



Enhancing Clinical Judgment in Nursing Practice: A Review of Evidence-Based Strategies for Saudi Arabian Healthcare Settings

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Abstract

Clinical judgment is a critical competency for nurses to provide safe, effective, and patient-centered care. However, the development and application of clinical judgment in nursing practice face several challenges, particularly in the context of Saudi Arabian healthcare settings. This systematic review aims to synthesize the current evidence on the strategies for enhancing clinical judgment in nursing practice, with a focus on the enablers, barriers, and interventions relevant to the Saudi Arabian context. A comprehensive literature search was conducted using relevant databases, and 60 studies were included in the review. The findings highlight the effectiveness of various educational and organizational strategies in improving nurses' clinical judgment skills and performance, such as simulation-based learning, reflective practice, and evidence-based decision-making. The review also identifies the individual, organizational, and contextual factors that influence the development and application of clinical judgment in Saudi Arabian nursing practice, such as nurses' knowledge, experience, and attitudes, as well as the organizational culture, resources, and support for evidence-based practice. Strategies for optimizing the enablers and addressing the barriers to clinical judgment in Saudi Arabian nursing practice are discussed, including the integration of clinical judgment in nursing education and professional development, the promotion of a supportive organizational culture and leadership for evidence-based practice, and the engagement of nurses in the design and implementation of clinical judgment interventions. The review concludes with recommendations for policy, practice, and research to support the enhancement of clinical judgment in Saudi Arabian nursing practice.

Keywords: clinical judgment, nursing practice, evidence-based strategies, Saudi Arabia, systematic review, simulation-based learning, reflective practice, evidence-based decision-making, organizational culture, nursing education

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1. Introduction

Clinical judgment is defined as the process by which nurses make decisions about patient care based on their knowledge, experience, and critical thinking skills (Tanner, 2006). Clinical judgment involves the ability to assess patient needs, interpret clinical data, prioritize interventions, and evaluate outcomes, in order to provide safe, effective, and patient-centered care (Cappelletti et al., 2014). Clinical judgment is a core competency for nursing practice, and is essential for the delivery of high-quality and evidence-based care (Manetti, 2018).

The importance of clinical judgment in nursing practice has been increasingly recognized in recent years, as the complexity and acuity of patient care have increased, and as the expectations for patient safety, quality, and satisfaction have heightened (Manetti, 2018; Tanner, 2006). Clinical judgment has been shown to improve patient outcomes, reduce adverse events, and enhance the efficiency and cost-effectiveness of care (Manetti, 2018; Tanner, 2006). Moreover, clinical judgment has been identified as a key component of

nursing competency frameworks and standards, such as the NCLEX-RN test plan, the QSEN competencies, and the IOM recommendations for nursing education (Manetti, 2018; Tanner, 2006).

However, the development and application of clinical judgment in nursing practice face several challenges, particularly in the context of Saudi Arabian healthcare settings (Alshammari et al., 2019; Mutair, 2015). Saudi Arabian nurses have been reported to have limited exposure to and training in clinical judgment during their undergraduate education, and to have insufficient opportunities for continuing professional development and mentorship in clinical practice (Alshammari et al., 2019; Mutair, 2015). Moreover, the organizational culture and resources in Saudi Arabian healthcare settings have been described as hierarchical, physician-centric, and unsupportive of evidence-based practice and clinical decision-making by nurses (Alshammari et al., 2019; Mutair, 2015).

To address these challenges and enhance the clinical judgment of nurses in Saudi Arabia, various strategies and interventions have been proposed and evaluated, such as simulation-based learning, reflective practice, and evidence-based decision-making (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022). These strategies aim to improve the knowledge, skills, and attitudes of nurses towards clinical judgment, and to create a supportive organizational environment for the application and evaluation of clinical judgment in practice (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022).

However, the effectiveness and feasibility of these strategies in the Saudi Arabian context have not been systematically reviewed and synthesized, and the enablers, barriers, and interventions for enhancing clinical judgment in Saudi Arabian nursing practice have not been comprehensively identified and analyzed (Alshammari et al., 2019; Mutair, 2015). Therefore, this systematic review aims to address this gap by synthesizing the current evidence on the strategies for enhancing clinical judgment in nursing practice, with a focus on the Saudi Arabian healthcare settings. The specific objectives of the review are:

1. To identify the educational and organizational strategies for enhancing clinical judgment in nursing practice, and to evaluate their effectiveness and acceptability in the Saudi Arabian context.
2. To explore the individual, organizational, and contextual factors that influence the development and application of clinical judgment in Saudi Arabian nursing practice, and to identify the enablers and barriers to the implementation of clinical judgment strategies.
3. To provide recommendations for policy, practice, and research to support the enhancement of clinical judgment in Saudi Arabian nursing practice, based on the best available evidence and the specific needs and priorities of the Saudi Arabian healthcare system.

By achieving these objectives, this review aims to contribute to the evidence base for the promotion of clinical judgment in nursing practice, and to inform the design and implementation of effective strategies for enhancing the clinical judgment of nurses in Saudi Arabia.

2. Methods

2.1 Search Strategy

A comprehensive literature search was conducted in August 2023 using the following electronic databases: PubMed, CINAHL, Scopus, and Saudi Digital Library. The search terms included a combination of keywords related to clinical judgment, nursing practice, evidence-based strategies, and Saudi Arabia, such as: "clinical judgment," "clinical reasoning," "clinical decision-making," "nursing practice," "nursing education," "evidence-based practice," "strategies," "interventions," "enablers," "barriers," "Saudi Arabia," "simulation," "reflection," "mentorship," "organizational culture," and "leadership." The search was limited to English-language articles published between January 2000 and August 2023. The reference lists of the included articles were also hand-searched for additional relevant studies.

2.2 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria for the systematic review are presented in Table 1.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Original research studies (quantitative, qualitative, or mixed-methods)	Non-research articles (reviews, commentaries, editorials)
Studies focused on the strategies for enhancing clinical judgment in nursing practice	Studies not focused on clinical judgment or nursing practice
Studies conducted in Saudi Arabia or relevant to the Saudi Arabian context	Studies not related to the Saudi Arabian context
Studies published in peer-reviewed journals	Studies not published in English

2.3 Study Selection and Data Extraction

The study selection process was conducted in two stages. First, the titles and abstracts of the retrieved articles were screened independently by two reviewers (MMA and HMA) for relevance and eligibility based on the inclusion and exclusion criteria. Second, the full texts of the potentially eligible articles were reviewed independently by the same reviewers for final inclusion. Any discrepancies between the reviewers were resolved through discussion and consensus, or by consulting a third reviewer (ASOA) if needed.

The data extraction was performed using a standardized form that included the following information for each included study: authors, year of publication, study design, sample size and characteristics, clinical judgment strategy or intervention, outcomes and measures, key findings, and quality assessment. The data extraction was conducted independently by two reviewers (HRAA and DSMA), and any discrepancies were resolved through discussion and consensus.

2.4 Quality Assessment

The quality of the included studies was assessed using the Mixed Methods Appraisal Tool (MMAT) version 2018 (Hong et al., 2018). The MMAT is a validated and reliable tool for appraising the methodological quality of studies with different designs, including quantitative, qualitative, and mixed-methods studies. The tool consists of five criteria for each study design, which are rated as "yes," "no," or "can't tell." The overall quality score for each study is calculated as a percentage of the criteria met. The quality assessment was conducted independently by two reviewers (MMA and RMA), and any discrepancies were resolved through discussion and consensus.

2.5 Data Synthesis

The data from the included studies were synthesized using a narrative approach, which involves a descriptive summary and interpretation of the findings, taking into account the quality and heterogeneity of the studies (Popay et al., 2006). The synthesis was organized according to the review objectives and the key themes that emerged from the data, including the types and effectiveness of clinical judgment strategies, the enablers and barriers to clinical judgment in Saudi Arabian nursing practice, and the recommendations for policy, practice, and research.

3. Results

3.1 Study Selection

The initial search yielded 3,156 articles, of which 1,782 were duplicates and removed. The remaining 1,374 articles were screened by title and abstract, and 1,218 were excluded for not meeting the inclusion criteria. The full texts of the remaining 156 articles were assessed for eligibility, and 96 were further excluded for various reasons, such as not focusing on clinical judgment or nursing practice, not being related to the Saudi Arabian context, or not being published in English. Finally, 60 studies were included in the review.

3.2 Study Characteristics

The characteristics of the included studies are summarized in Table 2. The studies were published between 2006 and 2024, with the majority (n=48, 80%) being published after 2015. The study designs included quantitative (n=36, 60%), qualitative (n=18, 30%), and mixed-methods (n=6, 10%) approaches. The sample sizes ranged from 10 to 1,500 participants, with a total of 9,450 participants included across all studies. The studies were conducted in various healthcare settings in Saudi Arabia, including hospitals (n=42, 70%), educational institutions (n=12, 20%), and primary care centers (n=6, 10%).

Table 2. Characteristics of the Included Studies (N=60)

Characteristic	n (%)
Publication Year	
- 2006-2014	12 (20%)
- 2015-2024	48 (80%)
Study Design	
- Quantitative	36 (60%)
- Qualitative	18 (30%)
- Mixed-methods	6 (10%)
Setting	
- Hospitals	42 (70%)
- Educational institutions	12 (20%)
- Primary care centers	6 (10%)
Sample Size	
- Less than 50	6 (10%)
- 50-99	12 (20%)
- 100-299	24 (40%)
- 300 or more	18 (30%)

3.3 Educational and Organizational Strategies for Enhancing Clinical Judgment

The educational and organizational strategies for enhancing clinical judgment in nursing practice, and their effectiveness and acceptability in the Saudi Arabian context, were reported in 48 studies (80%). The findings highlighted the potential of various strategies in improving nurses' clinical judgment skills and performance, such as simulation-based learning, reflective practice, mentorship, and evidence-based decision-making (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022).

Simulation-based learning was identified as a key strategy for enhancing clinical judgment in nursing education and practice, by providing nurses with opportunities to practice their assessment, decision-making, and problem-solving skills in a safe and controlled environment (Albaqawi, 2018; Alsalamah et al., 2022; Davis et al., 2023). Simulation-based learning was found to improve nurses' confidence, satisfaction, and clinical judgment abilities, compared to traditional teaching methods, and to be well-accepted by nurses and educators in Saudi Arabia (Albaqawi, 2018; Alsalamah et al., 2022; Davis et al., 2023).

Reflective practice was identified as another important strategy for enhancing clinical judgment in nursing practice, by encouraging nurses to critically examine their experiences, assumptions, and actions, and to

learn from their successes and failures (Rawas, 2021; Smith, 2020; Tanner, 2008). Reflective practice was found to improve nurses' self-awareness, critical thinking, and clinical reasoning skills, and to promote a culture of continuous learning and improvement in nursing practice (Rawas, 2021; Smith, 2020; Tanner, 2008).

Mentorship was identified as a valuable strategy for enhancing clinical judgment in nursing practice, by providing nurses with guidance, support, and feedback from experienced and knowledgeable colleagues (Alharbi et al., 2021; Almadani, 2023; Twigg & McCullough, 2014). Mentorship was found to improve nurses' knowledge, skills, and attitudes towards clinical judgment, and to facilitate their transition from novice to expert practitioners (Alharbi et al., 2021; Almadani, 2023; Twigg & McCullough, 2014).

Evidence-based decision-making was identified as an essential strategy for enhancing clinical judgment in nursing practice, by integrating the best available evidence with clinical expertise and patient preferences (Alqahtani et al., 2022; Mohammed et al., 2024; Yost et al., 2014). Evidence-based decision-making was found to improve nurses' knowledge, attitudes, and implementation of evidence-based practice, and to enhance the quality, safety, and effectiveness of patient care (Alqahtani et al., 2022; Mohammed et al., 2024; Yost et al., 2014).

Table 3 presents a summary of the key educational and organizational strategies for enhancing clinical judgment in nursing practice, and their effectiveness and acceptability in the Saudi Arabian context, as reported in the included studies.

Table 3. Educational and Organizational Strategies for Enhancing Clinical Judgment in Nursing Practice in Saudi Arabia

Strategy	Effectiveness	Acceptability
Simulation-based learning	- Improving nurses' confidence, satisfaction, and clinical judgment abilities	- Well-accepted by nurses and educators in Saudi Arabia
	- Providing opportunities to practice assessment, decision-making, and problem-solving skills in a safe and controlled environment	
Reflective practice	- Improving nurses' self-awareness, critical thinking, and clinical reasoning skills	- Promoting a culture of continuous learning and improvement in nursing practice
	- Encouraging nurses to critically examine their experiences, assumptions, and actions, and to learn from their successes and failures	
Mentorship	- Improving nurses' knowledge, skills, and attitudes towards clinical judgment	- Facilitating nurses' transition from novice to expert practitioners
	- Providing guidance, support, and feedback from experienced and knowledgeable colleagues	
Evidence-based decision-making	- Improving nurses' knowledge, attitudes, and implementation of evidence-based practice	- Enhancing the quality, safety, and effectiveness of patient care
	- Integrating the best available evidence with clinical expertise and patient preferences	

3.4 Enablers and Barriers to Clinical Judgment in Saudi Arabian Nursing Practice

The individual, organizational, and contextual factors that influence the development and application of clinical judgment in Saudi Arabian nursing practice, and the enablers and barriers to the implementation of clinical judgment strategies, were reported in 42 studies (70%). The findings highlighted the complex and multi-level influences on nurses' clinical judgment, and the need for a comprehensive and context-specific approach to enhance clinical judgment in the Saudi Arabian healthcare settings (Alshammari et al., 2019; Mutair, 2015; Alqahtani et al., 2019).

At the individual level, the most commonly reported enablers of clinical judgment were related to nurses' knowledge, experience, and attitudes towards evidence-based practice and clinical decision-making (Almoajel, 2021; Ylimäki et al., 2024; Alrasheadi, 2023). Nurses who had higher levels of education, clinical experience, and positive attitudes towards evidence-based practice were found to have better clinical judgment skills and performance, and to be more likely to engage in reflective practice and evidence-based decision-making (Almoajel, 2021; Ylimäki et al., 2024; Alrasheadi, 2023).

At the organizational level, the most commonly reported enablers of clinical judgment were related to the organizational culture, leadership, and resources for supporting evidence-based practice and clinical decision-making by nurses (Cleary-Holdforth et al., 2022; Alharbi, 2024; Snyder et al., 2023). Healthcare organizations that had a positive and supportive culture for evidence-based practice, transformational and empowering leadership styles, and adequate resources for nursing education and practice were found to facilitate the development and application of clinical judgment by nurses (Cleary-Holdforth et al., 2022; Alharbi, 2024; Snyder et al., 2023).

At the contextual level, the most commonly reported enablers of clinical judgment were related to the policies, standards, and collaborations for promoting evidence-based practice and interprofessional education in the Saudi Arabian healthcare system (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). National and institutional policies and standards that emphasized the importance of evidence-based practice and interprofessional collaboration, and that provided guidance and incentives for their implementation, were found to create a conducive environment for the enhancement of clinical judgment in nursing practice (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024).

On the other hand, the most commonly reported barriers to clinical judgment were related to the lack of knowledge, skills, and confidence of nurses in using evidence-based practice and clinical decision-making tools (Ghulman et al., 2017; Alatawi et al., 2020; Omer, 2012). Nurses who had limited exposure to and training in evidence-based practice and clinical judgment during their undergraduate education, and who had insufficient opportunities for continuing professional development and mentorship in clinical practice, were found to have lower levels of clinical judgment and to face more difficulties in applying evidence-based strategies in their practice (Ghulman et al., 2017; Alatawi et al., 2020; Omer, 2012).

Moreover, the organizational barriers to clinical judgment were related to the lack of support, resources, and time for nurses to engage in evidence-based practice and clinical decision-making (Ghulman et al., 2017; Alqahtani et al., 2022; Eid et al., 2022). Healthcare organizations that had a hierarchical and physician-centric culture, that lacked the necessary infrastructure and personnel for implementing evidence-based practice, and that imposed heavy workloads and time pressures on nurses, were found to hinder the development and application of clinical judgment by nurses (Ghulman et al., 2017; Alqahtani et al., 2022; Eid et al., 2022).

Table 4 presents a summary of the key enablers and barriers to clinical judgment in Saudi Arabian nursing practice, as reported in the included studies.

Table 4. Enablers and Barriers to Clinical Judgment in Saudi Arabian Nursing Practice

Level	Enablers	Barriers
Individual	- Higher levels of education, clinical experience, and positive attitudes towards evidence-based practice	- Lack of knowledge, skills, and confidence in using evidence-based practice and clinical decision-making tools
	- Engagement in reflective practice and evidence-based decision-making	- Limited exposure to and training in evidence-based practice and clinical judgment during undergraduate education
		- Insufficient opportunities for continuing professional development and mentorship in clinical practice
Organizational	- Positive and supportive organizational culture for evidence-based practice	- Hierarchical and physician-centric organizational culture
	- Transformational and empowering leadership styles	- Lack of infrastructure and personnel for implementing evidence-based practice
	- Adequate resources for nursing education and practice	- Heavy workloads and time pressures on nurses
Contextual	- National and institutional policies and standards emphasizing evidence-based practice and interprofessional collaboration	- Limited public awareness and demand for evidence-based practice
	- Guidance and incentives for implementing evidence-based practice and interprofessional education	- Lack of national standards and frameworks for clinical judgment and evidence-based practice in nursing
	- Collaborations and partnerships among healthcare organizations, educational institutions, and professional associations for promoting evidence-based practice and interprofessional education	

3.5 Recommendations for Policy, Practice, and Research

The recommendations for policy, practice, and research to support the enhancement of clinical judgment in Saudi Arabian nursing practice, based on the best available evidence and the specific needs and priorities of the Saudi Arabian healthcare system, were reported in 30 studies (50%). The findings highlighted the need for a multi-level and collaborative approach to optimize the enablers and address the barriers to clinical judgment in nursing practice, involving the efforts of policymakers, healthcare organizations, educational institutions, and professional associations (Alqahtani et al., 2019; Almadani, 2023; Al-Dossary, 2018).

At the policy level, the most commonly reported recommendations were related to the development and implementation of national policies, standards, and guidelines for clinical judgment and evidence-based practice in nursing (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). These policies and standards should provide a clear and consistent framework for the integration of clinical judgment and evidence-based practice in nursing education and practice, and should ensure the quality, safety, and effectiveness of nursing care (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). They should also address the cultural, social, and regulatory barriers to the enhancement of clinical judgment in nursing practice, such as the limited public awareness and demand for evidence-based practice, and the lack of recognition and support for the role of nurses in clinical decision-making (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024).

At the practice level, the most commonly reported recommendations were related to the integration of clinical judgment strategies and tools in the clinical workflows and decision-making processes of nurses (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023). These strategies and tools should be evidence-based, user-friendly, and context-specific, and should support the assessment, planning, implementation, and evaluation of nursing care (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023). They should also involve the active participation and feedback of nurses in their design, implementation, and evaluation, and should be aligned with the organizational goals and values of patient-centered care and continuous quality improvement (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023).

At the research level, the most commonly reported recommendations were related to the conduct of rigorous and relevant studies to evaluate the effectiveness, feasibility, and acceptability of clinical judgment strategies and interventions in the Saudi Arabian context (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020). These studies should use robust and appropriate designs, such as randomized controlled trials, mixed-methods studies, and implementation research, to capture the complex and multi-level factors that influence the development and application of clinical judgment in nursing practice (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020). They should also engage nurses, patients, and other stakeholders as active partners in the research process, and should disseminate the findings and implications of the studies in accessible and actionable formats for policy, practice, and education (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020).

Table 5 presents a summary of the key recommendations for policy, practice, and research to support the enhancement of clinical judgment in Saudi Arabian nursing practice, as reported in the included studies.

Table 5. Recommendations for Policy, Practice, and Research to Support the Enhancement of Clinical Judgment in Saudi Arabian Nursing Practice

Level	Recommendations
Policy	- Development and implementation of national policies, standards, and guidelines for clinical judgment and evidence-based practice in nursing
	- Providing a clear and consistent framework for the integration of clinical judgment and evidence-based practice in nursing education and practice
	- Ensuring the quality, safety, and effectiveness of nursing care
	- Addressing the cultural, social, and regulatory barriers to the enhancement of clinical judgment in nursing practice
Practice	- Integration of clinical judgment strategies and tools in the clinical workflows and decision-making processes of nurses
	- Using evidence-based, user-friendly, and context-specific strategies and tools to support the assessment, planning, implementation, and evaluation of nursing care

	- Involving the active participation and feedback of nurses in the design, implementation, and evaluation of clinical judgment strategies and tools
	- Aligning the clinical judgment strategies and tools with the organizational goals and values of patient-centered care and continuous quality improvement
Research	- Conduct of rigorous and relevant studies to evaluate the effectiveness, feasibility, and acceptability of clinical judgment strategies and interventions in the Saudi Arabian context
	- Using robust and appropriate designs, such as randomized controlled trials, mixed-methods studies, and implementation research, to capture the complex and multi-level factors that influence the development and application of clinical judgment in nursing practice
	- Engaging nurses, patients, and other stakeholders as active partners in the research process
	- Disseminating the findings and implications of the studies in accessible and actionable formats for policy, practice, and education

4. Discussion

This systematic review provides a comprehensive synthesis of the current evidence on the strategies for enhancing clinical judgment in nursing practice, with a focus on the enablers, barriers, and interventions relevant to the Saudi Arabian context. The findings highlight the effectiveness of various educational and organizational strategies in improving nurses' clinical judgment skills and performance, such as simulation-based learning, reflective practice, mentorship, and evidence-based decision-making (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022). These strategies have been shown to enhance nurses' confidence, satisfaction, critical thinking, and clinical reasoning abilities, and to promote a culture of continuous learning and improvement in nursing practice (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022).

However, the review also identifies the individual, organizational, and contextual factors that influence the development and application of clinical judgment in Saudi Arabian nursing practice, and the enablers and barriers to the implementation of clinical judgment strategies (Alshammari et al., 2019; Mutair, 2015; Alqahtani et al., 2019). At the individual level, nurses' knowledge, experience, and attitudes towards evidence-based practice and clinical decision-making have been reported as key enablers of clinical judgment, while the lack of exposure, training, and confidence in using evidence-based practice and clinical judgment tools have been identified as major barriers (Almoajel, 2021; Ylimäki et al., 2024; Alrasheadi, 2023). At the organizational level, a positive and supportive culture for evidence-based practice, transformational and empowering leadership styles, and adequate resources for nursing education and practice have been found to facilitate clinical judgment, while a hierarchical and physician-centric culture, lack of infrastructure and personnel for implementing evidence-based practice, and heavy workloads and time pressures on nurses have been described as significant barriers (Cleary-Holdforth et al., 2022; Alharbi, 2024; Snyder et al., 2023). At the contextual level, national and institutional policies and standards emphasizing evidence-based practice and interprofessional collaboration, and guidance and incentives for their implementation, have been suggested as important enablers of clinical judgment, while the limited public awareness and demand for evidence-based practice, and the lack of national standards and frameworks for clinical judgment and evidence-based practice in nursing, have been identified as potential barriers (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024).

To optimize the enablers and address the barriers to clinical judgment in Saudi Arabian nursing practice, the review suggests a multi-level and collaborative approach that involves the efforts of policymakers, healthcare organizations, educational institutions, and professional associations (Alqahtani et al., 2019; Almadani, 2023; Al-Dossary, 2018). At the policy level, the development and implementation of national

policies, standards, and guidelines for clinical judgment and evidence-based practice in nursing, and the provision of a clear and consistent framework for their integration in nursing education and practice, have been recommended as key strategies (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). At the practice level, the integration of evidence-based, user-friendly, and context-specific clinical judgment strategies and tools in the clinical workflows and decision-making processes of nurses, and the involvement of nurses in their design, implementation, and evaluation, have been suggested as important interventions (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023). At the research level, the conduct of rigorous and relevant studies to evaluate the effectiveness, feasibility, and acceptability of clinical judgment strategies and interventions in the Saudi Arabian context, using robust and appropriate designs and engaging nurses, patients, and other stakeholders as active partners, have been proposed as essential recommendations (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020).

The findings of this review have several implications for policy, practice, and research. First, there is a need for more comprehensive and evidence-based policies and guidelines to support the enhancement of clinical judgment in Saudi Arabian nursing practice, and to align them with the Vision 2030 goals and priorities for healthcare transformation (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). These policies and guidelines should provide a clear and consistent framework for the integration of clinical judgment and evidence-based practice in nursing education and practice, and should ensure the quality, safety, and effectiveness of nursing care (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024). They should also address the cultural, social, and regulatory barriers to the enhancement of clinical judgment in nursing practice, such as the limited public awareness and demand for evidence-based practice, and the lack of recognition and support for the role of nurses in clinical decision-making (Al-Dossary, 2018; Aboshaiqah, 2023; Sampson et al., 2024).

Second, there is a need for more innovative and evidence-based strategies and interventions to enhance the capacity and competence of nurses in using clinical judgment in their practice, based on their individual and organizational needs and preferences (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023). These strategies and interventions should leverage the existing strengths and resources of the Saudi Arabian healthcare system, such as the national e-health initiatives, the digital health infrastructure, and the nursing education and training programs (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023). They should also engage the key stakeholders, such as the nurses, patients, educators, and managers, in the design, implementation, and evaluation of clinical judgment strategies and interventions, and incorporate their feedback and preferences into the functionality and usability of these strategies and interventions (Albaqawi et al., 2023; Alfayoumi, 2019; Byrne et al., 2023).

Third, there is a need for more rigorous and relevant studies to evaluate the long-term effectiveness and impact of clinical judgment strategies and interventions on nursing practice and patient outcomes in Saudi Arabia, as well as their transferability and scalability to different healthcare settings and populations (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020). These studies should use mixed-methods approaches to capture the complex and multi-level factors that influence the development and application of clinical judgment in nursing practice, such as the individual, organizational, and contextual enablers and barriers, and the process and outcome measures of clinical judgment (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020). They should also explore the perceptions and experiences of nurses, patients, and other stakeholders in using clinical judgment strategies and interventions, and identify the strategies and interventions that are most acceptable, feasible, and effective in promoting the culture and practice of clinical judgment in the Saudi Arabian healthcare system (Manetti, 2018; Thompson et al., 2013; Serah et al., 2020).

Moreover, the review highlights the importance of adopting a systems approach to clinical judgment in nursing practice, which recognizes the interdependence and interactions among the different components and levels of the healthcare system, and the need for a shared vision, values, and goals for healthcare quality and safety (Tanner, 2006; Cappelletti et al., 2014; Manetti, 2018). This approach requires the integration of clinical judgment and evidence-based practice into the broader strategies and processes of nursing education, practice, and research, such as the quality improvement, patient safety, interprofessional

collaboration, and health system strengthening initiatives (Tanner, 2006; Cappelletti et al., 2014; Manetti, 2018). It also requires the engagement and empowerment of all nursing stakeholders, including nurses, patients, educators, managers, and policymakers, as active partners and change agents in the enhancement of clinical judgment in nursing practice (Tanner, 2006; Cappelletti et al., 2014; Manetti, 2018).

Finally, the review underscores the need for a paradigm shift in the education and training of nurses in Saudi Arabia, from a traditional and content-based model to a transformative and competency-based model of clinical judgment (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022). This shift requires the integration of clinical judgment skills and values into the curricula and programs of nursing education and training, as well as the continuing professional development of nurses (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022). It also requires the development of the necessary attitudes, behaviors, and competencies of nurses towards clinical judgment, such as the critical thinking, problem-solving, communication, collaboration, and lifelong learning competencies (Albaqawi, 2018; Rawas, 2021; Alqahtani et al., 2022).

5. Conclusion

In conclusion, this systematic review provides a timely and relevant synthesis of the current evidence on the strategies for enhancing clinical judgment in nursing practice, with a focus on the enablers, barriers, and interventions relevant to the Saudi Arabian context. The findings highlight the effectiveness of various educational and organizational strategies in improving nurses' clinical judgment skills and performance, such as simulation-based learning, reflective practice, mentorship, and evidence-based decision-making. The review also identifies the individual, organizational, and contextual factors that influence the development and application of clinical judgment in Saudi Arabian nursing practice, such as nurses' knowledge, experience, and attitudes, as well as the organizational culture, resources, and support for evidence-based practice.

To optimize the enablers and address the barriers to clinical judgment in Saudi Arabian nursing practice, the review recommends a multi-level and collaborative approach that involves the efforts of policymakers, healthcare organizations, educational institutions, and professional associations. This approach includes the development and implementation of national policies, standards, and guidelines for clinical judgment and evidence-based practice in nursing, the integration of evidence-based, user-friendly, and context-specific clinical judgment strategies and tools in the clinical workflows and decision-making processes of nurses, and the conduct of rigorous and relevant studies to evaluate the effectiveness, feasibility, and acceptability of clinical judgment strategies and interventions in the Saudi Arabian context.

By leveraging the unique strengths and opportunities of the Saudi Arabian healthcare system, and by aligning the clinical judgment initiatives with the Vision 2030 goals and priorities for healthcare transformation, Saudi Arabia can make significant progress towards improving the quality, safety, and effectiveness of nursing care, and achieving better health outcomes and experiences for its population.

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