

Evolving Competences of Nurse Mentors in Clinical Education: A Mini-Review of Recent International Evidence

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Abstract

Introduction. Clinical mentoring plays a crucial role in nursing education, contributing to the development of students' technical, relational, and critical skills. Mentor competence is a key determinant of the quality of the clinical learning experience. In this perspective, the aim of this work is to synthesize evidence on nurse mentors' self-assessed competence, with particular focus on strengths, areas for improvement, and effective educational interventions.

Methods. This mini-review was based on the updated literature search (PubMed, CINAHL, Scopus) covering the period 2020–2025. Quantitative and mixed-method studies conducted in real clinical settings, with direct measurement of mentors' self-perceived competence, were included.

Results. Pedagogical and personal competencies were perceived as strong, whereas organizational skills were less developed. Structured educational programs significantly improved self-assessed competence scores and observed performance. Intercultural competence emerged as a critical area.

Discussion. Improving mentors' competence requires an integrated approach that combines continuous training, standardized assessment tools, the development of intercultural skills, and organizational support.

Keyword: Clinical Mentoring, Nursing Education, Competence, Self-Assessment, Narrative Review

Introduction

Clinical mentoring is a vital part of nursing education as it helps students to integrate theoretical learning with professional practice. It supports the development of clinical, communication and reflective skills (Pramila-Savukoski et al., 2020; Papastavrou et al., 2016; Saarikoski et al., 2013).

However, in the literature the terms mentoring and tutoring are sometimes used interchangeably, despite referring to distinct educational approaches (Tuomikoski et al. 2018). Tutoring typically focuses on academic support and task oriented supervision, whereas clinical mentoring is a broader developmental process that involves relational, reflective and psychosocial support. In this article, the concept of clinical mentoring is adopted in its wider meaning, referring to an intentional, structured and time limited relationship aimed at supporting professional growth and integration into clinical practice (Mínguez Moreno et al., 2023; Chen & Lou, 2014). This clarification ensures conceptual alignment throughout the manuscript and distinguishes mentoring from narrower forms of academic tutoring.

The concept of mentoring has ancient origins, dating back to classical Greece. In nursing, it formally emerged in the United Kingdom in the 1960s as a strategy to support trainee professionals (Mínguez Moreno et al., 2023). Today, mentoring is understood as an intentional, structured, and temporary relationship in which an experienced professional (the mentor) supports a less experienced professional (the mentee), helping them with not only the transfer of knowledge, but also social and professional integration (Mínguez Moreno et al., 2023; Chen & Lou, 2014).

In university nursing education, mentors have taken on an increasingly central role, particularly given the reduced presence of university lecturers in wards (Warne et al., 2010; Jokelainen et al., 2011). Directive 2013/55/EU stipulates that at least 50% of training must take place in clinical settings, which makes it essential to have competent and motivated individuals available to act as mentors (European Parliament, 2013).

The literature emphasises that effective mentoring can promote student learning, reduce

anxiety and stress, boost professional confidence and support the transition to clinical practice (Huybrecht et al., 2011; Gularte-Rinaldo et al., 2022; Tuomikoski et al., 2020). Furthermore, well-structured mentoring programmes have been shown to improve the retention of recent graduates, reduce staff turnover, and promote a sustainable organisational culture (Chen & Lou, 2014; Haggerty et al., 2013; WHO, 2020).

Mentoring also directly impacts the quality of care by providing constructive feedback and clinical supervision to reduce variability in care and promote patient safety (Mínguez Moreno et al., 2023; Jokelainen et al., 2013).

In this context, Pramila-Savukoski et al. (2020) systematic review analysed the self-assessed skills of nursing mentors in depth, identifying their strengths and areas for improvement. The aim of this mini-review is to update this evidence by including studies published between 2020 and 2025. The review will outline emerging areas of competence and propose operational recommendations to strengthen the training and support of clinical mentors.

Methods and Materials

This mini-review included international studies addressing nursing mentoring, with a focus on programmes designed to strengthen, evaluate or support clinical mentoring in real clinical environments, rather than on students themselves. The literature review was carried out independently by two researchers, following Griffith's (2002) methodological recommendations and adopting a two-stage process.

During the first exploratory phase, MEDLINE and CINAHL databases were searched to identify the most relevant indexed terms (Aromataris & Riitano, 2014). In the subsequent phase, these terms and related keywords were used to perform a systematic search across PubMed (MEDLINE), CINAHL (EBSCO Host), and Scopus, which were deemed the most relevant databases for the topic (Aromataris & Riitano, 2014). To enhance methodological transparency and replicability, the complete search strategy—including database specific strings—is presented in Table 1. Grey literature was not considered for inclusion.

Table 1. Terms used to search the electronic databases.

Search Terms	
CINAHL	(MH "Preceptorship" OR MH "Mentors" OR preceptor*[TI] OR mentor*[TI] OR supervis*[TI]) AND (MH "Students, Nursing" OR "nursing student"[TI]) AND ("clinical learning environment"[TI] OR "clinical placement"[TI] OR "clinical training"[TI]) AND (competenc*[TI] OR skill*[TI] OR performance[TI]) NOT MH "Qualitative Studies" <u>Filters:</u> English, Italian Languages; Peer Reviewed, Exclude MEDLINE records, Publication year 2020-2025
PubMed	(mentor*[Title/Abstract] OR supervis*[Title/Abstract] OR preceptor*[Title/Abstract]) AND ("nursing student"[Title/Abstract] OR "nursing students"[Title/Abstract]) AND ("clinical learning environment"[Title/Abstract] OR "clinical education"[Title/Abstract] OR "clinical teaching"[Title/Abstract] OR "clinical placement"[Title/Abstract] OR "clinical training"[Title/Abstract]) AND (competence[Title/Abstract] OR skill*[Title/Abstract] OR performance[Title/Abstract]) <u>Filters:</u> English, Italian Languages; Publication date from 2020/01/01 to 2025/05/31;
Scopus	TITLE-ABS-KEY (mentor* OR supervis* OR preceptor*) AND TITLE-ABS-KEY ("nursing student" OR "nursing students" OR nurs* W/1 student*) AND TITLE-ABS-KEY ("clinical learning environment" OR "clinical placement" OR "clinical placements" OR "clinical rotation" OR "clinical training") AND TITLE-ABS-KEY (competenc* OR skill* OR performance) AND NOT TITLE-ABS-KEY ("qualitative study" OR "qualitative research") <u>Filters:</u> English, Italian Languages; Peer Reviewed original studies, Publication year 2020-2025, Nursing subject area

Caption: Search fields and Boolean operators used across the three databases.

Studies were included if they met the following conditions: they employed quantitative or mixed methods designs, were conducted in real clinical settings, focused explicitly on mentors' self perceived competence, and were published in English between January 2020 and May 2025. Studies were excluded if they relied solely on qualitative designs, were carried out in simulated learning environments, or did not use validated measurement instruments to assess mentoring competence.

It is important to clarify that these inclusion criteria refer to the methodological approach (quantitative or mixed methods). By contrast, the study design categories used in the Results section (e.g., cross sectional, longitudinal, quasi experimental) describe temporal or structural characteristics and therefore operate on a different level. This distinction explains why both classifications appear in the manuscript without contradiction, purely qualitative studies were excluded.

The search yielded a total of 120 records. After removing duplicates (n = 75), 45 records were screened by title and abstract, and 15 were excluded for not meeting the inclusion criteria (e.g., qualitative-only design, non validated assessment tools, non clinical settings). A total of 30 full text articles were assessed for eligibility, of which 25 were excluded due to inadequate methodology or misalignment with mentoring competence. Ultimately, 5 studies were included in the final synthesis. This narrative

format is consistent with the concise nature of mini-reviews while ensuring methodological transparency.

In addition, further eligible studies were identified through a manual search of the reference lists of the selected papers.

For each included study, the following data were extracted: year of publication, country, study design, sample size, measurement instruments, any educational or training interventions, and main findings.

Extracted data were analysed through a descriptive synthesis. Two independent researchers compared and categorised the studies based on recurring competence domains and methodological features, resolving discrepancies through discussion. Due to the heterogeneity of instruments and outcomes, no meta-analysis was performed. Results were therefore synthesised narratively and presented in tabular form. Terminology describing methodological approaches and study designs has been harmonised across Methods and Results to ensure internal consistency.

Results

A total of five studies met the inclusion criteria and were included in this mini-review. These studies were conducted between 2020 and 2025 in Europe, North America, Africa and the Middle East, and employed quantitative or

mixed-methods designs, in accordance with the eligibility criteria. A descriptive overview of the studies—covering geographical context, design, sample size and measurement instruments—is summarised in Table 2.

Overall, the included studies consistently demonstrated that clinical mentoring influences multiple domains of mentor competence, confirming both the complexity and the multifaceted nature of the role. Across settings, mentors tended to report high levels of perceived pedagogical and interpersonal competence, while organisational and intercultural dimensions appeared comparatively less

developed. The findings detailed below provide a structured synthesis of these patterns.

More recent evidence (2020–2025) builds on this foundation and extends the understanding of mentor competences (Table 2). Tuomikoski et al. (2020) demonstrated that structured training programmes significantly improve mentors' skills, particularly regarding feedback provision, student-centred evaluation, and support for learning processes. These improvements were observed across nearly all competence subdomains, indicating that educational interventions can generate both broad and deep enhancements in mentoring capacity.

Table 2. Main studies on nurse mentors' self-assessed competences (2020–2025).

Author(s) (year)	Country	Design	Sample	Instrument	Intervention / Focus	Key findings
Hagrass et al. (2023)	Egypt	Quasi-experimental	n = 30 mentors + 60 students	MCI, performance tools	Educational program	Significant improvements in knowledge, competence and performance; strongest gains in feedback, evaluation, conflict management.
Tuomikoski et al. (2020)	Finland	Quasi-experimental	n = 120 mentors	MCA-21 / MCI	Mentor training	Marked improvements in nearly all mentoring domains, especially workplace practices and student-centred evaluation.
Gularte-Rinaldo et al. (2023)	USA	Longitudinal	n = 154 mentees	Surveys, retention data	Be1Support1 Program	Positive effects on retention, confidence, problem-solving, communication and transition to practice.
Luukkonen et al. (2023)	EU (4 countries)	Cross-sectional	n = 270 mentors	MCCI + MCI	Intercultural competence	High awareness but weaker interaction/ safety; cultural competence correlated with mentoring competence.
Narayanan et al. (2025)	Bahrain	Cross-sectional	n = 201 students	Mentor Behaviour Tool	Mentor behaviours	High scores in learning facilitation, professional development and psychosocial support; strongest in emotional support.

Legend: MCI = Mentor Competence Instrument; MCCI = Mentors' Cultural Competence Instrument; MCA 21 = Mentor Competence Assessment Tool; Be1Support1 = Structured mentorship programme for newly graduated nurses.

Similarly, Hagrass et al. (2023) reported substantial gains in both self-assessed competence and observed performance after a structured educational programme. The most pronounced improvements concerned feedback quality, conflict management, and evaluation practices, suggesting that targeted training can strengthen complex relational and pedagogical

skills that are essential in clinical supervision.

In the United States, Gularte-Rinaldo et al. (2023) highlighted the long-term benefits of mentoring, including greater professional confidence, improved problem-solving skills, enhanced communication, and higher retention rates among newly graduated nurses. This study provides important evidence of the sustained

impact of mentorship over time, emphasising that its effects are not limited to the educational phase but extend into early professional practice.

Luukkonen et al. (2023), in a large international study, underscored the growing importance of intercultural competence, noting that mentors showed high levels of cultural awareness but limited operational ability to support international students. The study demonstrated that while attitudinal aspects of intercultural competence are generally strong, practical skills—such as adapting communication to linguistic needs or managing cultural misunderstandings—remain areas of vulnerability.

Finally, Narayanan et al. (2025) documented discrepancies between mentors' and students' perceptions, especially regarding the quality of feedback and emotional support. This

misalignment highlights the need to employ multi-perspective assessment tools, as self-reported competence alone may not fully capture the quality or consistency of mentoring interactions experienced by students.

The competences identified can be summarised into four macro-areas (Table 3). The established domains include pedagogical skills (e.g. feedback, reflection, clear objectives), personal qualities (motivation, resilience, professional values), and organisational abilities (time and resource management, collaboration with universities). More recent contributions have added a fourth dimension: intercultural competence, which refers to the ability to support students from diverse cultural and linguistic backgrounds through adapted communication and inclusive practices.

Table 3. Macro-areas of nurse mentors' competence and main evidence.

Macro-area	Description	Practical examples	Evidence
Pedagogical competence	Ability to facilitate and structure clinical learning	Improved feedback, evaluation, learning support, student centred supervision	Hagrass et al. (2023); Tuomikoski et al. (2020); Gularte Rinaldo et al. (2023); Narayanan et al. (2025)
Personal competence	Relational, motivational, emotional and professional qualities	Increase in confidence, communication, psychosocial support, problem solving	Gularte Rinaldo et al. (2023); Narayanan et al. (2025); Hagrass et al. (2023)
Organisational competence	Ability to manage resources, workload, coordination	Improvements in workplace mentoring practices and conflict management	Tuomikoski et al. (2020); Hagrass et al. (2023)
Intercultural competence	Ability to support culturally and linguistically diverse students	High cultural awareness but difficulty in communication, safety, interaction	Luukkonen et al. (2023)

Across the included studies, observational designs represented approximately half of the evidence base, followed by quasi-experimental studies and one systematic review. This distribution confirms the predominance of descriptive approaches in current research and highlights the need for more robust experimental designs in future investigations. Despite this limitation, the convergence of findings across diverse methodologies strengthens the validity of the identified competence areas and provides a coherent analytical framework for the updated mini-review.

In summary, the expanded narrative highlights consistent cross-study patterns, clarifies the contribution of each study to the four competence domains, and provides a more explicit link between the tabular data and the interpretive synthesis.

Discussion

The present mini-review builds upon and updates the systematic review by Pramila-Savukoski et al. (2020), which analysed sixteen quantitative studies and identified three core domains of nurse mentors' self-assessed competence: pedagogical, personal and organisational. Their review demonstrated that mentors consistently perceived pedagogical and interpersonal skills—such as providing feedback, motivating students, and fostering reflection—as their strongest areas, while organisational competences remained comparatively weaker due to workload constraints, lack of protected time, and insufficient institutional support. This prior evidence provides a crucial benchmark against which the findings of the present review can be interpreted and highlights the relevance

of updating the knowledge base, particularly in light of recent studies that have expanded the conceptualisation of mentor competence and introduced new domains, such as intercultural competence and observed performance outcomes (Papastavrou et al., 2016; Saarikoski et al., 2013).

Supporting evidence from earlier international studies reinforces this trend. For instance, Chen and Lou (2014) demonstrated the positive effect of mentoring programmes on new graduates' retention, while Huybrecht et al. (2011) showed that mentoring reduces students' anxiety and stress. Jokelainen et al. (2011, 2013) emphasised the importance of collaboration between universities and clinical settings for effective mentoring, and Luhanga et al. (2010) described the characteristics of preceptorship as a key determinant of clinical safety and learning quality. These findings provide an essential contextual background and further support the interpretation of the updated evidence included in this review.

The findings of this mini-review confirm the multidimensional nature of nurse mentors' competence, reinforcing the evidence that the pedagogical, personal and organisational dimensions are central to effective clinical mentoring. The systematic review by Pramila-Savukoski et al. (2020) was instrumental in categorising these domains and highlighting that mentors tend to rate their pedagogical and interpersonal skills more highly than their organisational and structural abilities. This imbalance highlights a long-standing discrepancy between individual motivation and institutional support, a finding that was initially observed in early European studies (Warne et al., 2010; Jokelainen et al., 2013).

Subsequent research has refined and expanded this framework. For example, Tuomikoski et al. (2018) identified three distinct competence profiles among Finnish nurse mentors, demonstrating the crucial role of professional experience and targeted education in shaping mentoring efficacy. Similarly, Mikkonen et al. (2020) proposed an evidence-based mentoring model derived from five European countries (Finland, Italy, Lithuania, Slovenia and Spain), which emphasised the importance of contextual adaptation and interprofessional collaboration. Together, these studies point to the need for structured mentoring education and organisational strategies that promote consistent

mentoring quality across different healthcare systems.

Recent quasi-experimental and longitudinal research (Tuomikoski et al., 2020; Hagrass et al., 2023; Gualarte-Rinaldo et al., 2022) has provided empirical evidence of the effectiveness of formal training programmes. Such programmes have been shown to significantly enhance mentors' perceived and observed competencies, particularly with regard to providing feedback, communicating, and engaging students. However, self-assessment bias (Eva & Regehr, 2005) means that multi-perspective evaluation tools must be implemented, integrating mentors' self-reports with student feedback and external observation.

A recurring theme is intercultural competence, which is increasingly recognised as a vital aspect of mentoring in today's globalised educational context. Luukkonen et al. (2023) found that, while mentors have good cultural awareness, they often lack practical strategies for inclusive and culturally responsive supervision. Curtis et al. (2019) echo this finding, arguing that developing cultural safety, rather than mere cultural knowledge, represents a crucial step towards health equity and effective international education. Meanwhile, the pivotal role of tutors in fostering cultural competence among nursing students and facilitating the establishment of inclusive clinical environments was emphasised by Giusti and Mazzotta (2025).

The results of this review also corroborate the findings of Mínguez Moreno et al. (2023), who defined mentoring as an educational and organisational process. As well as its pedagogical role, mentoring fosters staff retention, professional satisfaction and the development of a supportive institutional culture. These systemic effects are particularly pertinent in light of the current global nursing shortage, as effective mentoring contributes to both individual growth and workforce sustainability (WHO, 2020).

Finally, Narayanan et al. (2025) revealed discrepancies in perception between mentors and students regarding the emotional and instructional components of mentoring. These discrepancies emphasise the relational complexity of the mentoring process and highlight the importance of emotional intelligence, reflective practice and institutional recognition in maintaining mentoring quality.

In summary, synthesising recent evidence

reveals that developing mentor competence requires an integrated strategy combining formal education, intercultural awareness, validated assessment tools and strong organisational support. Taking a simultaneous approach to addressing these dimensions appears to be the most effective way of improving the quality of clinical education and strengthening the professional identity of future nurses.

Limitations

This mini-review has several limitations that should be considered when interpreting the results. Firstly, as most of the included studies are observational or quasi-experimental, it is difficult to establish solid causal relationships and the evidence is not easily generalisable. Furthermore, the marked heterogeneity of the measurement tools used to assess mentor competence hinders direct comparison between different studies and makes quantitative meta-analyses difficult to perform.

Another critical issue is the potential for self-assessment bias: many studies are based on questionnaires completed by the mentors themselves, which may lead to an overestimation of their actual skills, as has been noted in previous literature on self-assessment bias (Eva & Regehr, 2005).

Geographically, most of the research included in this review was conducted in European and North American contexts (Warne et al., 2010; Jokelainen et al., 2011; Chen & Lou, 2014; Gualarte Rinaldo et al., 2023), with limited representation from other regions or culturally diverse settings. This geographical imbalance may limit the generalisability of the findings to healthcare systems with different organisational structures or cultural profiles.

Finally, few studies have assessed the long term impact of mentoring on both students and organisations (Haggerty et al., 2013; WHO, 2020), leaving uncertainty regarding the sustainability of mentoring benefits over time.

Conclusions

Clinical mentoring is confirmed as a complex process requiring multidimensional skills and adequate organisational support to be effective. The analysed evidence highlights the importance

of implementing standardised training programmes for mentors to ensure consistent preparation and support professional growth. At the same time, adopting validated, multi-perspective assessment tools appears crucial to overcoming the limitations of self-assessment bias and providing a more accurate picture of actual skills.

Particular attention must be paid to developing intercultural skills, which are becoming increasingly relevant in training and care contexts that are characterised by high levels of cultural and linguistic diversity. Furthermore, institutional recognition of the mentor's role, accompanied by concrete organisational support, is essential for ensuring the long-term sustainability and effectiveness of mentoring programmes.

In summary, an integrated approach combining individual, educational, and organisational interventions is the most promising strategy for improving the quality of clinical training, promoting student satisfaction, and supporting the retention of nursing staff, thereby contributing to the development of more resilient and sustainable healthcare systems.

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