



Clinical Judgement in ICU Nurse: A Concept Analysis

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ABSTRACT

Clinical judgment is a critical and multifaceted process essential for ICU nurses, integrating technical expertise and interpersonal skills to ensure safe, effective patient care. Clinical judgment, recognized as a core competency in intensive care nursing, requires further conceptual clarity. This study aimed to define and analyze the concept of clinical judgment in ICU nurses using Walker and Avant's eight-step concept analysis method. A comprehensive literature search was conducted across databases including CINAHL, Medline, Scopus, ProQuest, SpringerLink, ClinicalKey Nursing, EMBASE, ScienceDirect, EBSCOhost, and Google Scholar, covering publications from 1994 to 2024. The analysis identified key attributes of clinical judgment: clinical knowledge, critical thinking, practical wisdom, data prioritization, intuition, scientific analysis, evidence use, and interaction. Antecedents included education, knowledge, experience, analytical ability, and the nursing process. Consequences of clinical judgment were accurate responses, reflective practice, safe nursing care, and improved patient safety. Decision-making was identified as the primary empirical referent. This concept analysis demonstrates that clinical judgment in ICU nurses is developed through a synthesis of critical thinking, clinical expertise, and situational experience, reinforcing its significance in the delivery of high-quality critical care.

Keywords: Clinical Judgment, Concept Analysis, Critical Care Nursing, ICU Nurses

ABSTRAK

Clinical judgment atau penilaian klinis merupakan proses yang kompleks dan sangat penting dimiliki oleh perawat di ruang ICU. Kemampuan ini mencerminkan perpaduan antara pengetahuan klinis, keterampilan teknis, dan kepekaan interpersonal dalam merawat pasien kritis secara aman dan bermutu. Artikel ini bertujuan untuk memperjelas dan mendefinisikan konsep *clinical judgment* pada perawat ICU dengan menggunakan metode analisis konsep Walker dan Avant yang terdiri dari delapan langkah sistematis. Penelusuran literatur dilakukan melalui berbagai basis data elektronik seperti CINAHL, Medline, Scopus, ProQuest, SpringerLink, ClinicalKey Nursing, EMBASE, ScienceDirect, EBSCOhost, dan Google Scholar, mencakup publikasi tahun 1994 hingga 2024. Hasil analisis menunjukkan bahwa atribut utama dari *clinical judgment* meliputi pengetahuan klinis, berpikir kritis, kebijaksanaan praktis, prioritas data, intuisi, analisis ilmiah, penggunaan bukti, dan interaksi. Faktor yang mendahului (antecedents) antara lain pendidikan, pengalaman, pengetahuan, kemampuan analisis, dan proses keperawatan. Sementara itu, dampak dari *clinical judgment* mencakup respons yang tepat, praktik reflektif, asuhan yang aman, dan peningkatan keselamatan pasien. Pengambilan keputusan menjadi indikator utama dari konsep ini. Hasil analisis ini menegaskan pentingnya pengembangan *clinical judgment* dalam praktik keperawatan intensif yang profesional dan empatik.

Kata kunci: Clinical Judgment, Analisis Konsep, Keperawatan Intensif, Perawat ICU

INTRODUCTION

Critical nursing is a multidimensional role with distinct competency criteria compared to the generalist nurse level (Ääri et al., 2008). International guidelines indicate that the complexity of the disease and the patient's condition influence the required level of nursing competence (Nurses & Bell, 2015). This is closely associated with nurses' ability to provide appropriate care within the Intensive Care Unit (ICU) context. The role of nurses in the ICU often encompasses a range of responsibilities, with a tendency towards performing medical procedures or following medical directives rather than implementing independent nursing interventions.

ICU nurses constantly assess patient conditions, interpret complex clinical data, and make timely interventions that can significantly impact patient outcomes (McNett et al., 2020). The dynamic and high-stakes environment of the ICU demands advanced critical thinking, situational awareness, and the ability to anticipate potential complications. An ICU presents a nurse with complex and ever-changing factors that shape their environment, decision-making processes, and interactions with patients, families, and healthcare teams (Aljanfawi, 2022; Johansen & O'Brien, 2016; Lloyd et al., 2015).

Those dynamics include: 1) High-stakes decision-making, in which ICU nurses must make rapid, evidence-based decisions in life-threatening situations. Clinical judgement is crucial for recognizing subtle changes in a patient's condition, prioritizing interventions, and preventing complications (Cuzco et al., 2021; Danielis et al., 2020), 2) Multidisciplinary collaboration, in which ICU nurses work closely with physicians, therapists, pharmacists, and other healthcare professionals. Effective communication and teamwork are essential for coordinating care, implementing treatment plans, and ensuring patient safety (Al Khalfan et al., 2021; Rose, 2011), 3) Emotional and ethical challenges, in which caring for critically ill patients, including those at the end of life, bring emotional stress and ethical dilemmas. ICU nurses often navigate decisions about withdrawing life support, dealing with patient suffering, and communicating with distressed families (Leung et al., 2017; Schwartz et al., 2022; Vester et al., 2022).

ICU nurses also face a high workload and time sensitivity, in which ICUs are fast-paced environments where nurses must manage multiple critically ill patients, administer complex treatments, and respond to emergencies, all while maintaining high-quality care (Dale et al., 2020; Kwame & Petrucka, 2021; Phua et al., 2021). ICU nurses rely on advanced medical technology, including ventilators, hemodynamic monitoring, and continuous infusion pumps. They must integrate technology with evidence-based practice to optimize patient outcomes. Moreover, sometimes those technologies could

become barriers in delivering nursing care (Harris & Panozzo, 2019). Due to rapidly evolving medical advancements, ICU nurses must engage in continuous education and professional development to stay updated on best practices, protocols, and new treatment approaches.

Those dynamics shape the clinical judgement of ICU nursing, influencing how they assess situations, make decisions, and provide patient-centered care. The importance of clinical judgment in ICU nursing cannot be overstated. Effective clinical judgment ensures accurate patient assessments, prioritization of care, and appropriate intervention strategies (Standing, 2020; Wright & Scardaville, 2021). It directly influences patient safety, reducing the risk of medical errors and improving overall quality of care. Given the high-risk nature of ICU settings, where patients are often unstable and require continuous monitoring, clinical judgement plays a vital role in ensuring timely interventions, reducing errors, and optimizing patient care (Van Graan et al., 2016; Wøien, 2012). Despite its significance, clinical judgement remains a complex and multidimensional concept that is often inconsistently defined in nursing literature.

Clinical judgment is a fundamental skill in nursing, especially in the ICU, where patients have complex, rapidly changing conditions. It involves cognitive and decision-making processes that enable nurses to assess, interpret, and respond to patient needs effectively (Benner, 2012). Analyzing this concept is crucial for enhancing nursing practice, ensuring patient safety, and improving ICU outcomes. Clinical judgment allows nurses to synthesize complex data, anticipate complications, and implement timely interventions (Connor et al., 2023). For instance, accurate clinical judgment can lead to early identification of sepsis or respiratory distress, allowing for prompt management. Additionally, clinical judgment supports holistic care by considering physiological parameters and psychological and social factors influencing patient outcomes (Jessee, 2021).

Concept analysis serves as a valuable method to clarify, define, and refine complex nursing concept such as clinical judgement. By systematically examining, concept analysis helps to establish a shared understanding and theoretical foundation for clinical judgement in ICU nursing practice. Walker and Avant's method of concept analysis provides a systematic framework for exploring and clarifying abstract concepts in nursing. By applying this structured approach, researchers can dissect and refine the concept of clinical judgment, making it more applicable to both theoretical development and practical application in nursing science (Holloway & Galvin, 2023).

Concept analysis is particularly valuable in nursing because it bridges the gap between theory and practice, facilitating a deeper understanding of essential constructs and guiding evidence-based interventions. This process enables the identification of key components that contribute to effective

clinical judgement, including critical thinking, experience, intuition, and ethical reasoning. Consequently, the authors posit that the concept of clinical judgment among ICU nurses remains ambiguous, warranting further exploration through the Walker & Avant concept analysis method. In this paper, we conduct a concept analysis of clinical judgment among ICU nurses. This analysis will not only contribute to nursing theory but also inform practice, education, and policy, ultimately improving patient safety and healthcare outcomes.

METHOD

This study analyzed the concept analysis. This method has structured approach which consist of eight steps: 1) select the concept; 2) determine the purpose of the analysis; 3) identify the use of concept; 4) identify defining attributes; 5) construct a model case; 6) Identify additional cases; 7) Identify antecedents and consequences; 8) define empirical referents (Walker & Avant, 2005, 2011). A literature search was carried out through various electronic database sources such as: CINAHL, Medline, Scopus, ProQuest, SpringerLink, ClinicalKeyNursing, EMBASE, ScienceDirect, EBSCOhost, and Google Scholar which were published widely from 1994 to 2022. The literature search uses the keywords: “clinical judgment in nursing” AND (intensive care unit or icu or critical care or critical care unit), “clinical judgment” or “clinical judgment” or “decision making”, “clinical” or “clinical reasoning” or “clinical decision making” AND “clinical judgment in nursing” AND (intensive care unit or icu or critical care or critical care unit). Articles that met specific criteria, such as being available in open access, written in English, and offering full text, were chosen to examine variations in how clinical judgment is defined. To gain a thorough understanding, this study did not limit the definition of clinical judgment. The methodology used in this research is outlined in the following steps.

RESULTS AND DISCUSSION

Selecting a Concept

The concept of clinical judgement was identified through a literature review from multidisciplinary terminology. Walker and Avant suggest that selecting a concept should correspond with the field of interest and its significance in furthering both theory and practice. The initial step was examining the definition of the general term of judgement in the dictionary and clinical judgement in relevant published literature. Based on the Oxford Dictionary the word of judgement has multiple meanings, including: the ability to make considered decisions or come to sensible conclusions; an opinion or

conclusion formed after careful thought; a decision of a law court or judge (Dictionary, 1989). In this study, judgement is represented on clinical settings which precisely.

Determining the purpose of the Analysis

The purpose of this concept analysis is to clarify and define the meaning of clinical judgment within the specific context of ICU nursing. Despite being a fundamental component of nursing competence, clinical judgment remains a multifaceted and sometimes ambiguously defined concept, particularly in high-acuity environments such as the ICU. The complex and dynamic nature of critical care demands that nurses exercise refined clinical judgment to ensure timely and effective patient care.

Through a structured concept analysis, it will identify the defining attributes of clinical judgment as demonstrated by ICU nurses, explore the antecedents and consequences of clinical judgment in the ICU setting. Moreover, concept analysis will help distinguish clinical judgment from related concepts such as clinical reasoning, decision-making, and critical thinking. Furthermore, it will develop a clear operational definition of clinical judgment that is context-specific to ICU nursing practice. By achieving those, the analysis intends to provide a theoretical foundation that can guide nursing education, clinical practice, competency assessment, and future research. A clearer understanding of clinical judgment in ICU nurses can inform the development of targeted strategies to enhance nursing performance, patient safety, and overall quality of critical care.

Identifying the use of the Concept

This study identified nine concepts of clinical judgment, derived from two medical, one social pharmacy, five nursing, and one psychology sources. The identification and definitions of these concepts are presented in Table 1.

Tabel 1
The Concept Definition of Clinical Judgement

No.	Source	Disciplines	Definition	Identification
1	Clinical judgment revisited: the distraction of quantitative models. (Feinstein, 1994)	Medical	clinical judgment in physicians included; clinical knowledge and experience, effective patient relationships, collection of pertinent evidence, scientific analysis, organization and prioritization of data, hypothesis generation, and actions	<ul style="list-style-type: none"> ● Clinical Knowledge ● Experience ● Effective relationship with patients ● Scientific analysis ● Data priority ● Assumptions and ● Hypotheses Treatment

No.	Source	Disciplines	Definition	Identification
2	Clinical judgement in the era of big data and predictive analytics (Chin-Yee & Upshur, 2018)	Medical	clinical judgement refers to the range of complex reasoning tasks and actions performed by clinicians in the context of offering diagnosis, therapeutic options, and prognosis to patients regarding their health and illness	<ul style="list-style-type: none"> ● Reasoning task ● Treatment ● Diagnosis, therapy, and prognosis according to the patient (Specific)
3	Clinical decision-making: An essential skill for 21st century pharmacy practice. (Wright et al., 2019)	Social Pharmacy	The process of weighing-up the options available, and prioritizing them on the basis of their impact. The impact of a decision will extend beyond the treatment outcomes for the patient's health and may also include financial considerations, social implications, effects on the patient's family, or how the patient interacts with other health services	<ul style="list-style-type: none"> ● Weighing options ● Data priority ● Results ● Relationship with patient ● Patient interaction with health workers ● Relations with the patient's family ● Treatment outcomes
4	Thinking Like a Nurse: A Research-Based Model of Clinical Judgment in Nursing. (Tanner, 2006)	Nursing	Clinical judgments are more influenced by what nurses bring to the situation than the objective data about the situation at hand. Clinical judgement is arrived at through clinical reasoning and its not only based on clinical knowledge, but other factors such as nurses' personal values and familiarity with the patient.	<ul style="list-style-type: none"> ● Objective data ● Clinical reasons ● Personal Values ● Proximity to the patient
5	Expertise in Nursing Practice. Caring, Clinical Judgment, and Ethics. (Benner et al., 1996)	Nursing	“the ways in which nurses come to understand the problems, issues, or concerns of clients and patients, to attend to salient information, and to respond in concerned and involved ways	<ul style="list-style-type: none"> ● Understanding of problems or concerns ● Stands out data ● Right action
6	Clinical judgment conceptualization scoping review protocol (Hussein, Olfert, &	Nursing	Clinical judgment is understood as the product of the cognitive, psychomotor, and affective processes of critical thinking and clinical reasoning	<ul style="list-style-type: none"> ● Scientific analysis ● Cognitive, psychomotor, and affective processes ● Critical Thinking ● Clinical Reasoning

No.	Source	Disciplines	Definition	Identification
	Hakkola, 2022)			
7	Sound clinical judgment in nursing: A concept analysis (Manetti, 2019)	Nursing	is a cognitive process in which the nurse forms a holistic assessment of a patient situation. Critical thinking, clinical reasoning, practical wisdom, and intuition are used in the decision making process that ensues. Sound clinical judgment: making a holistic assessment, critical thinking, clinical reasoning, practical wisdom, intuition, and reflection.	<ul style="list-style-type: none"> ● Cognitive processes ● Holistic assessment ● Critical thinking ● Clinical reasoning ● Practical Wisdom ● Intuition ● Holistic assessment
8	Improving health care for critically ill patients using an evidence-based collaborative approach to ABCDEF bundle dissemination and implementation (Barnes-Daly et al., 2018; Van Graan et al., 2016)	Nursing	nurses make clinical judgements as conclusions by selecting from alternatives, weighing evidence, using intuition and pattern recognition	<ul style="list-style-type: none"> ● Scientific evidence ● Weigh ● Intuition ● Recognition Patterns
9	Psychological assessment and clinical judgment (Garb, Lilienfeld, & Fowler, 2012)	Psychology	analysis, evaluation, or prediction of the presenting signs and symptoms in an individual with a disease, disorder, dysfunction, or impairment. It includes assessing the appropriateness of particular treatments and the degree or likelihood of clinical improvement	<ul style="list-style-type: none"> ● Analysis ● Evaluation ● Predictions ● Assessment

Defining Attributes

Attributes of the concept provide an understanding of what components appear or are inseparable from a concept (Connor et al., 2023). The attributes found will lead to an analysis of the characteristics of the concept. After identifying the concept definition in the first step, the writer then analyses the primary attributes of the clinical judgment concept. The analysis carried out is to identify the key characteristics that are unique and differentiate from other concepts. Table 2 presents an analysis of the results of the word identification that continues to emerge from each of the definitions obtained.

Table 2.**Attribute Identification**

Identify attribute characteristics (most frequently occurring words)	Attribute
Clinical knowledge, clinical reasoning	Clinical knowledge Clinical reason
Critical thinking	Critical Thinking
Practical Wisdom	Practical Wisdom
Recognize and data priority	Data Priority
Intuition	Intuition
Experience, Holistic Assessment, Analysis, Diagnosis, Assumptions, Hypotheses, Therapeutics, Predictions, Scientific Analysis, Cognitive Processes, Affective, Psychomotor	Scientific Analysis
Holistic Assessment	Holistic Assessment
Weighing options, objective data, stand out data, Scientific evidence, Right treatment	Evidenced
Proximity to the patient, Relationship with the patient, Relationship with the patient's family, relationship between the patient and health workers	Interaction relationship
Treatment, outcome	Outcome

Based on the results of the definition analysis, it can be concluded that the attributes of clinical judgment are: 1) Clinical knowledge; 2) Clinical reasoning; 3) Critical thinking; 4) Practical wisdom; 5) Data prioritization; 6) Intuition; 7) Scientific analysis; 8) Holistic assessment; 9) Evidence; 10) Interprofessional interaction; and 11) Outcomes.

Model Case

A model case represents a real-world example that embodies all the defining attributes of the concept under analysis. In this study, a model case was developed to demonstrate how ICU nurses use critical thinking, clinical reasoning, and decision-making to respond to a patient's deteriorating condition. A representative case model is as follows:

A woman, Mrs. PS 41 years old, being treated at the HCU for indications of shortness of breath, cough with phlegm, weakness, no appetite, and coughing up blood, and a history of fainting at home. The Sars Cov-2 PCR swab twice showed negative results in a row. The patient uses HFNC 70 Lpm/FiO₂ 90%. ABG results: PaO₂ 50 mmHg, PaCo₂ 40 mmHg, HCO₃ 20 mmHg, SatO₂ 97.3%, BE +2. Chest X-ray results: Heterogeneous consolidation fills both lung fields, can be compatible with pneumonia, accompanied by cavities and fibrosis of the upper fields of both lungs, especially the left, still possible pulmonary tuberculosis, DD/pulmonary tuberculosis with secondary infection. At present the patient still looks breathless, with increased work of breathing, decreased RoX index, RR 30-33 x/minute, O₂ Saturation 95-96%, Ronchi +/- with asymmetrical lungs, no onset of fever, but productive cough with thick yellowish sputum. The patient was planned to be admitted to the ICU for intubation, bronchoscopy, sputum culture examination, and fungal microorganisms. The patient is transferred to the ICU in the evening at 20.00. While in the ICU, Nurse. A receives patients

and performs handovers from HCU nurses. The accompanying family looked very worried to see Mrs. PS and repeatedly asked Nurse. A. Nurse. A, along with 3 other ICU nurses, moved the bed by giving the patient a comfortable position and making sure the patient was safe beforehand. After that, Nurse. A educate the patient's family that Nurse. A will first examine the patient and ask the family who is the main person in charge of the patient. It is known that the main person in charge is Mrs. PS's husband, Mr. KJ, 46 yrs. Nurse. A calm Mr. A and promised Mr. A that in 30 minutes they will be summoned to re-explain the results of the patient's examination. Then Nurse. A conduct a head-to-toe assessment as well as a focused assessment of the patient's respiratory system. Nurse. A also did anamnesis on the patient, it appeared that the patient was still short of breath. Nurse. A looks at the previous Blood Gas Analyses and compares it with the current condition. Based on the results of the examination, Nurse. A believes that Mrs. PS is a condition of impaired spontaneous ventilation which is at risk of respiratory failure. Nurse. A performs independent nursing interventions according to the nursing diagnosis of spontaneous ventilation disorders. Nurse. A also collaborated with the doctor on duty to conduct a rapid assessment. The doctor on duty also agreed that this condition needed to be treated immediately by intubation. Nurse. A then prepared the intubation process and called back Mr. KJ to be educated. Nurse. A asked his team to monitor Mrs. PS is currently educating the patient's family. After being educated, the family agreed to the intubation process for the patient's condition. Nurse. A also told Mr. KJ to pray and meet with the patient just before intubation.

Borderline and Contrary Case

Borderline and contrary cases were also constructed to distinguish clinical judgment from similar or overlapping concepts and to clarify its unique characteristics. These cases help illustrate how clinical judgment differs from other cognitive processes, such as problem-solving or intuition. The borderline case contains several attributes of the concept whereas contrary case does not contain the attributes of the concept. The difference is so significant that most people are able to decide that this example is not a representation of the concept being described (Jha et al., 2006) Both model are as follows:

Boderline Case

At 20:00, Nurse. A, an ICU nurse, received a transfer patient from the HCU with an indication of shortness of breath and an intubation plan. The patient's family seemed worried, and several times asked the nurse about the patient's condition. When educating the patient's family, Nurse. A said that the patient would be examined first and asked the family to wait in the waiting room first. Nurse. A returned to the patient and performs positioning on the patient. Nurse. A read the patient's AGD value beforehand and did not do a complete examination of the patient. Nurse. A only did auscultation and calculated the patient's respiratory rate. Based on daily experience and the doctor's previous plans for intubation, Nurse. A believed that the patient is in danger of respiratory failure. Nurse. A then prepared the intubation equipment and asked the doctor on duty to educate the patient's family. Then the patient's family was called, but Nurse. A forgot to ask the name of the main person in charge of the patient. After the family agrees to intubate, the family is asked to return to wait in the ICU waiting room.

Contrary Case

When accepting a new patient by the name of Mrs. PS at 20.00 in ICU, Nurse. A immediately called the doctor on duty to examine the patient. In addition, Nurse. A asked another nurse to move the patient to a predetermined bed. Nurse. A did a handover with the nurse in the previous room and found that the patient had severe shortness of breath. After the handover was completed, Nurse. A tidying up patient documents and calling the patient's family to provide education regarding ICU regulations. The family asked about the patient's condition and Nurse. A read the results of previous examinations and handovers without looking at the patient's condition. Nurse. A also said that the patient was being examined by the doctor on duty. After that, Nurse. A asked the patient's family to wait in the patient's waiting room. Next, Nurse. A met the doctor on duty and asked the doctor on duty what therapy and actions should be prepared for the current patient.

The borderline case exhibited only certain elements of clinical judgment, such as anticipation and partial assessment, but it lacked comprehensive reasoning, data integration, and patient-centered care.

This renders it an incomplete application of clinical judgment within the ICU context. Moreover, the contrary case presented above displayed none of the defining attributes of clinical judgment. The nurse functioned as a passive caregiver, relying solely on the decisions of others without integrating clinical information or making any evaluative or proactive decisions.

Antecedents and Consequences

Walker and Avant explain that antecedents appear before the concept and definition of attributes. Clinical Judgment of an ICU nurse can be influenced by several factors that strengthen the nurse's clinical decisions regarding the patient's condition. Antecedents of clinical judgment are level of education, knowledge, experience, ability to analyze, and understanding of the nursing process. The results that are formed or the outcomes that are produced from a concept are the meaning of the consequences. The concept of clinical judgment will produce five main consequences, namely: decision-making, appropriate response and reflective practice, safe nursing care, and patient safety. The antecedents and consequences can be seen in Figure 1.

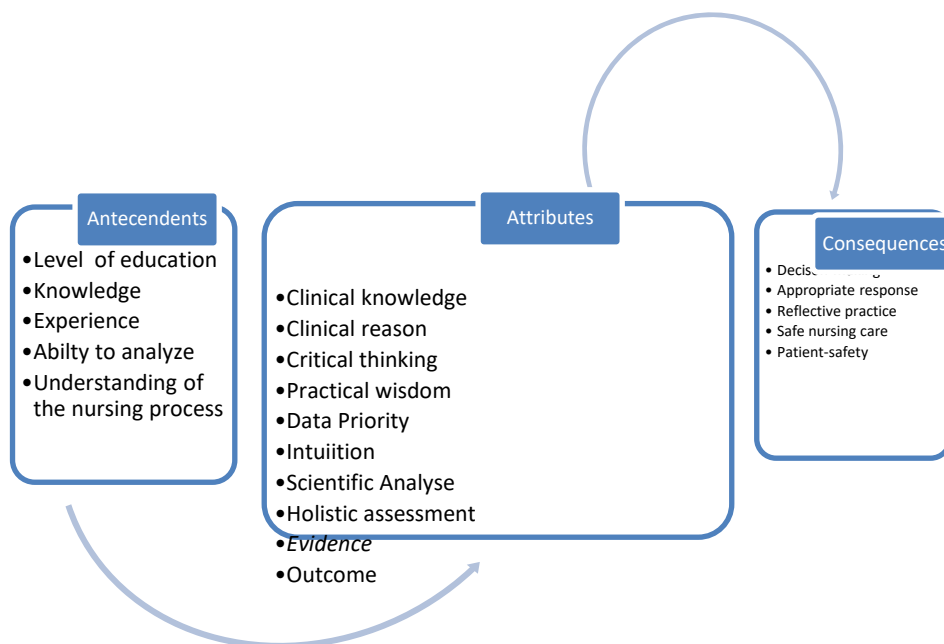


Figure 1. Clinical judgement's antecedents, attributes, and consequences

Antecedent

Antecedents are events or conditions that must occur prior to the development of a concept. In the context of clinical judgement in ICU nurses, several factors have been identified in the literature as

essential precursors, such as: level of education, knowledge, experience, analytical ability, and understanding of the nursing process. Clinical judgement could be a useful test to determine what to do next and possibly important to choose the further evaluation of patient's condition (Creavin et al., 2022). The educational background of ICU nurses significantly influences their competencies and ability to provide high-quality care in critical settings. Research indicates that nurses with advanced degrees, such as a Master of Science in Nursing, tend to demonstrate higher levels of practice and knowledge compared to those with diplomas or Bachelor of Science in Nursing degrees (Hebeshy et al., 2024). Despite the importance of education, many new ICU nurses report feeling unprepared, highlighting a need for improved educational frameworks and support systems to bridge the gap between training and practical application (Chang et al., 2024). That's why experience also important to sharpening the clinical judgement. The greater the exposure of nurses to intensive care unit settings, the more they will gain experience and enhance their clinical judgment regarding ICU situations.

Attributes

Attributes are the core characteristics that define the concept. Based on a review of the literature, the defining attributes of clinical judgement in ICU nurses include: clinical knowledge, clinical reasoning, critical thinking, practical wisdom, data prioritization, intuition, scientific analysis, holistic assessment, evidence-informed practice, and outcome orientation (Barnes-Daly et al., 2018; Manetti, 2019). Clinical judgement in ICU nurses involves a combination of knowledge, reasoning, and experience to make timely and accurate clinical decisions. It begins with strong clinical knowledge, enabling nurses to interpret complex data through clinical reasoning and critical thinking (Standing, 2020; Wright & Scardaville, 2021). These cognitive processes are supported by practical wisdom, drawn from experience and ethical awareness, allowing nurses to act appropriately in high-risk situations. Nurses must also prioritize data effectively to identify the most urgent issues in fast-paced ICU environments. In practice, clinical judgement is strengthened by intuition, or the ability to sense changes based on subtle cues, and scientific analysis, which involves interpreting diagnostics and applying evidence-based care.

Consequences

The effective application of clinical judgement by ICU nurses leads to a range of critical consequences that directly impact the quality and safety of patient care. These consequences reflect the value and relevance of clinical judgement in high-acuity environments, particularly in terms of decision-making, patient outcomes, and professional nursing practice. Effective clinical judgement

among ICU nurses leads to critical outcomes in patient care. One of the primary consequences is accurate and timely decision-making, which is essential for managing life threatening conditions in critical care settings (Tanner, 2006). This contributes to an appropriate and immediate response to changes in patient status, reducing the risk of deterioration and improving care efficiency (Johansen & O'Brien, 2016). Clinical judgement also promotes reflective practice, encouraging nurses to evaluate their actions, learn from experiences, and refine their professional competencies over time (Lasater, 2007). Moreover, strong clinical judgement supports the delivery of safe and high quality nursing care, minimizing medical errors and enhancing the consistency of interventions (P. E. Benner et al., 2009).

Empirical References

The final step of the concept analysis is to suggest empirical references or footprints of the concept's main attributes. Attributes, antecedents, and consequences of a concept are sometimes still very abstract, so empirical references can help to form an operational clarification of the concept (Jha et al., 2006). Empirical referents are also observable phenomena that are closely related to the attributes of the concept.

The concept of clinical judgment can be classified into several empirical references that are closely related to the formation of clinical decision processes. The first is management in the process of forming a nurse, which is a close relationship to education and experience, both formal and non-formal. Education and experience will shape a nurse in having the ability of clinical knowledge, clinical reasoning, and critical thinking (Chin-Yee & Upshur, 2018; Standing, 2020; Thompson et al., 2013; Van Graan et al., 2016).

The second is an understanding of the nursing process. This can be the basis of understanding and basic formation of a nurse. The nursing process is a basic concept that must be done, not as a work habit. A good understanding of the nursing process will shape nurses to make decisions in data prioritization, carry out holistic assessments, and produce outcomes that are right on target (Adamson et al., 2011; Aitken et al., 2019; Almenyan et al., 2021; ANA, 2021). The third is evidence-based nursing practice or evidence-based nursing practice. This practice aims to improve the results of a nurse's clinical judgment. Therefore, clinical decisions made will be linear with appropriate actions based on scientific updates (P. Benner et al., 2009; Garb et al., 2012).

Based on the explanation above, the things that support empirical references in clinical judgment are:

- a. The competence of ICU nurses can be formed from the level of education, experience, and type of training they have.
- b. Strategies improve clinical judgment skills with various methods, such as: case studies, simulations, discussions, and practical reflections.
- c. Expert knowledge is based on educational and theoretical frameworks, so that exposure should be introduced from the start of nursing education.

Implication for Nursing Practices

The Concept analysis reveals that clinical judgment among ICU nurses is influenced by antecedents such as education, knowledge, experience, analytical ability, and comprehension of the nursing process. It is characterized by attributes including critical thinking, clinical reasoning, practical wisdom, data prioritization, intuition, scientific analysis, holistic assessment, and evidence-informed practice. These components collectively enable nurses to make timely, accurate, and ethical decisions in the complex and rapidly evolving ICU environment. In nursing practice, this underscores the necessity for continuous development of clinical judgment through targeted education, simulation-based training, reflective practice, and supportive clinical environments. Enhancing clinical judgment improves decision-making, ensures appropriate responses, promotes patient safety, and supports nurses' autonomy and professional growth, ultimately leading to improved outcomes in critical care settings.

CONCLUSIONS AND SUGGESTIONS

The Intensive Care Unit is a specialist part of hospital care with special staff needs for diseases or conditions of high complexity. Nurses have an important role in the care of patients with critical conditions or patients who are treated in the ICU. According to the American Nurses Association, critical nursing is a separate field that involves integrated nursing care and interdisciplinary collaboration. Critical nursing is a specialty within the science of nursing dealing in detail with human beings responsible for life-threatening problems. ICU nurses are registered professional nurses whose responsibility is to ensure critically ill patients and their families receive optimal care (Urden et al., 2017).

Patients who are treated in the ICU will face very dynamic changes in conditions. Likewise, the family being treated will experience difficulties in accepting conditions that often change quickly. Based on

the important role that nurses have in caring for patients in the ICU, nurses must be able to adapt, be competent, and have relevant education and experience to improve their ability to make and take clinical judgments (Thompson et al., 2013). Dynamic, complex, and challenging conditions in the ICU require the ability of nurses to understand conditions in a comprehensive, tactical, and effective manner based on appropriate clinical decisions based on the individual patient's condition.

ICU Nurses in daily practice in their work are closely intersected with ethics, policies, actions or care, clinical and non-clinical decisions (Johansen & O'Brien, 2016). Integrated nursing care starting from assessment, data analysis, formulation of nursing diagnoses, planning and implementation of care plans, to evaluation is the duty and role of nurses who need to be based on adequate skills and experience. Humans, in this context as patients, are unique creatures, especially in terms of health and illness. Patients will have different responses in defining the disorder or pain that occurs in their body. Nurses are expected to be able to make clinical judgments about the patients. Clinical judgment is not only influenced by good cognitive processes, but how a nurse can measure, prioritize, and recognize salient information in both clinical and non-clinical situations (Schmidt & McArthur, 2018).

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Conflict of Interest Statement

The authors declare that have no conflict of interest.

REFERENCES

- Ääri, R.-L., Tarja, S., & Helena, L.-K. (2008). Competence in intensive and critical care nursing: a literature review. *Intensive and critical care nursing*, 24(2), 78-89.
- Adamson, K., Gubrud-Howe, P., Sideras, S., & Lasater, K. (2011, 11/30). Assessing the Reliability, Validity, and Use of the Lasater Clinical Judgment Rubric: Three Approaches. *The Journal of nursing education*, 51, 66-73. <https://doi.org/10.3928/01484834-20111130-03>
- Aitken, L., Marshall, A., & Chaboyer, W. (2019). *Critical Care Nursing*. Elsevier Health Sciences. <https://books.google.co.id/books?id=egKfDwAAQBAJ>
- Al Khalfan, A., Al Ghamdi, A., De Simone, S., & Hadi, Y. (2021). The impact of multidisciplinary team care on decreasing intensive care unit mortality. *Saudi Critical Care Journal*, 5(2), 13-18. https://doi.org/10.4103/sccj.sccj_34_20
- Aljanfawi, S. (2022). Dynamics of workload and burnout among nurses in the intensive care unit during COVID-19 pandemic. *Hail Journal of Health Science*, 4(2), 42-46. https://doi.org/10.4103/hjhs.hjhs_25_22

- Almenyan, A. A., Albuduh, A., & Al-Abbas, F. (2021, Jan 13). Effect of Nursing Workload in Intensive Care Units. *Cureus*, 13(1), e12674. <https://doi.org/10.7759/cureus.12674>
- ANA, A. N. A. (2021). *Nursing: Scope and standards of practice (4th ed.)*
- Barnes-Daly, M. A., Pun, B. T., Harmon, L. A., Byrum, D. G., Kumar, V. K., Devlin, J. W., Stollings, J. L., Puntillo, K. A., Engel, H. J., & Posa, P. J. (2018). Improving health care for critically ill patients using an evidence-based collaborative approach to ABCDEF bundle dissemination and implementation. *Worldviews on Evidence-Based Nursing*, 15(3), 206-216.
- Benner, P. (2012). Educating nurses: a call for radical transformation—how far have we come? , 51(4), 183-184.
- Benner, P., Tanner, C., & Chelsa, C. (1996). *Expertise in Nursing Practice. Caring, Clinical Judgment, and Ethics*
- Benner, P., Tanner, C. A., & Chesla, C. A. (2009). *Expertise in nursing practice: Caring, clinical judgment, and ethics*. Springer Publishing Company.
- Benner, P. E., Tanner, C. A., & Chesla, C. A. (2009). *Expertise in Nursing Practice, Second Edition: Caring, Clinical Judgment, and Ethics*. Springer Publishing Company. <https://books.google.co.id/books?id=6Ql8AAAAQBAJ>
- Chang, S. O., Chaung, S. K., Sohng, K. Y., Kim, K., Won, J., & Choi, M. J. (2024). Priority analysis of educational needs for new nurses in the intensive care unit: A cross-sectional study. *Nursing in Critical Care*, 29(5), 1162-1173.
- Chin-Yee, B., & Upshur, R. (2018). Clinical judgement in the era of big data and predictive analytics. *Journal of Evaluation in Clinical Practice*, 24(3), 638-645.
- Connor, J., Flenady, T., Massey, D., & Dwyer, T. (2023). Clinical judgement in nursing—An evolutionary concept analysis. *Journal of Clinical Nursing*, 32(13-14), 3328-3340.
- Creavin, S. T., Noel-Storr, A. H., Langdon, R. J., Richard, E., Creavin, A. L., Cullum, S., Purdy, S., & Ben-Shlomo, Y. (2022). Clinical judgement by primary care physicians for the diagnosis of all-cause dementia or cognitive impairment in symptomatic people. *Cochrane Database of Systematic Reviews*(6). <https://doi.org/10.1002/14651858.CD012558.pub2>
- Cuzco, C., Torres-Castro, R., Torralba, Y., Manzanares, I., Munoz-Rey, P., Romero-Garcia, M., Martinez-Momblan, M. A., Martinez-Estalella, G., Delgado-Hito, P., & Castro, P. (2021, Oct 21). Nursing Interventions for Patient Empowerment during Intensive Care Unit Discharge: A Systematic Review. *Int J Environ Res Public Health*, 18(21), 11049. <https://doi.org/10.3390/ijerph182111049>
- Dale, C. M., Carbone, S., Istanboulian, L., Fraser, I., Cameron, J. I., Herridge, M. S., & Rose, L. (2020). Support needs and health-related quality of life of family caregivers of patients requiring prolonged mechanical ventilation and admission to a specialised weaning centre: A qualitative longitudinal interview study. *Intensive & critical care nursing*, 58, 102808. <https://doi.org/10.1016/j.iccn.2020.102808>
- Danielis, M., Povoli, A., Mattiussi, E., & Palese, A. (2020, Jul). Understanding patients' experiences of being mechanically ventilated in the Intensive Care Unit: Findings from a meta-synthesis and meta-summary. *J Clin Nurs*, 29(13-14), 2107-2124. <https://doi.org/10.1111/jocn.15259>
- Dictionary, O. E. (1989). Oxford english dictionary. *Simpson, Ja & Weiner, Esc*, 3.
- Feinstein, A. R. (1994). Clinical judgment revisited: the distraction of quantitative models. 120(9), 799-805.
- Garb, H. N., Lilienfeld, S. O., & Fowler, K. A. (2012). Psychological assessment and clinical judgment. In *Psychopathology: Foundations for a contemporary understanding*, 3rd ed. (pp. 121-144). Routledge/Taylor & Francis Group.
- Harris, B., & Panozzo, G. (2019). Barriers to recovery-focused care within therapeutic relationships in nursing: Attitudes and perceptions. *International Journal of Mental Health Nursing*, 28(5), 1220-1227.
- Hebeshy, M. I., Gaballah, S. H., & Ibrahim, N. M. (2024, 2024/10/19). Assessment of ICU nurses' competency towards delirium among critically ill patients. *BMC Nursing*, 23(1), 769. <https://doi.org/10.1186/s12912-024-02330-z>
- Holloway, I., & Galvin, K. (2023). *Qualitative research in nursing and healthcare*. John Wiley & Sons.
- Jessee, M. A. (2021). An update on clinical judgment in nursing and implications for education, practice, and regulation. *Journal of Nursing Regulation*, 12(3), 50-60.

- Jha, V., Bekker, H., Duffy, S., & Roberts, T. (2006). Perceptions of professionalism in medicine: a qualitative study. *Medical Education*, 40(10), 1027-1036.
- Johansen, M. L., & O'Brien, J. L. (2016). Decision Making in Nursing Practice: A Concept Analysis. *Nursing Forum*, 51(1), 40-48. <https://doi.org/https://doi.org/10.1111/nuf.12119>
- Kwame, A., & Petrucka, P. M. (2021, 2021/09/03). A literature-based study of patient-centered care and communication in nurse-patient interactions: barriers, facilitators, and the way forward. *BMC Nursing*, 20(1), 158. <https://doi.org/10.1186/s12912-021-00684-2>
- Lasater, K. (2007). Clinical judgment development: using simulation to create an assessment rubric. *Journal of Nursing Education*, 46(11).
- Leung, D., Blastorah, M., Nusdorfer, L., Jeffs, A., Jung, J., Howell, D., Fillion, L., & Rose, L. (2017). Nursing patients with chronic critical illness and their families: a qualitative study [Article]. *Nursing in Critical Care*, 22(4), 229-237. <https://doi.org/10.1111/nicc.12154>
- Lloyd, A., Clegg, G., & Crouch, R. (2015). Dynamic nurse leadership in high-pressure situations. *Emergency Nurse*, 23(3).
- Manetti, W. (2019). Sound clinical judgment in nursing: A concept analysis. *Nursing Forum*.
- McNett, M., O'Mathúna, D., Tucker, S., Roberts, H., Mion, L. C., & Balas, M. C. (2020). A Scoping Review of Implementation Science in Adult Critical Care Settings. *Critical care explorations*, 2(12), e0301. <https://doi.org/10.1097/CCE.0000000000000301>
- Nurses, A. A. o. C.-C., & Bell, L. (2015). *AACN scope and standards for acute and critical care nursing practice*. American Association of Critical-Care Nurses.
- Phua, J., Lim, C.-M., Faruq, M. O., Nafees, K. M. K., Du, B., Gomersall, C. D., Ling, L., Divatia, J. V., Hashemian, S. M. R., Egi, M., Konkayev, A., Mat-Nor, M. B., Shrestha, G. S., Hashmi, M., Palo, J. E. M., Arabi, Y. M., Tan, H. L., Dissanayake, R., Chan, M.-C., Permpikul, C., Patjanasontorn, B., Son, D. N., Nishimura, M., Koh, Y., & for the Asian Critical Care Clinical Trials, G. (2021, 2021/10/07). The story of critical care in Asia: a narrative review. *Journal of Intensive Care*, 9(1), 60. <https://doi.org/10.1186/s40560-021-00574-4>
- Rose, L. (2011). Interprofessional collaboration in the ICU: how to define? *Nursing in Critical Care*, 16(1), 5-10.
- Schmidt, B. J., & McArthur, E. C. (2018). Professional nursing values: A concept analysis. *Nursing Forum*, 53(1), 69-75. <https://doi.org/https://doi.org/10.1111/nuf.12211>
- Schwartz, A. C., Dunn, S. E., Simon, H. F., Velasquez, A., Garner, D., Tran Jr, D. Q., & Kaslow, N. J. (2022). Making family-centered care for adults in the ICU a reality. *Frontiers in psychiatry*, 13, 837708.
- Standing, M. (2020). Clinical judgement and decision making in nursing. *Clinical Judgement and Decision Making in Nursing*, 1-288.
- Tanner, C. A. (2006). Thinking Like a Nurse: A Research-Based Model of Clinical Judgment in Nursing. *Journal of Nursing Education*, 45(6), 204-211. <https://doi.org/doi:10.3928/01484834-20060601-04>
- Thompson, C., Aitken, L., Doran, D., & Dowding, D. (2013). An agenda for clinical decision making and judgement in nursing research and education. *International journal of nursing studies*, 50(12), 1720-1726.
- Urden, L. D., Stacy, K. M., & Lough, M. E. (2017). *Critical Care Nursing - E-Book: Diagnosis and Management*. Elsevier Health Sciences. <https://books.google.co.id/books?id=VIglDgAAQBAJ>
- Van Graan, A. C., Williams, M. J., & Koen, M. P. (2016). Professional nurses' understanding of clinical judgement: A contextual inquiry. *health sa gesondheid*, 21, 280-293.
- Vester, L. B., Holm, A., & Dreyer, P. (2022). Patients' and relatives' experiences of post-ICU everyday life: A qualitative study. *Nursing in Critical Care*, 27(3), 392-400. <https://doi.org/https://doi.org/10.1111/nicc.12682>
- Wøien, H. (2012). Intensive care pain treatment and sedation: Nurses' experiences of the conflict between clinical judgement and standardised care: An explorative study. *Intensive & critical care nursing : the official journal of the British Association of Critical Care Nurses*, 29. <https://doi.org/10.1016/j.iccn.2012.11.003>
- Wright, J., & Scardaville, D. (2021). A nursing residency program: A window into clinical judgement and clinical decision making. *Nurse Education in Practice*, 50, 102931.