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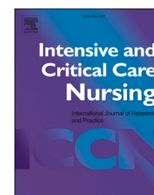

Review Article

Nurses' clinical leadership in the intensive care unit: A scoping review

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ABSTRACT

Objective: To explore the existing knowledge in the literature about nurses' clinical leadership in the intensive care unit.

Methods: A scoping review was conducted according to Arksey & O'Malley's methodology. The search process encompassed five main online databases, PubMed (including MEDLINE), CINAHL, PsycINFO, Scopus and Cochrane, for the period January 2007-September 2022. Data abstraction, quality appraisal and narrative synthesis were conducted in line with the Preferred Reporting Items for Systematic reviews and meta-Analyses extension for Scoping Reviews (PRISMA-ScR) guidelines.

Results: Eleven studies were included. The evidence reveals that idealised influence, motivational inspiration, intellectual stimulation and intrinsic individual consideration are the key clinical nurse leader competencies needed in the intensive care unit. The compatible leadership styles in this setting are situational and transformational. Communication skills and professional experience seem to be determinants to consider in the strategies to promote clinical leadership in intensive care units.

Conclusions: This scoping review provides broad and comprehensive knowledge, which helps to understand, in a single study, the key competencies, leadership styles, determinants and strategies needed to promote intensive care unit nurses' clinical leadership.

Implications for clinical practice

- Intensive care nurses should address the competencies of idealised influence, motivational inspiration, intellectual stimulation and intrinsic individual consideration for developing clinical leadership.
- Two complementary leadership styles, situational and transformational, are identified to exercise clinical leadership in intensive care.
- Training in communication skills, emotional intelligence and innovation development through formal programmes throughout the professional career is needed.
- Having programmes that effectively empower nurses at the bedside to carry out improvement projects and act with autonomy and confidence may help other professionals change their perception of the appropriateness of considering them to improve the care of critically ill patients.

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Introduction

Nurse clinical leadership refers to nurses at the bedside who, although not vested with formal authority, exert influence on the health care team to achieve positive patient outcomes (Chávez and Yoder, 2015; Patrick et al., 2011). Bedside nurses are well positioned to identify areas for improvement, motivate other members of the care team to act on patient care, and lead change initiatives to correct problems that arise in the clinical setting. In addition, they can identify inefficiencies related to organisational structures, workflows, policies and procedures for the delivery of optimal patient care (Casey et al., 2011; Doherty, 2014).

Clinical leadership is known to be an ambiguous and context-dependent phenomenon (Larsson and Sahlsten, 2016), and may vary depending on the service in which it is exercised (Stanley & Stanley, 2018). The Intensive Care Unit (ICU) context is characterised by critically ill patients, unpredictable clinical care, rapid patient turnover, aggressive treatments on the verge of death, and the need for critical care nurses to provide highly complex and specialised care (Brewster et al., 2020; Intas et al., 2021; Lima et al., 2017). In this context, there is a need for bedside nurse leaders with critical capacity, a sense of control, competence and autonomy who can provide an agile and effective response (Al Anwer-Ashour, et al., 2022; Brewster et al., 2020; Intas et al., 2021; Lima et al., 2017).

Promoting nurse clinical leadership in ICU can have a positive impact on clinical practice, the professional practice environment, safety, quality, efficiency and sustainability of care processes that benefit the healthcare team and provide good patient care, as well as nurse satisfaction and retention (Alvinius, 2017; Breswter et al., 2020; Ha & Pepin, 2018; Mianda & Voce, 2017; Wong & Cummings, 2007). According to the Institute of Medicine's report on the future of nursing, all nurses can exercise leadership at any level and setting (IOM, 2011). In this sense, for instance, the American Association of Critical-Care Nurses (AACN), launched in 2012, is a 16-month training program that aims to empower and provide nurses with the knowledge and skills to become leaders at the bedside to positively influence patient's outcomes (Lacey et al., 2017).

In the last decade, there have been reviews that have contributed to expanding knowledge about nurses' clinical leadership in ICU. Specifically, Henriques (2012) has provided knowledge on the professional competencies that clinical nurses develop in ICU, while Kiwanuka et al., (2020) show the impact of different nursing leadership styles on quality measures in ICU. However, these reviews provide a partial view of this phenomenon. Therefore, it is considered necessary to obtain a broader understanding of this type of leadership in order to design effective strategies to promote it in ICU. This scoping review aims to explore the existing knowledge in the literature about nurses' clinical leadership in the ICU setting.

Methods

Design

A scoping review was conducted according to Arksey & O'Malley's (2005) methodological framework and further refined by the Joanna Briggs Institute (Peters et al., 2020), to examine existing knowledge about clinical leadership of ICU nurses, obtain a broad and comprehensive view and summarise the evidence and identify gaps in the literature. Preferred Reporting Items for Systematic reviews and meta-Analyses extension for Scoping Reviews (PRISMA-ScR) were used to ensure reporting standards (Tricco et al., 2018). The record of the review protocol is DOI https://doi.org/10.17605/OSF.IO/QZ69U.

Research questions

We sought to answer the following questions: What can be found in the international literature regarding nurses' clinical leadership in the Intensive Care Unit? What are the main aspects of nurses' clinical leadership in the Intensive Care Unit? What is the gap of knowledge about this topic in the international literature?

It was also formulated by PICo framework (Munn et al. 2018):

- Population: Nurses.
- Phenomenon of Interest: Clinical leadership.
- Context: Intensive care unit.

Search methods

The authors designed the review protocol and agreed on its details (Supporting Information 1). A librarian assisted with the definition of the search strategy and database identification. During this process, a content expert in the field (MV-C) was also consulted to ensure that the search strategy included the appropriate terms. The search was performed in Pubmed, CINAHL, PsycINFO, Medline, Scopus and Cochrane databases, for the period January 2007-September 2022. The terms used were "clinical leadership", "intensive care unit" and "nurse", with their respective synonyms, combined with the Boolean operators "AND" and "OR". To improve sensitivity and avoid omission of relevant articles, MeSH terms and keywords identified in the existing literature were used (Table 1). The limits applied were: language (English, Spanish, French and Portuguese), and year of publication (last 15 years).

Studies were selected based on the application of the inclusion and exclusion criteria presented in Table 2.

Quality appraisal

Quality assessment is not mandatory for scoping reviews (Munn et al., 2018). However, it could be considered to assess the credibility and transferability of findings (Pollock et al., 2021), as in this review, to provide future directions. The selected studies were evaluated independently by the five investigators using the methodological quality criteria described by the Joanna Briggs Institute for most studies and the Hawker et al. (2002) scale for combined studies. This process was reviewed and agreed upon by two of the investigators (AB-Z and AR-B). No study was excluded from the review for the methodological quality.

Data abstraction and synthesis

Data was collected using RedCap®, a secure web application for building and managing online surveys and databases, powered by Vanderbilt. The data were analysed considering the research objectives, methodology, sample and the main results of the studies reviewed. Tables were used to display the data from the scoping review. A thematic synthesis of the results was carried out based on the method proposed by Dixon-Woods et al. (2005) for qualitative and quantitative evidence synthesis: summary, coding, comparison and identification of common themes. This analysis process was first performed by two researchers separately (RG-G and AI-I) and then reviewed and discussed by the entire research team, which resulted in reconfiguring the themes and further summarising the results. The entire research team consisted of nurses with professional experience in ICU; the last author also has extensive experience in academia, management and research. The Clinical Nurse Leader's competencies in ICU were categorised according to the transformational leadership model of competencies adapted from

Table 1
Search strategy used in the different databases.

("clinical leadership" OR "clinical leader" OR "nursing leadership" OR "clinical nurse leadership")
AND
("nurse" OR "nurses" OR "nursing")
AND
(Intensive Care Unit [MeSH Terms] OR "Intensive Care Unit" OR "Intensive Care Units" OR "ICU" OR "critical care unit")

Table 2
Selection criteria.

Inclusion criteria	Exclusion criteria
Studies examining the clinical leadership of nurse caregivers in the adult ICU setting. Qualitative, quantitative, mixed, and grey literature studies	Studies that focus on formal nursing leadership, including the managerial, supervisory or advanced practice nurse. Studies examining the clinical leadership of the paediatric and/or neonatal ICU nurse. Studies focused on clinical leadership developed by health professionals other than the nurse caregiver.

Bass and Avoilo's (1994): idealised influence, motivational inspiration, intellectual stimulation, and individual consideration.

Ethical considerations

This research was conducted in accordance with research ethics and legislation and corresponding policies.

Results

Search outcomes

The initial search yielded a total of 311 studies. After eliminating duplicates, the abstracts of 176 articles were reviewed, and after applying the defined criteria, nine articles were selected. In addition, the reference lists of the selected articles were also reviewed through the snowballing technique to obtain other related studies, adding two studies that met the selection criteria, resulting in a total of 11 studies for the analysis of the results (Fig. 1). The process of reading and selecting the articles was carried out in pairs as shown in Fig. 2.

Table 3 presents the main characteristics of the studies included in this review. Of the 11 articles selected, five have a qualitative approach, 2 are integrative reviews, 2 are correlational, one uses mixed methodology and another is gray literature. These studies come from very diverse countries.

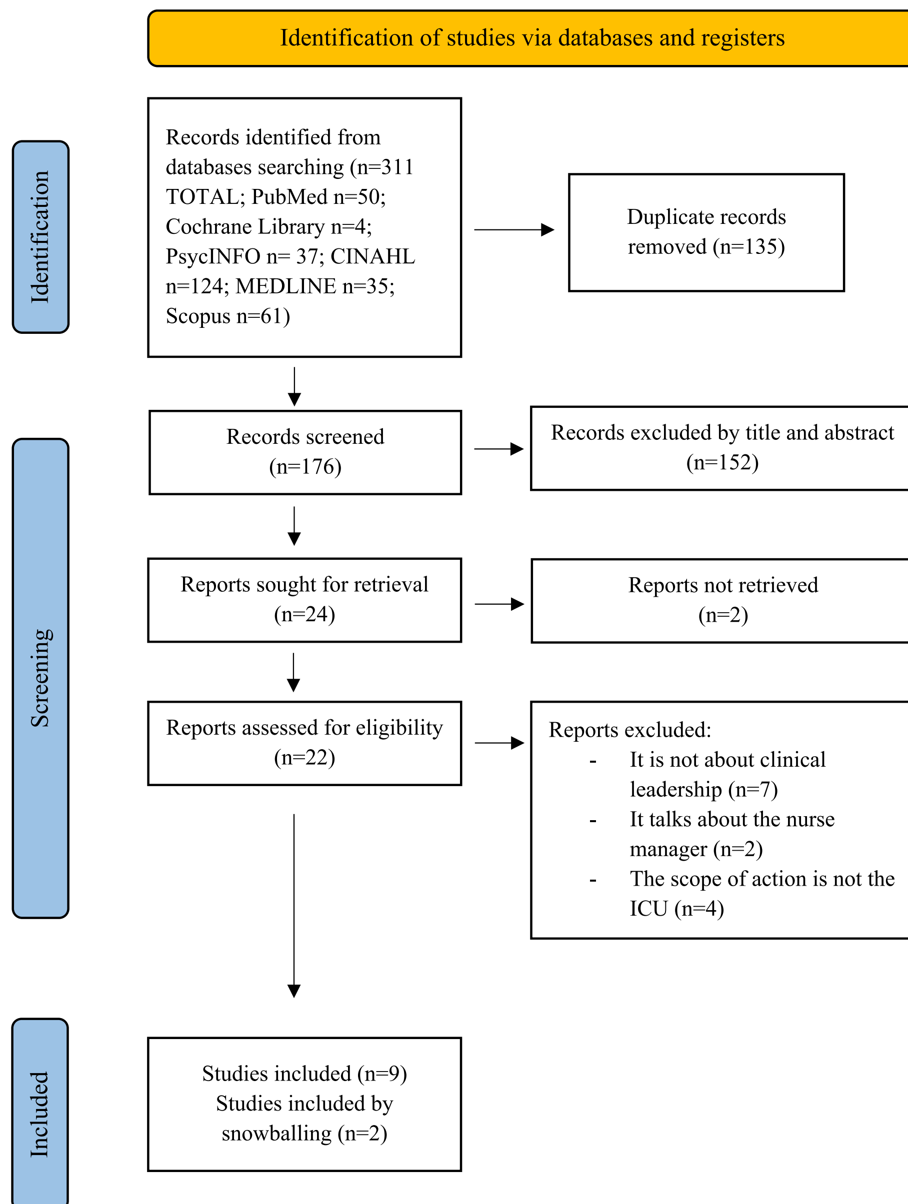

Fig. 1. PRISMA 2020 flow chart of the study selection process (Tricco et al., 2018).

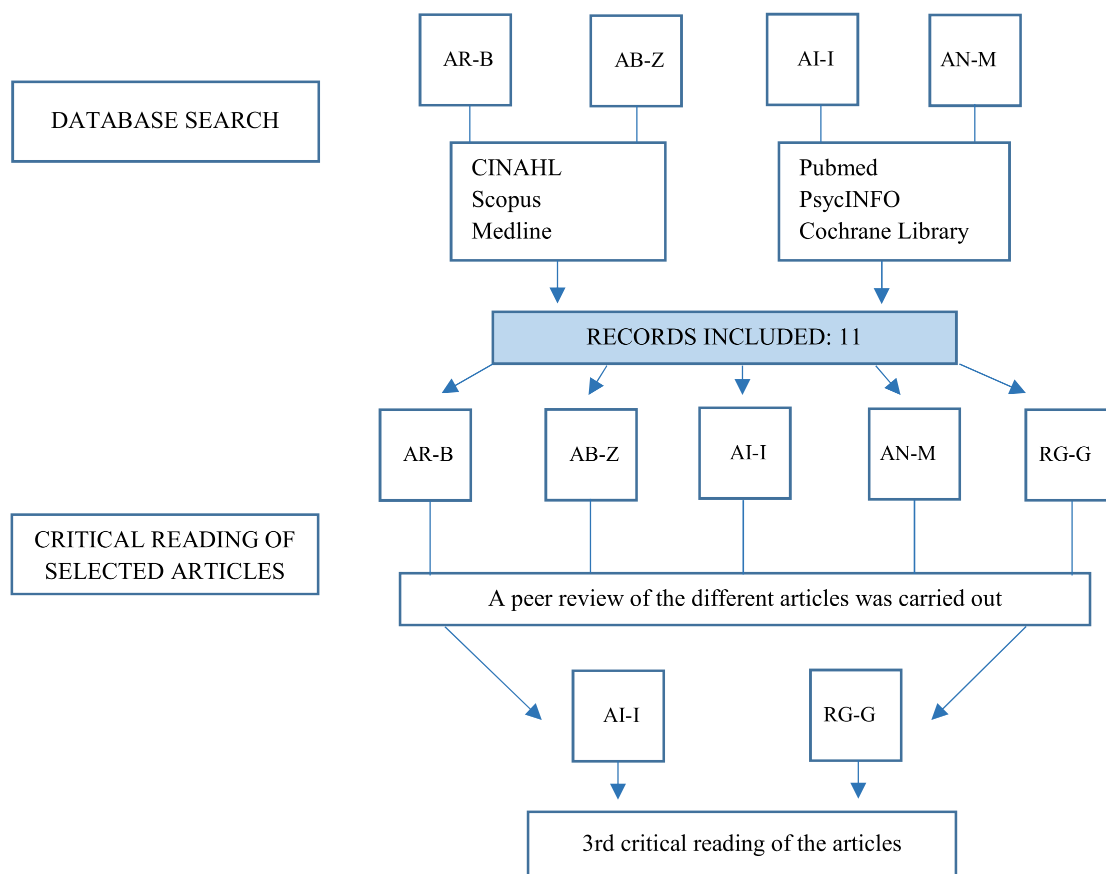

Fig. 2. Figure of the article selection process.

Methodological quality of the studies

Table 4 details the methodological quality of the studies. In general, the studies were of medium (n = 7), and, to a lesser extent, low (n = 1) and high (n = 2) quality. However, due to the scarcity of publications related to the topic of interest, all articles were included.

Main results of the studies

The results of the comprehensive analysis of the identified studies are presented below. Fig. 3 shows a representation of the main results of this study.

The clinical nurse leader's competencies in ICU

Five of the studies reviewed have identified four key competencies that ICU nurses need to develop to exercise clinical leadership (Agard & Lomborg, 2010; Henriques, 2012; Lima et al., 2009; Linton & Farrell, 2009; Zhuravsky, 2015). Table 5 summarises these competencies, which are developed below.

Idealised influence. Idealised influence is one of the key competencies of ICU nurses' clinical leadership, as it appears recurrently in five of the studies. It refers to the qualities and behaviours of ICU nurses that make them role models for others, who admire, respect, trust and wish to imitate them (Agard & Lomborg, 2010; Henriques, 2012; Lima et al., 2009; Linton & Farrell, 2009; Zhuravsky, 2015).

Among the qualities identified to exert an idealised influence, bidirectional and effective communication stands out, both with other professionals from the same or different disciplines and with the patient and his or her family (Henriques, 2012; Lima et al., 2009; Linton & Farrell, 2009). That is one in which constant feedback is carried out in both directions and care is taken with verbal and nonverbal communication, as well as active and conscious listening. Findings suggest the need to address attitudinal qualities such as empathy, respect, availability, tolerance and responsibility, optimism and enthusiasm (Agard & Lomborg, 2010; Henriques, 2012; Linton & Farrell, 2009).

In addition, nurses who exert idealised influence gain the respect and trust of others when they demonstrate their knowledge of ethical problem solving and conflict resolution, especially in critical ICU situations where diligent and confident decision-making is required (Agard & Lomborg, 2010; Henriques, 2012; Lima et al., 2009; Linton & Farrell, 2009; Zhuravsky, 2015). In these crisis situations, as highlighted by Zhuravsky (2015), nurses must act autonomously, i.e., according to their knowledge and clinical judgment, to solve daily practice problems in the ICU context, with control and competence. In this way, they manage to bring value to the team and exert idealised influence and thus informal leadership (Zhuravsky, 2015).

Motivational inspiration. Motivational inspiration is another of the competencies that the nurse must develop to exercise clinical leadership in the ICU, identified in three of the studies. It refers to the nurse's ability to motivate and inspire other professionals to achieve a common goal. To do so, the nurse must have a clear vision of the objective and be of integrity, i.e., there must be coherence between his or her values and actions (Lima et al., 2009; Linton & Farrell, 2009; Zhuravsky, 2015).

Intellectual stimulation. Intellectual stimulation, which appears in only one study, alludes to the ICU nurse leader's ability to encourage other professionals to carry out new ideas (Linton & Farrell, 2009). Through her example and the trust and knowledge of the professionals, the nurse empowers team members, favouring their intellectual growth and development and fostering a sense of belonging (Linton & Farrell, 2009).

Table 3
Selected studies and their main characteristics.

Author, year, country	Objective	Methodology	Sample	Main Results	Quality
Kiwanuka et al. (2020), 6 in USA, 1 in Australia	To examine the impact of nursing leadership styles on ICU quality measures.	Integrative review	7 articles	- Leadership styles: transformational, considerate, exemplary, dependable, and absent. - Nurse leaders with a common vision and who advocate for their staff are more effective. - Structural measures related to leadership styles: productivity and staff morale.	8/11
Lacey et al. (2017) USA	To describe the AACN-CSI academy curriculum to provide nurses with the leadership skills needed to create change projects.	Mixed methodology	164 nurses from 42 hospitals in 6 cities	The programme included topics in leadership, communication, change concepts, quality improvement methods, project management, and data management and analysis. This programme helped the nurses to gain leadership skills and improved their empowerment significantly ($p = 0.016$). Of those who completed the programme, 90 % were satisfied.	30/36
Pazetto & Kowal (2015) Brazil	To establish the relationship between the work environment and nursing leadership in the ICU.	Correlational study	66 nurses and nursing technicians	- Work environment was not related to actual nursing leadership ($p = 0.825$). - Only the nurse-doctor relationship domain stood out ($p = 0.001$).	6/8
Zhuravsky (2015) New Zealand	To explore the experiences of ICU staff and adopt leadership approaches to manage a large-scale crisis.	Qualitative study with a social constructivist methodological approach	14 were sent, of which 10 finally participated	- Formal leadership: decision-making, transmitting calmness, effective communication. - Informal leadership: leader motivation, autonomy, emotional support, crisis as opportunity. - Shared leadership within formal medicine and nursing: leadership clusters. - Shared leadership between formal and informal leaders in the ICU.	6/10
Henriques (2012) Brazil	To identify and analyse the competencies of nurses to act in the ICU.	Integrative review	10 articles (6 qualitative and 4 quantitative)	Nursing competencies for working in the ICU: management and delivery of highly complex nursing care, decision-making, nursing leadership, communication, continuing education, management of human and material resources.	6/11
Agard & Lomborg (2010) Denmark	To identify and explore strategies used by Danish ICU nurses in daily decision-making about family visits.	Exploratory qualitative interview study	11 semistructured interviews	- Practising clinical leadership. - Clinical leadership practice strategies: clarifying relationships, defining the situation, orienting family members.	9/10
Author, year, country	Objective	Methodology	Sample	Main Results	Quality
Lima et al. (2009) Brazil	To reflect on and learn about the perception of ICU nursing leadership.	Qualitative descriptive-reflective study	Intensive care unit nurses, teachers, academics	- Characteristics of the nurse leader in the clinical setting: dedication, accessibility, enthusiasm, optimism, open-mindedness, communication skills. - Nurse as team coordinator, especially in critical situations. - Nurse distancing as an obstacle to patient care and team growth. - Presence of nurse leadership in care planning, ethical and bioethical conflicts, evaluation of quality of care, interaction with the patient and family and with the professional team.	4/10
Linton & Farrel (2009) Australia	To explore ICU nurses' perceptions of nursing leadership in the adult ICU.	Qualitative phenomenological methodology	6 nurses with 5 years of experience	Topics to highlight: (1) leading by example, (2) communication, (3) management skills, (4) knowing your staff, and (5) stepping up in times of crisis.	7/10
Pazzeto et al. (2009) Brazil	To examine the association between ICU nurses' leadership styles and their personal and professional profile and workload.	Cross-sectional, descriptive, correlational study	7 nurses and 7 nursing assistants	Nurses with less experience tend to exercise a more decisive and persuasive leadership style, which is related to a higher workload on the NAS scale ($p < 0.05$). No significant relationship ($p > 0.05$) was observed between leadership style and the personal and professional profile of the nurses.	6/8
Sorensen et al. (2008) Australia	To examine nursing leadership in contemporary health care and its potential contribution to the organisation and management of health services.	Qualitative ethnographic study	34 participants	Barriers to the enactment of nurses' professional role (exclusion of nurses in briefings and decision-making, uncivil behaviour of physicians).	6/10
Iacono & Altman (2016), USA	To show the impact of a bedside nurse leadership course to decrease the rate of urinary tract infections associated with bladder catheterisation.	Opinion article	NA	Decrease in the rate of urinary tract infection associated with bladder catheterisation by 33 % after the implementation of the project by the nurses participating in the course. Recognition of nurses as transformational leaders in their hospital.	5/6

USA: United States; NA: not applicable; ICU: intensive care unit.

Table 4
Methodological quality of included studies.

Quality assessment of **qualitative studies** (Y, Yes; N, No; D, Doubtful)												Score
Studies	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**		
Agard & Lomborg (2010)	Y	Y	Y	Y	Y	Y	N	Y	Y	Y		9/10
Lima et al. (2009)	Y	Y	D	D	Y	N	N	N	N	Y		4/10
Linton & Farrell (2009)	Y	Y	Y	Y	N	N	N	Y	Y	Y		7/10
Sorensen et al. (2008)	D	Y	Y	Y	Y	N	N	Y	D	Y		6/10
Zhuravsky (2015)	Y	Y	Y	D	Y	N	N	Y	D	Y		6/10
Assessment of the quality of **systematic reviews** (Y, Yes; N, No; D, Doubtful)												
Studies	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**	**P10**	**P11**	
Henriques (2012)	Y	Y	N	N	Y	N	N	Y	N	Y	Y	6/11
Kiwanuka et al. (2021)	Y	Y	D	Y	N	N	Y	Y	Y	Y	Y	8/11
Quality assessment of **cross-sectional/correlational studies** (Y, Yes; N, No; D, Doubtful)												
Studies	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**				
Pazzeto et al. (2009)	Y	Y	Y	Y	Y	N	D	Y				6/8
Pazetto & Kowal (2015)	Y	Y	Y	Y	D	D	Y	Y				6/8
Quality assessment of **mixed studies** (1 = very poor; 2 = poor; 3 = acceptable; 4 = good)												
Studies	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**	**P7**	**P8**	**P9**			
Lacey et al. (2017)	4	4	4	2	4	1	4	4	3			30/36
Evaluation of the quality of opinion **text studies** (Y, Yes; N, No; D, Doubtful)												
Studies	**P1**	**P2**	**P3**	**P4**	**P5**	**P6**						
Iacono & Altman (2016)	Y	Y	Y	Y	Y	N						5/6

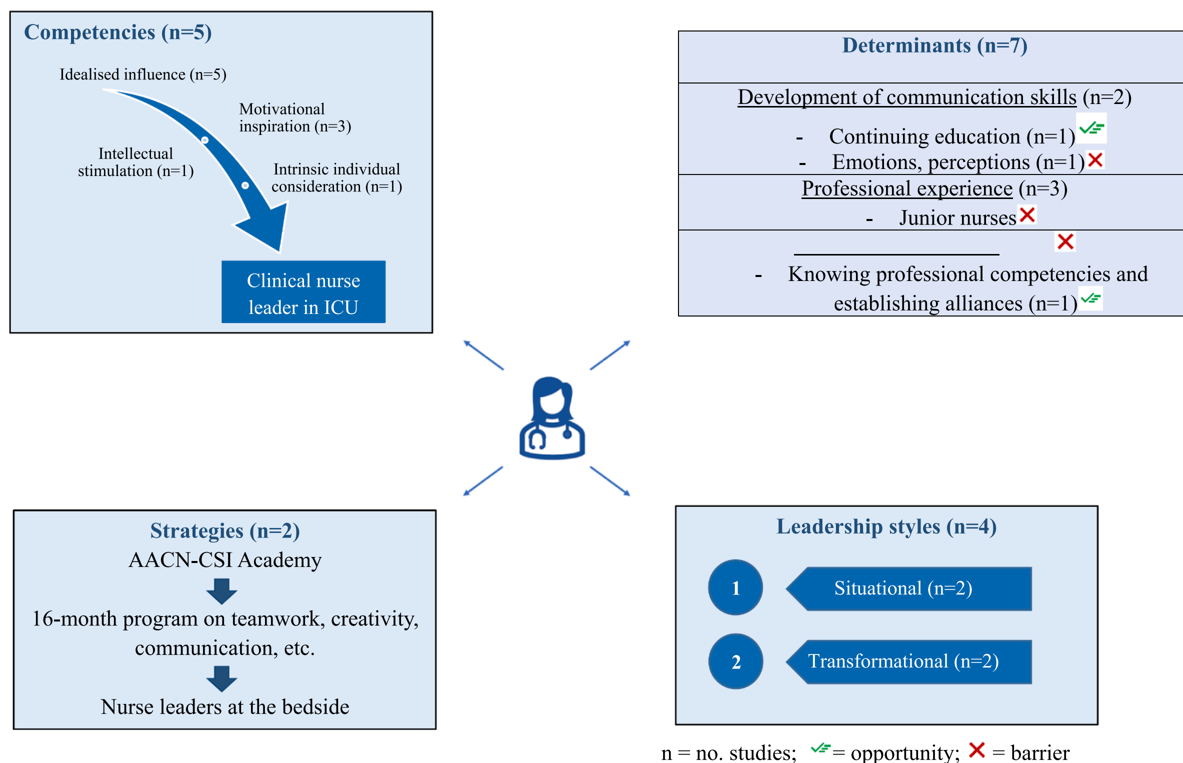

Fig. 3. Main results.

Intrinsic individual consideration. Intrinsic individual consideration is the fourth competency identified in one of the selected studies with a qualitative approach and refers to the nurse's ability to provide emotional support to team members (Zhuravsky, 2015). To do so, the nurse must know the professionals and possess adequate emotional intelligence that allows her to recognize, understand and control her own emotions and those of others (Zhuravsky, 2015).

Clinical leadership styles in ICU nurses

Situational leadership. This leadership style, also called the Managerial Grid model, states that there is no single leadership style appropriate for each situation, so the nurse will exercise one leadership style or another depending on the relationship and maturity of the professionals (Pazetto et al., 2009; Pazetto & Kowal, 2015). Although the reviewed studies share this definition, they differ in their classification. Henriques (2012) and Pazetto et al. (2009) pointed out four modes of exercising clinical leadership: determining, persuading, delegating and sharing;

Table 5
Clinical leadership competencies of the ICU nurse.

	Idealized influence					Motivational inspiration				Intellectual stimulation		Intrinsic individual consideration
	Attitudinal qualities	Knowledge	Personal experience	Communication skills	Autonomy	Role model	Motivation	Vision	Integrity	Encourage and meet professionals	Team empowerment	Emotional intelligence
Agard & Lomborg, 2010	X	X	X									
Henriques, 2012		X		X								
Lima et al., 2009	X	X	X	X		X	X	X	X			
Linton & Farrell, 2009	X	X	X	X		X	X	X	X	X	X	
Zhuravsky, 2015		X			X	X	X	X	X			X

highlighting persuasion and sharing decisions as the two most common in ICU nurses. For their part, Pazetto & Kowal (2015) distinguish five leadership styles: indifferent, interested in people, balanced, authoritarian and integrated, finding no significant difference between the leadership style and the context where it is applied, suggesting that they can be applied in any context, in addition to ICU.

Transformational leadership. Transformational leadership, also called exemplary leadership, is a leadership style in which the nurse motivates the rest of the professionals to achieve changes, seeking the interests of the team and involving them emotionally and intellectually (Kiwanuka et al., 2020; Linton & Farrell, 2009). In both studies, these nurses are characterised as role models, with extensive experience and knowledge, communication skills, promoters of changes in the team and who know how to delegate in complex ICU situations (Kiwanuka et al., 2020; Linton & Farrell, 2009). Kiwanuka et al. (2020) in their integrative review further conclude that this leadership style has a positive impact on ICU nurse satisfaction and retention.

Determinants of clinical leadership in ICU nurses

Several aspects have been identified that determine the exercise of clinical leadership by ICU nurses. One of the key aspects of its exercise is the development of communication skills (Kiwanuka et al., 2020; Linton & Farrell, 2009). For this, it is necessary that the nurse knows the professionals, knows how to listen and has knowledge of communication strategies (Linton & Farrell, 2009). However, there are aspects such as the nurse's emotions, perceptions and values (Linton & Farrell, 2009), or absenteeism (Kiwanuka et al., 2020), which hinder communication (Kiwanuka et al., 2020; Linton & Farrell, 2009). Henriques (2012) highlights that continuing education is an opportunity for the consolidation of nurses' communicative competence, facilitating the development of clinical leadership.

Another relevant aspect to develop clinical leadership from an informal authority is the professional experience of ICU nurses (Agard & Lomborg, 2010; Pazetto et al., 2009). Sorensen et al., 2008). Having little professional experience is associated with increased workload ($p < 0.05$) (Pazetto et al., 2009), higher nurse turnover (Sorensen et al., 2008) and lack of planning and organisation at work (Agard & Lomborg, 2010), which hinders the active participation of novice nurses in decision-making (Sorensen et al., 2008) and, therefore, their leadership in ICU.

Finally, the figure of the physician is also an aspect that determines the clinical leadership of ICU nurses (Sorensen et al., 2008). Sometimes, they do not have the nurses' opinion and exclude them from meetings and decision-making. This hinders teamwork and interprofessional collaboration, and causes nurses to lack up-to-date information about the patient's wishes, impacting the quality of care (Sorensen et al., 2008). In this sense, Pazetto et al. (2009) emphasise the importance of knowing and understanding the competencies of other professionals, in order to favour alliances, especially with the medical profession, facilitating the involvement and active participation of nurses in decision-making.

Strategies to promote clinical leadership in ICU and their impact

Two of the studies describe and evaluate a program, developed by the American Association of Critical-Care Nurses and the Clinical Scene Investigator, to promote ICU nurse clinical leadership in the United States (Iacono & Altman, 2016; Lacey et al., 2017). This 16-month program aims to provide ICU nurses with the necessary tools to become qualified clinical leaders (Iacono & Altman, 2016; Lacey et al., 2017). To this end, through workshops, webinars, personal meetings, telephone or email, nurses are trained in creativity and innovation, teamwork, strategic communication, entrepreneurship, among other competencies, to promote the development and implementation of improvement projects in their units (Iacono & Altman, 2016; Lacey

et al., 2017).

Lacey et al. (2017), through a quasi-experimental pre-post study, evaluated the impact of this program. Ninety percent of those who completed the program showed satisfaction. In addition, they found a significant improvement in the empowerment of these nurses measured by the Conditions of Work Effectiveness Questionnaire-II after taking the program ($p = 0.016$). For their part, Iacono & Altman (2016), in an opinion article, describe how a group of four nurses in an ICU developed an improvement project to reduce the rate of urinary tract infections associated with bladder catheterisation. This project succeeded in reducing the rate by 33 % and they were recognised as transformational leaders in their hospital (Iacono & Altman, 2016).

Discussion

This scoping review has provided a better understanding of the clinical leadership of ICU nurses by identifying their key competencies, the two compatible leadership styles and the determinants for their development. In addition, it has revealed different strategies to promote this type of leadership and its potential impact in the ICU context.

The identification of idealised influence, motivational inspiration, intellectual stimulation and intrinsic individual consideration as key competencies for developing clinical leadership in the ICU is consistent with a recent systematic review that identifies cognitive, interpersonal and intrinsic competencies as necessary to promote this type of leadership in the hospital context (Guibert-Lacasa & Vázquez-Calatayud, 2022). Both reviews also reflect the importance of working on bidirectional and effective communication to promote idealised influence in ICU nurses and interpersonal competence in hospitalisation (Guibert-Lacasa & Vázquez-Calatayud, 2022). Another common quality of nurses who exercise clinical leadership in both ICU, inpatient (Guibert-Lacasa & Vázquez-Calatayud, 2022) and outpatient (Lara Jaque et al., 2020) settings is emotional intelligence. These results can be attributed to the fact that, regardless of the context, when faced with situations of stress and insecurity, communication and emotional intelligence act as protective elements to preserve the quality of care provided to the patient and family (Giménez-Espert et al., 2020). This has been particularly essential for ICU nurses to cope with the care of COVID-19 patients (Cadge et al., 2021). It is also important to keep in mind that these findings respond to scarce research and that none of the studies reviewed have included all the competencies and qualities. This fact and its recognized context-dependence (Larsson and Sahlsten, 2016) motivate further research on this phenomenon, to identify those nuances existing in disparate settings, which can help to better focus strategies and interventions that help to boost it.

The findings of this review, in addition to identifying the competencies and qualities necessary for nurses to exercise clinical leadership in the ICU, point to two complementary leadership styles for its development, situational and transformational. Both have been identified in the literature under different classifications and nomenclatures. This ambiguity may be due to the lack of consensus in the definition of clinical leadership (Mianda & Voce, 2017; Chávez and Yoder, 2015). While Torres-Contreras (2013) leans towards the former, one leadership style or another being more appropriate based on the situation occurred, Kiwanuka et al. (2020) bet on the latter, whereby the nurse motivates the team to achieve changes, seeking their interests and involving them at an emotional and intellectual level. In this sense, although it is not possible to determine which leadership style is the most appropriate in the ICU, the results suggest, through the identification of the four competencies compatible with the latter leadership style (Doody & Doody, 2012) and its potential impact, that transformational leadership could be the most suitable. To confirm this hypothesis, it is crucial to carry out more intervention-type studies in the ICU.

This review also sheds light on the factors that determine the clinical leadership of ICU nurses and different strategies to promote it. Among these strategies, and in line with what has been argued previously, training in the development of communication skills, emotional intelligence and innovation, through formal programmes, stands out (Kiwanuka et al. 2020; Lacey et al., 2017). This training should continue throughout the professional career to ensure the consolidation of these competencies (Henriques, 2012; Vázquez-Calatayud et al., 2021). Efforts should also be made to promote the visibility of the impact of clinical nurse leadership, through active participation in decision-making, implementation and evaluation of improvement projects in the units (Kiwanuka et al. 2020; Lacey et al., 2017). According to this review, one of the factors conditioning the active participation of nurses in decision-making in daily practice is their lack of knowledge linked to the limited professional experience of some nurses. This finding is particularly relevant since bedside nurses occupy an informal leadership position, so they must gain the trust of others to be considered leaders (Larsson and Sahlsten, 2016). In this sense, the knowledge demonstrated in solving problems related to the patient in charge, e.g. in daily interdisciplinary rounds, as well as in leading improvement projects or participating in committees and working groups, is essential.

Another aspect that determines how ICU nurses exercise clinical leadership, although it has appeared less frequently in the results of this review, is considered to be of interest to address is the doctor's perspective (Sorensen et al., 2008). On occasions, nurses are not involved in decision-making concerning ICU patients, which hurts the quality of their care (Sorensen et al., 2008). Having programmes that effectively empower nurses at the bedside to carry out improvement projects and act with autonomy and confidence may help other professionals change their perception of the appropriateness of considering them to improve the care of critically ill patients (Iacono & Altman, 2016; Lacey et al., 2017). In this regard, this review may help to provide clues for the design of such programmes. These should enable nurses, for instance, to innovate, work in teams, to develop, implement and evaluate improvement projects in ICU through process and outcome indicators.

Limitations and suggestions for future studies

This scoping review provided an overview of international knowledge about clinical leadership of ICU nurses in spite of retrieving a few empirical studies of this relevant phenomenon. Studies that were not published in the databases analysed or in languages other than those selected may have been omitted, and should be considered by future researchers. This review was further limited by the deficiencies identified in the methodology of the studies in terms of the reflexivity of the investigator, ethical aspects and possible selection biases. Future research should take these aspects into account to fill these methodology gaps. Nevertheless, it should be noted that this study has followed a rigorous search, selection and synthesis procedure, first peer-reviewed and then reviewed by the entire research team (Pollock et al., 2021). Another strength of this review is the transparency and methodological rigour in the description of the process and critical appraisal tools used. In addition, for the first time in the literature, a more complete perspective on the clinical leadership of ICU nurses is provided.

Conclusions

This scoping review provides a broad and comprehensive knowledge, which helps to understand, in a single study, the key competencies, leadership styles, determinants and strategies needed to promote clinical leadership of nurses in the ICU context. Based on the results of this review, we suggest the development of programs to promote transformational leadership of ICU nurses that address the development of four competencies: idealised influence, motivational inspiration, intellectual stimulation and intrinsic individual consideration, as well as qualities such as communication and emotional intelligence.

However, it is worth to note that these findings respond to scarce

research on nurses' clinical leadership in the ICU and that none of the studies reviewed included all the competencies and qualities identified. Further research on this phenomenon is needed to identify ICU nurses' specific competencies to devise more accurate programs for empowering nurses to lead their daily clinical practice in ICU. Hence, it would improve the quality of care provided to patients and the satisfaction and retention of nurses.

Ethical considerations

This research was conducted in accordance with research ethics and legislation and corresponding policies.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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