

Critical Thinking in Nursing

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Critical thinking is very relevant to nursing at many different levels. Defining critical thinking can be difficult but a more comprehensive understanding of the topic is helpful. Critical thinking can be developed and occurs at three stages. It involves distinctive cognitive abilities and characteristics. Nurses use critical thinking in the nursing process and clinical judgment to provide the most appropriate solutions for individual clients. Nurses use concept maps to foster critical thinking in the clinical setting to understand the relationships that occur. Nursing education now aims to encourage and enrich critical thinking skills in order to improve client outcomes among other things. First, we must consider the multiple definitions and characteristics of critical thinking before further exploring its significant roles in nursing.

What is Critical Thinking?

The meaning of critical thinking often varies with its application and context. Critical thinking in general involves focusing on objectives and what an individual is aiming to accomplish, basing decisions on relevant and verified information, using the scientific method directly or indirectly, and (in nursing especially) reflecting on the human condition. It involves going beyond memorization to the evaluation and application of the data; an individual decodes multiple pieces of information and can consider them in multi-faceted situations. It isn't necessarily something to be achieved but should constantly be worked towards and used constantly (Rogal & Young, 2008, p.28). In other words, individuals can always improve their critical thinking. Critical thinking can be taught; individuals progress through the levels of critical thinking according to their knowledge, experience, and ability to relate data to one another.

Levels of Critical Thinking

The Basic Level of Critical Thinking

In the basic level of critical thinking, individuals cultivate a foundation of knowledge and experience. They are concerned mainly with adhering to rules, being strict with methods, and categorizing and classifying a situation into detached components (Nugent & Vitale, 2008, p. 11-12).

The Complex Level of Critical Thinking

In the complex level of critical thinking, the individuals acquire more knowledge and experience and are able to form more connections between bits of information and can apply them in more diverse ways. They look for relationships, respond to the environment, consider options based on the specific circumstances, and evaluate the decision (Nugent & Vitale, 2008, p. 12).

The Expert Level of Critical Thinking

In the upmost, expert of critical thinking, the individuals analyze a situation as a whole with extensive knowledge and experience. They foster reasoning using models, patterns, and principles that consider the uniqueness and wholeness of each situation (Nugent & Vitale, 2008, p. 12).

Levels of Nursing and Critical Thinking

There are also levels of expertise for nursing students. Nursing students use critical thinking to foster the development of nursing skills. As a novice, students learn rules and basic information. As an advanced beginner, students gain more clinical experience, contemplate more information and consider more complex rules. Students reach the level of competence when they develop rules and reasoning processes through additional experience. The students integrate their experiences and are able to compose and execute plans. They grow to see that they are

responsible for the care and the outcomes of their clients. The students become proficient when they recognize that the client's circumstances, the events and the context are as important as their knowledge. Evaluation becomes increasingly important. The students see that client outcomes are more significant than the interventions themselves. Reasoning at this level becomes much more elastic and instinctive. Finally, the nurses reach the expert stage in which they are able to distinguish goals and implement plans to achieve them. They strive to look at a client's situation from multiple angles and simultaneously consider theories, practices, and their instincts (Craven & Hirnle, 2009, p. 200).

Characteristics, Attitudes and Skills of Critical Thinking

There are many characteristics, attitudes and skills related to critical thinking (especially in nursing). Facione found that there are characteristics that ideal critical thinkers share; they are inquisitive, open-minded, analytical, systematic, confident, truth-seeking, and mature (as cited in Craven & Hirnle, 2009, p. 190). Critical thinking attitudes include: confidence (feeling fully capable to accomplish a goal), thinking independently (being able to consider and develop multiple ideas), fairness (treating every one and every situation equally without prejudice or bias), responsibility and accountability (using whole and sturdy knowledge in making decisions and accepting your decisions as being yours), risk taking (being enthused to test out new and original ideas), discipline (following logical judgments and processes and being capable of regulation), perseverance (being able to stay determined to continuously keep making attempts even in difficult situations to reach the goal), creativity (looking at a situation differently and being able to distinguish original alternatives), curiosity (being inspired to complete a task and having a genuine desire to uncover more relevant information by asking questions), integrity

(being honest and sincere while adhering to nursing principles), and humility (recognizing one's limitations as a person in a situation and as a nurse) (Craven & Hirnle, 2009, p. 191).

There are also a number of skills involved in critical thinking. Paying attention to context is significant in critical thinking. The individual circumstances determine what actions are best suited for the problem at hand (Alfaro-LeFevre, 2009, p.70). Interpretation involves clarifying the meaning and significance of data. Explanation is establishing data, validating approaches, and presenting statements. Deducing inferences entails examining evidence, contemplate alternatives, and achieve conclusions. Analysis is very important and entails considering ideas, discerning reasoning, and evaluating the situation. Evaluation involves considering and assessing all accounts and claims. Self-regulation is evaluating and amending decisions. Assessing progress is very important in critical thinking as well. The individuals are able to learn from their experiences and improve as a critical thinker. Critical thinking is very systematic and is based on the scientific method; it involves making observations, sorting information, drawing conclusions, performing experiments and testing hypotheses. The nursing process is very similar to the scientific method and also is related to critical thinking.

The Nursing Process and Critical Thinking

The nursing process is assessment, diagnosis, outcome identification, planning, implementation, and evaluation. It promotes critical thinking at each stage of care and in decision making and ensures superior levels of care and wellness for clients. "A truly educated nurse is able to use critical thinking to do something creatively with the information acquired," (Ennis as cited in Chabeli, 2007, p.75). Critical thinking in the nursing process allows the nurse to individualize the care of each client in the best possible way. "Critical thinking cannot be facilitated when the nursing process is used in a robotic and dogmatic way, where nurses are

mechanically efficient as evidenced by focusing on routine, mass production, assembly-line, task-oriented methods to provide efficient patient care,” (Karola as cited in Chabeli, 2007, p. 72). As a nurse, the individual must remain focused on the client, what is best for the client, and being present at every moment, and not necessarily about getting tasks done quickly at the expense of providing better care. Nurses use general methods and procedures with every client but should recognize the wholeness and uniqueness of each individual. The nursing process is an essential model that nurses use to organize the treatment for clients. Nurses make judgments at each step of the nursing process; nurses develop clinical judgment as a skill to make competent and rational decisions and conclusions.

Critical Thinking in Nursing is Revealed in Clinical Judgment

Clinical judgment is the capacity for developing a foundation of knowledge, implications, hypotheses, and experiences which nurses can utilize to enhance their practice. Clinical judgment in nursing is purposeful, informed and outcome-focused thinking. The individual distinguishes the crucial problems, concerns, and risks and aims to involve the client and when possible the family of the client in planning care. It is based on the scientific method, problem solving, and the nursing process; clinical judgment in nursing is based on observations and evidence. It involves utilizing logic, insight, and creativity while having a supporting foundation of knowledge, skills, and experience. Clinical judgment is based on the needs of the people: clients, their families, and communities but also takes into account the needs of the nurse. It also strives to maximize each individual’s potential and to counteract problems that are rooted in human nature.

Developing Clinical Judgment as Nurses

As nursing students, individuals build a knowledge base of distinct pieces and categories of information. Combined with clinical experience and critical thinking, the individuals connect their preexisting knowledge and the client information which progresses to a higher level of thinking (Craven & Hirnle, 2009, p. 194). In clinical experiences, the individuals strengthen their clinical reasoning. The individuals must actively think critically by analyzing a situation and information fully, looking for evidence, and making decisions based on the information. Nurses use clinical judgment and critical thinking to make rational decisions regarding the best actions to take in an individual case. "It requires a commitment to study common health problems, seek out clinical experiences, and come prepared to the clinical setting," (Chabeli, 2007, p.75). Clinical judgment is the integration of knowledge, experience, and inquisitiveness. In order to foster this vital skill, the individual must continuously evaluate and re-evaluate decisions and circumstances, make corrections, and aspire to make progress and learn more and more. Reflection is also very significant. In reflection, the individual recalls a situation intellectually and affectively in order to gain new or difference understandings and appreciations from a previous experience (Craven & Hirnle, 2009, p. 198).

Concept Mapping Facilitates Clinical Judgment and Critical Thinking

Critical thinking in nursing involves considering the big picture (the client's overall situation or the model the nurse considers) and the details (the context and the client's individual factors that affect the big picture) (Alfaro-LeFevre, 2009, p. 46); it also requires grasping the complex relationships that occur. Concept maps are used to understand information and the connections between them. When individuals use concept maps, they are more able to think critically and to apply information accurately and in more diverse ways. "A concept map is a tool that represents meaningful structures that people have for a concept or set of concepts and should display

several specific characteristics,” (Vacek, 2009, p. 47). A concept map should focus on a particular concept or question or problem. It should be organized by having more general concepts at the top branching out to more specific and detailed concepts towards the bottom and should have lines that connect the appropriate concepts to one another. In organizing data in a methodical way, problem solving and decision making becomes easier and clearer and critical thinking is enhanced.

Concept mapping helps the individuals personalize information so they are more likely to comprehend it and retain it for future use; it often involves both writing and drawing making the individual’s understanding and memory of the information more flexible. Concept maps involve decoding, interpretation and categorizing which all contribute to critical thinking (Facione as cited in Vacek, 2009, p. 47). Nurses often use concept maps in a problem-focused approach which promotes many critical thinking cognitive skills (including analysis, interpretation, inference, explanation, and self-regulation). Concept maps are dynamic learning tools; the same concept map can generate different conclusions in the same person who views it different because the individual experienced or learned something new or different and in each individual because of differing backgrounds, knowledge bases, experiences, etc (Hill as cited in Toofany, 2008, p. 28).

Developing and Improving Critical Thinking

Developing and improving critical thinking skills is very important for nursing students in particular. As mentioned earlier, to improve critical thinking skills the individual must be willing to put forth conscious effort; a sincere desire must be present. Asking questions helps to improve critical thinking. Questions distinguish and clarify information and how to apply it. Individuals can anticipate questions that other people may ask or ask themselves questions to

assess their reasoning. Self-questioning is very helpful and develops a habit in the individual to evaluate and re-evaluate decisions, rationale, comprehension, etc; it is beneficial when the individuals uncover the information themselves. In a clinical setting, individuals cannot necessarily foresee every question and situation that arises so they must actively discover the answer by applying the content and synthesizing and evaluating information (Hoffman, 2008, p. 233). Although being prepared going into a clinical setting is very important, determining important and useful information in the situation in which it will be used is very advantageous. Thinking aloud allows the individuals to articulate their thinking and reasoning processes, which simplifies and solidifies thoughts (Alfaro-LeFevre, 2009, p. 47). Organizing information allows individuals to see certain patterns while reorganizing information allows individuals to see other patterns (Alfaro-LeFevre, 2009, p. 49). When individuals revisit information, they either see it differently or discover something that they may have missed previously. Individuals should constantly consider ways in which to improve, view mistakes as learning opportunities and have high expectations for themselves. When individuals do not know something or are unsure, they should strive to find out and be confident in being capable of doing so.

In scenario review, the individual analyzes, translates, distinguishes evidence, uses reasoning, and forms conclusions. Reviewing a past situation encourages the individuals to learn to see situations from multiple perspectives and to learn from their mistakes. Case studies foster problem-based learning in which individuals are encouraged to take more responsibility for their processes and learning and apply their knowledge. Individuals progress through problem situations, compose hypotheses, and test the hypotheses that are presented as real situations in a safe and less threatening environment (Chen & Lin as cited in Hoffman, 2008, p. 229). There is often more than one correct answer. Journaling promotes metacognition and self-reflection and

results in better critical thinking as well. Writing a clinical journal about the events, decisions, interactions, and emotions involved in clinical experiences stimulates analysis, synthesis, judgment, and creativity. Reflection takes place, connections are realized between theory and practice, and patterns of behaviors are recognized so practice can be changed (Profetta-McGrath as cited in Zori & Morrison, 2009, p. 78). Human patient simulators are life-sized mannequins that simulate a real patient and change with each decision made by the students. They organize and prioritize information and practice communicating and collaborating. The individuals can make decisions for a lifelike situation in a safe environment. Often times, nursing students work together to reach decisions. They participate in cooperative (collaborative, team) learning which is:

The use of highly structure, interactive exercises that have been carefully designed to hold each participant individually accountable for contributing to a larger, complex learning goal, while also making all participants jointly responsible for integrating the learning of every other member (Matchett, 2009, p. 27).

Cooperative learning is especially useful for nursing students. The students learn to consider different alternatives and options as well as to be critical of their own ideas. It fosters creativity and rationality among other things and has been proven to facilitate critical thinking.

Critical thinking lays at the foundation of nursing. Nurses and nursing students in particular should recognize the importance of developing critical thinking skills. They should constantly be striving to understand not only the information underlying nursing interventions but also how the information applies to and varies with each client's individual situation. Donna D Ignatavicius, MS, RN, ANEF stated that:

Fostering, supporting, and rewarding critical thinking is key to recruitment and retention. If we don't encourage nurses to grow in these skills, they become task-oriented and frustrated, thinking, "I'll just do as I'm told, try not to think too much, and not say a word," (as cited in Alfaro-LeFevre, 2009).

Encouraging critical thinking provides competent nurses who are able to provide individualized and outcome-focused care. Nursing schools and programs strive to develop critical thinking in student nurses but it is the responsibility of the students and nurses themselves to continue the process of education and improvement.

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