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Exploring Situational Leadership in Nursing: Evidence, Measurement, and Gaps – A Scoping Review

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Abstract

This review seeks to deliver an in-depth exploration of situational leadership theory within the context of nursing management, emphasizing its assessment tools, implementation methods, and areas where research reporting remains insufficient. A scoping review was undertaken following the Joanna Briggs Institute (JBI) methodology. Literature searches were performed across eight databases—PubMed, Embase, CINAHL, Web of Science, CNKI, WanFang, CQVIP, and SinoMed—and the references of selected publications were also reviewed. Studies published up to September 9, 2024, were included. Guided by the PCC framework, a structured three-phase search strategy was used to identify relevant research. Titles, abstracts, and full texts were screened independently by reviewers, after which the extracted data were summarized and analyzed. Nineteen studies were identified, comprising five cross-sectional, thirteen quasi-experimental, and one mixed-method investigation. Evidence shows that situational leadership theory is applied in multiple aspects of nursing management and supports the advancement of nurses' leadership abilities and professional maturity. Nevertheless, existing studies often lack transparency and fail to follow standardized reporting criteria. Moreover, the reliability and validity of current measurement instruments require further examination. As a follower-focused leadership model, situational leadership enables managers to adjust their style according to the readiness and competence of their team members. This adaptability enhances organizational effectiveness, strengthens staff development, and promotes satisfaction. Future studies should aim to create unified intervention frameworks and improve methodological rigor and reporting practices to enhance the theory's utility in clinical settings. The theory highlights the importance of tailoring leadership strategies to the developmental stage of nursing staff. Yet, greater conceptual clarity among situational leadership models and further exploration of corresponding measurement tools and interventions are essential. Advancing these areas could result in a more standardized and effective integration of the theory into nursing practice.

Keywords: Nursing, Management, Scoping review, Situational leadership theory introduction

Introduction

The increasing prevalence of global public health challenges in recent years has led to a rising demand for caregivers and the continual expansion of the caregiving workforce [1]. A successful nursing team depends on effective collaboration between nurses and their managers. The nurse manager plays a pivotal role in translating an organization's culture and strategic goals into actionable plans at the operational level. Their responsibilities include resource management, coordination of care, planning and supervision of nursing activities, and providing evaluation and support services [2]. Leadership represents the internal motivation that drives a leader's actions and facilitates the achievement of group or organizational objectives while ensuring the leadership process functions efficiently [3].

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In nursing, leadership involves motivating and guiding team members to work collectively toward shared goals [4]. However, relying on a single leadership framework may be insufficient when managing nurses with diverse skills and levels of competence. To promote continuous professional growth among nurses and enhance both care quality and management efficiency, many nursing leaders have adopted situational leadership theory as a guiding model. This theory integrates leadership and management competencies, offering a versatile framework widely recognized across the nursing field. It provides nurse managers with a structured theoretical basis for problem-solving and establishing evaluation criteria for their staff. The core premise of situational leadership theory is that leadership styles should be adapted to match the varying maturity levels of nurses to achieve more effective management outcomes [5]. As nursing teams expand and the theory continues to evolve, situational leadership has been applied in diverse ways across nursing management. Examining existing practices, challenges, and areas for improvement can inform the development of more refined intervention programs and support ongoing optimization. Therefore, identifying current nursing interventions and uncovering research gaps is essential for future advancement.

Background

Situational leadership theory was originally conceptualized by psychologist and organizational behavior expert Paul Hersey and management scholar Kenneth Blanchard [5]. Also known as the leadership life cycle theory, it emphasizes the importance of adapting leadership behaviors based on subordinates' development levels. The model proposes that leaders should adjust their approach according to their team members' competence and motivation [6]. It highlights three primary elements that influence leadership effectiveness: employee maturity, task-oriented behavior, and relationship-oriented behavior. The theory posits that no single leadership style is universally effective; instead, leaders must modify their approach depending on their subordinates' maturity (M) level—defined by both ability and willingness—and the nature of the task. Ability encompasses an individual's knowledge, skills, experience, and proficiency in a specific role, while willingness reflects their confidence, dedication, and motivation to perform. The progression of employees from low to high maturity is categorized into four stages of readiness (R) or development (D). Correspondingly, leadership style (S) is determined by the balance between task behavior and relationship behavior, as illustrated in **Figure 1**. In practice, highly mature employees typically require less direction and greater emotional support, whereas those with lower maturity levels need more guidance and supervision [5]. Thus, situational leadership theory emphasizes the importance of a leader's capacity to accurately assess employees' developmental stages and tailor their leadership style accordingly to achieve optimal management effectiveness.

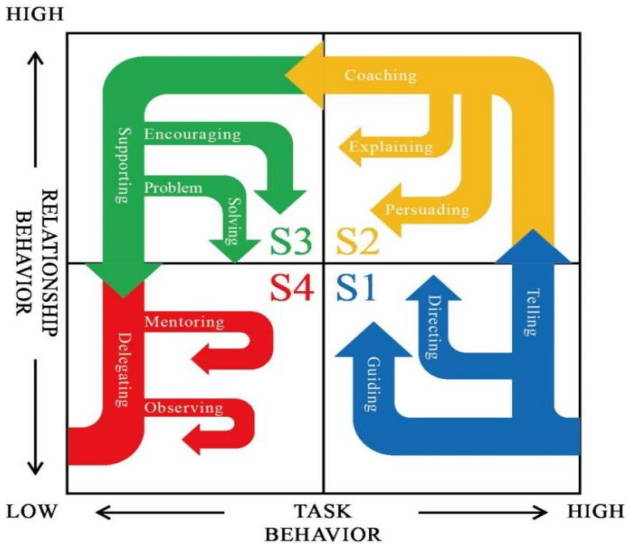

Figure 1. Situational Leadership Theory Model

According to situational leadership theory, leaders must possess three essential competencies: diagnosis, flexibility, and agreement on leadership style [7]. Diagnosis involves evaluating the current readiness or development level of team members, serving as the cornerstone of the theory. Flexibility refers to a leader's capacity to adapt their leadership approach to suit subordinates' varying readiness levels, or to modify their style toward the same individual as circumstances evolve. The concept of an agreed-upon leadership style highlights the collaborative aspect of leadership, wherein the leader and subordinate mutually determine the preferred leadership approach [8].

For employees, two main dimensions define their developmental stages: work maturity (ability) and psychological maturity (willingness). Work maturity encompasses the employee's knowledge, skills, and experience. Those with high work maturity are typically well-trained, knowledgeable, and capable of performing their duties independently without direct supervision. Psychological maturity, on the other hand, reflects the individual's motivation and confidence to carry out tasks. Employees with high psychological maturity exhibit strong self-motivation and self-assurance, relying primarily on internal incentives rather than external ones [9]. Therefore, an employee's development stage is assessed through two perspectives: their *ability to work*—the skills and knowledge demonstrated in performing specific tasks—and their *willingness to work*—the level of confidence and motivation shown in achieving goals. Based on these criteria, Hersey and Blanchard classified employee development into four progressive stages, ranging from low to high maturity levels [10].

As situational leadership theory evolved, its founders—Paul Hersey and Kenneth Blanchard—independently refined the model, resulting in two versions: the *Situational Leadership Model* (Hersey) [11] and *Situational Leadership Model II* (Blanchard). Despite their differences, both models share the core idea that leaders should flexibly adjust their styles according to subordinates' competence, motivation, task type, and work environment. The situational leadership process generally involves three key steps: defining the specific work tasks and objectives, assessing subordinates' ability and willingness in relation to those tasks, and selecting a suitable leadership style [10].

The primary distinction between the two models lies in how they categorize employee development. In Hersey's model, performance readiness is classified into four stages (R1–R4): R1—unable and insecure or unwilling; R2—unable but confident or willing; R3—able but insecure or unwilling; R4—able, confident, and willing. Corresponding leadership styles (S1–S4) include telling, selling, participating, and delegating. In Blanchard's revised model, employees are grouped into four developmental levels (D1–D4): D1—low competence, high commitment; D2—low to moderate competence, low commitment; D3—moderate to high competence, variable commitment; D4—high competence, high commitment. The leadership styles (S1–S4) are termed directing, coaching, supporting, and delegating. Essentially, while the classification terminology differs, both models share the same underlying leadership style principles.

In nursing management, situational leadership theory has long been recognized as a valuable framework. With the continual advancement of healthcare services and growing public expectations, higher standards are now placed on the professional capabilities of nursing teams, particularly head nurses [12]. Enhancing nurse leaders' ability to guide teams effectively and develop cohesive, high-performing nursing units has become crucial. The leadership behaviors of nurse managers have a direct influence on nurses' motivation, engagement, and the overall quality of patient care [13]. A key challenge for nurse managers is building teams capable of delivering high-quality, efficient care in complex clinical environments.

Applying situational leadership theory provides nurse managers with strategies to inspire staff, tailor management approaches, and increase operational efficiency. Research shows that when managers adjust their leadership styles according to nurses' maturity levels, it minimizes resistance, boosts motivation, and improves performance evaluations [14]. For instance, Zhang *et al.* [15] found that situational leadership improved various aspects of clinical performance, including medical documentation, prevention of accidental injuries, medication safety, patient satisfaction, and the quality of clinical instruction. Moreover, the approach allows nurse managers to delegate responsibilities effectively—assigning tasks to highly competent and motivated nurses—thereby reducing managerial workload and enhancing departmental efficiency [15].

To successfully apply situational leadership in nursing management, leaders should continually assess nurses' readiness levels and employ adaptive management techniques that help them advance through the R1–R4 or D1–D4 stages as efficiently as possible. This dynamic and individualized approach not only fosters professional growth among nurses but also contributes to the overall development and sustainability of the nursing team [7].

Despite the widespread application of situational leadership theory in nursing management, studies on this topic vary greatly in terms of research design, methodological approaches, and measurement instruments. To gain a clearer understanding of how this theory has been implemented in nursing practice, we conducted a scoping review to consolidate the current evidence [16]. To date, no systematic review has comprehensively addressed situational leadership theory in nursing management. Furthermore, our initial survey of the literature revealed a notable lack of transparency in reporting, highlighting the need for clearer documentation. This review therefore aimed to examine how situational leadership theory is applied in practice, the types of interventions implemented, and the degree of transparency in reporting, providing guidance for future research. Studies were assessed in alignment with reporting standards appropriate to their design to ensure reliability and clarity.

Research Questions

1. How is situational leadership theory applied in nursing management?
2. What intervention strategies are implemented under situational leadership theory, and how do they function in practice?
3. Which measurement tools or metrics are used to evaluate situational leadership theory?

4. How transparent is the reporting in the existing studies?

Review

Aim
This scoping review sought to provide a detailed summary of the use of situational leadership theory in nursing management, assess the reporting quality of relevant studies, and identify gaps in current research.

Design
A scoping review approach was used to integrate and interpret evidence from both qualitative and quantitative studies [17]. The review followed the Joanna Briggs Institute (JBI) Scoping Review Guidelines [18], which build upon the original framework of Arksey and O'Malley [19] and incorporate subsequent improvements suggested by Levac *et al.*[20]. Although the protocol was not registered, the study was reported in accordance with the PRISMA-ScR checklist (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) [21] as detailed in Appendix S1.

Literature selection
The review question was structured according to the PCC framework:
Population: nurses
Concept: application of situational leadership theory
Context: clinical nursing management
The primary objective was to determine how situational leadership theory is applied in nursing management. Inclusion criteria encompassed peer-reviewed journal articles, dissertations, and theses published in English or Chinese that addressed the use of situational leadership theory in nursing management, without restriction on publication date.
Exclusion criteria included letters, editorials, review articles, guidelines, and conference abstracts, as these did not provide sufficient practical details on the theory's application. Studies lacking full-text access and duplicate publications were also excluded.

Search strategy
We conducted a comprehensive three-phase search to capture relevant studies published in English and Chinese, including gray literature. In the first phase, two reviewers (PZY & LBW) performed exploratory searches in PubMed and CNKI to identify suitable keywords, synonyms, and indexing terms and to estimate the number of potentially relevant studies. This preliminary work informed the creation of a robust search strategy. After consultation with a librarian and approval by the research team, the finalized strategy incorporated MeSH terms, keywords, and Boolean operators tailored for each database.
The second phase involved a systematic search across eight databases: PubMed, Embase, CINAHL, Web of Science, CNKI, WanFang, CQVIP, and SinoMed, with the final search conducted on September 9, 2024. In the third phase, the reviewers manually screened the reference lists of included articles to ensure no relevant studies were missed. Key search terms in English included: "nurs*," "situational leadership," "leadership life cycle theory," and "manage*." A full account of search strategies and database-specific results is provided in Appendix S2.
All retrieved records were imported into EndNote X9 for management. Following removal of duplicates, titles and abstracts were screened independently by two reviewers (PZY & LBW), and full texts were then reviewed according to the inclusion and exclusion criteria. Conflicts were resolved through discussion. Reasons for excluding studies at the full-text stage were documented. No formal appraisal of study quality was undertaken [22].

Data extraction and analysis
Data extraction was conducted iteratively by two reviewers (WX & LST), who repeatedly examined the included studies to ensure accuracy and completeness [20]. The research team developed a structured extraction form through discussion and refinement to align with the scoping review objectives. Extracted data included authorship, publication year, country, study population and sample size, research aims, design, methodology, and primary findings. Any disagreements were resolved through consensus.
To evaluate reporting standards, quasi-experimental studies were assessed using the TREND (Transparent Reporting of Evaluations of Nonrandomized Designs) checklist, while cross-sectional studies were assessed using the STROBE (Strengthening the Reporting of Observational Studies in Epidemiology) guidelines [23, 24].

Results and Discussion

Study selection

The combined database searches and manual reference checks yielded 657 records. After removing 196 duplicates, 461 articles were screened by title and abstract, resulting in the exclusion of 366 studies. The remaining 95 full-text articles were assessed for eligibility, and 19 studies met all inclusion criteria for this review **(Figure 2)**.

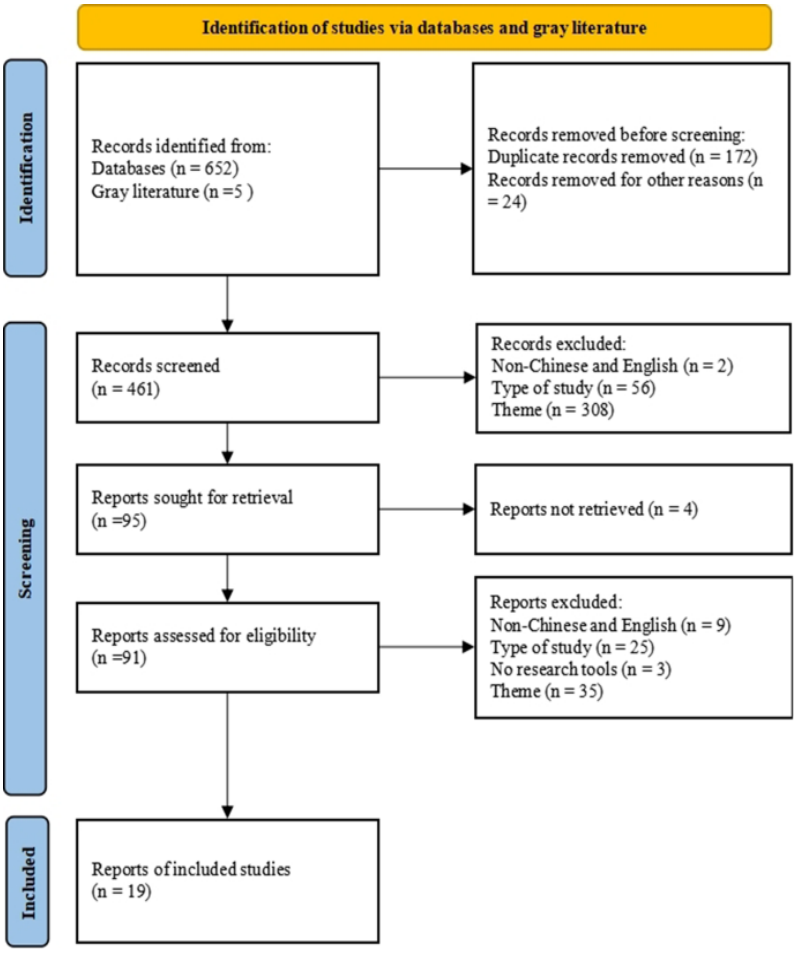

Figure 2. The PRISMA flow diagram

Characteristics of included articles

The 19 studies included in this review are summarized in **Table 1. Table 2** provides an overview of their key characteristics: 13 studies (68.4%) were published in Chinese, while 6 studies (31.6%) were in English. Regarding study design, 13 articles (68.4%) were quasi-experimental, and 5 (26.3%) were cross-sectional. Most studies (12, 63.2%) were published between 2011 and 2020. Geographically, the majority of research (13 studies, 68.4%) was conducted in Asian countries.

Table 1. Studies on Situational Leadership in Nursing Management

Author/Year/Country	Country	Sample	Study Purpose	Design	Methods	Key Conclusions
Cai, 2002 [happen25]	China	7 newly appointed head nurses	To apply leadership life cycle theory in competitive head nurse selection and management	Quasi-experimental	Quantitative	Situational leadership enhances maturity alignment for new head nurses, enabling tailored management across experience levels.

Cao, 2019 [26]	China	60 gastroenterology patients + 16 nurses	To assess situational leadership in digestive ward nursing management	Quasi-experimental	Quantitative	Adaptive leadership styles boost nurse initiative, elevate care quality, and increase patient satisfaction.
Cardoso, 2011 [27]	Brazil	111 private hospital nurses	To evaluate nurse leadership competencies using situational leadership framework	Cross-sectional	Quantitative	Leadership development strongly correlates with effective communication, feedback exchange, and empowerment delegation.
Castillo, 2021 [28]	Mexico	31 nurse managers + 125 subordinates	To compare self-perceived vs. subordinate-perceived leadership styles in a private hospital	Cross-sectional	Quantitative	Low agreement between managers and staff on leadership styles; effective leadership requires subordinate autonomy and stronger interpersonal bonds.
Chen, 2010 [29]	China	141 nursing interns	To improve clinical teaching management using situational leadership	Quasi-experimental	Quantitative	Targeted leadership guidance improves interns' clinical skills, assessment scores, and trainer satisfaction.
Chen, 2016 [30]	China	209 clinical nurses	To examine situational leadership's impact on nurse job satisfaction	Quasi-experimental	Quantitative	Flexible leadership increases motivation, job satisfaction, and advances nursing specialization.
de Oliveira, 2021 [31]	Brazil	71 nurses	To profile nurse leadership using the Situational Leadership Model	Cross-sectional	Quantitative	Most leaders effectively adapt styles situationally, demonstrating high leadership flexibility and effectiveness.
Foster, 1995 [32]	UK	61 charge nurses	To determine if management structures support nursing professionalism via preferred leadership	Survey + semi-structured interviews	Mixed	Situational leadership promotes autonomy, professional fulfillment, and efficient decision-making in nursing.

Furtado, 2011 [33]	Portugal	22 nurse managers + 244 staff nurses	To compare manager vs. staff perceptions of leadership and its effect on job satisfaction	Cross-sectional	Quantitative	Adaptive leadership styles improve nursing service quality and staff satisfaction.
Huang, 2016 [34]	China	16 nursing staff	To evaluate situational leadership training on nurse performance	Quasi-experimental	Quantitative	Training leaders in flexible styles enhances nurse performance, care quality, and patient satisfaction.
Li, 2011 [35]	China	10 chief nurses	To enhance nurse leader management using situational leadership	Quasi-experimental	Quantitative	Tailored leadership improves performance evaluations and managerial competence of head nurses.
Liu, 2020 [36]	China	72 operating room nurses	To assess situational leadership training on OR nurse core competencies	Quasi-experimental	Quantitative	Training significantly boosts core skills, training outcomes, and OR nursing quality.
Liu, 2017 [37]	China	154 head/assistant head nurses	To study effects of situational leadership training on leadership flexibility	Quasi-experimental	Quantitative	Training increases adaptability and effectiveness of nurse managers' leadership approaches.
McElhaney, 2003 [38]	USA	11 nurse managers + 79 RNs	To explore perceptions of leadership styles and their link to job satisfaction	Cross-sectional	Quantitative	Leadership style significantly influences team dynamics, staff morale, and patient care; context-specific strategies are essential.
Peng, 2012 [39]	China	18 emergency training nurses	To apply situational leadership in emergency nurse education	Quasi-experimental	Quantitative	Adaptive teaching methods increase trainee maturity and improve educational quality.
Wang, 2016 [40]	China	139 clinical instructors	To evaluate situational leadership in instructor training and management	Quasi-experimental	Quantitative	Flexible leadership enhances instructor capability, trainee satisfaction, and training delivery.

Xue, 2019 [41]	China	53 head nurses	To improve head nurse management skills via situational leadership training	Quasi-experimental	Quantitative	Training elevates managerial effectiveness and departmental staff satisfaction.
Yan, 2010 [42]	China	25 outpatient nurses	To implement situational leadership in outpatient nursing management	Quasi-experimental	Quantitative	Diverse leadership styles improve nursing quality and patient satisfaction in outpatient settings.
Zhang, 2019 [15]	China	67 neonatology nurses	To apply leadership life cycle theory in tiered neonatal nurse training	Quasi-experimental	Quantitative	Structured hierarchical training significantly improves overall clinical performance in neonatology.

Table 2. Details of selected literature

Study/article characteristics	***n*(%)**	**Study/article characteristics**	***n*(%)**
Year		Methodology used	
1991–2010	5 (26.3)	Quantitative research	18 (94.7)
2011–2020	12 (63.2)	Mixed research	1 (5.3)
2021-	2 (10.5)	Study design	
Region in which the study was conducted		Cross-sectional	5 (26.3)
Asian	13 (68.4)	Nonequivalent control group	4 (21.1)
North America	2 (10.5)	One-group pretest-post test	9 (47.4)
South America	2 (10.5)	Interview	1 (5.3)
European	2 (10.5)	Method of data collection	
Language		Questionnaires	18 (94.7)
English	6 (34.6)	Interview and questionnaires	1 (5.3)
Chinese	13 (68.4)	Sample size	
Type of evidence source		< 10	1 (5.3)
Journal	18 (94.8)	10 ~ 40	4 (21.1)
Dissertation	1 (5.3)	41 ~ 70	3 (15.8)
Presentation of result		71 ~ 100	4 (21.1)
Yes	18 (94.7)	101 ~ 130	1 (5.3)
No	1 (5.3)	> 130	6 (31.6)
Participants		Describe the research tools	
Nurses	9 (47.4)	Yes	17 (89.5)
Managing nurses	8 (42.1)	No	2 (10.5)
Coaching nurses	2 (10.5)		

Assessment tools in the situational leadership model

Nursing leadership

The included studies highlighted several tools used to evaluate nursing leadership styles within the framework of situational leadership. Five validated instruments were identified. The Leadership Effectiveness and Adaptability Description (LEAD) assesses nursing leaders' preferred leadership style, the range of styles they use, and their adaptability across situations [5]. The Leadership Behaviour Analysis II (LBAII) scale comprises two components: LBAII-Self, which captures the leader's self-assessment, and LBAII-Other, which reflects subordinate evaluations of the leader's flexibility and effectiveness [43]. To explore coaching-related leadership skills, Cardoso *et al.*[27] developed a self-administered questionnaire measuring leaders' knowledge, skills, and attitudes. The Leadership Style Assessment Tool (LSAT) evaluates leadership characteristics across different contexts, with the aim of comparing self-perceived and subordinate-rated leadership styles [44]. Finally, the

Leadership Style Self-Questionnaire (LSSQ) examines both the effectiveness and adaptability of leadership styles, though it is designed solely for nursing leaders [45].

***Nursing** maturity*

The included studies did not report any standardized tools specifically for assessing nurse maturity. However, three studies measured nurse maturity in terms of productivity, management skills, and innovation capacity [25, 35, 40]. Five studies evaluated maturity using indirect indicators such as education level, professional title, and years of work experience [15, 26, 34, 39, 42].

Application of situational leadership theory

Intervention studies

Due to variations in study aims and incomplete reporting, it was challenging to categorize interventions uniformly. Additionally, most studies did not explicitly specify which situational leadership model was applied. Generally, interventions guided by situational leadership theory focused on assessing subordinates' maturity and aligning leadership styles with their development level. Beyond clinical nursing management, the theory has also been applied to nurse training programs [36] and nursing internship supervision [29]. Variations in interventions included differences in maturity assessment, leadership style selection, teaching approaches, and training content. Some studies also addressed training leaders in applying situational leadership principles [37, 41]. Despite these differences, four main areas of application were identified: model selection, nurse management interventions, nurse training interventions, and leadership/theory training programs.

Model selection

Most studies did not clearly indicate which version of situational leadership theory was used. Based on the descriptions provided, seven studies applied the original Situational Leadership (SL) model [15, 25, 26, 29, 34, 39, 42], while four studies used the Situational Leadership II (SLII) model [30, 35, 37, 40]. One study displayed conceptual confusion, using the term "development" from the SLII model but defining it according to the SL model's concept of "readiness" [41].

Nurse management interventions

Eight studies [25, 26, 30, 34, 35, 40- 42] reported interventions focused on applying situational leadership theory in clinical nurse management. These interventions typically involved two steps: identifying subordinates' maturity (considering both ability and willingness to work) and matching appropriate leadership styles. Employees were categorized into four types—R1-R4 (or D1-D4)—and leaders applied styles S1-S4 accordingly: R1/D1 with S1, R2/D2 with S2, R3/D3 with S3, and R4/D4 with S4. Some studies added supplementary strategies. For instance, Chen *et al.*[30] included interventions to enhance nurses' maturity, such as individualized training programs and psycho-material incentives. Li & Li [35] structured their intervention into three steps: identify, adapt, and match, emphasizing continuous learning by leaders to master multiple leadership styles. Xue [41] highlighted the need for training leaders specifically in applying situational leadership principles.

Nurse training interventions

Five studies [15, 29, 30, 36, 39] implemented nurse training programs guided by situational leadership theory. In these programs, nurses and practical nurses were grouped according to their maturity levels, and teaching methods and leadership approaches were tailored to each group. For example, Liu and Zhang [36] classified nurses into three levels based on their mastery of manipulative skills: M1 (low), M2 (medium), and M3 (high). Nurses at M1 received directive, demonstration-based instruction; M2 nurses participated in small-group, persuasive, and participatory training sessions; and M3 nurses engaged in empowerment-based learning, practicing skills independently and providing peer instruction. Zhang *et al.* [15] detailed the training content for nurses at different maturity levels, covering four components: the leadership model, training objectives, training priorities, and instructional methods.

Leadership theory training programs

Two studies [37, 41] focused on training nurse leaders in situational leadership theory. Liu *et al.*[37] developed a course that included four main modules: objectives and principles of situational leadership, assessment of nurse development needs, characteristics of different leadership styles, and rules for applying the theory in practice. Similarly, Xue [41] described a training program that provided an overview of situational leadership, explained essential leadership styles, and instructed leaders on assessing the readiness of their subordinates.

Observational studies

Observational research on situational leadership in nursing employed two primary approaches. One approach examined the leadership profiles of hospital nurses using situational leadership assessment tools [27, 31]. The

other explored discrepancies between nurse managers' self-reported leadership behaviors and nurses' perceptions of their managers' leadership styles [28, 33, 38]. These studies highlighted differences in how leadership was viewed by managers versus their teams.

Intervention outcomes

The application of situational leadership theory in nursing generated multiple positive outcomes across nurses, nurse managers, students, and patients.

Effects on nurses

Studies reported that using situational leadership models improved clinical care quality for nurses [15, 26, 29, 36, 42]. Three studies found that job satisfaction increased, reflected in higher contentment with work, better relationships with colleagues, professional growth opportunities, and benefits [15, 30, 38]. Training in situational leadership also enhanced nurses' skills and core competencies. For instance, Zhang [15] observed improved operational skills scores, Peng [39] reported higher theoretical test scores, and Liu [36] found increased confidence and practical nursing abilities. Additionally, Huang [34] demonstrated that nurses' performance outcomes, including salary, improved when situational leadership principles were applied.

Effects on nurse managers

Eight studies showed that nurse managers trained in situational leadership exhibited enhanced managerial competencies compared to pre-training levels [25, 27, 28, 32, 33, 35, 37, 41]. Two studies noted improvements in leadership style, including increased flexibility, adaptability, and effectiveness [31, 37]. Nurses also reported higher satisfaction with management following the implementation of situational leadership practices [38, 41]. Cai [25] highlighted that managers' maturity improved, reflected in their ability and willingness to accomplish tasks, as well as growth in business acumen, management skills, creativity, and professional standing.

Effects on others

The application of situational leadership theory also positively influenced nursing students and patients. One study [40] reported that student nurses participating in internships experienced higher overall satisfaction when nurse educators applied situational leadership principles. This included increased satisfaction with training methods, the learning environment, organizational management, perceived learning gains, and general internship experience. Similarly, another study [29] found that intern nursing students demonstrated improved performance on both practical skills and theoretical assessments. Their evaluations of nurse leaders' clinical guidance, instructional design, and interpersonal support also improved. Beyond educational outcomes, two studies [29, 42] indicated that patient satisfaction with care increased when nursing managers implemented situational or contextual leadership approaches.

Reporting quality of included studies

The review encompassed 13 quasi-experimental studies, 5 cross-sectional studies, and 1 mixed-method study (excluded from reporting guideline assessment). **Table 3** summarizes adherence to reporting standards using the TREND checklist for quasi-experimental studies [23] and the STROBE checklist for cross-sectional studies [24]. TREND, introduced in 2004, provides guidance on reporting theoretical frameworks, study design, interventions, comparisons, and bias-adjustment methods [46]. STROBE aims to enhance the transparency, completeness, and accuracy of cross-sectional research. Overall, the included studies demonstrated considerable gaps in compliance with these guidelines. Adherence was evaluated using a 50% cut-off for both quasi-experimental and cross-sectional studies.

TREND evaluation for quasi-experimental studies

Assessment against TREND revealed limited reporting in key sections. Only 39.3% of items in the Methods section and 75% in the Results section were adequately described **(Table 3)**. Critical methodological details were often missing: sample size (item 7, 3/13), allocation method (item 8, 0–7/13), and blinding procedures (item 9, 0/13). In the Results section, participant flow (item 12, 0–9/13) and baseline characteristics (item 14, 0–11/13) were frequently omitted, and reporting on analyzed numbers (item 16), ancillary analyses (item 18), and adverse events (item 19) was largely absent. While some studies addressed these items, the information provided was incomplete or unsatisfactory.

STROBE evaluation for cross-sectional studies

Cross-sectional studies similarly demonstrated gaps in reporting. Only two of five studies addressed potential sources of bias (item 9, 2/5). One study reported on study size (item 10, 1/5), analytical methods accounting for sampling strategy (item 12d, 1/5), and sensitivity analyses (item 12e, 1/5). None reported strategies for handling missing data (item 12c, 0/5). The Results section also lacked clarity: only one study explicitly reported the number

of participants with missing data (item 13b, 1/5), and none included flow diagrams (item 13c, 0/5) or disclosed funding sources (item 22, 0/5). Further details are summarized in **Table 3**.

Table 3. Adherence with TREND and STROBE reporting guidelines

TREND	Item No	Reported	STROBE	Item No	Reported
Title and abstract			**Title and abstract**		
Title and abstract	1(*a*)	7/13, 53.8%	Title and abstract	1(*a*)	5/5, 100.0%
	1(*b*)	10/13, 76.9%		1(*b*)	5/5, 100.0%
	1(*c*)	11/13, 84.6%	Introduction		
Introduction			Background/rationale	2	5/5, 100.0%
Background	2(*a*)	12/13, 92.3%	Objectives	3	4/5, 80.0%
	2(*b*)	13/13, 100.0%	Methods		
Methods			Study design	4	4/5, 80.0%
Participants	3(*a*)	11/13, 84.6%	Setting	5	5/5, 100.0%
	3(*b*)	9/13, 69.2%	Participants	6	5/5, 100.0%
	3(*c*)	9/13, 69.2%	Variables	7	3/5, 60.0%
	3(*d*)	11/13, 84.6%	Data sources/ measurement	8	4/5, 80.0%
Interventions	4(*a-1*)	11/13, 84.6%	Bias	9	2/5, 40.0%
	4(*a-2*)	11/13, 84.6%	Study size	10	1/5, 20.0%
	4(*a-3*)	2/13, 15.4%	Quantitative variables	11	3/5, 60.0%
	4(*a-4*)	9/13, 69.2%	Statistical methods	12(*a*)	4/5, 80.0%
	4(*a-5*)	9/13, 69.2%		12(*b*)	3/5, 60.0%
	4(*a-6*)	4/13, 30.8%		12(*c*)	0/5, 0.0%
	4(*a-7*)	9/13, 69.2%		12(*d*)	1/5, 20.0%
	4(*a-8*)	0/13, 0.0%		12(*e*)	1/5, 20.0%
Objectives	5	11/13, 84.6%	Results		
Outcomes	6(*a*)	8/13, 61.5%	Participants	13(*a*)	3/5, 60.0%
	6(*b*)	4/13, 30.8%		13(*b*)	1/5, 20.0%
	6(*c*)	7/13, 53.8%		13(*c*)	0/5, 0.0%
Sample Size	7	3/13, 23.1%	Descriptive data	14(*a*)	3/5, 60.0%
Assignment Method	8(*a*)	7/13, 53.8%		14(*b*)	1/5, 20.0%
	8(*b*)	0/13, 0.0%	Outcome data	15	3/5, 60.0%
	8(*c*)	0/13, 0.0%	Main results	16(*a*)	3/5, 60.0%
Blinding (masking)	9	0/13, 0.0%		16(*b*)	2/5, 40.0%
Unit of Analysis	10(*a*)	6/13, 46.2%		16(*c*)	0/5, 0.0%
	10(*b*)	0/13, 0.0%	Other analyses	17	2/5, 40.0%
Statistical Methods	11(*a*)	8/13, 61.5%	Discussion		
	11(*b*)	0/13, 0.0%	Key results	18	5/5, 100.0%
	11(*c*)	1/13, 7.7%	Limitations	19	3/5, 60.0%
	11(*d*)	8/13, 61.5%	Interpretation	20	4/5, 80.0%
Results			Generalisability	21	4/5, 80.0%
Participant flow	12(*a-1*)	6/13, 46.2%	Other information		
	12(*a-2*)	9/13, 69.2%	Funding	22	0/5, 0.0%
	12(*a-3*)	5/13, 38.5%			
	12(*a-4*)	1/13, 7.7%			
	12(*a-5*)	0/13, 0.0%			
	12(*b*)	0/13, 0.0%			
Recruitment	13	10/13, 76.9%			
Baseline Data	14(*a*)	11/13, 84.6%			
	14(*b*)	3/13, 23.1%			
	14(*c*)	0/13, 0.0%			
	14(*d*)	1/13, 7.7%			
Baseline equivalence	15	0/13, 0.0%			
Numbers analyzed	16(*a*)	0/13, 0.0%			
	16(*b*)	0/13, 0.0%			
Outcomes and estimation	17(*a*)	6/13, 46.2%			
	17(*b*)	4/13, 30.8%			
	17(*c*)	3/13, 23.1%			
Ancillary analyses	18	0/13, 0.0%			
Adverse events	19	0/13, 0.0%			
Discussion					
Interpretation	20(*a*)	6/13, 46.2%			
	20(*b*)	12/13, 92.3%			
	20(*c*)	5/13, 38.5%			

	20(*d*)	10/13, 76.9%
Generalizability	21	7/13, 53.8%
Overall Evidence	22	13/13, 100.0%

Detailed items are referenced in Appendix S3

This scoping review provides a comprehensive examination of how situational leadership theory has been applied in nursing management, including the tools used, application contexts, roles of leaders, and the quality of reporting. The findings underscore the value of situational leadership in optimizing nursing management by fully leveraging nurse managers' leadership capabilities, particularly their ability to identify and utilize the strengths of team members. Situational leadership is effective because it allows leaders to adjust their behavior in response to team members' development needs and the complexity of the task, thereby enhancing overall leadership effectiveness [10]. Effective leadership is essential in guiding nursing teams to improve cohesion, competence, and performance [4]. Consequently, employing situational leadership theory can enhance manager leadership, foster nurse development, and ultimately improve both care quality and operational efficiency.

Despite empirical support for situational leadership theory, its practical application in nursing remains inconsistent. Our review revealed that many studies failed to clearly define which model—SL or SLII—they employed. This lack of clarity, coupled with differences between the models in categorizing employee development, may result in inconsistent interventions and variable outcomes. Future research should clearly specify the model used to prevent conceptual confusion and ensure proper implementation.

Assessment tools in situational leadership

Several tools are available for evaluating nursing leadership within the situational leadership framework, but differences and limitations exist. Cardoso's questionnaire [27] utilizes a 6-point Likert scale to measure nurses' knowledge, skills, and attitudes, whereas other tools rely on situational assessments of leadership style. LEAD and Hersey and Blanchard's leadership style assessment tools focus on identifying leadership types, while LBAII and LSSQ assess flexibility and effectiveness of leadership styles. Additionally, only some tools allow for both leader self-assessment and subordinate evaluation. Despite the availability of multiple validated instruments, many studies did not report the reliability or validity of their measurement tools. Most Chinese studies assessed nurse maturity indirectly, without standardized tools [15, 25, 26, 34, 35, 39, 40, 42], introducing potential biases and limiting the credibility of findings. Future research should enhance the rigor and transparency of measurement reporting and develop culturally sensitive tools, potentially incorporating modern technology such as digital assessment platforms to improve accuracy and applicability [47].

Application and contextual relevance

Situational leadership theory is well-suited for analyzing team dynamics in complex, interdisciplinary healthcare environments. Modern clinical care requires integration across professions to address increasingly complex patient needs [4]. Leadership is context-dependent; leaders must balance directive and supportive behaviors according to the situational demands and the maturity of team members [48, 49]. By adapting leadership style to team members' development, leaders can motivate employees, enhance productivity, and achieve organizational goals [50]. Properly applied, situational leadership can also improve job satisfaction by allowing staff to leverage their strengths while addressing weaknesses [10, 51].

However, leaders must exercise judgment when adjusting their leadership style. Frequent changes in style may disrupt team stability and undermine trust. Additionally, leaders' subjective perceptions of staff maturity can introduce bias, affecting leadership decisions [28]. Structured leadership training and ongoing feedback from team members can mitigate these risks, helping leaders refine their style and improve alignment with organizational objectives [52, 53].

Intervention reporting and research gaps

A notable limitation identified in this review is the lack of transparency in intervention reporting. Many studies provided minimal detail regarding allocation settings, timing, duration, incentives, and measures to reduce bias from non-randomization or non-blinding. Few studies offered guidance for refining or expanding interventions. Such under-reporting hampers replication and the development of standardized intervention protocols [54, 55]. To advance the field, future research should focus on comprehensive, transparent reporting of intervention design and implementation. Developing standardized protocols will facilitate broader application of situational leadership theory in nursing management and improve the reproducibility and quality of research outcomes.

Observational studies and methodological transparency

Of the nineteen studies included in this review, five employed observational designs. None fully satisfied all STROBE criteria, with notable deficiencies observed in methodological reporting. The remaining thirteen studies were non-randomized controlled trials, and none adhered completely to TREND guidelines. These trials frequently lacked comprehensive reporting of methods and results. TREND was designed to enhance the

transparency and accuracy of behavioral and public health evaluations in non-randomized studies [56], while STROBE aims to improve clarity and completeness in observational research [57]. The relatively early stage of research applying situational leadership theory in nursing management likely contributes to the generally low transparency and methodological rigor observed in these studies.

In observational studies, situational leadership theory was primarily applied to evaluate nurse managers' leadership. The STROBE assessment revealed major gaps, including insufficient reporting of study design details and funding sources, with sample size reporting being particularly limited. This limitation raises questions about the representativeness of the samples and may introduce measurement errors, meaning the findings should be interpreted with caution [27]. Similarly, quasi-experimental studies demonstrated situational leadership's utility in nursing management, but TREND evaluation revealed poor reporting of methodological procedures and outcomes. Less than half of the studies reported the validity of their measurement tools, which further limits confidence in the findings. Overall, the lack of transparent reporting has hindered the development of standardized interventions and clear protocols for applying situational leadership theory in nursing management. Future research should systematically follow STROBE and TREND guidelines to improve methodological transparency and study quality.

Limitations

This review has several limitations. Most included studies were conducted in Asian countries, which may restrict the generalizability of findings to other cultural or healthcare contexts, particularly in Western settings. Additionally, literature published in languages other than Chinese and English was excluded, potentially omitting relevant studies and limiting global coverage. Many studies also lacked transparency and did not employ validated assessment tools, constraining the depth of information available and highlighting the need for improved reporting and measurement in future research.

Conclusion

Effective nurse leadership is critical for fostering professional growth among nurses and achieving organizational objectives in contemporary healthcare. Situational leadership theory supports the development of nurse leadership and team maturity by aligning managerial leadership styles with the readiness and capabilities of nursing staff, thereby improving organizational outcomes. This review offers a comprehensive synthesis of situational leadership theory applications in nursing management, including measurement tools, research designs, intervention strategies, outcome indicators, and reporting gaps. While the literature demonstrates the theory's positive impact, challenges remain: some assessment tools require validation, the distinction between SL and SLII models needs clarification, and reporting transparency is generally poor, which diminishes study credibility and hinders methodological refinement. Future studies should focus on validating measurement instruments, standardizing application protocols, and adhering to reporting guidelines to strengthen the evidence base for situational leadership in nursing management.

Abbreviations

D: Development
LBAII: Leadership behaviour analysis II scale
LEAD: Leadership effectiveness and adaptability description
LSAT: Leadership style assessment tool
LSSQ: Leadership style self-questionnaire
R: Readiness
S: Leadership style
STROBE: Strengthening the reporting of observational studies in epidemiology
TREND: Transparent reporting of evaluations of quasi-experimental studies

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