to diverse findings.

Most of the previous studies adopted social theories and the self-determination theory in assessing the relationship between nursing leadership and nurses' performance. As a result, few studies mainly focused on the nurses' approaches in providing quality care through social interaction, rather than on their personal attributes such as satisfaction, quality of life, and motivation. However, some studies attempted to develop theoretical models,[34,35,40] indicating the emergence of various constructs and relations between nursing leadership and nurses' performance. One of the effective qualities of leaders is promoting autonomy among the team and making them self-reliant by developing skills and competencies to improve overall processes. Accordingly, from the findings (Table 3), it was observed that the majority of the factors identified were in relation to leadership practices that focused on promoting autonomy and competencies among nurses

In the past few years, significant developments can be observed in the adoption of Industry technologies such as the Internet of Things, Artificial Intelligence, Cloud computing, block chain technology etc.,[49-52] giving rise to new form of leadership such as nursing informatics leadership.[53,54] These developments can influence various factors within hospital settings, including organizational culture, workload, motivation, values in hospital settings that can directly or indirectly influence nursing performance. However, no studies were identified in this review which considered these developments in identifying the factors that influence nurses' performance. Studies reviewed indicated that nursing leadership can influence autonomy,[33,38,45] relatedness,[34] competencies,[36,37,41,48] individual characteristics,[40,48] and relationships and support,[37] as perceived by nurses influencing their motivation to perform well. In addition, leadership practices were identified to be nurses' abilities to perform well. Furthermore, leadership behaviors that support autonomy, inclusivity, transformation (improving skills, innovation abilities, and competencies), and staff prioritization (caring, paternalistic behavior, empathy) can result in high nursing performance.[33,38,45] It is important that nurse leaders share organizational goals to encourage staff, offer suggestions, and receive feedback on innovative practices for achieving goals in a cooperative and supportive work culture. The studies reviewed suggest leadership plays a crucial role in influencing nurses' performance in various areas, such as innovation, decision-making, and work engagement.[36,37,41,48] Furthermore, new approaches to leadership, such as entrepreneurial leadership and transformational leadership practices, can positively impact nurses' performance and support the achievement of organizational goals such as sustainability.[41] Therefore, it is important for nurse managers to continuously develop their leadership skills and create a positive work environment that supports nurses' ability to perform well.[36] By doing so, nurse managers can help to create practice environments that promote nurses' ability to perform their roles effectively, thus enhancing overall nursing performance.

While one study included in the review did not find any significant statistical association between nursing leadership styles and nurses' performance, it suggested that further research is needed to better analyze the relationship between nursing leadership and nurses' performance by adopting relatedness factors in the areas of advanced leadership approaches and providing performance appraisal.[34] This highlights the importance of considering relatedness factors in nursing leadership to support nurses' performance and promote positive relationships between nurse managers and nurses.

The results of Salanova et al[40] study highlight the significance of nurse managers adopting transformational leadership practices to increase nurses' interest in taking up extra roles, which can lead to improved hospital efficacy. Additionally, promoting psychological safety in the workplace can create a supportive work environment that encourages open communication and enhances nurses' performance.[48] This indicates the nurses should have enough freedom with nurse managers for sharing their opinions without any hesitation or fear, which may benefit both of them.

Therefore, nursing leadership has a significant impact on nurses' perceptions of the factors that influence their motivation to perform. This impact can be both direct and indirect. Therefore, it is essential to have competent nursing leaders to create practice settings that can foster nurses' capacity to succeed. In other words, the link between nursing leadership and nurses' success is critical, and it is necessary to prioritize leadership development in the nursing profession to achieve optimal patient outcomes.

As observed from the recent report by ICN,[30] the lack of strategic and systematic approach by the employers and policymakers is one of the key challenges associated with rising nursing problems. In this context, it may be implied that effective leadership approaches coupled with systematic management of nursing resources could be one of the effective ways to improve nursing performance, retention, and reduced burn-out rates. Accordingly, apart from the patient-related aspects, personal, co-worker, organizational, and societal related factors were identified to be the significantly contributing factors of nurses' burn-out during the pandemic,[55] highlighting the issues with nurses' leadership and organizational/employer approaches. In this context, a systematic review on interventions to reduce occupational stress and burn-out,[56] observed that the interventions were effective when they focus at individual level and organization directed, implying the strategic and systematic approach adopted by the employers and led by nursing leaders, with an individualized focus, signifying the relevance of transformational, motivational, and supportive leadership styles. For instance, spiritual intelligence among nursing leaders was identified to be influencing nursing managers' competencies in managing stress and burn-out,[57] and similar strategies could be directed by employers to effectively manage nursing resources. Such streamlined approaches may be effective in not only improving nurses' performance, but also in addressing the challenges such as nurses' burn-out, retention, and increasing stress in the post-pandemic era.
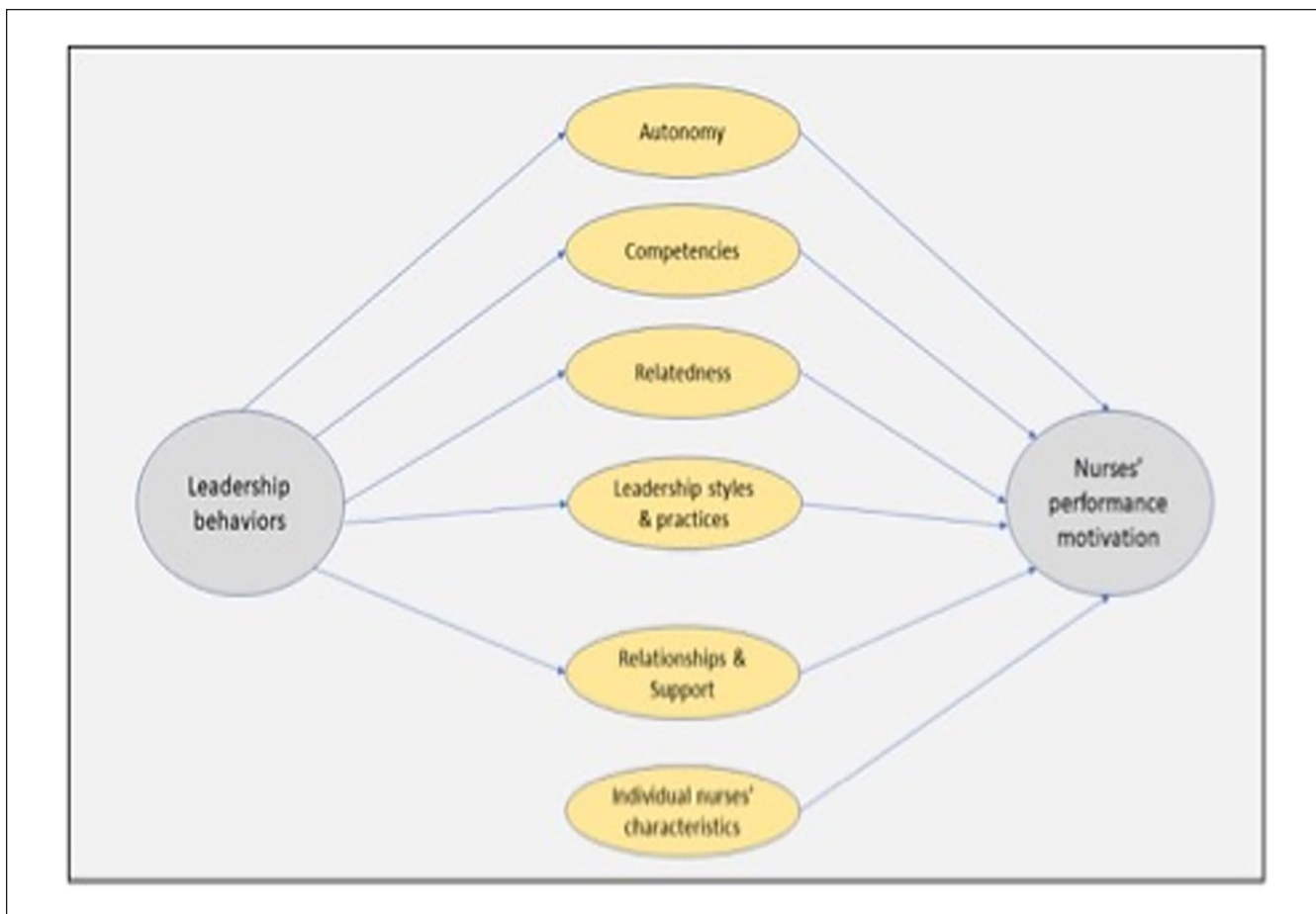
Figure 2. Proposed theoretical model.

Implications for Nurse Researchers

The findings from this review supports a theoretical model (Figure 2) on factors that influences nurses' motivation to perform well, which may be tested and evaluated in future research. Analyzing published research till date in this review has suggested that leadership practices that support autonomy, competencies, and relatedness through inclusive approaches reflect that nurses' contributions are valued and this process resulted in increased motivation of nurses to perform well. In addition, leadership practices that support innovation (entrepreneurial), and cooperative culture (transformational) were identified to be more influencing in improving nurses' motivation to perform better. Although, different leadership practices and their relationship with nurses' performance were investigated, significant changes have been observed in the nursing work environment in the past few years. The introduction of innovative technologies and business models, such as the gig economy and online health services, is among the many changes. These changes can lead to new leadership practices and new factors that influences nurses' performance, such as informatics competencies and skills, remote work culture. These are some areas

that future researchers can investigate to identify new leadership practices and the factors that influence nurses' performance. Furthermore, sustainability has become a core component of all organizations, including healthcare. Therefore, it is important to examine leadership behaviors that can have an impact on nurses' abilities to help achieve sustainable organizational goals. Furthermore, unexpected disasters such as the recent Covid-19 pandemic has significantly increased the burden on nursing care. Leadership practices in such a highly demanding workload environment and their impact on nurses' abilities to provide quality care and achieve better patient outcomes could be examined. Finally, it is evident from the review that most of the studies have adopted quantitative methods. Diverse methodological framework adoption can contribute to the quality of research. Therefore, future researchers should focus on adopting other frameworks such as qualitative, and mixed methods in conducting the research.

Implications for Nurse Leaders

Nursing performance is a key factor influencing the sustainability of nursing leadership.[37] Therefore, nurse leaders must

adopt various leadership practices and behaviors that improve nursing performance, especially those that increase nurses' motivation to perform better. Leadership practices that encourage employees' motivation can influence organizational practices and goals.[58] As nurse leaders carry huge workloads, their work effectiveness can be affected,[59] which create barriers and challenges in achieving optimal nursing performance and ultimately providing high-quality care. Addressing nurse leaders' workload is therefore necessary to enhance their ability to influence nurses and improve overall nursing performance.

Limitations

This review has a few potential limitations. It can be observed that 10 out of the 11 studies reviewed adopted quantitative methods, reflecting the limitation of including diverse methodological studies. Furthermore, reporting bias may exist as published studies tend to over-report positive findings. Many studies used self-designed scales to measure nurses' performance, and others used different tools, limiting the validity and generalizability of findings. Most of the studies in this review are cross-sectional correlation studies and may be prone to bias 44, but they are helpful in examining the relationship between nursing leadership practices, behaviors, and nurses' performance, which is the main purpose of this study.

Conclusions

Providing quality care and ensuring patients' safety are fundamental goals for all healthcare organizations. Since nurses are the primary healthcare providers who spend a significant amount of time with patients delivering care and services, they have a crucial role in achieving these objectives. Nurse leaders who manage the nursing resources are the key personnel who are responsible for overseeing the quality of care and patients' safety, and therefore they need to encourage nurses' in better understanding the patients' needs and values. Strong nurse leaders are effective in implementing evidence-based practices to ensure that these objectives are achieved, as research showed that nursing leadership can both directly and indirectly influence nurses' performance. The present review has identified 51 factors that nurses categorize under 6 domains, which they believe motivate them to perform effectively. These included autonomy, relatedness, competencies, individual nurse characteristics, relationships and support, and leadership practices/styles. Comprehending these actors is essential and necessary for nurse leaders to promote quality of care and to achieve organizational goals such as sustainability, growth and innovativeness. Therefore, nurse leaders should strive to understand and identify the factors that motivate nurses to perform well and accordingly should address/facilitate these factors through their behavior or leadership styles.

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