

# Addressing the Challenge of Developing a Conceptual Definition for Clinical Judgment

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**Abstract** Critical thinking, clinical reasoning, clinical decision making and clinical judgment, are used interchangeably in nursing literature. This presents a problem for nurses educating students to develop their clinical judgement. This paper reports on an integrative review undertaken to uncover whether it is feasible to continue using these concepts interchangeably. Data collection involved a search of relevant electronic databases for publications between 1980 and 2015 using such keywords as critical thinking, clinical reasoning, clinical decision making and clinical judgment. 23 papers met the inclusion criteria for the integrative review. Content analysis of the papers generated a total of 13 characteristics shared by the four concepts, which means that any one of the concepts can be used as a variable to measure changes in student nurses' thought processes.

**Keywords** Critical Thinking, Clinical Reasoning, Clinical Decision Making, Clinical Judgment, Concept Analysis, Integrative Review

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## 1. Introduction

A conceptual definition is utilised to determine the characteristics of a concept under study by helping to refine and clarify it. This assists the researcher in formulating a clear and concise definition which can be used to measure the phenomenon under investigation (1). While conducting a research project examining the cognitive processes used by student nurses to make a clinical judgment using high fidelity simulation, the authors found many definitions in the literature that made it difficult to differentiate its meaning from critical thinking, clinical reasoning and clinical decision making. Therefore, the initial step in this project was to formulate a conceptual definition of clinical judgment which could be operationalised for the research project.

### Background

The nursing process was one of the first structured

decision making systems used in nursing and was discussed by Lydia Hall in the 1950s who postulated that nursing was a process nurses used in their practice (2). However, the idea that nurses needed a process to provide patient focused care was not introduced internationally until the 1970s. The nursing process is an organised, systematic and deliberate approach to nursing, where nurses progress through a series of steps from assessment to evaluation, with the aim of improving standards of nursing care, and presume a decision making process (3). The nursing process and nursing diagnosis were also introduced to integrate the four constructs of nursing which are health, patient, environment and nursing, used by a number of nursing theorists, for example, Henderson, Orem and King (4), to professionalise nursing and differentiate nursing care from medical practice (5). In the late 1970s, especially in United States of America, nursing diagnosis was incorporated into the nursing process, which was a strategy introduced to advance the professional status of nursing and utilise the description of actual or potential problems upon which nursing interventions were based (6).

The concepts of critical thinking, clinical reasoning, clinical decision making and clinical judgment are not explicit in the nursing process and nursing diagnosis. However, since the 1980s, these concepts have become the focus of research in nursing (7-10) and have become an essential component of professional accountability and competency for nursing registration in Australia (11) and other countries, such as England (12) and Canada (13). The International Council of Nurses sees critical thinking as an essential aspect of a code of ethical nursing practice (14). This focus has evolved from authors arguing that the stepwise linear approaches of the nursing process and nursing diagnosis have not gone far enough to show how nurses formulate their decisions and what thinking/cognitive processes are utilised. Consequently, the authors of this paper conducted a review of the literature to explore how the four concepts, namely, critical thinking, clinical reasoning, clinical decision making and clinical judgment, have been defined in the literature by undertaking content analysis of the characteristics attributed to each concept.

An integrative review was chosen as the framework for the investigation of the literature in order to utilise both empirical and theoretical literature (15). The value of this type of review is that it provides for a more comprehensive and deeper understanding of the concepts than review of empirical research alone. According to Whittemore and Knafl (14), an integrative review is the only review method which allows use of material from the different perspectives of qualitative, quantitative and grey literature. An initial search of the literature conducted for this review yielded few published empirical studies; therefore, theoretical literature forms the bulk of this review. Grey literature has not been used for this review as the authors wanted to uncover how the concepts were characterised in peer reviewed literature which is most likely to be used in nursing research.

## 2. Methods

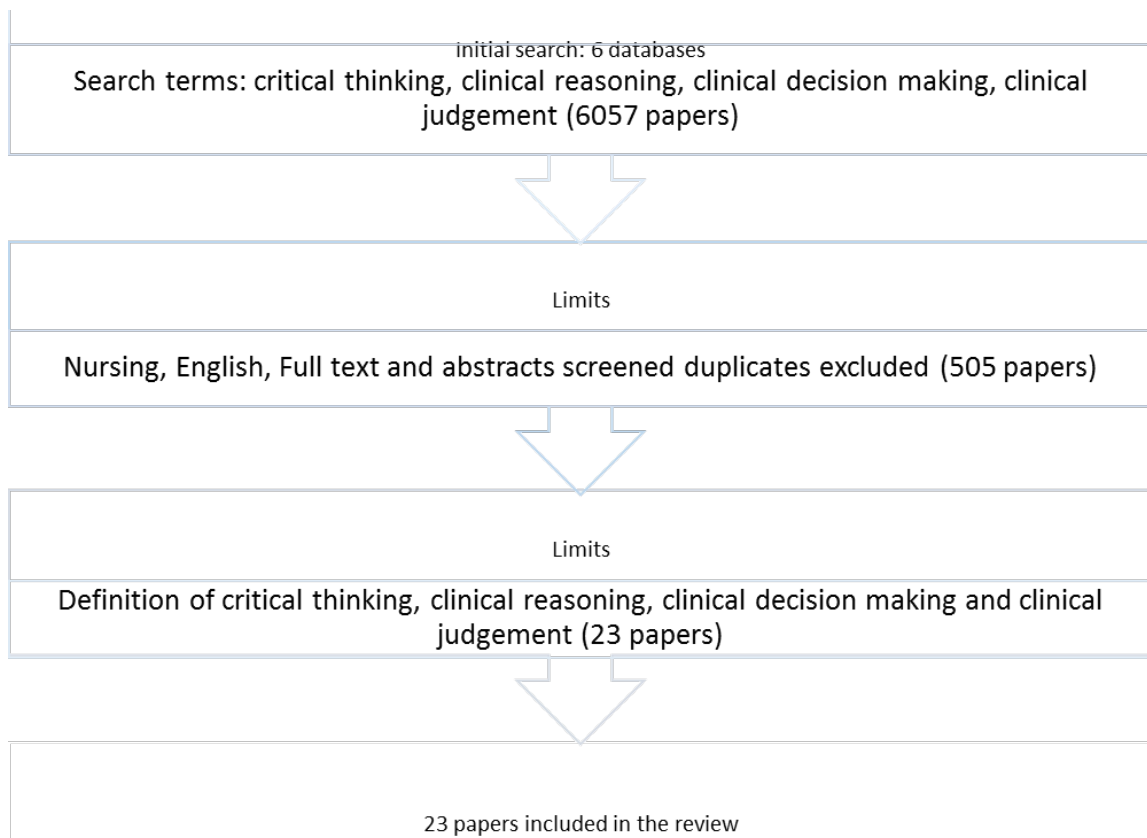
### 2.1. The Search

The literature search included a search of electronic databases and hand searching journals and reference lists (Conn et al. 2003). Electronic database searches were conducted on CINAHL, Ovid, Medline, the Cochrane Collaboration, the Johanna Briggs Institute, PubMed and Scopus. The search was limited to English full text articles,

and because of an interest in understanding when these concepts in nursing first began to appear in the literature, the search was also limited to literature published between 1980 and 2015.

The search terms used were ‘critical thinking’ OR ‘clinical reasoning’ OR ‘clinical decision making’ OR ‘clinical judgment’ AND NURS\*. Search alerts were set up to ensure all newly available literature was accessed. The initial search produced 6,057 articles. Once all the duplicates were excluded, the citations were filtered by screening the titles and abstracts. A total of 505 articles were found to be related to nursing and have a primary focus on critical thinking, clinical reasoning, clinical decision making or clinical judgment. Among these articles, only 23 provided a definition of one or more of the four concepts and were included as the final sample. A summary of the search strategy is depicted in Figure 1.

Five articles in the final sample were reports of research studies and were assessed for quality using the critical appraisal skills programme (CASP) tools (16). These articles met the CASP criteria related to appropriate methodology and sample, and although some of the sample sizes were small, this did not detract from the quality of definitions of the concepts. The remaining 18 articles in the final sample were theoretical and therefore the CASP tool was not applied.



**Figure 1.** Literature search results

## 2.2. Analysis

The first step in the analysis was to tabulate the definitions and method discussed in the identified articles (see Tables 1 – 4). The next step was to extract from each article the characteristics of each of the four concepts under study, which were then abstracted and synthesised by content analysis for common characteristics and differences and tabulated in Table 5 (17, 18).

**Table 1.** Definitions of critical thinking in nursing

	<b>Author</b>	<b>Definitions</b>	<b>Basis for definition</b>
5	(19)	Critical thinking in nursing is an essential component of professional accountability and quality nursing care. They also identified associated skills the person needs to possess when thinking critically	Based on research utilising the Delphi technique
4	(20)	Active cognitive process of logical reasoning in which the individual methodically explores and analysis issues, interprets complex ideas, considers all aspects of a situation and/or argument and where appropriate follows with prudent judgment	Theoretical discussion
3	(21)	Critical thinking is an essential skill in the administration of safe competent nursing care	Theoretical discussion
1	(22)	Critical thinking is considered the basis for clinical reasoning in professional practice and is the thought processes utilised which are reflective and purposeful	Integrative review
6	(23)	Identified critical thinking as a dynamic process and included the phases associated with critical thinking	Theoretical discussion
2	(24)	Critical thinking is a complex process that changes depending on the context and what one is trying to accomplish	Theoretical discussion

**Table 2.** Definitions of clinical reasoning in nursing

	<b>Author</b>	<b>Definitions</b>	<b>Basis of definition</b>
13	(25)_ENREF_24	Clinical reasoning is an essential component of professional practice. It is defined as a repetitive thinking process that uses both deductive and inductive cognitive skills to both gather and evaluate assessment data.	Literature review
9	(9)_ENREF_12	Clinical reasoning is the process with which nurses make decisions about patient care and requires specific patient knowledge, understanding of the particular disease processes and nursing interventions	Theoretical discussion
10	(26)_ENREF_25	Clinical reasoning is an important component of health care which focusses on the process of making decisions which is pertinent to the patient's management following assimilation and analysis of the data collected	Literature review
8	(8)_ENREF_8	Clinical reasoning is considered a practice based form of reasoning which requires a broad knowledge base. It also requires the ability to be able to understand the relevance of evidence underpinning the knowledge and how it impacts on that particular patient	Theoretical discussion
12	(27)_ENREF_26	Clinical reasoning is a context dependent way of thinking and decision making in professional practice to guide the actions of that professions. It permeates throughout clinical practice and is considered to be at the core of clinical practice and it also include reflection	Theoretical discussion
11	(28)_ENREF_27	Clinical reasoning is a process whereby nurses seek to understand the significance of the patient data collected and then be able to use the collected data to plan the patient's care. Clinical reasoning refers to a cyclical process that nurses' move through sequentially to a final decision i.e. coming to a conclusion	Theoretical discussion
7	(24)	Clinical reasoning is considered as being a very specific term and refers to ways of thinking about patient issues	Theoretical discussion
14	(29)_ENREF_28	Clinical reasoning involves applying ideas to experience in order to arrive at a valid conclusion and is used to describe the way a health care professional analyses and understands a patient's situation and form conclusions	Theoretical discussion

**Table 3.** Definitions of clinical decision making in nursing

	<b>Author</b>	<b>Definition</b>	<b>Basis for the definition</b>
15	(30)_ENREF_29	Decision making is a process that begins with the identification of a problem and ends with evaluation of the choices made and the actions taken and is based on evidence	Based on a concept analysis
18	(31)_ENREF_30	Process nurses use to gather patient information, evaluate the information and make a judgment which results in the provision of care.	Theoretical discussion
16	(32)_ENREF_31	Cognitive processes involved in the formulation of the patient's problems and the selection of appropriate interventions	Definition based on qualitative study
19	(33)_ENREF_32	Participation in decisions made by nurses in their usual clinical practice covering areas such as ADL's, wound dressings, medication administration and the provision of emotional support	Theoretical discussion
17	(34)_ENREF_33	Clinical decision making is a complex process. The various phases of clinical decision making outlined and coming to a decision to identify the best course of action to optimise the patient's health and minimise harm	Theoretical discussion
20	(35)_ENREF_34	Decision making is a dynamic conceptual process that may affect patient outcomes	A concept analysis

**Table 4.** Definitions of clinical judgment in nursing

	<b>Author</b>	<b>Clinical Judgment</b>	<b>Definition based on</b>
22	(9)_ENREF_12	Clinical judgment is an interpretation or conclusion about a patient's needs, concerns or health problems and/or decision to take action or not, use or modify standard approaches or improvise new ones as deemed appropriate by the patient's response	Theoretical discussion
21	(8)_ENREF_8	Clinical judgment is how nurses are able to understand the patient's problems, issues or concerns and to be able to respond in an appropriate way.	Theoretical discussion
25	(36)	Clinical judgment is the conclusion to which a nurse arrives following a process of observation, reflection and analysis of observable data or available information.	Theoretical discussion
23	(37)	Clinical judgment as the interpretation of a patient's needs, concerns or health problems, the decision to take action or not, to decide to use established or modified approaches, or develop new approaches which is dependent on the patient's responses.	Theoretical discussion
24	(38)_ENREF_36	Clinical judgment is the making of decisions which are based on the evidence and on normal conjecture. Clinical judgment is not linear but rather fluid as the process uses a variety of ways of knowing which includes the theory as well as knowledge gained from experience	Theoretical discussion

**Table 5.** Comparison of the characteristics of the four concepts

Characteristic of definition	Critical thinking in nursing	Critical reasoning	Clinical decision making	Clinical judgment
Context dependent	Yes (2,3,4)	Yes (7,8,9,10,11,12,13,14)	Yes (15,16,17,18,19,20)	Yes (21,22,23,24,25)
Knowledge based on experience	Yes (5,6)	Yes (8,9,10,11,14)	Yes (15,19)	Yes (21,22,23,24,25)
Knowledge based on theory	Yes (2,4)	Yes (8,9,10,11,14)	Yes (19)	Yes (21,22,23,24)
Knowledge based on practice skills	Yes (3)	Yes (8,9,10,11,14)	Yes (19)	Yes (21,22,23,25)
Systematic process	Yes (1,4,6)	Yes (10,11,12,13)	Yes (15,17)	Yes (21,22,23,25)
Reflective process	Yes (1)	Yes (11,12,14)	Yes (15)	Yes (22,23,25)
Pattern recognition and synthesis	Yes (5)	Yes (8,9,14)	Yes (15,16)	Yes (22,23,25)
Cyclical process	Yes (4,5)	Yes (9,10,11,12,13,14)	Yes (15)	Yes (22,23,25)
Interpretation of patient/client needs	Yes (4)	Yes (8,9,10,11,13,14)	Yes (15,16,17,18,19)	Yes (21,22,23,24,25)
Culminates in a clinical decision	Yes (2,5)	Yes (8,9,10,11,12,13,14)	Yes (16,17,18)	Yes (21,22,23,24,25)
Culminates in a nursing management plan	Yes (4,5)	Yes (10,11)	Yes (15,17,18)	Yes (21,22,23,25)
Evaluation of choices made and actions taken	Yes (4,5)	Yes (10,11,13)	Yes (15,16,17,18)	Yes (21,22,23,24,25)
Essential for safe patient/client care	Yes (1,3,4,5)	Yes (8,9,10,11,12,13,14)	Yes (15,16,17,18,19,20)	Yes (21,22,23,24,25)

### 3. Results

All papers in the final review sample were related to nursing and described the characteristics of one or more of the four concepts. Of the 25 papers in the final sample, eighteen were theoretical discussion papers, three literature reviews, and four empirical studies. The first stage of data analysis was undertaken through a process of abstracting and synthesizing the characteristics attributed to all four concepts. At this stage, a list of 13 characteristics was developed. The second stage of analysis was a process whereby the number of papers that identified a characteristic for each concept including critical thinking, clinical reasoning, clinical decision making and clinical judgment was recorded (See Table 5).

#### Critical Thinking in Nursing

In a review of articles exploring research on critical thinking in nursing between 1992 and 2003, Brunt (22) found that only 50% of articles provided a conceptual definition and these arise out of educational literature. The definitions depicted in Table 1 are derived from six articles and include an integrative review of the literature (22), theoretical discussion papers (20, 21, 23, 24) and a research study based on a Delphi technique (19). These definitions are vague and in most cases do not extend the generic educational definitions to the nursing context. The authors, however, did emphasise context dependence, clinical skills to collect data, and outcomes, which provide safe competent nursing care.

#### Clinical Reasoning in Nursing

The definitions shown in Table 2 were extracted from

eight articles including two literature (25, 26), and six theoretical discussion papers (8, 9, 24, 27-29). According to the articles, clinical reasoning is viewed as essential for safe patient care and involves both experiential and formal scientific knowledge (28). While common to all the definitions, clinical reasoning in nursing is not always framed in the same way, for example, Koharchik et al (28) used the term 'using ideas' and other authors did not emphasise experience as being important (27). Most see clinical reasoning as a cyclical process with Levett-Jones et al. (12) discussing clinical reasoning as being linked clinical encounters (p.516). The exceptions were Alfaró-LeFevre (6) and Benner et al. (10) who identified clinical reasoning as a process instead of specifying it as being cyclical.

Another commonality amongst the definitions is that clinical reasoning is a process whereby the nurse interprets the patient's needs and then utilises this information in the development of a nursing management plan. Levett-Jones et al. (27) identified specific phases the nurse works through to ultimately arrive at a conclusion about the patient's condition. All the authors agree that clinical reasoning culminates in a decision regarding patient management.

#### Clinical Decision Making in Nursing

The definitions shown in Table 3 were extracted from six articles, including three based on theoretical discussion of ideas (31, 33, 34), two based on a concept analysis of literature (30, 35) and one qualitative study (32). Three of the definitions (30, 31, 34) were more specific in describing the various stages the nurse works through to come to a decision about patient care, whereas the remaining three definitions (32, 33, 35) provided a broader description of clinical decision making in nursing. Although the definition

espoused by Hoffman et al (32) was broad, it identified the actual patient care during which nurses would be making decisions. The reasoning about patient care and the selection of an appropriate plan to provide the best possible outcome for the patient were common to all the definitions of clinical decision making in the literature reviewed.

### **Clinical Judgment in Nursing**

Five papers that were theoretical discussion papers were content analysed (8, 9, 36-38). The definitions of clinical judgment derived from the literature are presented in Table 4. This analysis showed clinical judgment is seen as a process which culminates in an action based on practical and theoretical knowledge. Phaneuf (35) specified that clinical judgment is the conclusion nurses reach at the end of the process, whereas Benner et al (10) explained that it is the understanding of the patient's problems. Victor-Chmil (37) identified that clinical judgment is made on conjecture using both intuition and experience. Lasater (36) and Tanner (12) incorporated and extended the idea of intuition and experience to include the action taken, which was modified as a result of the patient's responses.

### **Comparison of the Characteristics of the Four Concepts**

The common characteristics derived from the literature are: 'context dependent'; 'based on practical'; 'theoretical and experiential knowledge'; 'a systematic process'; 'a reflective process'; 'pattern recognition and synthesis'; 'a cyclical process'; 'the interpretation of the patient's/client's needs'; 'making a clinical decision'; 'formulating a management plan'; 'the evaluation of plan made and actions taken'; and 'essential for safe nursing practice' (Table 5).

Importantly, this analysis has revealed that each characteristic is found in definitions of every concept. For example, the characteristic 'context dependent' is identified as a component of the definition of critical thinking in nursing in three papers, clinical reasoning in eight papers, clinical decision making in six papers and clinical judgment in five papers (See Table 5).

Overall analysis demonstrates that each of the four concepts shares the same characteristics, making it difficult, if not impossible, to differentiate between them.

## **4. Discussion**

This integrative review identified 23 articles that met the inclusion criteria. It is interesting to note that the majority of the papers reviewed used the terms critical thinking, clinical reasoning, clinical decision making and clinical judgement without explicitly defining the concepts. Through extraction and synthesis of relevant data from the articles, the authors found there appeared to be uniformity in the four concepts of critical thinking, clinical reasoning, clinical decision making and clinical judgment in nursing. As only five of these articles used research to formulate definitions, there is little empirical evidence for the identified characteristics. As a

result, this research was extended to include a survey of nurse scholars and nurse academics to clarify if they agree with the identified characteristics or if there are any missing.

The four concepts are used frequently in nursing discourse and in competency standards for nursing practice and registration (11-13). The lack of empirical evidence to support the conceptual definitions highlights the urgency and importance of clarifying concepts that underpin essential aspects of nursing practice. This will have a huge impact on nursing organisations and accreditation bodies globally. A global conversation may be needed to utilise only one concept to describe cognitive processes in nursing.

The nursing process and nursing diagnosis are useful tools in nursing, but are also limited in that they do not fully capture the cognitive processes nurses need to utilise to provide safe quality nursing care. The literature reveals some common characteristics shared by critical thinking, clinical reasoning, clinical decision making and clinical judgment and these are: a systematic process, reflective process, cyclical process, involving pattern recognition and synthesis, interpretation of the patient's needs, culminating in a clinical decision and nursing management plan, involving the evaluation of choices made and actions taken and being essential for safe patient care (7). Using the integrative review to differentiate between the concepts of critical thinking, clinical reasoning, clinical decision making and clinical judgment in nursing is valuable, as it has become clear that all four concepts share common characteristics. Therefore, any one of the four concepts could be used in research as a variable to determine changes in student thinking.

## **5. Conclusions**

Developing a conceptual definition of clinical judgment in nursing is a challenge because its characteristics are synonymous with those of critical thinking, clinical reasoning and clinical decision making in nursing (Table 5). This has implications for nurses designing projects that examine how the cognitive process of clinical judgment can be explored in education and practice situations. Researchers need to be very clear on the characteristics of the definition in quantitative research so that the measurement of clinical judgment is clearly formulated and an appropriate tool used. In qualitative research where interview or observations may be used, the definition needs to be clear as well so that researchers can determine how student nurses or registered nurses use clinical judgment. Finally, further research is needed to confirm the characteristics of the four concepts of critical thinking, clinical reasoning, clinical decision making and clinical judgment in nursing.

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