

An Overview of Critical Thinking in Nursing and Education

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Abstract

Critical thinking in nursing is skill and ability to use, use of risk taking creativity to make a decision and knowledge as a result, analysis and synthesis that, evaluation, to acquire, information search, to develop thinking, as an individual aware of his own thinking. Nurses and nursing students are visual barriers critical thinking, often react without thinking, cause and effect relationship does not install, perception difficulties, not being flexible, as a waste of time to think. Critical thinking is to be important educational programs important prepared of the implementation and evaluation. Critical thinking and learning are interrelated; one must think to gain knowledge. To be able to add to the depth and breadth of an individual's knowledge, the individual must become more aware of the cognitive processes.

Key Words: Critical thinking, critical thinking in nursing, critical thinking in nursing education

CRITICAL THINKING

Definitions for critical thinking are numerous and vary according to disciplines. The Watson Glaser definition is most often cited in the nursing literature because of the definition's close alignment with the nursing process, thus making it most emanable to nursing faculty. This definition presents critical thinking as a composite of attitudes, knowledge, and skills that include "defining a problem, choosing information for the solution, recognizing stated and unstated assumptions, formulating and selecting relevant and promising hypotheses, drawing conclusions, and judging the validity of the inferences" (Hickman, 1993).

Kincheloe (2004), even, asserts that what exactly critical thinking is unknown and if it is defined it may die; and so keeping searching is seen as only alternative. Historically, while the roots of critical thinking were founded on Socrates, Dewey is generally known as the pioneer of the critical thinking tradition. Dewey defines critical thinking as "...active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends" (Fisher, 2001). In 1988-1999, in order to reach a consensus on critical thinking for the purpose of educational assessment and instruction, a group of expert researchers and theoreticians in critical thinking came together in a Delphi Research Project sponsored by the American Philosophical Association. A consensus definition of critical thinking was revealed: We understand critical thinking to be purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as the explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based (Facione, 1990).

Ennis (1991) gives another definition: "Critical thinking is reasonable, reflective thinking that is focused on deciding what to believe or do". Fisher and Scriven define critical thinking as "the skilled and active interpretation and evaluation of observations and communications, information and argumentation". In addition, Johnson (2000) indicates, "critical thinking is a type of thinking where a person must organize, analyze, or evaluate given information". Paul and Elder (2004) contributed significantly to educational practices for promoting critical reflection, metacognition, and literary analysis. Their contention was that few readers have the abilities to skillfully read and translate the author's intended meaning in the text, that how students read should be determined by what they read, and that "skilled readers do not read blindly; they read purposely.

They have an agenda, goal, or objective”. Paul and Elder emphasized the importance of students understanding the purpose of their reading and the author’s purpose in writing, perceiving ideas in a text as being interconnected, connecting with a text while reading, and formulating questions and seeking answers to those questions while reading. Further, they encouraged explicating the thesis of a paragraph, analyzing the logic of what is being read, and evaluating and assessing the logic of a reading.

Critical thinking is the process of “actively and skillfully conceptualizing, applying, analyzing, synthesizing, and/or evaluating information” (Scriven, Paul, 1987). People who think critically can analyze their own thinking and realize they can improve their own reasoning; a highly cultivated critical thinker raises vital questions and problems, gathers and assesses relevant information, thinks open-mindedly, and communicates effectively (Elder, 2007; Scriven, Paul, 1987). Carroll (2007) suggested that “one of the key elements of critical thinking is the recognition that one’s worldview can be a major hindrance to being fair-minded”; hence, students must be willing to negotiate previously held positions and beliefs while considering opposing viewpoints. Teaching critical thinking through direct instruction in rhetorical analysis could improve students’ critical thinking ability, for in order to teach students to think critically, “we must teach them to try to understand how one’s worldview is likely to be embedded with prejudices, biases, and false notions”

According to Yildirim (2011), critical thinking is “the process of searching, obtaining, evaluating, analyzing, synthesizing and conceptualizing information as a guide for developing one’s thinking with self-awareness, and the ability to use this information by adding creativity and taking risks”.

Nursing And Critical Thinking

Yildirim argues that the ability of critical thinking increases as the work years increase, and the critical thinking skills can be improved during nursing education. Be rapid and dynamic change in the health care system, nurses in providing optimal patient care, problem solving, ethical decision making, determine priorities and trends in clinical decision making and critical thinking skills you need to use (Yildirim 2010b).

Just as society has faced “accelerating changend increasing complexity” (Paul 1993) so too have health care professions. Beck and colleagues declared: Health care today has many complex problems that cannot be solved unless significant conceptual shifts are made by the providers of health care. Most health care problems are multidimensional as well as multi-system and involve values and priorities that demand sympathetic consideration of all points of view and an interdisciplinary approach. Reductive thinking within the discipline of nursing does not equip future nurses with the ability to solve such problems. (Beck et al., 1992). As health care has become more complex with an exponentially expanding knowledge base, nurses have become more autonomous, requiring critical thinking skills for decision making, therapeutic judgment, diagnostic reasoning, and problem solving. In this unpredictable, ever changing, complex practice setting, nrses have been continuously faced with volumes of data and information to analyze, synthesize, and evaluate in order to make crucial, and often life and death, decsions (Colucciello 1997). Collucciello (1997) stated that it is “imprevatve for nurses to reason critically about the judgements they face in practice and to act on those judgements in such a way that management of care.....exemplifies reasonedconsideration, constructive thinking, and a particular disposition that leads to favorable outcomes”. Many other nursing experts have also described critical thinking as essential for making sound clinical judgements in nursing and managing complex nursing systems as nurses enter the 21st Century (Alfavro-Lefevre, 1999; Berger, 1984; Brock, Butts, 1998; Haffer, Raingruber, 1998; Kataoka-Yahiro, Saylor, 1994; Maynard, 1996; Miller, 1992; Pless, Clayton, 1993; Saucier, 1995; Rubenfeld, Scheffer, 1999; Yildirim, 2010).

CRITICAL THINKING IN NURSING EDUCATION

It has been widely accepted that critical thinking is a very essential learning and teaching tool for many years. It has been deemed as a skill that should be gained in order to meet the today’s societal expectations such as quick thinking, competent communication, and ability to resolve conflict and reconcile diverse perspectives (McCallister, 2004). Research findings have supported how it helps students to learn tasks better and solve problems that they encountered in academic and nonacademic environments (McKendree et al., 2002). It is indicated that critical thinking skill should not be confused with intelligence; it is a skill that can be taught and improved in everyone as opposed to intelligence. Since late 1980s, strategies for teaching the function of critical thinking to all level of students have been discussed (Grant, 1988; Paul et al., 1989; White, Burke, 1992); and it has been emphasized that this skill should be taught to students at all level in the school curriculum.

Thinking and learning are interrelated; one must think to gain knowledge. To be able to add to the depth and breadth of an individual's knowledge, the individual must become more aware of and more skilled in thinking and the cognitive processes. Critical thinking in nursing education is a means by which nurses can use analysis, questioning, interpretation, and reflection to resolve patient care issues. Several theorists, practitioners, and educators have attempted to define critical thinking as it applies to nursing but to no avail. Jones and Brown (1991) conducted research to try to understand the perception of critical thinking in nursing. Their research found that critical thinking in nursing is viewed as a variant of the scientific method used for decision-making in the medical field. The use of the scientific method for problem resolution in nursing led Jones and Brown to question how nurses characterized critical thinking as it is used in nursing programs. They wanted to find out how critical thinking activities were described in nursing education. They sought to come up with a definition for critical thinking as it applies to nursing education, as well as to identify components of critical thinking skills as they apply to nursing, and to describe strategies used to teach critical thinking in nursing. Jones and Brown found that nursing education still followed the traditional path of education with no room for skepticism or questioning and that the faculty in their research lacked a clear understanding of the mechanism involved in the application of critical thinking in nursing.

The scientific method of decision-making in the medical field is built on logic governing the physical sciences and was adopted by nursing as a means of understanding and planning healthcare. This led to nursing being viewed as a discipline of procedural activity instead of a discipline of analysis of problems, which lead to problem resolution (Jones, Brown, 1991). In the 1960s, nursing adopted the nursing process as an approach to problem-solving. Doenges and Moorhouse (2003) describe the nursing process as an approach to problem-solving that involves assessment, nursing diagnosis, planning, nursing intervention, and evaluation. The nursing process evolved as a means of problem resolution in nursing because it was found that nursing's unique frame of reference for dealing with human problems seemed to require a more context-driven approach to problem-solving, and the nursing process was considered more aligned with a context-driven resolution format. The characterization of critical thinking by Dewey (1933) and Ennis (1985) as a unique cognitive thought process, and by Siegel (1988) and Ennis (1962) as a problem solving technique, that uses logical propositions, appears congruent with the nursing process.

Jones and Brown (1991) explain that in nursing education programs, judgment and skepticism are systematically discouraged. They further state that although nursing faculty felt that critical thinking was integrated into at least 97% of nursing programs, nursing faculty had difficulty teaching it as their interpretation of the critical thinking concept was narrow and contradictory. Bandman and Bandman (1995) have also composed definitions of critical thinking in nursing. Bandman and Bandman describe critical thinking as a rational examination of ideas, assumptions, principles, arguments, inferences, issues, conclusions, statements, beliefs, and actions". Along with the examination of ideas, Bandman and Bandman include within the critical thinking framework scientific reasoning, use of the nursing process, decision making and reasoning in controversial issues. They further expand their explanation of reasoning within critical thinking as "analysis of language use, formulation of problems, explication of assumptions, evaluation of conclusions, weighing of evidence, discriminating between good and bad argumentation, and justification of facts and values that result in credible beliefs and actions". Boychuk Duchscher (1999) also supports the scientific method of decision making, a form of critical thinking along with the nursing process, as a means of problem resolution in nursing because she sees it as one way nurses could apply the process of inquiry to the profession. Boychuk Duchscher further states Paul's (1996) description of critical thinking as conceptualization, application, analysis, synthesis, and evaluation is congruent with the tenets of the nursing process, but that the nursing process alone is inadequate for problem resolution in nursing in the current volatile healthcare environment. Daly (1998) also sees the need for critical thinking skills in nursing as necessary because of the complexity of nurses' clinical reasoning.

Importance of Teaching Critical Thinking

Studies indicate that the United States has not been performing as well as other industrialized nations, in terms of critical thinking skills (National Center for Education Statistics, 2007). Students must learn to think skillfully and independently so they may cultivate their own problem-solving abilities and come to reliable conclusions. The goals of this study were to provide students with the analytical, problem-solving skills needed in a variety of academic settings and in their everyday lives. Specifically, the researcher investigated whether the interventions implemented in the study are effective in promoting student critical thinking knowledge, skills, and dispositions, and whether there is growth in student perceptions of critical thinking knowledge, skills, and dispositions.

Sternberg (2003) reasoned that “a future of successfully intelligent thinkers is important to personal satisfaction and national achievement”. Teaching students to think reflectively and critically should be a primary goal of educational institutions, for although students may be knowledgeable, they may not have been taught how to think analytically; hence, they could become highly vulnerable to the fallacious reasoning exhibited by political leaders and within the media in its various forms. The ultimate goal for educators is to promote lifelong learning by enhancing students’ problem-solving abilities so they may “apply these steps not just in school problems, but in problems in everyday life”.

Brookfield (2003) referred to the transfer of those skills learned in the classroom and lifelong learning as “the organizing concept for adult education”. Brookfield claimed “there are forms of learning we engage in that are visible in a much more heightened form in adulthood as compared to childhood and adolescence”. Adult learning is distinct to childhood and adolescent learning in that it includes the capacity to think dialectically, to employ practical logic, to know how one knows what one knows, and to think reflectively. Brookfield defined critical reflection as “the process by which adults become critically reflective regarding the assumptions, beliefs and values which they have assimilated during childhood and adolescence”. This critical reflection occurs over a period of time as a result of interpersonal, work-related, and political experiences. Society is experiencing tremendous economic, political, technological, and social changes. These complexities demand a healthy, democratic populace who exercise critical thought. When discussing the importance of critical thinking, Brookfield et al. (2005) deduced that Without the capacity to think and act critically, we would never move beyond those assumptions we assimilated uncritically in childhood. We would believe totally in the myths, folk wisdom, and values we encountered in authority figures in our early lives. We would make no attempt to change social structures or to press for the collective social action. Under these circumstances, individuals might believe they are victims of circumstances that seem beyond their control, unaware that they have the capacity to prompt action through social change.

Brookfield (1995) encouraged educators to take a critical reflective stance toward teaching and to help students confront their world or environment with compassion, understanding, and fairness; nevertheless, the sincerity of intentions “does not guarantee the purity of practice”. When teachers reflect critically on their practice and model the critical thinking process, students begin to understand what is involved in a critical analysis of assumptions. For educators, the reflective process involves questioning their practice and discovering assumptions about their practice and their students. This reflective habit will lead to informed action, add meaning to instruction, and encourage the creation of democratic classrooms.

Paul (1995a) believed critical thinking is the “essential foundation for education because it is the essential foundation for adaptation to the everyday personal, social, and professional demands of the 21st Century and thereafter”. In view of the rapidly changing world and the new global realities, there is a vital need for individuals to develop those skills and abilities that enable them to respond and adapt to these changes. Research findings from “Policy Issues in Teaching Education” indicated that Although students can perform basic skills pretty well, they are not doing well on thinking and reasoning. American students can compute, but they cannot reason.

. . . They can write complete and correct sentences, but they cannot prepare arguments
 . . . Moreover, in international comparisons, American students are falling behind
 . . . particularly in those areas that require higher order thinking. (Paul, Wilson, 1995c)

In order to adapt to the complexities and demands of the 21st century, Paul (1995b) recommended that educators “cultivate minds that habitually probe the logic of the systems of the status quo as well as the logic of the possible variations and alternative systems”, and that rather than memorizing the conclusions of others, “students should reason to those conclusions on the basis of their own disciplined thought”. However, not only are many of the educational institutions ill-prepared for the rapid changes occurring in society, but educators and students, seemingly, fail to have a clear idea of what critical thinking is. Students have an obligation to be responsible for their thoughts, their conduct, and their lives, and educators can attempt to encourage this accountability and improve students’ approach to problem solving through direct instruction in argument and critical thinking. Elder (2000) discussed the emphasis of teaching students the skills needed to become competent employees at the community college level. As society becomes more complex, and as a rapid change in technology occurs, “training students for job performance in narrowly defined skill areas no longer serves students well”. Elder’s contention was that students are not prepared for the challenges of the current job market.

Therefore, educators should encourage in their students the intellectual tools that “will render them mentally flexible and intellectually disciplined”. Successful employees must be able to utilize disciplined reasoning and the metacognitive process so they can direct and redirect their thinking. Rather than emphasizing the transfer of information, educators should encourage students to rethink their thinking and to reason, analyze, judge, and interpret that information.

Facione (2006) discussed the value of critical thinking and the need for an informed citizenry who can make good judgments while offering practices for nurturing the habits of mind or dispositions for critical thinking. He suggested the ideal critical thinker “can be characterized not merely by her or his cognitive skills but also by how she or he approaches life and living in general”. Facione related a study of over 1,100 college students that indicated “scores on a college level critical thinking skills test significantly correlated with college GPA”. His contention was that there is a “significant correlation between critical thinking and reading comprehension”; however, this goal may be somewhat limited. Apart from the college experience, students must learn to stand on their own, think for themselves, and make their own contributions to society; hence, “learning critical thinking, cultivating the critical spirit, is not just a means to this end, it is part of the goal itself”. To date, there are a number of researchers who have examined the effect of direct instruction in critical thinking. This study, however, examined this issue by determining whether there was improvement in students’ critical thinking knowledge, skills, and dispositions on pretest and posttest scores after direct instruction in argument mapping, Paul’s Thinker’s Guides, and Socratic questioning. Of added importance was the researcher’s investigation of the students’ perceptions of the effectiveness of the instructional interventions and of their own growth in critical thinking abilities at the end of the course.

Yıldırım (2010a) skill based critical thinking education program were conducted 14 week (two credit), 11 units, every unit theoretical knowledge, scenario studies, exercises and homework in the content of the elective course. Skill based critical thinking education program were conducted firstly. There was not statically significant difference between students’ pretest CCTDI scores ($p>0.05$) and there was statically significant difference between posttest CCTDI scores ($p<0.05$); it is seen that the discussing group had moderate level and control group had lower level scores. This difference originated from discussing group that had higher academic success scores from control group. It is observed that discussing group students had explicit increase on final grade success through the first unit to last unit in the course period.

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