Critical Thinking Versus Clinical Reasoning Versus Clinical Judgment
Differential Diagnosis
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Concepts of critical thinking, clinical reasoning, and clinical judgment are often used interchangeably. However, they are not one and the same, and understanding subtle differences among them is important. Following a review of the literature for definitions and uses of the terms, the author provides a summary focused on similarities and differences in the processes of critical thinking, clinical reasoning, and clinical judgment and notes suggested methods of measuring each.

The terms critical thinking, clinical reasoning, and clinical judgment are interrelated concepts. Each represents an important set of processes leading the nurse to sound, evidence-based practice. Critical thinking is the cognitive processes used for analyzing knowledge. Clinical reasoning is the cognitive and metacognitive processes used for analyzing knowledge relative to a clinical situation or specific patient. Clinical nursing judgment is the cognitive, psychomotor, and affective processes demonstrated through action and behaviors. Together, these processes lead to competent nursing practice.

In both education and practice, nurses must demonstrate competency through measurable outcomes. To ensure that measurements of critical thinking, clinical reasoning, and clinical judgment are both valid and reliable, nurses must first differentiate what each of these key processes is and what tools are available for the measurement of each.

Literature Search Strategy
To better understand these related concepts, multiple databases and search strategies were used to review the literature. A search for each key term critical thinking, clinical reasoning, and clinical judgment AND nursing was conducted using the CINAHL, PubMed, Academic Search Premier, and the archives of the Clinical Simulation in Nursing online journal. Additional definitions were obtained via Google with no year limitations to obtain a sense of nonnursing definitions of these concepts. An initial search of the key terms critical thinking, clinical reasoning, and clinical judgment yielded more than 10,000 results. Because for this review, the author was interested only in the application of these terms to nursing, “AND nursing” was added to the search criteria. This yielded 3207 publications.

Because of the volume of the data retrieved, a filter to limit sources to English language was added. This decreased the number of publications yielded to 946. Because these data included a large number of posters and presentation abstracts, a filter for full-text articles was added. This reduced the data retrieved to 95 publications. Search findings were scanned for relevancy. Clinical trials using the terms, but not primarily addressing the concepts of, critical thinking, clinical reasoning, and clinical judgment were found in the retrieved data. A filter was added to eliminate clinical trials from the search, which reduced the findings to 29. Three articles dated 1984, 1988, and 1995 were found to be relevant and were accessed for use in this literature review prior to adding a filter for publications within the last 10 years. This final filter yielded 12 additional relevant articles, which were also used in this literature review. Nine of these 12 articles were published within the last 5 years.

Critical Thinking
According to the Foundation for Critical Thinking, critical thinking is a way of “imposing intellectual standards” in the approach to any subject, content, or problem. Critical thinking is a cognitive process used to analyze empirics. It is knowledge based and is not dependent on the situation at hand, but rather on the knowledge about the subject that the nurse possesses. The process of critical thinking is based on evidence and science rather than “assumptions and/or conjectures.”

A thorough literature review by Simpson and Courtney included an examination of 78 publications on the topic of critical thinking. The publications ranged from Dewey in 1916 to current literature in 2000. The majority of the literature reviewed was published in the 1990s and included a discussion of the tools available as of 2000 to evaluate critical-thinking skills. Their review was based largely on the 1990 Delphi Project by Facione, which concluded that critical thinking is a cognitive process that is not discipline specific.
Simpson and Courtney’s analysis of clinical thinking laid the groundwork for the concept of clinical reasoning. Kuiper and Pesut noted that critical thinking is one of the key factors in the cognitive processes of clinical reasoning. Clinical reasoning is defined in practice-based disciplines as the application of critical thinking to the clinical situation. In nursing literature, Jones defines clinical reasoning as a cognitive process used by healthcare practitioners to address patient issues. According to Benner, clinical reasoning involves synthesis of knowledge and experience, as well as engagement in the social relationships of the caregiving situation. Clinical reasoning requires both a background of scientific knowledge and a general case or a particular instance in which to apply this knowledge. Clinical reasoning refers to a set of cognitive processes used to discern the relevance of the evidence and scientific knowledge as it applies to a particular patient.

A concept analysis by Banning reviewed and analyzed 71 nursing and nonnursing publications dated 1964 to 2005, with the majority of the literature dated in the late 1990s and early 2000s. Banning’s analysis (1) identified a consensus that the processes of clinical reasoning are both cognitive and metacognitive, (2) provided a definition of clinical reasoning as the application of knowledge and experience to a clinical situation, and (3) concluded there is a need to develop tools to measure clinical reasoning in nursing practice in order for it to be better understood.

Many of the difficulties surrounding the measurement of clinical reasoning in nursing practice were related to the lack of a definition. This may have been due to the blurring of lines between the defining attributes of critical thinking and clinical reasoning which existed prior to the publication of Banning’s concept analysis of clinical reasoning in 2008. A search for valid and reliable tools to measure the development of clinical reasoning did not yield any results; however, current literature suggests that the cognitive and metacognitive processes of clinical reasoning can be developed within the practice of nursing through the use of decision trees and algorithms, thinking aloud, and reflective journaling.

Clinical Judgment

Alfaro-LeFevre emphasized the imperativeness of developing both critical thinking and clinical reasoning skills in order to practice sound clinical judgment. In her definition of clinical judgment, Alfaro-LeFevre suggests clinical judgment is the application of critical thinking in clinical practice. Judgments are necessary for clinical practice that is based on evidence rather than conjecture.

At first glance, Alfaro-LeFevre’s definition of clinical judgment is no different than the definitions found in the literature for clinical reasoning. Clinical judgment, however, is not limited to cognitive or metacognitive processes. In her conceptual model of Clinical Judgment in Nursing, Tanner defines clinical judgment as “an interpretation or conclusion about a patient’s needs, concerns, or health problems, and/or the decision to take action (or not), use or modify standard approaches, or improvise new ones as deemed appropriate by the patient’s response.”

Tanner also identified 5 assumptions of clinical judgment in nursing. They are (1) clinical judgments are more influenced by what nurses bring to the situation than the objective data about the situation at hand; (2) sound clinical judgment rests to some degree on knowing the patient and his/her typical pattern of responses, as well as an engagement with the patient and his/her concerns; (3) clinical judgments are influenced by the context in which the situation occurs and the culture of the nursing care unit; (4) nurses use a variety of reasoning patterns alone or in combination; and (5) reflection on practice is often triggered by a breakdown in clinical judgment and is critical for the development of knowledge and improvement in clinical reasoning.

Tanner’s key concepts of clinical judgment differentiated it from other definitions of clinical judgment and from the concepts of both critical thinking and clinical reasoning. First, Tanner’s definition focuses not only on the cognitive and metacognitive processes of thinking and reasoning, but also on the psychomotor processes of actions and the affective processes of the caregiver. Second, Tanner’s 5 assumptions take into account not only the knowledge and application to a specific patient, but also the affective aspects of the caregiver and the environment.

Clinical judgment can only be evaluated comprehensively when there are observable behaviors that allow for the evaluation of level of mastery in not only cognitive domains, but also the psychomotor and affective domains. The development and evaluation of clinical judgment come not only from observable behaviors but also from self-reflection on these behaviors.

Clinical judgment encompasses cognitive, psychomotor, and affective skills. Clinical judgment is specific to the individual. It is rooted in actions based on the ability to analyze empirical information in relation to both the specific situation and the aesthetic and reflective aspects of the nurse and the environment of practice. The most comprehensive conceptual framework for defining clinical judgment in nursing and its philosophical underpinnings are presented in Tanner’s Model for Clinical Judgment in Nursing. Tanner’s conceptual model illustrates the subcategories or 4 aspects of clinical judgment: noticing, interpreting, responding, and reflecting, and discusses the cognitive, psychomotor, and affective aspects of “thinking like a nurse.”

The Lasater Clinical Judgment Rubric (LCJR) operationalizes Tanner’s Model of Clinical Judgment in Nursing by further breaking down each of Tanner’s phases of clinical judgment into 11 dimensions. The rubric provides a consistent language that can be used to evaluate performance within each dimension and categorize it into a developmental phase of
beginning, developing, accomplished, or exemplary.14 The LCJR thus provides a framework for both self-assessment and formal evaluation of clinical judgment development.13

Although the LCJR has been shown to be a valid and reliable tool for the assessment of clinical judgment development in nursing students when used in the simulation environment,15 there is no evidence to suggest it reflects the specific measurement of critical thinking or clinical reasoning. In a study by Mann16 using the LCJR and the Assessment Technologies Institute Critical Thinking Assessment to evaluate clinical judgment and critical thinking before and after simulation, there was no significant relationship established between critical thinking and clinical judgment. The LCJR is designed to evaluate development within the 4 phases of clinical judgment in nursing14 but not the cognitive, metacognitive, psychomotor, and affective skills specifically applied in clinical judgment. Also, the validity and reliability for the LCJR outside the simulation environment and for the evaluation of populations other than nursing students have not been established.

Summary

The terms critical thinking, clinical reasoning, and clinical judgment are interrelated concepts. Each represents an important set of processes leading the nurse to sound, evidence-based practice.

Critical thinking is the cognitive processes used for analyzing knowledge based on evidence and science.1,3 Critical thinking is a key skill or process integral for clinical reasoning.5 Critical thinking can be measured through valid and reliable standardized examinations not specific to the discipline of nursing.4

Clinical reasoning is the cognitive and metacognitive processes used for analyzing knowledge relative to a clinical situation or specific patient.7 Clinical reasoning is a necessary cognitive and metacognitive component of clinical judgment in nursing.7,8,10 Although there are currently no valid and reliable tools for measurement, clinical reasoning can be developed within the practice of nursing through the use of decision trees and algorithms;8 thinking aloud;9 and reflective journaling.10

Clinical judgment in nursing is the cognitive, psychomotor, and affective processes demonstrated through action and behaviors within the 4 phases of clinical judgment: noticing, interpreting, responding, and reflecting.12 Development of clinical judgment in nursing students within its 4 phases can be evaluated using the LCJR in the simulation environment.13

Together, application of cognitive, metacognitive, psychomotor, and affective processes leads to sound and competent nursing practice. Although the concepts of critical thinking, clinical reasoning, and clinical judgment are interrelated, there is no one way to measure their development, but rather a variety of tools and processes to facilitate and assess their development. Measurable outcomes to assess the development of critical thinking, clinical reasoning, and clinical judgment in nursing can only be achieved through strategies appropriately designed to individually evaluate each of the processes used by the nurse to analyze (critically think), apply (clinically reason), and act (clinically judge).

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References