

## **Clinical judgement in nursing – An evolutionary concept analysis**

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## REVIEW

# Clinical judgement in nursing – An evolutionary concept analysis

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**Abstract**

**Aims:** The aim of this concept analysis was to develop a contemporary operational definition of Clinical Judgement in nursing.

**Design:** Concept analysis.

**Methods:** Rodgers' evolutionary method of concept analysis. Throughout the study, the authors followed the [SRQR checklist](#).

**Results:** This concept analysis guided the development of an operational definition of clinical judgement, within the context of nursing, articulated as *Clinical judgement is a reflective and reasoning process that draws upon all available data, is informed by an extensive knowledge base and results in the formation of a clinical conclusion.*

**Conclusion:** The purpose of this concept analysis was to propose a detailed definition of clinical judgement in nursing, that reflected its theoretical base within today's contemporary healthcare system. Using Rodgers' evolutionary method of concept analysis, surrogate terms, attributes, antecedents and consequences were identified, and a contemporary definition was developed.

No patient or public contribution was required to design or undertake this research.

**KEYWORDS**

clinical judgement, clinical reasoning, critical thinking, decision-making, nurse, nursing

## 1 | INTRODUCTION

Clinical judgement is viewed as an essential skill for nurses (Cappelletti et al., 2014; Martin et al., 2020; Tanner, 2006). The concept of clinical judgement has evolved, rather than been discovered or invented; therefore, it is difficult to determine when clinical judgement was first recognised and used in nursing. It is known that within the limitations of knowledge and technology, nursing rapidly developed during World War I (Power, 2013). Whilst caring for hundreds of wounded, in extreme circumstances and with minimal resources, nurses realised the significance of rapid triage. Nurses had to treat

patients autonomously and efficiently, thereby developing the skill of problem-solving using judgement and intellect (Agustin, 2020). Patient safety is reliant on the safe, accurate and timely decisions of educated nurses (Reay et al., 2016, p. 8). Noon (2014) suggests nurses now practice in an environment where conventional nurse boundaries and responsibilities are persistently challenged and employing clinical judgement for safe practice is essential.

Health care is becoming more complex (Kuipers et al., 2014), and nurses are recognised as key decision-makers, progressively required to provide safe and effective nursing care in multi-layered healthcare environments that demand higher cognitive and clinical

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skills than in previous decades (Clemett & Raleigh, 2021). This is of concern as nurses assume higher levels of responsibility and accountability in increasingly demanding and complex clinical situations (Clemett & Raleigh, 2021). Internationally, nurses must matriculate from a bachelor's degree level of study to meet registration requirements (Baumann & Blythe, 2008; Liaw et al., 2017). Whilst nurses are autonomous practitioners, assuming accountability and responsibility for their own actions, they also work closely with the wider multidisciplinary team, at times delegating care to other members of the healthcare team (Alcorn & Topping, 2009; Jacob et al., 2015; Twohig, 2018). Nurses are significant decision-makers in any developed healthcare system, and evidence suggests sound clinical judgement is important because the judgements made by nurses in practice, influence patient outcomes (Manetti, 2019; Standing, 2020; van Graan et al., 2016b).

Patient acuity, new technology and the increasing expectations placed on healthcare provision have all influenced contemporary nursing practice, driving quality and safety standards which have influenced how nurses perform their practice (Clemett & Raleigh, 2021). Improving the quality of nursing care and thus, patient outcomes, is dependent on nursing, prioritising the development of judgement and decision-making skills (Thompson & Stapley, 2011). Clinical judgement and decision-making are described by multiple terms within nursing literature (Clemett & Raleigh, 2021; El Hussein et al., 2021; Wright & Scardaville, 2021), and almost all imply the application of higher-order cognitive skills.

The demands of complex clinical practice settings mean nurses are multitasking more involved tasks, have further increased their scope of practice and make important judgements about the care they provide (Manetti, 2019). The terms clinical judgement, clinical reasoning, critical thinking and clinical decision-making are often used interchangeably (Menezes et al., 2015), yet the meaning, application and interpretation of the terms often differ. Extensive work was undertaken in the early 1990s and again in 2006 by Tanner around clinical judgement to address the processes or reasoning patterns nurses use as they manage patients (Tanner, 1998, 2006). Tanner (2006, p. 208) describes the process as 'thinking like a nurse' and developed the Clinical Judgement Model, which includes four phases: noticing, interpreting, responding and reflecting.

Whilst Tanners work is important and made a significant contribution to understanding the 'thinking like a nurse' concept (Tanner, 2006), we reason that patient populations, nursing education and nursing research have evolved since Tanner's early work. Thus, it is timely to provide a contemporary analysis of clinical judgement in nursing as a concept. Although widely used by researchers (Benner et al., 2009), clinicians (Balzer et al., 2014) and educators (Kim, 2014), we argue that the concept of clinical judgement remains elusive and difficult to quantify and define. Consequently, an analysis of the term clinical judgement is intended to better describe and understand this concept and its attributes in nursing.

The fundamental purpose of a concept analysis is to clarify ambiguous concepts in a premise and to propose a detailed operational definition which reflects its notional base within a contextual setting

### What does this paper contribute to the wider global community?

- An explanatory and descriptive statement of clinical judgement in nursing.
- Acknowledgement of clinical judgement as an essential skill for nurses and patient safety in increasingly complex environments.
- Clarification of clinical judgement to give direction for future research, education and clinical application.

(Foley & Davis, 2017). Clinical judgement is a key attribute of professional practice (Seidi et al., 2015; Tanner, 2006), and its application is vital to the nursing process, effective clinical decision-making, problem-solving and the overall consequence of safe and quality patient care (Seidi et al., 2015). Using Rodger's evolutionary framework (Rodgers & Knafel, 2000) to explore the evidence around this topic will provide clarity to the term clinical judgement. A clear description of the concept clinical judgement will provide clarity to the term within nursing and may further be employed to support the application of the concept in research, education and clinical environments.

## 1.1 | Background

The importance of judgement in relation to nursing practice is evident internationally. In the UK, the Nursing and Midwifery Council (NMC) states nurses must employ evidence-based person-centred nursing care, which is defined as ensuring any care and treatment given by the nurse is made by applying judgement and experience of the nurse in collaboration with the views of the patient and is supported by research (Nursing and Midwifery Council, 2018). The American Nurses Association (ANA) includes judgement as part of nurse competence. The ANA Professional Role Competence Position Statement highlights that competency is an expected level of performance that integrates knowledge, skills, abilities and judgement (American Nurses Association, 2014, p. 3). The ANA statement further proposes that judgement includes critical thinking, problem-solving, ethical reasoning and decision-making (American Nurses Association, 2014, p. 3).

Similarly, the Nursing and Midwifery Board of Australia's (NMBA) registered nurse standards for practice clearly identify judgement as a professional expectation (Cashin et al., 2017; Cowin et al., 2019). The standards mandate critical thinking and decision-making inform evidence-based practice as core nursing skills, stating 'evidence-based practice is accessing and making judgements to translate the best available evidence, which includes the most current, valid, and available findings into practice' (Nursing and Midwifery Board of Australia, 2016, p. 6). Nurses' judgement is also included as an underpinning action in the code of conduct for nurses where it is expected that to deliver the best possible outcomes in practice,

and nurses will exercise their professional judgement (Nursing and Midwifery Board of Australia, 2018, p. 4). The inference to 'making judgement' and employing 'profession judgement' adds to the ambiguity of the term. Despite the nursing standards use of the term nursing judgement, the term clinical judgement remains elusive, and a common understanding of the concept is not obvious.

A plethora of literature analyses, discusses and uses the concept of clinical judgement in different settings with diverse multiple applications of clinical judgement discussed contributing to the ongoing confusion and misuse of the term (Manetti, 2019; Standing, 2020; Tanner, 2006; van Graan et al., 2016b). The nursing profession largely communicates using terminology, not concepts; therefore, misuse of terms to represent concepts such as clinical judgement is common. For example, critical thinking, a concept based on nurses' use of evidence and science (Jessee, 2021; Victor-Chmil, 2013), is commonly used to explain nurse-led decisions. Yet, it is advocated (Jessee, 2021) that because patient-centred decisions are founded on a nurse's interpretation of the patient's needs as well as informed by evidence, that clinical judgement has been used to make the clinical decision. These synonymously used terms and their concepts are discussed in much more detail later in the study.

Clinical judgement is multifarious and complex (Tanner, 2006) and sound clinical judgement is said to be the 'foundation of quality nursing care' (Manetti, 2019, p. 102). Nurses are expected to notice cues and changes in patient conditions, regardless of how subtle they may be, to be proactive in the prevention of further harm and swift in the detection of deterioration in a patient's condition (Manetti, 2019). Sound clinical judgement demands an adaptable and salient capability to identify relevant characteristics of an open-ended, possibly unclear clinical situation, decipher the significance, and respond safely and appropriately (Manetti, 2019; Tanner, 2006).

The expectation is that nurses make safe clinical judgements about patient care; however, this requires complex decisions to be made in a continually challenging healthcare environment (Kassaman & Corlett, 2019). Nurses' development of clinical judgement is crucial because it guides appropriate nursing diagnoses, clinical decision-making and health outcomes (Benner, 1984; Seidi et al., 2015). Having a clear definition and subsequent understanding of the term clinical judgement when commencing any investigations into its application and operation is important for clarity and accuracy. To apply the concept of clinical judgement to operational documents such as policy, procedure, standards and accreditation, a clearly articulated contemporary definition and description is needed and as demonstrated is currently lacking. A concept analysis provides guidance and direction to and creates a platform for, a better understanding of the concept, particularly when the chosen concept has limited defining literature and research available or is considered ambiguous with multiple applications (Foley & Davis, 2017).

Concept analyses published in recent years provide clarity for similar terms that are not easily defined or are particularly confusing when used in clinical, education and research areas (Johansen & O'Brien, 2016; Manetti, 2019; Pouralizadeh et al., 2017;

Simmons, 2010). Manetti (2019) completed a concept analysis guided by Walker and Avant's framework and concluded that clinical judgement ensues from critical thinking and clinical reasoning and is synonymous with the term decision-making. Manetti (2019) believed this finding was beneficial to the ultimate goal of improving patient care if educators and administrators used reliable and valid tools to develop and measure clinical judgement in novice nurses. A concept analysis undertaken by van Graan et al. (2016a, p. 33) arrived at a theoretical definition for clinical judgement that explained it as a 'complex cognitive skill to evaluate patient needs, adaption of current treatment protocols as well as new treatment strategies, prevention of adverse side effects through being proactive rather than reactive within the clinical nursing environment'. The findings emphasised clinical judgement as a skill within the clinical nursing environment, one that should be taught and assessed in nurse education, to ultimately improve nursing practice and patient outcomes (van Graan et al., 2016a). Similarly, Pouralizadeh et al. (2017) undertook a concept analysis to understand clinical judgement in the undergraduate education of Iranian nursing students using a hybrid approach of Walker and Avant's concept analysis. Results from Pouralizadeh's study formulated a definition and description of clinical judgement as applied in an undergraduate nursing programme in Iran, which considered clinical judgement a cognitive and reasoning process, which requires nurses to establish professional relationships including appropriate communication with patients. Drawing on knowledge and experience and applying cognitive, reasoning and reflective processes to the patients' problem allows clearer interpretation of data, and better clinical judgement outcomes (Pouralizadeh et al., 2017, p. 12).

Outcomes generated from these concept analyses and others include assisting in the development of tools for the teaching, operationalisation, application and measuring of the concepts (Johansen & O'Brien, 2016; Manetti, 2019; Pouralizadeh et al., 2017; Simmons, 2010). An extensive scoping review by Rodgers et al. (2018) looked at the application and capabilities of concept analysis published between 1972 and 2017. The Rodgers et al. (2018) review found that concept analysis is a robust area of nursing scholarship and used a case analysis to trace the impact of one single analysis. Significantly, that analysis has been cited 75 times across 42 different journals. Moreover, 75% of those citations were in research reports, most often the discussion section where authors address the applicability or interpretation of the concept in relation to the study. These findings support the importance and relevance of concept analyses in nursing scholarship (Rodgers et al., 2018).

## 2 | THE STUDY

### 2.1 | Aim

The aim of this concept analysis is to identify the surrogate terms, attributes, antecedents and consequences of clinical judgement and to develop an operational definition of the term within the context

of nursing. Concepts are understood differently within disciplines (Toftthagen & Fagerstrøm, 2010), and there are several approaches that are commonly used in the healthcare field to guide concept analysis.

## 2.2 | Design

Rodgers' method of evolutionary concept analysis is well suited to this activity, by cause of its systematic method and applicability when exploring fluid or transforming concepts. Rodgers's approach concentrates on existing applications of the concept and its affiliation or links with other aspects or related factors (Rodgers & Knafl, 2000). Constructs and concepts in nursing are constantly being redefined and Rodgers's method of analysis fits well because it begins with the known definitions and surrogate terms and then guides the reviewer to expand the search to include related terms that help make sense of antecedents and consequences (Toftthagen & Fagerstrøm, 2010). Rodgers' method has been recognised as a reliable and relevant approach to developing nursing knowledge by applying an inductive method of analysis (Toftthagen & Fagerstrøm, 2010), and multiple works have been published and cited using Rodger's evolutionary method (Johansen & O'Brien, 2016; Mirza et al., 2014; Mohammadi-Shahboulaghi et al., 2021; Simmons, 2010), with findings supporting an array of platforms within the nursing field, such as pre-registration education, professional practice and ultimately patient outcomes.

To guide this concept analysis, six phases are addressed within the evolutionary method; however, Rodgers argues many of them are performed simultaneously, and that the process is nonlinear, iterative and flexible in nature (Dinmohammadi et al., 2013; Rodgers & Knafl, 2000). Table 1 sets out the 6 phases and their descriptions. Applying Rodgers's evolutionary process for this study affords a solid foundation for future conceptual activity, particularly in the context of ongoing concept development of clinical judgement, its meaning and its relationship to contemporary nursing practice (Rodgers et al., 2018).

## 2.3 | Surrogate and related terms

The term clinical judgement is often used conversely with terms such as clinical reasoning, critical thinking and clinical decision-making within the problem-solving and decision-making context of nursing care (Standing, 2020). Several definitions have been used for clinical judgement (Foley & Davis, 2017; Lasater, 2011; Tanner, 2006). All concur there is an interrelationship that exists between clinical judgement, clinical reasoning, critical thinking and clinical decision-making, but a clear definition for clinical judgement is not agreed upon. The term clinical is defined as 'relating to, or conducted in or as if in a clinic, involving direct observation of the patient; based on, or characterised by observable and diagnosable symptoms' (Merriam-webster dictionary, 2002, para 2). Judgement is also defined as 'the process of forming an opinion or evaluation by discerning and

TABLE 1 The Rodgers' evolutionary concept analysis framework (Rodgers & Knafl, 2000 p.85)

### Rodgers' concept analysis phases – The evolutionary 6-step method.

1 Identify the concept of interest and associated expressions

Identify surrogate terminology and relevant uses of the concept

2 Identify and select an appropriate setting (time period) and sample for data collection

3 Collect data – attributes antecedents and consequences on a contextual basis of the concept

*Attributes refer to the characteristics of the concept, antecedents are phenomena that have been associated with the concept and consequences are outcomes of the concept.*

4 Analyse the data regarding the above characteristics

5 Identify an exemplar of the concept *if appropriate*

6 Identify implications for further development of the concept.

comparing careful consideration of the odds' (Merriam-webster dictionary, 2002, para 2).

According to Tanner (2006, p. 206) 'clinical judgement is arrived at through clinical reasoning and is not only based on clinical knowledge, but other factors such as nurses' personal values and familiarity with the patient'. It is professional consideration and understanding of a problem or need, concluding in a judgement of what to do next, as appropriate to each individual circumstance (Tanner, 2006, p. 204). Similarly, Botti and Reeve (2003) assert the employment of the decision-making process using problem-specific knowledge, services good clinical judgements. A more simplistic definition observes clinical judgement as a term that describes how nurses gather and analyse data within the nursing process (Dickerson, 2005).

Clinical reasoning is a generic term that is frequently referred to as a process of collecting information and deciphering it into a meaningful interaction to generate a healthcare outcome (Menezes et al., 2015). Conversely, because other terms or expressions are continuously applied interchangeably with clinical reasoning, such as clinical judgement, decision-making process and at times, critical thinking, it can be difficult to have a clear understanding of what the term clinical reasoning is representing (Menezes et al., 2015). Clinical reasoning is described by Levett-Jones et al. (2010, p. 516) as 'the process by which nurses collect cues, process collected information, reach a decision about a patient problem or situation, plan and implement interventions, evaluate outcomes, and reflect on and learn from the process'. Victor-Chmil (2013) explains it is the cognitive and metacognitive processes used for analysing knowledge relative to a clinical situation as opposed to clinical judgement, which is concerned with the cognitive and psychomotor processes validated through actions and behaviours. Hence, whilst clinical reasoning is a primary skill in nursing practice as it supports that nurse identify, prioritise, formulate plans, and interpret clinical data (Menezes et al., 2015), it is not clinical judgement, and this continues to be a problem when investigating how clinical judgement is applied by nurses.

Critical thinking is a cognitive process used to examine observation and data and is required by nurses to meet the changing demands of a complex healthcare environment (Kassaman & Corlett, 2019). Critical thinking is a construct that was developed from an abstract concept to a practical and relevant process expected of nursing professionals (Papathanasiou et al., 2014). Developing a solid knowledge base from experience over time is key to the application of critical thinking (Benner, 1984). Critical thinking is the cognitive process of gathering and reviewing the information available and processing the data using experience, reflection and reasoning to formulate action (Papathanasiou et al., 2014). Reflection and reasoning to formulate action is an important element of higher order thinking and is closely aligned within the concept of critical thinking. Consequently, at times, critical thinking involves suspension of judgement, an evaluation and critical appraisal, and is oriented towards making decisions about many situations encountered daily (Kassaman & Corlett, 2019).

Finally, the complex activity of clinical decision-making is paramount for nurses to undertake when managing patients (Johansen & O'Brien, 2016). Benner et al. (2009) believe both analytic and intuitive processes encompass the complexities of decision-making. Decision-making by nurses is usually a fluent, quick action, guided by pertinent subjective and objective data available and often made under laboured conditions and in uncertain environments (Johansen & O'Brien, 2016). The evolving and continuous method of data collection and analysis used when decision-making affords strength and clarity when deciding on an action. Macauley et al. (2017) rely somewhat on contextual factors and their impact in the process of the decision-making (Johansen & O'Brien, 2016). Benner (1984) also considers circumstance along with level of education and practice, impact decision-making in nursing practice. Whilst all these terms have aspects of gathering the data, interpreting the meaning within the data and drawing conclusions, all overlap and none clearly articulate where clinical judgement may fit in the concepts, nor do they allow for what clinical judgement is as a standalone concept.

## 2.4 | Data collection

Collection of material to be included in a concept analysis can be any relevant materials deemed 'credible' by the researcher; however, it is important that researchers do not allow bias and preconceived notions of the concept to influence the sources of data used (Tofthagen & Fagerstrøm, 2010). As part of the overarching search strategy planned at the commencement of the study, data were retrieved from peer-reviewed journals, published in English, between the years 2000 and 2021.

Several databases including CINAHL, ProQuest, PubMed and Web of Science were used to identify relevant literature (Figure 1). The search strategy included the MeSH terms clinical judgement AND clinical decision-making OR clinical decision-making AND clinical reasoning AND critical thinking OR critical thinking skills AND

nurs\* with a date limitation of 2000–2021. A total of 18 articles were returned and their author, year and title are identified in Table 2. Articles about nurses working in acute clinical or educational settings, graduate nurses and student nurses were considered inclusive of the context. Studies that focused on other speciality streams of practice, such as midwifery, mental health, medicine and allied health, were excluded as they are considered as separate specialities and/or disciplines.

## 2.5 | Data analysis

The coding procedure was performed using Rodgers' evolutionary method (Rodgers & Knafl, 2000). The articles were read by the primary author JC to acquire the essence of clinical judgement context within the paper. This context of the term was recognised during coding. Articles were then reviewed again for systematic data collection and coding validity. The extracted data were classified into an excel spreadsheet and analysis by all authors (JC, TF, TD, DM). This process specified definitions alluded to attributes, antecedents and consequences mentioned.

Using an excel spreadsheet, the terms were initially considered individually, with key themes identified. Next, the themes were categorised into attributes, antecedents and consequences, including all connected concepts. At each step, data were reviewed to enable submersion and extraction of the key themes, including labelling to provide clear explanations at each understanding of the concept.

## 3 | FINDINGS

Applying Rodgers' method of concept analysis, surrogate terms, attributes, antecedents and consequences were distinguished. Figure 2 below illustrates the findings within this process of Rodgers' method.

Surrogate terms are substitute terms often applied to identify the concept. The surrogate terms identified for clinical judgement in the context of nursing were clinical reasoning, critical thinking, clinical decision-making, decision-making and critical thinking skills. These interrelated terms are often employed interchangeably in nursing literature. Table 3 indicates a summary of the results as applied to this project. It includes the first three steps undertaken and the results from the steps including analysis.

### 3.1 | Attributes of clinical judgement

Attributes of a concept offer recognition of circumstances that involve the concept of interest (Rodgers & Knafl, 2000). These attributes guide the analysis by reducing the search of exact characteristics of the concept. A review of the literature identified the following primary attributes as features of clinical

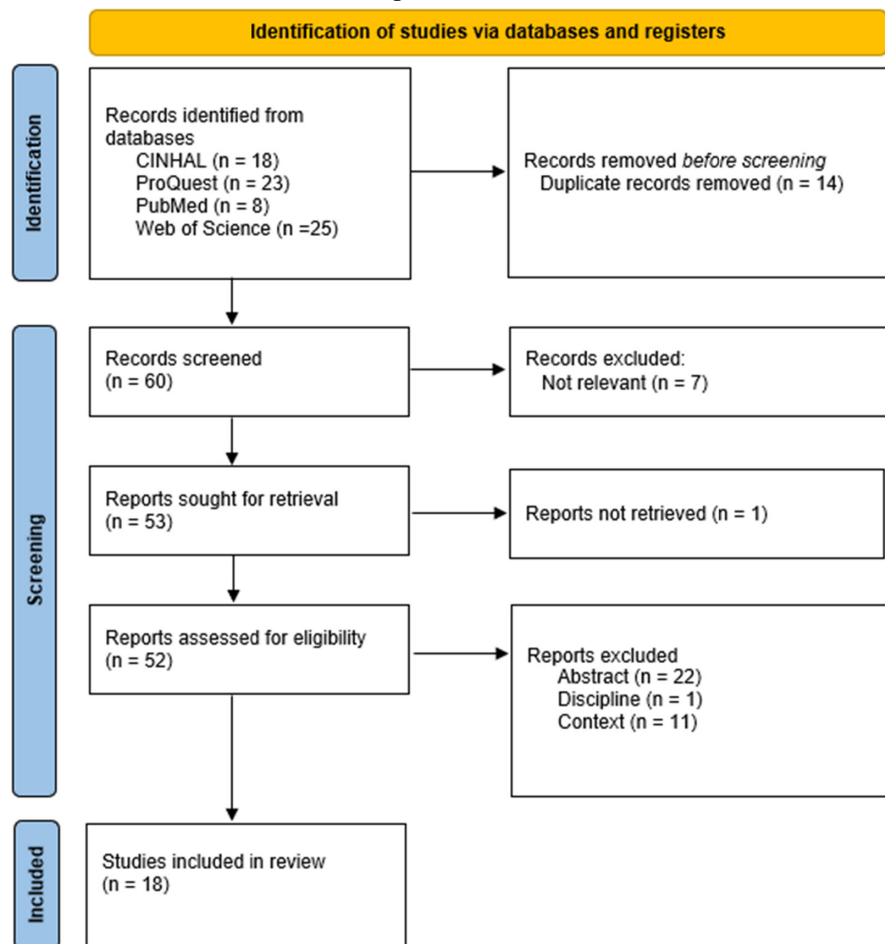


FIGURE 1 PRISMA flow diagram outlining data collection.

judgement, first, the ability to clinically reason with the information and evidence available (Cappelletti et al., 2014; Hallin, Häggström, et al., 2016; Lasater, 2011; Lin et al., 2003; Lindsey & Jenkins, 2013; Manetti, 2019; Wright & Scardaville, 2021), second, the ability to draw on one's knowledge base in context including theoretical education/knowledge and clinical experience within context (Adderley & Thompson, 2017; Agbedia et al., 2008; Balzer et al., 2014; Dowding et al., 2012; Maeda et al., 2021), and finally, the ability to employ reflective process to actions that include consideration of patient and their support networks, the interdisciplinary team and self (Cappelletti et al., 2014; Gerdeman et al., 2013; Hallin, Häggström, et al., 2016; Wright & Scardaville, 2021). Descriptive elements within the attributes included clinical reasoning, ability to think like a nurse, practical wisdom and having confidence to know your patient and the team in which you work. These attributes help discern the concept from surrogate terms (Rodgers & Knafel, 2000).

### 3.2 | Antecedents

Antecedents are occurrences identified within the literature that help define the concept (Rodgers & Knafel, 2000). The data analysis identified three themes as precursors to clinical judgement

transpiring. The three themes are classified as knowing your subject, knowing your situation and knowing the nursing process.

Knowing your subject is influenced by a number of considerations. The nurses' level of education (Agbedia et al., 2008; Cappelletti et al., 2014; Gerdeman et al., 2013), ability to employ evidence-based thinking during practice (Harbison, 2006; Lasater, 2011; Wright & Scardaville, 2021), the years of experience practising (Adderley & Thompson, 2017; Gerdeman et al., 2013; Harris, 2015; Lin et al., 2003; Lindsey & Jenkins, 2013) and years of experience in specified or specialised fields of nursing which leads to pattern recognition and the ability to quickly and confidently correlate data to form conclusions. Knowing the situation includes factors of building therapeutic relationships with patients and their support networks to enable an intimate understanding of data when forming conclusions. This theme extends to the relationship with colleagues, the extended interdisciplinary team and the dynamics of the work environment. It is also important to note a factor of knowing self was overt within the data (Manetti, 2019; Wright & Scardaville, 2021), and this included acknowledgement of bias when determining judgements in clinical care. The final theme identified was knowing the nursing process. A thorough understanding and the application of the nursing process was an explicit precursor to forming clinical judgements. This involved undertaking holistic assessments and ensuring the inclusion of objective data and subjective

TABLE 2 Final group – journal articles selected for data analysis

Author	Year	Title
Bowles, K.	2000	The relationship of critical-thinking skills and the clinical-judgment skills of baccalaureate nursing students.
Dowding, D., & Thompson, C.	2003	Measuring the quality of judgement and decision-making in nursing.
Lin, P., Hsu, M., & Tasy, S.	2003	Teaching clinical judgment in Taiwan.
Eisenhauer, L. A., Hurley, A. C., & Dolan, N.	2007	Nurses' reported thinking during medication administration.
Agbedia, C. O., Ofi, B., & Ibeagha, J. E.	2008	Causal model of clinical judgment of practising nurses, in selected hospitals in Delta State, Nigeria.
Lindsey, P. L., & Jenkins, S.	2013	Nursing Students' Clinical Judgment Regarding Rapid Response: The Influence of a Clinical Simulation Education Intervention.
Victor-Chmil, J.	2013	Critical Thinking Versus Clinical Reasoning Versus Clinical Judgment Differential Diagnosis.
Balzer, K., Kremer, L., Junghans, A., Halfens, R. J. G., Dassen, T., & Kottner, J.	2014	What patient characteristics guide nurses' clinical judgement on pressure ulcer risk? A mixed methods study.
Cappelletti, A., Engel, J. K., & Prentice, D.	2014	Systematic Review of Clinical Judgment and Reasoning in Nursing.
Cazzell, M., & Anderson, M.	2016	The Impact of Critical Thinking on Clinical Judgment During Simulation With Senior Nursing Students.
Hallin, K., Bäckström, B., Häggström, M., & Kristiansen, L.	2016	High-fidelity simulation: Assessment of student nurses' team achievements of clinical.
Adderley, U. J., & Thompson, C.	2017	Confidence and clinical judgement in community nurses managing venous leg ulceration - A judgement analysis.
Billings, D. M.	2019	Teaching Nurses to Make Clinical Judgments That Ensure Patient Safety.
Manetti, W.	2019	Sound clinical judgment in nursing: A concept analysis.
Bayoumy, H., & Albeladi, G.	2020	Clinical judgment skills among junior-level nursing students enrolled in adult health nursing courses: Errors and risk level classification.
Hensel, D., & Billings, D. M.	2020	Strategies to Teach the National Council of State Boards of Nursing Clinical Judgment Model.
Eisenmann, N.	2021	An Innovative Clinical Concept Map to Promote Clinical Judgment in Nursing Students.
Wright, J., & Scardaville, D.	2021	A nursing residency program: A window into clinical judgement and clinical decision making.

findings to inform the assessment. Also considered is the planning and implementation of the clinical care warranted at time of judgement, leading to returning to evaluate outcomes of the judgement, learning from these outcomes with the use of reflective practice.

### 3.3 | Consequences

A consequence is explained as an outcome resulting in the concept of interest (Rodgers & Knafel, 2000). Analysis of the data identified two consequences of clinical judgements, with two equally important but less pronounced consequences emerging. These consequences are primarily decision-making and reflective practice, with clearer communication and associated impacts on patient-centred care also themed.

Decision-making is an integral part of nursing practice (Johansen & O'Brien, 2016). In nursing, it is an involved process which includes a chain of decisions, resulting in delivery of a safe quality outcome (Johansen & O'Brien, 2016). Data collection to drive the decision-making process includes subjective and objective information

pertaining to a situation. To engage in successful decision-making, the application of knowledge and experience is considered with heuristics to formulate an outcome or decision (Johansen & O'Brien, 2016). Manetti (2019, p. 106) describes the nurse 'carefully deliberating, choosing among alternative actions such as critical thinking, clinical reasoning, practical wisdom, and intuition in the decision-making process and in consideration of anticipated outcomes keeping the best interest of the patient a priority'.

Decision-making was the primary consequence of clinical judgement. Appropriate decision-making, clinical decision-making, decision-making process, decisions about the patient and problem-solving decisions were phrases used by all the data sources analysed for this concept (Adderley & Thompson, 2017; Agbedia et al., 2008; Cappelletti et al., 2014; Dowding & Thompson, 2003; Elliott, 2010; Manetti, 2019). The overwhelming consequence of performing a clinical judgement was to make a decision pertaining to the clinical problem at hand.

Another consequence of clinical judgement is reflective practice. A key skill for nurses is that nurses must be able to engage in reflection on practice to function effectively in diverse healthcare environments. (Canniford & Fox-Young, 2015). Reflective practice is



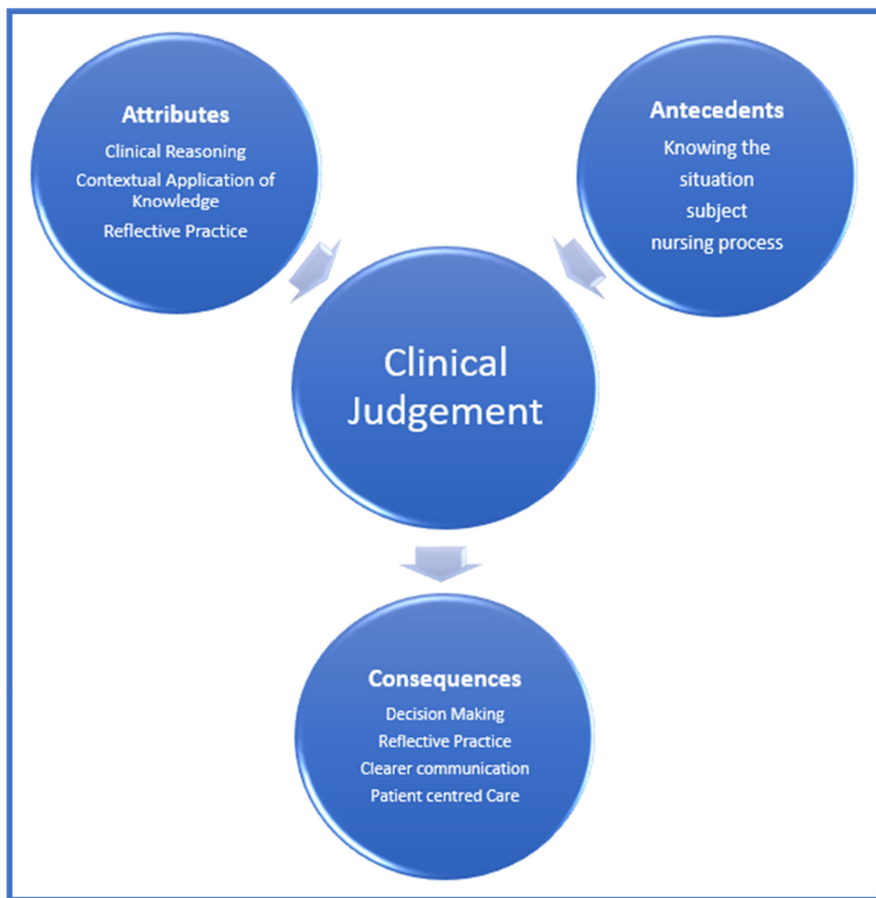


FIGURE 2 Attributes, antecedents and consequences of clinical judgement.

TABLE 3 Applying Rodgers' evolutionary method to the concept of clinical judgement—The first 3 phases (Rodgers & Knafel, 2000)

Concept analysis phase	Results	
Identifying the concept of interest Identify surrogate terminology and relevant uses of the concept	Clinical Judgement in nursing Clinical decision-making, clinical reasoning, critical thinking.	
Identify and select an appropriate setting (time period) and sample for data collection	Search Strategy clinical judgement AND clinical decision-making OR clinical decision-making AND clinical reasoning AND critical thinking OR critical thinking skills AND nurs* 2000–2021 Returned a final result of 18 peer-reviewed journal articles used for this project as per search strategy (Table 2)	
Identify the attributes of the concept, <i>Attributes refer to the characteristics of the concept</i>	Ability to clinically reason with the information and evidence available. Ability to draw on one's knowledge base in context including theoretical education/knowledge and clinical experience in context.	
Identify the antecedents and consequences on a contextual basis of the concept	Employ reflective process to actions that include consideration of patient/family/interdisciplinary team and self.  Antecedent Knowing – education. Evidence-based thinking, experience, recognition of patterns, correlating data Knowing – patient/ family/team/work environment/self (bias) Knowing – understanding and application of the nursing process (APIE)	Consequences Decision-making Reflective practice Clearer communication Patient-centred care

understood to be a conduit when integrating theoretical knowledge for safe and effective care, guiding nurses to consider past experiences and how to make changes to enhance future practice (Goulet et al., 2016). The practice of reflection has links to reducing the inconsistency between personal vision and actual practice, potentially

reducing bias when making judgements (Johns & Freshwater, 2009). Phrases emerged from the data, such as reflection on practice, reflective activity, and debriefing and reflection, all as consequences of making a clinical judgement (Cappelletti et al., 2014; Gerdeman et al., 2013; Hallin, Bäckström, et al., 2016; Lasater, 2011).

Clearer communication and patient-centred care were the final two consequences to emerge from the data. Terms such as improved communication, working with the patient and family, patient-focused decision-making and patient safety considerations were mentioned in context when reviewing consequences of clinical judgement (Harbison, 2006; Lasater, 2011; Lindsey & Jenkins, 2013; Maeda et al., 2021; Manetti, 2019; Pouralizadeh et al., 2017; Tanner, 2006; Wright & Scardaville, 2021).

In summary, the ability to clinically reason using information and evidence available, the ability to draw on one's knowledge base in context including theoretical education and knowledge and clinical experience in context and the practice of employing reflective process to nursing actions that include consideration of patient/family/interdisciplinary team and self are all attributes of clinical judgement in nursing. The antecedents are positioned within a knowing landscape, based on a foundation of education, evidence-based thinking, experience, recognition of pattern and correlation of data. It includes knowing your patient and their support network, the team and work environment of which you undertake the action and knowing yourself, your strengths, weakness and recognising bias. The final antecedent identified was application of the nursing process of assessment, planning, implementation and evaluation (APIE), confidently and inherently to practice. The consequences are decision-making and reflective practice, and to a lesser degree, clearer communication and patient-centred care.

### 3.3.1 | Descriptive statement

Based on this concept analysis, clinical judgement is the product of three primary premises, first, management of thought processes and the ability to make sense of data and form reasonable and tangible conclusions or judgements, second, an expert knowledge based on theoretical education and extensive clinical experience including proficiency in the nursing process. Finally, clinical judgement involves reflective practice, whereby links from experience, recognised patterns in data and actions and acknowledging bias, are considered within the judgement.

Therefore, *clinical judgement is a reflective and reasoning process that draws upon all available data, is informed by an extensive knowledge base and results in the formation of a clinical conclusion.*

## 4 | DISCUSSION

The intention of this analysis was to define the concept 'clinical judgement' within the context of nursing using literature retrieval from key publications. Rodgers' evolutionary method was used to investigate the concept of clinical judgement, a concept that continues to evolve within nursing practice. Choosing a different method of concept analysis, such as Walker and Avant's framework and approach, may generate different outcomes (Manetti, 2019; Pouralizadeh et al., 2017). However, Rodgers' framework was chosen for this study as this approach offered a method of concept analysis

referred to as an evolutionary view of concepts, which is described as an 'abstraction that is expressed in some form' (Rodgers, 2000, p. 78). This supports a notion of evolution that views three distinct aspects of concept development; significance, use and application. (Rodgers, 2000, p. 81). Rodgers' method has also been used and published extensively in the field of nursing giving strength to its value as a method for this study (Bonis, 2009; Carbogim et al., 2016; Johansen & O'Brien, 2016). Multiple variables are intertwined with clinical judgement, for example time constraints, patient acuity and the context of the situation; therefore, a definition of clinical judgement is difficult to develop as a standalone statement. This concept analysis adds a contemporary and authentic explanation and illumination of clinical judgement in nursing, one that has been developed from the data using Rodgers' method, and that can be applied to the advancement of registered nursing education, practice and research.

The development of clinical judgement itself is not a clear linear process, and although years of experience in nursing appear to support the sound development of clinical judgement skills in a nurse, almost all the literature around this concept addresses that it is imperative the skill must be introduced in foundational studies of a nursing students course of study (Hallin, Häggström, et al., 2016; Jarrett-Williams, 2012; Standing, 2008; van Graan & Williams, 2017). Many studies hold robust discussion that clinical judgement should be nurtured and explored throughout an undergraduate degree and become a fundamental process the nurse recognises, practices and develops as they complete their theoretical studies and move into the clinical environment (Hallin, Häggström, et al., 2016; Jarrett-Williams, 2012; Standing, 2008; van Graan & Williams, 2017). It was identified when analysing the data during this concept analysis that education is a fundamental and influencing factor in the nurturing and development of clinical judgement in nurses (Cappelletti et al., 2014). It is understood that this needs to be nurtured from a pre-registration standpoint and accordingly many curriculums have introduced Tanner's Clinical Judgement Model to direct the development of clinical judgement in nurses (Lasater, 2011; Tanner, 2006; Yang et al., 2019). The contemporary and unique construct of the clinical judgement definition, developed from this concept analysis, is that of a 'knowing' landscape. This is a significant point of difference between previous work undertaken on clinical judgement.

The advancement of nursing knowledge, established in undergraduate education, then subsequently developed during professional practice, has emerged as a fundamental basis for clinical judgement. Customarily, knowledge is generated through research, education and professional practice. The discipline of nursing follows this pattern, constructing knowledge based on explanatory theory which aims to account or understand a situation through description or explanation, given reason to its place in existence (Hassanian et al., 2014).

Knowledge as a construct emerged in this concept analysis because it is now more important than ever that nurses are knowledgeable, enabling operation within the dynamic and evolving healthcare landscape of the 21st century. Today's healthcare

settings are increasingly complex with patients who are older, sicker and more informed than ever before (Nibbelink & Brewer, 2018). Coupled with increased patient workload, a shortage of experienced nurses and a part-time workforce, nurses must be able to efficiently evaluate the situation or problem using their knowledge of all aspects of the circumstance to make sound judgement and decisions (Nibbelink & Brewer, 2018). This has never been so obvious as during the COVID 19 pandemic, where nurses report inordinate levels of stress and anxiety, potentially compromising their clinical judgement and decision-making ability via the manifestation of decision fatigue, impacting negatively on patients and their families (Pignatiello et al., 2021).

Patient safety and quality care have become the corner stone of the healthcare system, and nurses hold a large space within the implementation on outcomes of these factors. Studies indicate improved nursing care may prevent many adverse events (Flenady et al., 2020); therefore, nurses' ability to use knowledge to inform decision-making is increasingly essential (Farokhzadian et al., 2018; Ghahramanian et al., 2017; Hutchinson et al., 2018).

Theoretical knowledge is an essential attribute of nurses (Günay & Kılınc, 2018) and knowing arises from that knowledge as well as other information gained by experience, reflection and practice among other things. Acknowledging the seminal works of Carper in 1978 that is recognised today as Carper's 'Ways of Knowing', knowing has become a concept of reference within nursing literature (Bonis, 2009). Research exploring reflection and experience has been fundamental in understanding individuals distinct patterns of knowing (Bonis, 2009). Relatedly, individuals understand clinical judgement within their personal context (Seidi et al., 2015) and the provision of safe quality care can be conditional upon nurses thinking, reasoning and judgement and is impacted by variables such as experience (Benner et al., 2009; Gerdeman et al., 2013; Mirza et al., 2014).

Further investigation into clinical judgement is important. The nursing profession needs to continue to deepen its understanding and to work towards resolving what clinical judgement in nursing is. A larger contemporary investigation is certainly warranted to ensure the term continues to respond to the changing healthcare landscape. The authors recognise that gaps within any elements that comprise the concept, such as reflective practice, will interfere with clinical judgement and it is important to investigate what these impacts may be.

#### 4.1 | Limitations

Potential weaknesses or limitations in studies can, to some degree, be out of the researcher's control because they are often associated with the chosen research design (Theofanidis & Fountouki, 2018). Botes (2002) avers that due to the methodological nature of concept analysis, that is, a research design of philosophical inquiry and a diminished reliance on empirical investigation to explain meaning,

results are to an extent, dependent on intellectual analyses to clarify concepts. As this was a concept analysis, results of this study were dependent on the intellectual expertise and analyses of the research team to clarify concepts.

Conversely, a strength of this concept analysis is Rodgers' six phases of the method, that allow for an inductive approach to the data analysis and has been identified as a relevant method for developing knowledge in nursing (Tofthagen & Fagerström, 2010). Additionally, the inclusion of additional disciplines within the health arena, a wider date range such as publications prior to 2000 and including publications in other languages—not only English, would have certainly broadened the analysis.

## 5 | CONCLUSION

The fundamental purpose of this concept analysis was to propose a detailed operational definition of clinical judgement in nursing, which reflects its theoretical base within today's contemporary healthcare system. Clinical judgement is an essential skill for nurses in increasingly complex environments, calling for nurses to engender important judgements whilst ensuring safe patient-centred care.

Surrogate terms, attributes, antecedents and consequences were identified using Rodgers' evolutionary method of concept analysis. A contemporary definition of clinical judgement, within the context of nursing, was developed from the analysis and is articulated as Clinical judgement is a reflective and reasoning process that draws upon all available data, is informed by an extensive knowledge base and results in the formation of a clinical conclusion. The outcome of this concept analysis is a contemporary descriptive statement of clinical judgement in nursing which explains meaning, has transferability and provides direction for future research, education and clinical application.

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## SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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