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# Comparison of levels of empowerment and clinical decision-making in senior bachelor of science nursing students enrolled in a curriculum based on a caring nurse theorist and a curriculum not based on a caring nurse theorist

Karen M. Johnson

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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

A COMPARISON OF LEVELS OF EMPOWERMENT AND CLINICAL  
DECISION-MAKING IN SENIOR BACHELOR OF SCIENCE NURSING  
STUDENTS ENROLLED IN A CURRICULUM BASED ON A CARING  
NURSE THEORIST AND A CURRICULUM NOT BASED ON A  
CARING NURSE THEORIST

A Dissertation Submitted in Partial Fulfillment  
of the Requirement for the Degree of  
Doctor of Philosophy

Karen M. Johnson

College of Natural and Health Sciences  
School of Nursing  
Program of Nursing Education

August, 2011

This Dissertation by: Karen M. Johnson

Entitled: *A Comparison of Levels of Empowerment and Clinical Decision-Making in Senior Bachelor of Science Nursing Students Enrolled in a Curriculum Based on a Caring Nurse Theorist and a Curriculum Not Based on a Caring Nurse Theorist*

Has been approved as meeting the requirements for the degree of Doctor of Philosophy in the College of Natural and Health Sciences in the School of Nursing, program of Nursing Education

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## ABSTRACT

Johnson, Karen M. *A Comparison of Levels of Empowerment and Clinical Decision-Making in Senior Bachelor of Science Nursing Students Enrolled in a Curriculum Based on a Caring Nurse Theorist and a Curriculum Not Based on a Caring Nurse Theorist*. Published Doctor of Philosophy Dissertation, University of Northern Colorado, 2011.

The purpose of this study was to investigate whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring reported higher levels of perceived empowerment as learners and higher levels of perceived clinical decision-making ability than senior baccalaureate nursing students enrolled a curriculum not based on a theory of caring. This study also investigated whether there is a relationship between the level of empowerment as learners and the level of perceived clinical decision-making ability in senior baccalaureate nursing students.

Surveys were distributed online to senior nursing students enrolled in a university which was determined to have a curriculum based on a caring theory and to senior nursing students enrolled in a university which was deemed to have a curriculum which was not based on a caring theory. Research instruments included a demographic survey, the Learner Empowerment Measure (LEM), and the Clinical Decision Making in Nursing Scale (CDMNS). Sixty-nine surveys were returned and 62 were included in the study.

T-tests were conducted to determine differences in mean scores of the total LEM and total CDMNS and each of the subscales for each instrument. No significant differences in group mean scores were found between the two groups on the LEM and the CDMNS. Additionally, no significant relationship was found between the LEM and the CDMNS.

The results of this study indicate that curriculum structure may not be a contributing factor to learner empowerment and clinical decision-making of nursing students. However, the information obtained regarding students' perceptions of caring characteristics of the nursing school/faculty is important. Further research should be conducted to determine what factors students identify as caring and whether these factors may influence empowerment and clinical decision-making.

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I thank my family for their love, understanding and encouragement during this academic journey. I dedicate this to the memory of my parents, Lowell and Lois Dawson. They were unwavering in their love and support and always proud of my accomplishments. I know that they would rejoice with me.

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## CHAPTER I

### INTRODUCTION

#### Statement of the Problem

Professional nurses must be prepared to assume responsibility for planning and delivering care in a highly complex health care arena. Practice issues such as the aging population of health care recipients, increased prevalence of chronic conditions, globalization of health care, shortage of registered nurses, and increasing complexity of technology are some of the challenges facing new graduate registered nurses (Heller, Oros, and Durney-Crowley, 2000). New graduates are expected to practice autonomously and make clinical decisions regarding patient care issues. It is imperative that the design of nursing curricula facilitates this expectation. Students in baccalaureate nursing programs must be empowered to achieve the needed level of knowledge and power to be active and equal partners in health care.

This research study is designed around the major concepts of curriculum structure, including sub-concepts of curriculum based on a theory of caring and curriculum not based on a theory of caring, learner empowerment, and clinical decision-making. Each concept will be discussed and defined below. The significance of the study will be described and research questions will be identified.

### *Empowerment*

Gibson (1991) defined empowerment as “a social process of recognizing, promoting, and enhancing people’s abilities to meet their own needs, solve their own problems and mobilize the necessary resources in order to feel in control of their own lives” (p. 359). Empowerment has also been described as the provision of resources and the development of an environment whereby individuals can “develop, build, and increase ability and effectiveness of others to set and reach goals for individual and social needs” (Hawks, 1999, p. 610). Nursing education curricula must be designed to facilitate empowerment of graduate nurses so that they may assume positions as health care partners capable of practicing autonomously and possessing high levels of decision-making ability.

The concept of empowerment is important to both nursing education and the profession of nursing. Evidence in the literature shows the relevance of empowerment to the nursing profession (Campbell, 2003; Itzhaky, Gerber & Dekel, 2004), nurse educators (Brancato, 2007; Espeland & Shanta, 2001; McCarthy & Holbrook Freeman, 2008; Sarmiento, Spence Lashinger & Iwasiw, 2004), new graduate nurses (Cho, Spence Laschinger, & Wong, 2006; Nedd, 2006), and nursing students (Mailloux, 2006).

The nursing profession has historically been described as oppressed and against power. The oppression and powerlessness has led to dissatisfaction of nurses with the profession and dysfunctional behavior among nurses (Daiski, 2004). Daiski suggested that nurses have long been oppressed by a hierarchical structure which led to feelings of powerlessness, domination, and exploitation by individuals and organizations deemed superior in the hierarchy. Perceived inability to change the situation caused nurses to resort to horizontal violence. Remedies suggested for decreasing the disempowering

behavior of nurses included respecting each other, sharing of knowledge, and shared decision-making. Daiski found that many of the 20 nurses interviewed for the study identified nursing education as a place to begin to change the disempowerment of nurses.

Horizontal violence is not limited to practicing nurses. Curtis, Bowen, and Reid (2007) reported on the incidence of horizontal violence experienced or witnessed by nursing students. Fifty-seven percent of 152 nursing students surveyed in an Australian university indicated that they had experienced or witnessed behaviors such as humiliation and lack of respect. Students reported feeling powerless. Ninety percent of the students who reported that they had experienced or witnessed horizontal violence indicated that it would impact their future career choices, e.g., avoiding certain institutions or units. In fact, some of the students stated that they considered leaving nursing school. In this time of nursing shortage, interventions to retain nursing students must be employed.

Empowerment of nurses can bring about positive changes in the profession of nursing in the form of greater commitment to the profession, patients, and organizations (Campbell, 2003; Cho, et al., 2006; Daiski, 2004; McCarthy & Holbrook Freeman, 2008; Nedd, 2006). Spence Laschinger and Finegan (2005) assert that to recruit and retain new nurses to the profession, empowering environments of trust and respect must be cultivated. Cho, et al. tested an empowerment model based on Kanter's (1993) theory of structural power in organizations with 226 new graduate nurses. The model tested the linkages of structural empowerment, specifically organizational climate and access to workplace empowerment structures, to six areas of work life (workload, control, rewards, community, fairness, and values) as well as engagement/burnout and organizational commitment. Results indicated that empowerment had a direct positive effect on organizational commitment.

Nedd (2006) reported similar findings in a study of 206 registered nurses to determine if empowerment of nurses was related to the employee's intent to stay with the organization. Results indicated that intent to stay with the organization was positively correlated with all empowerment variables: formal power, informal power, work environment, opportunity, information, support and resources. While supporting Kanter's theory that empowerment is related more to environment than personal characteristics, the results did not show any significant correlation between intent to stay and demographic characteristics. This finding supports the premise that an empowering environment for nurses, and perhaps nursing students, leads to a higher level of commitment to the organization, and perhaps the nursing profession.

Kuokkanen and Katajisto (2003) conducted a quantitative study with 600 registered nurses to determine behaviors which promoted or impeded empowerment. Categories explored included moral principles, personal integrity, expertise, future-orientation, and sociability. Factors promoting empowerment included shared values, respect for others, confidence, cooperation, support from colleagues, problem solving, and open atmosphere. Factors described as impeding empowerment included devaluation, authoritarian leadership, distrust, hierarchy, and lack of openness.

Campbell (2003) asserted that empowerment in nursing education is paramount; nursing education is the beginning of future nurses' beliefs and values about the profession of nursing. Campbell conducted a grounded theory qualitative study of 16 senior level baccalaureate nursing students, nursing faculty, and nursing administrators to explore empowerment and disempowerment among nursing students, faculty and administrators. Findings indicated that empowerment was not solely dependent upon individuals but also upon environment. Campbell stated, "Empowerment is a continuous

and ever-changing process throughout individuals' lives, with individuals often moving back and forth between experiencing feelings of empowerment and disempowerment" (p. 424). Faculty and students indicated that they preferred to work alone rather than in teams, perhaps indicating a lack of appreciation for the empowerment possibilities of teamwork. Campbell (2003) recommended that nursing education include content on oppression, empowerment, and teamwork issues, both in classroom and clinical settings.

While much research has been conducted regarding empowerment in organizations, there is limited research on empowerment of nursing students other than Campbell (2003). Mailloux (2006) studied the extent to which teaching strategies and nursing student perception of empowerment predicted autonomy in female baccalaureate nursing students. Results indicated that learner perception of empowerment had a direct, positive effect on autonomy.

Brancato (2007) asserted that future nurses must be given the necessary tools to contribute to the redesign of health care systems and that incorporation of empowerment into nursing curriculum is critical to the success of the nursing profession. In addition, it is suggested that nursing students may benefit from opportunities to experience empowerment and role modeling of empowerment by faculty. Brancato studied the perceptions of personal empowerment among baccalaureate teaching faculty and the faculty's use of empowering teaching behaviors. Forty empowering teaching behaviors were divided into four categories: analytic nursing (strategies to promote problem solving); change activities (strategies to plan and facilitate change); collegiality (activities to encourage peer support); and sponsorship (strategies to assist nurses to elicit support from administration). Brancato found that the faculty surveyed used only half of available teaching strategies identified as being empowering with strategies under the categories of

collegiality and analytical most frequently used. Sponsorship strategies were the least used. Use of strategies to assist nursing students in understanding health organizations is vital to the abilities of future nurses to be active partners in health care. Nursing education programs must include these empowerment strategies in the curriculum.

### *Clinical Decision-making*

Patient safety and well being are largely dependent upon the ability of the registered nurse to make clinical decisions. Many new graduates identified that they do not feel prepared for the magnitude of the decision-making required in clinical practice (Etheridge, 2007; Olson, 2009). Etheridge found that graduate nurses felt unprepared for the increased responsibility of clinical decision-making regarding patient issues. They indicated that they had not been responsible for decision-making as nursing students and thus felt unqualified for the increased responsibility. New graduate nurses expressed surprise at the amount of responsibility for patient care decisions and did not feel confident to make clinical decisions on their own. The graduates interviewed for this study felt that they had not been given enough opportunities to think for themselves and learn independence while students (Etheridge). Watson (2008) believes that nursing education may be contributing to the inability of many new graduate nurses to think independently and make effective clinical decisions. Watson stated that nursing education imposes self-restricting limits with students “often being rewarded more for obedience and conformity than for assertiveness, questioning, and differences of opinion” (Watson, p. 108). It may be that providing an educational environment and resources that promote independent thinking among nursing students will lead to increased levels of perceived empowerment and effective preparation for the challenges facing them as registered nurses.



Nurse managers also expressed concern about the decision-making abilities of new graduate nurses (Berkow, Virkstis, Stewart, & Conway, 2009; Utley-Smith, 2004). Nearly 10% of the nursing work force is comprised of new graduates. While the majority of deans of colleges and universities feel that graduates of their nursing programs are prepared for clinical practice, only 10% of hospital and health system nurse executives feel that graduate nurses satisfactorily meet expectations for practice (Berkow, et al.). The Nursing Executive Center surveyed more than 5,700 nurse leaders (clinical nurse specialists, nurse managers, nurse educators, and clinical charge nurses) asking them to rate their satisfaction with the abilities of graduate nurses to meet 36 identified competencies. Many of the 36 competencies directly or indirectly relate to clinical decision-making: “recognition of when to ask for assistance, decision-making based on the nursing process, conducting appropriate follow-up, recognition of change in patient status, ability to take initiative, ability to prioritize, and ability to anticipate risk” (Berkow, et al., p. 20). Percentages of nurse managers responding with *strongly agree* or *agree* to a statement regarding satisfaction with new graduate proficiency were as follows: recognition of when to ask for assistance (35%), decision-making based on the nursing process (20%), conducting appropriate follow-up (19%), recognition of change in patient status (19%), ability to take initiative (19%), ability to prioritize (12%), and ability to anticipate risk (11%). Utley-Smith found similar results from a survey of 363 nurse administrators from hospitals, nursing homes, and home health agencies. Administrators were given a list of 45 competencies for BSN graduates and asked to respond whether or not new BSN graduate nurses met the competencies. Over 52% of the respondents felt that new BSN graduate nurses did not meet the competencies. These results clearly indicate a need for nurse educators to reconsider educational strategies and

curriculum structure to facilitate the graduation of registered nurses who are better prepared to meet the expectations of nurse managers.

An important aspect of clinical decision-making is recognition of patient cues which lead the nurse to take a specific action (Banning, 2007; Hoffman & Elwin, 2003; Minick, 1995). A qualitative study by Minick indicated that caring by a nurse may increase the nurse's early recognition of patient problems, leading to quicker decision-making and interventions. Minick described caring for the purposes of this research as the nurse having an "involved stance" (p. 303) although no further description or definition is provided. Minick interviewed 30 critical care nurses to gain an understanding of processes used in identifying patient problems and decision-making. Data analysis indicated that "a pattern of caring between the patient and nurse was found with every episode of early recognition" (p. 307). Minick described these episodes of caring and early identification of patient problems as "making the connection" (p. 307). Conversely, nurses who could not relate any episode of early identification of patient problems or of making a difference in patient outcomes through decision-making appeared to be detached from the patients. Minick labeled this as "missing the connection" (p. 308). Minick suggested that one of the implications for nursing practice and nursing education is the need to identify methods to assist nurses to see the value in caring.

#### *Caring and Caring Curriculum*

Caring is central to nursing practice (Watson, 2008). Caring has been studied in nursing students (Khademian & Vizesfar, 2007; Sitzman & Leners, 2006; Wade & Kasper, 2006) and professional nurses (Liu, 2004; Wilkin & Slevin, 2004). There is evidence in the literature on the impact of nurse caring on patient satisfaction and patient outcomes (Pryzby, 2005; Wolf, Miller, & Devine, 2003).

Frameworks for nursing curricula provide a means to organize and structure information. A framework is helpful to provide meaning to faculty and students regarding the philosophy of the nursing curriculum. Frameworks for curriculum structure include those designed around a single nursing theory, those which are an eclectic blend of two or more nursing theories, and those which are not based on a specific nursing theory (Billings & Halstead, 2005; Iwasiw, Goldenberg & Andrusyszyn, 2005). Examples of single theory models include curricula based on Orem's self care theory (Bowling Green State University, 2010) and Roy's adaptation theory (Mount Saint Mary's College, 2010), which demonstrate how the concepts of a theory are incorporated throughout a curriculum. Curricula based on theories of caring such as those by Watson and by Boykin and Schoenhofer (usually referred to as "caring curricula" in the literature) are prevalent among colleges of nursing.

Watson (2000) called for a change in curriculum structure for nursing education toward a "human caring-human science perspective" (p. 53). Watson stated that a framework for nursing education that integrates scientific knowledge with appreciation for spiritual awareness leads to a "transformative paradigm that is philosophically and morally consistent with phenomena and practices of human caring in both educational and clinical worlds" (pp. 53-54). Watson asserted that a caring curriculum is based on anticipatory-innovative learning and provides opportunity for creative critical thinking. This curriculum structure encourages both students and faculty to consider nursing not as it is, but as it could be. This may be an important factor in empowering nursing students to become practitioners who are able to bring about positive changes to health care.

Boykin and Schoenhofer (2001) developed the Nursing as Caring theory based on the premise that all persons are caring. Personhood is described as "the process of living

grounded in caring” (p. 4). The process of living as caring person and being authentically present is enhanced through nurturing relationships with others. Implications for nursing practice, nursing administration, and nursing education are described. Traditional curriculum structure is questioned and new paradigms are explored. “Although past methods of teaching of nursing may have been comfortably structured through textbooks organized around medical science, faculties are now empowered to question what should be the focus of study in the discipline of nursing” (Boykin & Schoenhofer, pp. 45-46).

Touhy and Boykin (2008) describe the development of a caring based curriculum, stating:

To study nursing is to study caring, to grow in an understanding of self and other as caring person, and to be committed to the development of caring knowledge and the value of caring to the health and wholeness of persons nursed. (p. 8)

The caring curriculum structure is described as learning through examination of nursing situations where students are encouraged to reflect upon questions such as “who is the nurse as caring person, who is the person as caring person, how is the nurse expressing caring in this moment” (Touhy & Boykin, pp. 11-12). Students are also asked to reflect on personal, ethical, and empirical ways of knowing. The caring curriculum exists in an environment of support and respect where learning occurs through dialogue and reflection. Collegial relationships and open dialogue and debate between faculty and students are encouraged. Nursing is conceptualized and taught as an egalitarian model of helping and celebration of the human person as that person strives to achieve their own fullness in the learning situation. Nursing in a caring curriculum is based on “interconnectedness and collegiality rather than on esoteric knowledge, technical expertise, and disempowering hierarchies (Boykin & Schoenhofer, 2001, p. 16). In

addition, in order to facilitate students' achievement of living their full personhood and understanding nursing as caring, faculty "support an environment in which students are free to choose and to express self in various ways" (Boykin & Schoenhofer, p. 45). Thus, students who are educated in a caring curriculum may have increased exposure to empowering learning environments, thus increasing their level of empowerment as learners and as nurses.

### Purpose

The purpose of this study was to investigate whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived empowerment as learners and higher levels of perceived clinical decision-making ability than senior baccalaureate nursing students enrolled a curriculum not based on a theory of caring. This study also investigated whether there is a relationship between the level of empowerment as learners and the level of perceived clinical decision-making ability in senior baccalaureate nursing students.

### Professional Significance of Study

It is evident that nursing education must evolve from the historical Tyler model of nursing curriculum adopted in the 1950s to provide education to prepare graduates for health care in the 21<sup>st</sup> century (Bevis & Watson, 2000). Watson (2008) asserts that nursing education must change from "treating students as objects, creating competency without compassion or caring, restricting teaching/learning to behavioral objectives, factual information, and techniques, and tolerating power and dependence roles for teachers and students" (p. 324).

The American Association of Colleges of Nursing (AACN, 2008) describes the roles of graduate registered nurses as "providers of direct and indirect care" (p. 8),

“designers, coordinators, and managers of care” (p. 9), and “members of the profession” (p. 9). AACN has developed nine essentials for baccalaureate nursing education and describes educational frameworks necessary for adequate preparation of registered nurses. Graduate registered nurses must be competent to meet the challenge of these essential practice responsibilities. It is clear these essentials require graduate nurses be prepared to begin their practice at a high level of professionalism and competence. AACN asserts that nursing education is uniquely positioned to respond to the challenges facing health care providers through innovative educational programs, e.g., inclusion of education on the topics of caring and healing, ways of knowing from sciences and arts, critical decision-making, teamwork skills, and interprofessional collaboration.

In 2003, the National League for Nursing (NLN) issued a position statement that called for “dramatic reform and innovation in nursing education to create and shape the future of nursing practice” (p. 1). The NLN states that nursing curricula must be focused less on content and more on relationships and teaching strategies that are innovative and based on pedagogical research. Additional pedagogical research is necessary to determine if innovative teaching strategies and curriculum structures result in graduate nurses who are better prepared to think independently and able to rise to the challenge of the complexity of the current and future health care issues.

The challenge facing nurse educators is to develop and implement teaching strategies and environments which facilitate the abilities of new graduate registered nurses to meet the requirements of increasingly complex health care issues. Nursing curricula must incorporate philosophies and strategies to increase the perceived levels of empowerment of nursing students and the perceived ability to make clinical decisions in order to positively influence health care of individuals and populations.

Additional research is needed to understand the impact of curriculum structure on nursing education and professional nursing. Evidence of caring nursing practice, and the outcomes associated with caring nursing practice, is common in the nursing literature. While there is ample evidence regarding caring in nursing practice, there is little research on caring and a curriculum structure based on a theory of caring related to nursing education.

Limited research exists related to the concept of empowerment of nursing students, specifically how the structure of the curriculum may contribute to empowerment of nursing students. Watson (2008) asserted that nursing education has traditionally been bound by self-imposed restrictions on teaching methods which impede the development of professional nurses. Watson stated that the curriculum of most nursing education programs is not designed to foster empowerment and the development of clinical decision-making in students. This research will contribute to the knowledge of nurse educators regarding the impact of curriculum structure on perceived levels of empowerment of nursing students and the students' perceptions of their ability to make clinical decisions. By contributing to the body of knowledge related to nursing education, nurse educators will be better prepared to design nursing curricula that are most likely to produce nursing graduates who feel empowered and perceive themselves as prepared to be clinically competent professional nurses.

#### Problem Statement

Graduate professional nurses are expected to be capable of decision-making related to complex health care issues. Graduate professional nurses must feel empowered to fully participate in clinical decision-making and decisions regarding the nursing profession. Nurse educators are interested in discovering strategies to increase clinical

decision-making abilities and empowerment of nursing students, i.e., teaching strategies and curriculum structure. This research will investigate senior baccalaureate nursing students' perceptions of their level of empowerment as learners and their perceived clinical decision-making abilities for professional nursing practice.

### Research Questions and Research Hypotheses

- Q1 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived learner empowerment than senior baccalaureate nursing students enrolled in a curriculum which is not based on a theory of caring?
- Q2 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring?
- Q3 Is there a relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students?

In addition to the research questions, the following hypotheses were proposed:

- H1 Senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring will report higher levels of perceived learner empowerment than senior nursing students enrolled in a curriculum which is not based on a theory of caring.
- H2 Senior baccalaureate nursing students enrolled in a curriculum based on theory of caring report will higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring.
- H3 There will be a significant positive relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students.

### Definitions

This research study has three major concepts: curriculum structure including sub-concepts of curriculum based on a theory of caring and curriculum not based on a theory of caring, empowerment, and clinical decision-making.



### *Curriculum Structure*

*Conceptual definition.* Curriculum structure is defined as a course of study including the program outcomes, subject matter, systematic arrangement of courses, and materials of instruction (Billings & Halstead, 2005).

*Operational definition.* Curriculum structure is defined as the published structure of curriculum in a school of nursing.

### *Nursing Curriculum Based on a Theory of Caring*

*Conceptual definition.* A nursing curriculum based on a theory of caring is defined as a curriculum in a school of nursing that is designed using a nursing theory of caring and is based on the philosophy that caring is central to nursing and that fosters an environment of personal growth and capacity to care (Boykin, 1994).

*Operational definition.* A nursing curriculum based on a theory of caring is a curriculum of nursing study that is expressly designed around the concept of caring. Caring is identified in the mission, vision, philosophy, and coursework. Nursing education in a nursing curriculum based on a theory of caring is provided through innovative nursing experiences which explore the uniqueness of caring in nursing situations.

### *Nursing Curriculum Not Based on a Theory of Caring*

*Conceptual definition.* A nursing curriculum not based on a theory of caring is a program of study leading to a baccalaureate degree in nursing including the prescribed courses and arrangement of courses.

*Operational definition.* A nursing curriculum not based on a theory of caring is a program of study in a school of nursing which is not expressly based on the concept of caring as identified in the mission, vision, philosophy, or coursework

### *Empowerment*

*Conceptual definition.* “A social process of recognizing, promoting, and enhancing people’s abilities to meet their own needs, solve their own problems and mobilize the necessary resources in order to feel in control of their own lives” (Gibson, 1991, p. 359).

*Operational definition.* Empowerment of nursing students is defined as students’ perceptions of empowerment--including concepts of meaningfulness, competence, and impact--as measured by the 35-item Learner Empowerment Measure (LEM) (Frymier, Shulman, & Houser, 1996).

### *Clinical decision-making*

*Conceptual definition.* “The formation of hypotheses and/or the selection of nursing interventions” (Shin, 1998, p. 415). Clinical decision-making is further defined as the process of examination of data and the evaluation of alternatives in the selection of a nursing action (Jenkins, 1985).

*Operational definition.* Clinical decision-making is defined as nursing students’ perceptions of their own decision-making abilities as measured by the 40-item Clinical decision-making in Nursing scale (Jenkins, 1985).

### Conceptual Model

This research study is designed using the concepts of curriculum structure, learner empowerment and clinical decision-making. The model depicted in Figure 1 represents the nursing student in a caring curriculum where the nursing student is in an environment of mutual trust and respect between faculty and students and where students are encouraged to be creative and engage in reflection regarding the caring aspects of nursing. Open dialogue between faculty and students is encouraged in a curriculum based

on a theory of caring. This study explored whether senior nursing students who were enrolled in a curriculum based on caring theory reported higher levels of learner empowerment and clinical decision-making than senior nursing students who were enrolled in a curriculum which was not based on a caring theory.

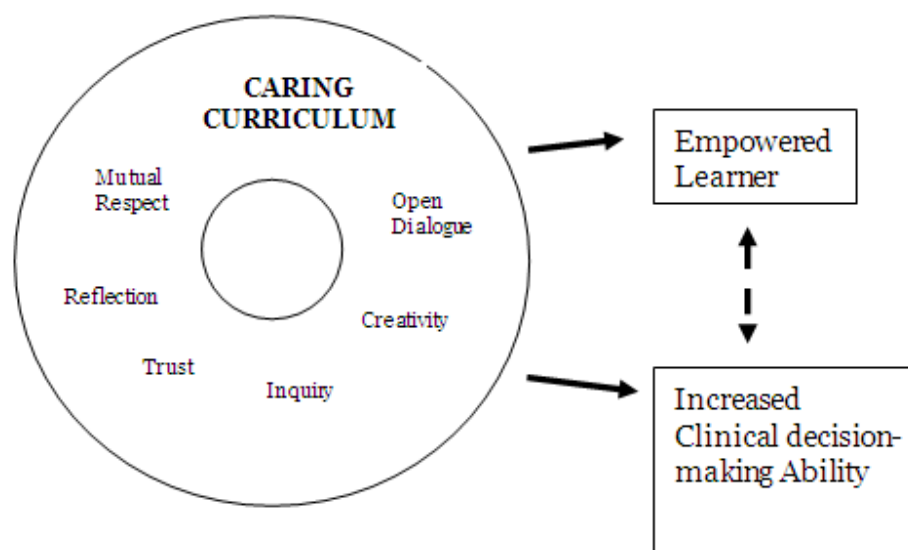


Figure 1

Conceptual Model

## CHAPTER II

### REVIEW OF LITERATURE

This review of literature focuses on theoretical literature and research studies regarding caring, empowerment, and clinical decision-making. The review of literature regarding caring includes references on a caring curriculum as well as a review of research studies involving nurses, nursing students, and nursing faculty. It is relevant to include studies of evidence of caring in nursing practice in addition to relevant information regarding a caring curriculum. Similarly, the review of literature includes references regarding empowerment as a concept, empowerment of nurses and the nursing profession, nursing students, and nurse educators. Literature regarding clinical decision-making includes studies conducted with nurses as well as nursing students.

#### Theoretical Review of Caring

Boykin and Schoenhofer's (2001) Nursing as Caring theory serves as the theoretical framework for this study. According to Boykin and Schoenhofer, the basic premises of the theory are that all persons are caring, that caring is a process, and that knowing a person in a caring manner and growing in the potential to be caring is central to the practice of nursing. Unlike other theories that are based on medical models of problems and deficits, the Nursing as Caring theory "proceeds from a frame of reference based on interconnectedness and collegiality rather than on esoteric knowledge, technical expertise, and disempowering hierarchies" (p. 16).

Contrary to other nursing models that are modeled after medicine or other professions, the Nursing as Caring theory is based on a framework of interconnectedness and collegiality rather than considering that the role of nursing is to alleviate a problem or eliminate a deficit. The Nursing as Caring theory is described as an egalitarian model of helping rather than a model of nursing based on disempowering hierarchies (Boykin & Schoenhofer, 2001).

The central concept to the theory of Nursing as Caring is the nursing situation, described as a “shared lived experience in which the caring between the nurse and the one nursed enhances personhood” (Boykin & Schoenhofer, 2001, p. 13). In each nursing situation, the nurse “endeavors to come to know the other as caring person and seeks to understand how that person might be supported, sustained and strengthened in his or her unique process of living caring and growing in caring” (p. 13). This requires that the nurse develop and utilize “authentic presencing” that allows the nurse to be known as caring and to know the person as caring and recognize the other’s call for nursing (p. 18). Each nursing situation is unique with the nursed calling out for the nurse’s personal caring response. Each caring nurse responds to the nursing situation in his or her own unique way representing the uniqueness of the individual nurse.

Boykin and Schoenhofer (2001) discussed the Nursing as Caring theory as it relates to nursing education. The study of nursing in a caring curriculum is designed to come to know nursing through nursing situations. Stories are utilized to discover nursing through personal, empirical, ethical, and aesthetic knowing. Students and faculty share exploration of the nursing situation and dialogue about the nurse and the nursed as caring.

Watson (2008) describes nursing as “transpersonal caring moments” during which time the nurse is able to be fully present and open to another person, is able to connect

with the spirit of another person, and be open to expanding possibilities. Watson's theory of nursing contains 10 caritas processes, formerly referred to as carative factors. Watson explains that caritas processes better describe nursing as a caring science. The 10 caritas processes are as follows:

1. Cultivating the practice of loving-kindness and equanimity toward self and other as foundational to caritas consciousness.
2. Being authentically present: enabling, sustaining, and honoring faith, hope, and deep belief system and the inner-subjective life world of self/other.
3. Cultivation of one's own spiritual practices and transpersonal self, going beyond ego-self.
4. Developing and sustaining a helping-trusting caring relationship.
5. Being present to, and supportive of, the expression of positive and negative feelings.
6. Creative use of self and all ways of knowing as part of the caring process; engage in the artistry of caritas nursing.
7. Engage in genuine teaching-learning experience that attends to unity of being and subjective meaning – attempting to stay within the other's frame of reference.
8. Creating a healing environment at all levels.
9. Administering sacred nursing acts of caring-healing by tending to basic human needs.
10. Opening and attending to spiritual/mysterious and existential unknowns of life/death (Watson).

Caring has been identified as being the central core and as fundamental to nursing practice. Yet caring in nursing remains a concept that is difficult to define and

understand. Brilowski and Wendler (2005) examined the evolution of the concept of caring in nursing practice. Utilizing a Cumulative Index to Nursing and Allied Health Literature (CINAHL) search for research articles focusing on the nursing experience of caring, 238 articles were reviewed. The authors identified the following attributes of caring: relationship, action, attitude, acceptance, and variability. Characteristics of the relationship attribute were described as trust, intimacy, openness, love, sincerity, and patience. The carer in the relationship is charged with being knowledgeable and ethical. “Professional ethical codes provide a framework for nurses to facilitate decision-making and ensure a high standard of conduct” (Brilowski & Wendler, p. 643). The attribute of action is further subdivided into nursing care, touch, presence, and competence. Caring cannot be demonstrated merely by nursing action. Actions accompanied by an attitude of caring about rather than simply caring for reveal the essence of caring in nursing. Characteristics that imply a caring attitude include empathy, being respectful, intuition, creativity, being interested and attentive, demonstrating genuineness, and being sensitive to the needs of others. The attribute of acceptance is guided by the belief that each individual is valuable and worthy of love and respect. Caring is fluid and changing and thus is described as variable. Caring is individualized and changes based on context (Brilowski & Wendler).

Caring as a theory of nursing has been utilized in nursing practice (Boykin, Smith, & Aleman, 2003; Bulfin, 2005; Finfgeld-Connett, 2008; Watson & Foster, 2003), nursing administration (Britt Pipe, 2008; Watson, 2006), and nursing education (Anthony & Landeen, 2009; Barry & Purnell, 2008; Boykin, 1994; Owen-Mills, 1995; Preheim, 2008).

## Caring Theory and Nursing Practice and Leadership

The attending nurse caring model (ANCM) incorporates a philosophy of caring in an environment of shared knowledge and vision where a blending of theory and evidence translates in caring nursing practice (Watson & Foster, 2003). The model was piloted in The Children's Hospital of Denver as a "research and advanced professional practice model for actualizing caring theory and evidence as a guide to advancing professional nursing practice" (Watson, 2006, p. 54). Similar models are in place in numerous hospitals across the United States. Nurses practicing in the ANMC are immersed in a culture of shared knowledge and mutual respect for patients, families, and colleagues. All plans of care and therapeutic interventions are based from a framework of caring and derived from evidence and theory (Watson & Foster, 2003).

Britt Pipe (2008) uses Watson's (2008) *caritas* processes as a framework for nursing leadership and states that moral commitment and intentionality are the basis for caring leadership. She believes that nursing leaders and administrators have a responsibility to develop skills related to caring behaviors and to model caring to staff and colleagues. She states that the caring behaviors of nurse leaders can be applied to colleagues and other individuals and groups who are being led and/or mentored including students. She also asserts that "caring leadership is founded on transpersonal caring relationship and build on moral commitment, intentionality, and *caritas* consciousness" (Britt Pipe, p. 124). Watson (2006) also emphasizes that the adoption of a nursing model of caring is vital for nursing leadership in order to promote the integration of human healing within healing environments.



Bulfin (2005) describes a research project whereby a community hospital sought to incorporate the nursing as caring theory of Boykin and Schoenhofer (2001). The project was grounded in three assumptions expressed in the theory: (a) all persons are caring by virtue of being human; (b) the nursing situation is the locus of all that is known and done in nursing; and (c) caring nurses identify calls for nursing and respond in unique and caring ways. The project was intended to infuse the hospital with instances of caring. It was assumed that the growth of caring would improve staff morale and lead to higher patient satisfaction. Language from the theory was infused into day to day nursing, e.g., change of shift reports. Nurses shared stories to identify how calls for nursing were recognized and how nursing responses were developed. Themes identified from the nurses' stories included "intimate knowing in order to respond to that which matters; being the best you can be; offering self; and going above and beyond" (Bulfin, p. 317). Quantitative measures of patient satisfaction indicated a dramatic increase in patient satisfaction during the first year after implementation of the nursing as caring model. In addition, qualitative measures of patient satisfaction in the form of letters from patients and families were reviewed for positive and negative comments, with positive comments far outweighing negative comments. Nursing staff and nursing leadership have reported an increased appreciation for nursing and the journey to know self and others as caring.

Boykin et al. (2003) report similar findings from the implementation of the nursing as caring model in another hospital. Qualitative data analysis of stories shared by nurses of caring situations revealed six themes:

- (1) commitment;
- (2) being there out of concern for other;
- (3) truly listening leads to truly knowing and responding to that which matters;
- (4) nurturing the person living and growing in caring through unique expressions of caring;
- (5) value experienced from the mutuality of the experience; and
- (6) valuing contributions of other members of the health care team. (p. 226)

Evaluation of the project after two years included patient satisfaction indicators moving from the 10<sup>th</sup> percentile to the 80<sup>th</sup> percentile for some categories. Mean scores in patient satisfaction increased in every category measured from 2000 to 2002. Qualitative evaluation of nurse satisfaction was accomplished through stories shared by nurses. Before implementation of the nursing as caring model, nurses acknowledged that their nursing care was focused on tasks to be completed without much regard for the person. They felt frustrated by the lack of time to truly know the patients and colleagues as persons. After implementation of the model, nurses expressed more satisfaction with nursing as they embraced the call to nursing and experienced others as caring persons.

#### Review of Research Related to Caring and Nursing

Caring has been described as central to nursing; there has been much research to document the presence and value of caring in nursing practice, both to nurses and to the individuals and groups who are recipients of nursing care. Caring in nursing practice is evident in a multitude of practice settings. Manogin, Bechtel, and Rami (2000) report a relationship between caring behaviors demonstrated by nurses during childbirth and women's satisfaction with the childbirth experience. Thirty-one women who had experienced uncomplicated childbirths were asked to complete the Caring Behaviors Assessment, a 63 item 5 point Likert scale research instrument developed by Cronin and Harrison (1988) that has been deemed to be congruent with Watson's 10 carative factors. The instrument is subdivided into seven categories. Descriptive statistics indicated that women rated all categories as important indicators of caring by the nurse; human needs assistance and humanism/faith-hope/sensitivity ranked as the top two categories ( $\mu = 4.70$  and 4.53, respectively). Baldursdottir and Jonsdottir (2002) found similar results when

using the Caring Behaviors Assessment with patients who were treated in the emergency department. Human needs assessment also ranked first in importance followed by supportive/protective/corrective environment. Baldursdottir and Jonsdottir concluded that caring is an attribute that is closely connected with physical care of the patient and cannot be separated from nursing care.

Norman, Rutledge, Keefer-Lynch, and Albeg (2008) sought to recognize caring in nursing practice through the narratives of nurses and also to explore whether nurses with more clinical experience demonstrated more caring behaviors than nurses with less experience. Benner's (1984) novice to expert framework was used to define the nurses' level of expertise. Clinical Nurse I was the designation for new graduate nurses (less than one year of experience); they were considered to be advanced beginners. Nurses defined as competent were designated Clinical Nurse II and had 1 to 30 years of experience. Expert nurses were designated as Clinical Nurse III/IV and included nurses who were seeking career advancement. Six narratives from each category were reviewed.

Narratives were analyzed by noting descriptions that fit Watson's (2008) *caritas* processes. Evidence of all 10 *caritas* processes were found in the 18 narratives analyzed. *Caritas* processes that were most often evident were "developing and sustaining a helping-trusting, authentic caring relationship; cultivation of one's own spiritual practices and transpersonal self, going beyond ego self; and assisting with basic needs, with an intentional caring consciousness" (pp. 328-329). The expert group of nurses had the largest number of narratives demonstrating all of the *caritas* processes (four out of the six narratives). Competent nurses had the fewest *caritas* processes evident in their narratives; the narratives were described as "shorter, more concrete, and less descriptive than the other groups" (Norman et al., 2008, p. 332). This was an unexpected finding. However,

the authors hypothesized that the difference in the groups might lie in the motivation for the narratives. Nurses designated as Clinical Nurse I were new graduates who were assigned to write the narratives during orientation. Expert nurses (Clinical Nurse III/IV) were experienced nurses who were seeking career advancement and might use the narratives for promotion consideration. Therefore, there may have been different incentives for the groups of nurses. The authors considered the findings to be important evidence of the existence of caring in nursing practice and felt that the narratives demonstrated the commitment of nurses to engage in caring practice (Norman et al.).

Wilkin and Slevin (2004) conducted a qualitative study with 46 full-time registered nurses in an intensive care unit to explore the meaning of caring for those nurses and to determine if the meaning of caring had the potential to alter care provided by the nurses. Semi-structured interviews were conducted, transcribed, and analyzed for themes. The authors identified three related themes to the central theme of concept of caring: nurses' feelings, nurses' knowledge, and nurses' skills. Theme clusters were then identified for each of the related themes. Examples of clusters for nurses' feelings included "comfort, touch, empathy, presence, dignity, holistic care, and caring for the carers" (Wilkin & Slevin, p. 53). Theme clusters for nurses' knowledge included "knowing the patient, caring for significant others, technology, prioritizing care, and critical situations" (p. 53). Finally, theme clusters for nurses' skills included "nurse-patient relationship, physical support, advocacy, and barriers to caring" (p. 53). Although nurses in an intensive care environment are surrounded by technology, and the technology was at times perceived as a barrier to caring, the nurses determined that the barrier can be overcome and that caring can and does occur in an intensive care environment (Wilkin & Slevin).

Synthesis of the research reveals that caring is evident in nursing practice and is valued by both nurses and patients. Themes from theories of caring from both Boykin and Schoenhofer (2001) and Watson (2008) are clearly identified in nursing research. Characteristics of caring, including authentic presence, empathy, genuineness, respect for each individual's uniqueness, and value as a person, are clearly identified in the reviewed literature.

### Review of Research Regarding Caring in Nursing Education

Caring has been described as the essence and core of nursing. If it is accepted that nursing is an integral element of nursing practice, it stands to reason that it is important to study the attitudes of nursing students toward caring and strategies to develop caring in nursing students.

Research with nursing students has been done on nursing students' beliefs and perceptions about caring (Khademian & Vizeshfar, 2008; Kapborg & Bertero, 2003; Wagner, 1999) and also about students' impressions of caring behaviors of nursing faculty (Dillon & Wright Stines, 1996; Holland Wade & Kasper, 2006).

Much of the research concerning the beliefs and perceptions of nursing students regarding caring has been done from the qualitative perspective. Kapborg and Bertero (2003) explored the thoughts of novice nursing students by asking 132 first year nursing students to write an essay responding to the question of "what is your image of caring?" (p. 185). Students had not had any previous coursework or education on caring. Data were analyzed through summarizing and content analysis. Concepts of "being" and "doing" were identified along with a third concept that was first simply classified as "miscellaneous" and later named "professionalism" (p. 186). The concept of "doing" was

described as the physical care provided for the patient. Descriptions of caring classified as “being” were behaviors such as listening to the patient and establishing a connection. Professionalism was identified through students’ comments that caring was expressed through the delivery of competent, professional, and ethical care to patients (Kapborg & Bertero). Concepts identified in this study are similar to those identified in a phenomenological study conducted by Wilkes and Wallis (1998) who studied the meaning of caring in nursing students as they progressed through the curriculum. However, competence as caring was not identified as caring by nursing students until they had reached their final year of nursing school. First year students focused their description of caring more around compassion and concern for the patient. Attributes of caring described more frequently by senior nursing students included competence, commitment, confidence, conscience, and courage to advocate for patient rights.

Eklund-Myrskog (2000) also found that nursing students’ understanding of caring became more sophisticated as they progressed through a caring-based nursing curriculum; first year students focused on terms and concepts related to caring and students at the end of the curriculum were more focused on the importance of the how and why of caring. However, Mackintosh (2006) found that nursing students’ perceptions and descriptions of caring became more negative as they progressed through a nursing curriculum. The author reported that students at the beginning of the program of study related caring to an idealistic attitude of providing care to patients. As students progressed and were exposed to encounters with practicing nurses, their descriptions of caring were more disillusioned and cynical. Narratives of students were largely related to negative role modeling by practicing nurses and disempowering working environments where nurses were not satisfied with or fulfilled by their work and thus demonstrated less

caring behaviors toward patients and others. Similar results were reported by Murphy, Jones, Edwards, James, and Mayer (2009) who found that measurements of caring in nursing students surveyed in their first year and again in their third year of nursing study were significantly lower in the third year of study. The authors posed a possibility that negative socialization from encounters with nurses and nursing faculty may diminish the students' perceptions of the importance and value of caring in nursing. If caring is not being modeled for nursing students, it is possible that they will not internalize caring as an important aspect of nursing (Murphy et al.).

Development of curricula and teaching strategies to cultivate the knowledge of caring and the relevance of caring to the nursing profession is of interest to nurse educators. It has been shown that nursing students, even novice first year nursing students, come to nursing education with some thoughts on caring. However, it is also important to determine the importance that nursing students place on caring. Khademian and Vizesfar (2008) conducted a study with 90 Iranian baccalaureate nursing students to determine the students' perceptions of the importance of caring in nursing. The researchers used a modified version of the Caring Assessment Questionnaire that consisted of 55 caring behaviors divided into the following categories: accessible, monitors and follows through, explains and facilitates, spiritual care, comforts, anticipates, and trusting relationship. Students were asked to determine the importance of each behavior on a 5 point Likert scale ranging from 1 (*low importance*) to 5 (*high importance*). The possible range for total score was 55 to 275. The mean score for all students was 216.74. The subscale rated as the highest importance was monitors and follows through; trusting relationship was rated the least important. These students clearly related caring to practical and cognitive behaviors while not placing as much

value on the interpersonal relationships involved in caring. This is contrary to other studies where emotional caring behaviors are ranked above psychomotor behaviors (Eklund-Myrskog, 2000; Kapborg & Bertero, 2003; Karaoz, 2005; Wilkes & Wallis, 1998). These results also indicate the possibility that cultural factors may influence beliefs about caring.

Nursing students are expected to demonstrate caring in their interactions with patients, families, and professional colleagues. Therefore, it is also necessary to examine the presence or absence of caring among nursing students in their interactions with each other and between students and nursing faculty. Hughes, Kosowski, Grams, and Wilson (1998) compared students in two different associate degree nursing programs to determine if there was a difference in the caring interactions among students. Students in one school were placed in “caring groups” that were developed to “create a safe place in which students and faculty members can give and receive care, develop self-awareness and empowerment, and recognize that caring for oneself precedes caring for others” (p. 176). Students in the second school did not participate in peer groups. Data were collected using the Peer Group Caring Interaction Scale (PGCIS), a 16 item rating scale designed to measure students’ perceptions about caring during peer interactions (Hughes, 1998). Students who participated in the caring groups scored significantly higher than students who did not participate in caring groups on all items on the PGCIS. This suggests that academic environment where caring is actively demonstrated may influence students’ caring interactions with other students.



## Review of Literature Regarding Caring Curriculum

A nursing curriculum based on the premise that caring is the core and essence of nursing practice is described by Watson (2000) as a “transformative paradigm that is philosophically and morally consistent with phenomena and practices of human caring in both clinical and practice worlds” (pp. 55-56). A caring-based curriculum can be emancipatory and empowering as caring becomes internalized as a way of being and caring becomes manifest in each nursing situation (Owen-Mills, 1995). Touhy and Boykin (2008) describe a nursing curriculum that is based on caring as one that focuses on nurturing the whole person, growing in the ability to know and understand one and others as caring, and commitment to the development of caring knowledge. The environment is one where faculty and students grow in their knowledge of caring. Caring literature and stories of nursing situations are infused in nursing courses.

Boykin and Schoenhofer (2001) state that the theory of nursing as caring can be applied to nursing education by assuring that the foundation of the nursing education program “asserts the focus and domain of nursing as nurturing persons living caring and growing in caring” (p. 41). All activities within the nursing curricula should be structured to the development and organization of nursing knowledge through the assertion that all individuals are caring. Boykin and Schoenhofer relate all individuals involved in nursing education to the circle of dancing partners described in their theory of nursing. All persons involved in the education of nursing students--including not only the students and faculty but also administrators, staff, community, and the nursed--share in the dance as partners in the growing and developing of caring.

Bevis and Watson (2000) describe components that are characteristic of a caring curriculum: recognizing and valuing human freedom, caring and commitment to self and others, and critical awakening where individuals recognize human spirit, wholeness, and the possibility of alternate realities. In addition, teaching strategies of modeling, dialogue, practice, confirmation, and connectedness are essential components of teacher-student interactions.

Components of a caring curriculum may be of particular importance to culturally diverse students. Evans (2004) describes the application of caring curriculum design to facilitate the recruitment and retention of students of color. Recognition by nursing faculty of the importance of a caring relationship that fosters the sense of self esteem and self confidence is vital to all students, but especially to students of color. Evans interviewed five practicing nurses and two nursing students who were of Hispanic/Latino or American Indian descent in the development of a recruitment video to encourage workforce diversity. Interviews were transcribed and analyzed for themes related to barriers to success in nursing and nursing education. Eighteen themes emerged. Evans identified components of a caring curriculum that could compensate for those identified barriers. For example, a barrier of “leaving home, entering a different world, and feeling isolated from culture and family” was identified (p. 223). Teaching strategies coming from a caring perspective to counter the barrier would include the development of a caring, trusting relationship, demonstration of being authentically present in interactions with the students, and modeling of caring through supportive dialogue.

The review of literature regarding the presence and importance of caring to nurses, nursing students, patients and families who are the nursed reveals the importance of caring to the profession of nursing. There is little recent evidence of educational

factors that may contribute to the development of caring attitudes and behaviors of nurses. Severtsen and Evans (2000) describe a specific course, Concepts of Caring, within a curriculum where relevance stems from an environment of trust and mutual respect; students and faculty alike seek meaning in the exploration of caring in nursing. The authors asserted that nursing students look to nursing faculty to facilitate the development of their individual nursing identities. Therefore, it was imperative that faculty model caring in their interactions with students. Narrative pedagogy in the form of personal stories from the perspective of the students and the persons being nursed was used to give voice to and empower students in their exploration of what it is to be a caring nurse.

To determine if the Concepts of Caring course had any impact on students' learning and any influence on their practice as caring, students who took the course were interviewed one year after the conclusion of the course. A qualitative data analysis was conducted on the student interviews and quantitative data regarding a scale measuring perceptions of caring were used to triangulate the data. Data analysis from the student interviews revealed nine domains of student learning from the course and subsequent clinical practice. The domains and selected related components of the domains are as follows:

1. Ways to learn about caring
  - a. Experiencing community building
  - b. Experiencing caring curriculum
  - c. Creating/being a safe place
  - d. Suggesting vs. teaching
2. Barriers to learning about caring

- a. Lecturing about caring
  - b. Displaying a hierarchy among instructors
  - c. Creating a formal milieu
3. Providing caring nursing
    - a. Assessing holistically
    - b. Understanding others differently through story
    - c. Embodying caring
    - d. Engendering trust
    - e. Empathizing
4. Effect on caregiver of providing caring nursing
    - a. Feeling better about practice
    - b. Creating a new way of life
5. Experience caring nursing
    - a. Appreciating student's being there
    - b. Healing through telling one's story
6. Barriers to providing caring nursing
    - a. Devaluing of care by the system
    - b. Focusing on the cure paradigm
7. Providing uncaring nursing
    - a. Doing necessary tasks without caring
    - b. Detaching
8. Facilitating caring nursing
    - a. Allowing autonomy and time to care
    - b. Caring for the caregiver by self and others

c. Valuing caring afresh

9. Being nonresponsive

a. Lacking a fruitful answer. (Severtsen & Evans, 2000, p. 175)

Severtsen and Evans concluded that the Concepts of Caring course, and the use of narratives to explore caring in nursing, is “empowering, cathartic, and affirming of one’s own wisdom” (p. 176).

Hoover (2002) found similar positive results from a 15-week course on caring in a degree nursing program in Wales. Focus group interviews with 25 students were conducted at the beginning of the course and again at the end of the course. The author concluded that the students were positively impacted by the course, both personally and professionally. Themes related to personal impact that emerged from the data analysis included connecting in improved relationships with self and others. Students indicated that they were more accepting of others after exploring what it truly meant to have a caring connection with others. Self affirmation of themselves as caring led students to have a more meaningful understanding of their purpose in life. Finally, the students felt that they had more clarification of their own values and an increased awareness of their spirituality after the course. Themes related to professional impact included increased knowledge and understanding of caring theory, enhancement of their caring practices, and the provision of more holistic care to clients.

### Theoretical Review of Empowerment

Discussions of empowerment have been prominent in literature since the 1920s with the earliest references to empowerment relating to community issues of social justice and equal access to economical resources (McCarthy & Holbrook Freeman, 2008). Much of the literature related to empowerment stems from Kanter’s (1977, 1993)

work on empowerment in organizations. Kanter discussed power and empowerment, not in a hierarchical sense but as “the ability to get things done, to mobilize resources, to get and use whatever it is that a person needs for the goals he or she is attempting to meet” (Kanter, 1993, p. 166). Kanter asserts that structural empowerment is necessary for individuals to be empowered. Structural empowerment is comprised of elements within the work (or education) environment which contribute to the individual’s ability to mobilize and use resources to accomplish goals. Structural power involves access to support, information, and resources. Individuals who have access to structural power perceive themselves as empowered and capable of achieving self directed goals. Persons who lack access to support, information, and resources lack power and are more likely to become disenfranchised or disillusioned with their work (or education) setting.

Kanter (1981, 1993) described demands for leaders and the reasons those demands necessitate an empowered workforce. Most importantly, organizations, including health care and educational organizations, must recognize the need for a change in the image of leadership from a paternalistic position to one of shared leadership. Additionally, organizations must search for leadership where leadership has not existed in the past including among women and minorities. The increasing scarcity of resources, both financial and human, requires creative leadership to maximize the potential of outcomes with limited resources. Organizations such as health care agencies and educational institutions are facing more competition and less control over organizational decisions, and the need to meet the needs of multiple stakeholders. This requires that organizations design leadership systems that are flatter and more responsive to the needs of members of the organization. The environment must be a shared leadership where members feel empowered to strive toward accomplishment of organizational goals.

Kanter (1981) states that power and powerlessness impact productivity and efficacy. Powerlessness leads to ineffective performance and behavior within the organization. In addition, people who feel powerless often resort to dysfunctional behavior including disrespectful behavior toward peers. This is consistent with literature regarding perceptions of empowerment, disempowerment, and horizontal violence behaviors among nurses (Curtis et al., 2007; Daiski, 2004). The process of empowerment remains elusive despite the assumption that empowerment leads to positive results. Empowerment does not occur simply by delegation of power. Individuals must have their own personal drive to seek and accept empowerment (Kanter, 1993).

Theoretical descriptions of empowerment are the basis for the application of empowerment to nursing. Kuokkanen and Leino-Kilpi (2000) reviewed three theoretical approaches to the concept of empowerment: critical social theory, organizational theory, and social psychological theory. The premise of critical social theory is that certain segments of society are marginalized and disenfranchised, leading to powerlessness and oppression. Power is obtained by some as a result of others relinquishing power. The profession of nursing has often been viewed as oppressed with nurses surrendering their power to perceived superiors (Diaski, 2004; Fletcher, 2006).

Organizational theory of empowerment stems from the work of Kanter (1977, 1993) who began by examination of work environments of corporations. The assertion of organizational empowerment is that workers who are empowered have greater productivity; therefore, the goals of the organization are more likely to be achieved. Much research has been conducted using Kanter's theory of empowerment with nurses, nursing organizations, and nurse educators (Cho et al., 2006; Faulkner & Spence

Laschinger, 2008; Kluska, Spence Laschinger, & Kerr, 2004; Patrick & Spence Laschinger, 2006; Sarmiento et al., 2004).

Psychological empowerment theories describe empowerment from the individual perspective, focusing on personal growth. Characteristics such as a positive self image and the ability to manage one's own environment are crucial to the process of individual empowerment. Power is neither conquered nor surrendered but is a synergetic process (Kuokkanen & Leino-Kilpi, 2000).

Bradbury-Jones, Sambrook, and Irvine (2008) expand on the work of Kuokkanen and Leino-Kilpi (2000) and propose a fourth theoretical approach to empowerment--a poststructuralist viewpoint that power is not fixed but is in a constant state of alteration based on circumstances. Examination of empowerment through a poststructural perspective includes consideration of cultural and political influences of empowerment. A poststructural examination of empowerment includes the elements of disciplinary power and knowledge/power relationship. Disciplinary power is described as the power to be responsible for not only one's individual conduct in the discipline but also the monitoring of others in the discipline in order to maintain the integrity of the profession. Nurses must discover methods to publicize the unique knowledge of nursing to increase empowerment (Bradbury-Jones et al.).

### Empowerment in Nursing

The importance of empowerment to the nursing profession is evident in the literature. Empowerment has been shown to have an impact on job satisfaction of nurses and nurse managers (Kluska et al., 2004; Nedd, 2006; Patrick & Spence Laschinger, 2006), on patient satisfaction (Donahue, Piazza, Quinn Griffin, Dykes, & Fitzpatrick,



2008), and on the views of nurses regarding the profession of nursing (Dingel-Stewart & LaCoste, 2004; Hausner, 2002).

Nurses have often been called upon to empower others to improve health care. It is important to examine how nurses view their role of empowerment of others and to examine nurses' opinions on empowerment of themselves and nursing as a profession. Fulton (1997) used a critical social theory framework to explore the views of nurses related to the empowerment of themselves and how they facilitate empowerment in others. The choice of critical social theory was made to reflect the author's position that nurses are an oppressed group. The author conducted two focus groups with a total of 16 experienced and novice nurses who worked in a variety of settings. The researcher asked open-ended questions to elicit the group members' concept of empowerment. Four major themes were identified: "empowerment, having personal power, relationships within the multidisciplinary team, and feeling right about oneself" (Fulton, p. 531). Things which made nurses feel empowered included the ability to make decisions, having a choice, and having authority. However, some nurses indicated that having one's decisions and authority questioned led to feelings of disempowerment. This is consistent with the premise of critical social theory that nurses, as an oppressed group, may feel disempowered by hierarchical structures that limit power of nurses. Having personal power included themes of assertiveness, knowledge, and experience. However, some nurses commented on the lack of personal power, relating a concern of being ineffective in relationships with patients, colleagues, and other nurses. One nurse related a fear of other nurses which is consistent with the pattern of horizontal violence common in oppressed or disempowered groups. Discussion related to relationships with interdisciplinary team members focused on physicians and the feeling that the opinions of

physicians took precedence over those of nurses. Nurses felt powerless to disagree with physicians or initiate a discussion regarding differences of opinion. Confidence and autonomy were necessary for nurses to feel right about themselves and begin to identify methods of empowerment in their practice (Fulton).

In light of Fulton's (1997) findings regarding feelings of disempowerment and powerlessness among nurses during interactions with other nurses, it is important to examine not only why those behaviors exist but also how to change disempowering behaviors of nurses toward each other. Daiski (2004) reported on a qualitative study where broad, open-ended questions were asked of 20 nurses to examine whether nurses viewed themselves as empowered or disempowered and marginalized. Disempowering behaviors were identified as lack of respect from physicians and nurse managers and a lack of inclusion in decision-making. This resulted in nurses who were not supportive of each other, especially novice nurses. Suggestions for changing the views of nurses as oppressed and powerless included incorporation of empowerment theories and strategies for empowerment into nursing education and inclusion of nurses in decision-making regarding policy and resources (Daiski; Dingel-Stewart & LaCoste, 2004).

The growth and development of the nursing profession is dependent upon nurses' abilities to represent themselves as equal partners in health care. Nursing must be able to attract and retain intelligent and ambitious individuals who will continue to facilitate the progression of the profession. An atmosphere of empowerment, respect, and autonomy is essential for the accomplishment of that goal (Campbell, 2003; Spence Laschinger & Finegan, 2005). Spence Laschinger and Finegan surveyed 273 nurses using Kanter's (1977, 1993) theory to determine if structural empowerment had an impact on the perceptions of the nurses regarding trust and respect in the workplace. Structural

empowerment had a direct, positive effect on all variables tested: interactional justice, respect, trust, job satisfaction, and commitment to the organization. The authors suggested that empowering work environments are necessary to address the nursing shortage in order to recruit and retain professional nurses. Similar results were found by Nedd (2006) who found a relationship between nurses' perceptions of empowerment in the workplace and their intent to stay with the organization. Structural empowerment and psychological empowerment were significant predictors of feelings of respect among acute care nurses (Faulkner & Spence Laschinger, 2008) and perceptions of support and job satisfaction among middle nurse managers (Patrick & Spence Laschinger, 2006).

As it is clear that perceptions of empowerment have an effect on nurses' feelings of job satisfaction and commitment to the employing organization, it then becomes necessary to explore what factors in the environment lead to feelings of empowerment or disempowerment among nurses. In a study by Kuokkanen and Katajisto (2003), factors were identified that either promoted or impeded nurses' feelings of empowerment in their employing organization. Six hundred nurses in Finland were surveyed: 200 critical care nurses from a university hospital, 200 long-term care nurses from seven community hospitals, and 200 public health nurses from 25 different health centers. Questionnaires that measured work empowerment promoting factors and work empowerment impeding factors were administered as well as an instrument to measure personal well being. The five categories that constituted the measurement of promoting or impeding of empowerment included moral principles, personal integrity, expertise, future-orientedness, and sociability. Workplace factors promoting empowerment were reported less frequently by critical care nurses than other groups. The least frequently reported category for all groups was future-orientedness which included items such as

opportunities for advancement and access to information. Future-orientedness was also the category cited most by groups as the factor which most impeded empowerment. Factors of organizational bureaucracy, authoritarian leadership, and poor access to information were identified as factors which impeded empowerment. This supported Kanter's (1977, 1993) theory that access to information and resources and perceived opportunity for career advancement enhances individual perception of empowerment. Further examination of the measurement of job satisfaction indicated that the majority of nurses were dissatisfied with their jobs, felt that their work was not held in high regard by others, and were considering a change in employment or careers.

As the nursing shortage continues and a large number of professional nurses near retirement from the profession, it is imperative that graduate nurses feel committed to their profession and their organization and engaged in their work. Cho et al. (2006) surveyed 226 new graduate nurses (defined as less than two and one half years of nursing experience) to test a model that linked structural empowerment to work life and work engagement/burnout. Items included in work life were workload, control, reward, community, fairness, and values (Leiter & Maslach, as cited in Cho et al.). Data analysis revealed that structural empowerment had a strong, direct effect on organizational commitment, work life, and burnout. The authors suggested that empowering environments with access to information, resources, opportunity, support and formal and informal power will enhance the commitment of new graduates to their workplace and decrease the likelihood of emotional exhaustion and burnout (Cho et al.).

#### Empowerment and Nursing Education

It has been shown that empowerment has an effect on nurses and nursing practice. It has been suggested that an empowering curriculum structure and educational

environment and empowerment of nursing students will lead to a more empowered nursing profession (Campbell, 2003; Watson, 2000). However, traditional learning environments are not perceived as empowering or conducive to the development of autonomous learners. Mailloux (2006) found that students' perceptions of empowerment in learning had a direct effect on the perceptions of autonomy. Therefore, research should be conducted to explore methods to increase empowerment in nursing students.

There is limited research related to nursing education and the empowerment of nursing students. It is important to determine whether teaching strategies in nursing education can lead to increased levels of empowerment in students. Brancato (2007) studied 531 full time faculty members in baccalaureate nursing programs to determine the level of psychological empowerment of the faculty and to determine if there was a relationship between the psychological empowerment of the faculty and the number of empowering teaching strategies they used in the teaching of nursing students. Spreitzer's (1992) Psychological Empowerment Instrument measures four dimensions of psychological empowerment: meaning, competence, self-determination, and impact. Empowering teaching behaviors were identified using the Status and Promotion of Professional Nursing Practice Questionnaire (Carlson-Catalano, 1988). Forty teaching strategies identified as being empowering are subdivided into four categories: analytic nursing, change activities, collegiality, and sponsorship. Analytic nursing strategies include activities that relate to problem solving. Change activities include strategies to assist students to plan, implement, and accept change. Collegiality includes strategies for peer support and team building; sponsorship activities are related to strategies to gain administrative support. Faculty rated their use of each of the 40 teaching strategies by indicating whether they used the strategy often, sometimes, not at all but considered the

strategy useful, or not at all and did not feel the strategy was necessary. Scoring was accomplished by assigning one point for a strategy which was marked “I do this often” and zero points for any other response. The maximum number of points achievable was 40 if faculty marked that they did all of the strategies often.

Results indicated that the mean score for use of empowering teaching strategies was 19.5 with seven of the surveyed faculty scoring 40 and one scoring zero. Only 25% of the faculty scored 25 or higher and 25% scored 13 or less. This indicated that nursing faculty members were not using teaching strategies that had been identified as being empowering to nursing students. Results of the psychological empowerment measure showed that 25% of faculty scored low on the impact subscale indicating that faculty may not feel that they have any influence on decisions, thus lowering their feelings of empowerment (Brancato, 2007). Further analysis revealed a small but significant correlation between the faculty’s sense of psychological empowerment and the use of empowering teaching strategies. This is consistent with findings by Hawks (1999) who found that organizational culture was related to use of empowering teaching strategies by nursing faculty.

It is evident that faculty characteristics and organizational culture have an impact on the empowerment of nursing students. However, the stresses of the workplace environment may lead to burnout and dissatisfaction among faculty, thus decreasing their effectiveness as educators. Sarmiento et al. (2004) studied 89 full time nurse educators to determine if organizational empowerment had any relationship to job satisfaction and burnout. Faculty reported that their work environment was only somewhat empowering; access to opportunity was seen as the most empowering and access to resources as the least empowering aspect of their jobs. Overall, faculty reported being moderately

empowered. Faculty also reported a moderate amount of burnout in all of the categories: emotional exhaustion, depersonalization, and personal accomplishment. Perceptions of workplace empowerment were related to both burnout and job satisfaction. It is reasonable to assume that faculty members who feel empowered in their workplaces are more likely to be satisfied with their jobs and experience less burnout, thereby positively influencing their teaching of nursing students. The climate of the workplace or educational setting may be an important factor in empowerment. Bosley (2005) found that organizational culture was positively correlated with perceived empowerment of nursing students in a study of 231 senior baccalaureate nursing students. In a study of junior level baccalaureate nursing students, Jenkins (2006) found a strong relationship between learner empowerment and a classroom environment where students and faculty experienced collegiality, accountability, and open and honest communication ( $r = .62, p < .05$ ).

Mailloux (2006) surveyed 198 nursing students to determine if there was a relationship among students' perceptions of teaching strategies, selected student contexts, and learner empowerment autonomy. The sample was restricted to female students due to the use of an instrument that measures autonomy in female nursing students. Therefore, results may be different with a sample comprised of both male and female nursing students. Although results did not indicate a significant relationship between student perceptions of teaching strategies and either learner empowerment or autonomy, there was a direct relationship between learner empowerment and autonomy. The only student context variable that was shown to be significant was the fact that age was directly related to perceived autonomy.

Empowerment of professional nurses is important for the advancement of the profession and to facilitate the recruitment and retention of qualified individuals into the profession. It is clear that to have empowered nurses, educational environments must be empowering and empowerment in nursing students must be developed. Teaching strategies and learning environments that facilitate empowerment of nursing students must be cultivated.

#### Theoretical Review of Clinical Decision-making

Much of the information in the literature regarding clinical decision-making focuses on the process of decision-making. The two most commonly cited models of clinical decision-making are the information processing model, also referred to as the systematic-rational or hypothetico-deductive model, and the intuitive-humanist model (Banning, 2007; Thompson, 1999). The information processing model comes from a systematic-positivist framework that had its beginnings in medicine. This model of decision-making involves four stages. The first stage is identified as the cue acquisition stage. During this stage, the nurse gathers data about the patient situation, either from direct patient contact or other means such as review of history. The second stage involves the formation of tentative hypotheses based on the information that has been generated. The next stage is the cue interpretation stage where the nurse interprets and classifies cues as confirming, refuting, or not contributing to the initial hypotheses. The final stage is the evaluation process whereby the nurse weighs the benefits and disadvantages of each potential action and chooses the action based on the preponderance of the evidence collected (Banning; Thompson).

The second model of decision-making is the intuitive-humanist model. Based on Benner's (1984) work, this model focuses on the relationship of nursing experience,



nursing knowledge, and intuition. Benner identifies five stages of progression of nurses from novice to expert practitioners with varying degrees of ability for decision-making. The novice nurse has limited experience from which to draw during decision-making situations. Consequently, the novice nurse often relies upon rules to guide decisions. Advanced beginner nurses have limited experience but are able to begin to recognize recurrent meanings in situations. Competent nurses are able to visualize their actions in terms of long term effectiveness for patient situations. Proficient nurses perceive situations as whole and can identify alternatives when unexpected patterns of care are encountered. Expert nurses have significant experience and do not rely on guiding rules or principles but instead use an intuitive process to identify patient problems and make clinical decisions (Benner).

Thompson (1999) asserts that the primary difference between the information processing model and the intuitive-humanist model is the respective motivational loci. The motivational loci of the information processing model is related to task features such as the number of cues and the complexity of the task required. The intuition model relies upon the experience and expertise of the individual making the decision. Thompson reviews the strengths and limitations of each model using the themes of communicability, simplification, context specificity, and applicability. Regarding communicability, Thompson asserts that the intuition model has limitations as intuition is individualized and cannot be easily communicated to others. The intuition model appears to have advantages over the information processing model in terms of simplification or reductionism. The intuition model takes into account that nursing decisions are more complex than just scientific evidence. There are limitations apparent with both models regarding context specificity. The information processing model fails to acknowledge

context-specific factors in decision-making by assuming that decision-making is a generic process used by all clinicians at all times. Thompson asserts that each of the models has limitations regarding applicability in the realm of clinical reality; it appears that nurses employ both information processing and intuition during the decision-making process.

Therefore, Thompson (1999) proposes a decision-making continuum with information processing and intuition as end points on the continuum. Factors that determine whether the nurse uses the information processing model or the intuition model, or some of both along the continuum, include the complexity and ambiguity of the task involved, how the task is presented, and the time frame available for decision-making. If a large number of cues are present, and if the cues present lead to a prediction of the presence of other cues, the nurse is more likely to use the intuition model. Also, if the situation is unfamiliar to the nurse with no organizing principle present, the nurse is more likely to use intuition in the decision-making process. If, however, there is an organizing principle with which the nurse is familiar and which is likely to result in accuracy of the decision, the analytical information processing model is more likely to be used. If a decision must be made in a short timeframe, the nurse is more likely to employ the intuition model.

The situated clinical decision-making framework was developed to foster the development of knowledge, skills, and confidence in decision-making of novice nurses (Gillespie & Peterson, 2009). This framework is designed to consider decision-making in a manner other than the linear decision-making process that is often described in literature but does not truly capture the complexity of nursing practice. The framework involves context, foundational knowledge, decision-making processes, and thinking

processes. Gillespie and Peterson believe this framework is useful both in nursing practice and nursing education.

The situated clinical decision-making framework considers the context of the decision-making scenario including micro, meso, and macro levels. Micro level is described as the nurse-patient relationship. Meso level refers to the environment--the nursing unit or department and the agency or institution. Macro level includes the profession, government, and society. Each of these levels includes factors that influence decision-making, e.g., social, cultural, political, and economic considerations (Gillespie & Peterson, 2009).

The nurse relies on foundational knowledge during the decision-making process. Foundational knowledge includes knowing the profession, knowing self, knowing the case, knowing the client, and knowing the person. Knowing the profession refers to knowing professional standards of practice and required competencies and skills needed for the role of the nurse. Knowing self involves recognizing strengths and limitations, skill level, and experience. Knowing the case includes knowledge of pathophysiology, patterns and trends in typical cases, predicted progress, and patient responses. Knowing the client refers to knowledge of the patient data including baseline assessments and responses to treatments. Finally, knowing the person includes knowing the client's individual perception of health and illness, preferences, and support systems (Gillespie & Peterson, 2009).

The clinical decision-making process involves cue recognition, judgment, and decision. The process begins with the nurse recognizing cues from the patient--either the presence or absence of expected events. Cues are collected from multiple sources: observations, conversations, and intuition. Following cue recognition, the nurse makes a

judgment, defined as “the best conclusion a nurse can reach at a point in time, given the information available” (Gillespie & Peterson, 2009, p. 167). The nurse remains open to revision of the judgment based on new information. The formation of a judgment drives the nurse to the next step--the making of a clinical decision. Making a clinical decision involves both what needs to be done and how it should be done including the decision of whether to take immediate action or continue to observe, whether the nurse needs to consult other health care professionals, and the determination of the priority of the necessary actions. The final step in the decision-making process is the evaluation of the decision (Gillespie & Peterson).

Gillespie and Peterson (2009) stated that thinking is inherent in the situated clinical decision-making framework. Thinking is described as being different from fundamental knowledge and includes “critical, systematic, creative, and anticipatory thinking” (p. 168). Critical thinking requires the nurse to challenge his or her assumptions, remaining open to various possibilities, and necessitates reflective skepticism during decision-making. Systematic thinking recognizes the importance of the collection and organization of data. Creative thinking recognizes the individuality of patients and the ability to find creative solutions to problems given specific contextual issues. Anticipatory thinking requires that the nurse use foundational knowledge to plan ahead for prevention and early detection of patient problems (Gillespie & Peterson).

#### Decision-making and Nurses

The importance of decision-making in nursing practice dictates that the decision-making process be researched so that the process of decision-making is better understood and the decision-making capabilities of nurses are enhanced. Hoffman, Donoghue, and Duffeld (2004) investigated contributing factors to the decision-making of a group of

practicing nurses in Australia. The purpose of the study was to investigate relationships between clinical decision-making and contributing variables of age, educational level (certificate, diploma, degree, or postgraduate degree), amount of experience, clinical specialty, occupational orientation, and level of appointment (Registered Nurse, Clinical Nurse Specialist, Clinical Nurse Consultant, and Nurse Unit Manager). The convenience sample of 96 nurses was obtained from medical and surgical units at three hospitals in New South Wales. Role values and decision-making were measured by instruments constructed by Rhodes (1985). The occupational orientation scale tests for professional ideology, para-medical ideology, and bureaucratic ideology. The decision-making scale measures both perceived decision-making (decisions that nurses say that they make) and normative decision-making (decisions that nurses say they want to make). Data were analyzed using correlational tests. Factors that were significantly related to decision-making were further analyzed with stepwise regression to determine the variability in decision-making. Results of this study indicated factors that had positive relationships with perceived decision-making were professional orientation, level of appointment, age, and area of clinical practice. These variables accounted for 24% of the variance in the decision-making model, indicating that there are perhaps other factors which need to be explored. Professional orientation to work was shown to be the highest predictor of decision-making; the authors suggested that further research be conducted to determine methods of enhancing this characteristic in nursing students.

A study of the cognitive processes involved in clinical decision-making was conducted with registered nurses in Canada, Finland, Sweden, Switzerland, and the United States (Lauri et al., 2001). The purpose of the study was to identify models of decision-making used by nurses in different countries in different practice settings and

also to explore the relationship between decision-making and various demographic variables. The sample consisted of 459 registered nurses from both acute ( $n = 223$ ) and long term care ( $n = 236$ ) in all countries except Sweden where all of the nurses were employed in long term care facilities. Finland had the largest sample size with 194 nurses. Numbers of participants from other countries were as follows: Canada, 87; Sweden, 78; Switzerland, 40; and the United States, 60.

A 56-item Likert scale instrument was designed to include four stages of decision-making: “(a) collecting information to define a patient’s condition; (b) processing information to define nursing problems; (c) planning; and (d) implementing nursing interventions, and monitoring and evaluating a patient’s condition” (Lauri et al., 2001, p. 85). The instrument included 14 items for each stage of decision-making--half of the items measured analytically-oriented decision-making and the other half measured intuitively-oriented decision-making. Lower scores were intended to indicate analytical decision-making and higher scores were intended to indicate intuitive decision-making. Factor analysis yielded five factors: (a) Analytical Step-By-Step Model, (b) Intuitive Pattern Recognizing Model, (c) Intuitive Processing Model, (d) Intuitive Interpretative Model, and (e) Analytical Processing Model. The models having the highest eigenvalues were the Analytical Step-By-Step Model (4.80) and the Intuitive Pattern Recognizing Model (4.72), indicating that these models were the most frequently used in the decision-making process. These models represented the poles of the continuum of decision-making from analytical to intuitive. The remaining three decision-making models were in the middle of the continuum and were used less frequently (Lauri et al.).

Additional analysis explored the relationship of various demographic factors to decision-making. Nursing education was significantly associated with decision-making

with nurses having baccalaureate degrees (or 3 to 4.5 years of education) more likely to use intuitive pattern recognizing models than nurses with 2.5 to 3 years of education. Nursing experience was significantly correlated only with the intuitive pattern recognizing model. Nurses with 5 to 10 years of experience used that model the most; nurses with less than one year of experience used it the least. Area of clinical practice was significant related to the analytical step-by-step model, the intuitive pattern recognizing model, and the intuitive interpreting model. Nurses working in short term or acute care settings used all of those models more frequently than nurses in long term care (Lauri et al., 2001).

Manias, Aitken, and Dunning (2004) also sought to identify decision-making models used by nurses when managing patients' medications. The authors defined three decision-making models to be explored: hypothetico-deductive reasoning, pattern recognition, and intuition. Hypothetico-deductive reasoning involved the generation and testing of hypotheses based on patient data. Pattern recognition referred to a process of making a judgment based on previous experience in which a patient presented with similar characteristics to those seen in patients cared for in the past. Intuition occurred at a subconscious level and involved the use of tacit knowledge as the basis of the decision-making. Participants included 12 nurses in their first year of clinical practice in a medical/surgical unit. Participants were observed by the researchers during a two hour period in early morning, mid-day, and mid-afternoon. Observations were audio recorded and the participants were also interviewed after the observation periods. Audio tapes were transcribed and analyzed by coding and identification of themes.

Data analysis showed that the most commonly used model for decision-making was the hypothetico-deductive reasoning model, followed by pattern recognition, and

then by intuition. Themes identified under the hypothetico-deductive reasoning model included objective monitoring, asking the patient about their pain and medication needs, and observation of the patient's body language. Nurses utilized the objective monitoring in their decision-making about administering pain medications when they assessed vital signs and pathology reports prior to medication administration and assessed patient response after the administration of the pain medications. Only four nurses were observed to reassess pain level after administration of a pain medication. Two observations were identified that could have had potentially harmful consequences by failure to monitor patient condition after the administration of a medication (Manias et al., 2004).

Patterns related to patient characteristics and patterns related to medication characteristics were identified as themes under the pattern recognition category. It was also noted that pattern recognition was more apparent in units where the patients had similar medical conditions. Nurses became familiar with medications commonly prescribed for patients in those units. However, it was noted that there were instances of failure of nurses to question orders for medications, e.g., heparin for an ambulatory patient who was being discharged post-surgery. There were only two occurrences of nurses using intuition as a decision-making model during the observations (Manias et al., 2004). This was consistent with Benner's (1984) theory as these were novice nurses who may not have had the breadth of experience to develop intuition to be used in decision-making. Implications from this research included the recommendation that opportunities for decision-making be increased in nursing education including experiences for nursing students to recognize patterns and trends and to verbalize their thought process when making a clinical decision.



Bucknall (2000) conducted a qualitative study with 18 critical care nurses to observe clinical decision-making in a natural setting. The author reasoned that most research regarding clinical decision-making has been conducted using patient simulations and lack the reality of the context of actual patient situations. Therefore, it is important to study decision-making by nurses in a natural setting to determine the actual clinical decision-making process used by nurses when caring for patients. The sample consisted of 18 nurses--two each at the appointment level of registered nurse, clinical nurse specialist, and charge nurse in three different hospitals. All of the study participants were full time nurses in the critical care unit and had completed a critical care course. Data were collected by observing the nurse's activities and recording on an audio recorder. Recordings were then transcribed and coded. Data were coded into three core categories: intervention, communication, and evaluation. These categories were then subdivided to include new and old decisions. New decisions were described as decisions that were occurring for the first time on the shift being observed. Old decisions were decisions that had been previously made and were being maintained.

Intervention decisions were defined as "an act which occurs to prevent or modify the patient situation" (Bucknall, 2000, p. 30). Interventions included hands-on patient care and indirect interventions that may include ordering equipment, restocking supplies, and gathering necessary equipment and medications. Communication decisions were defined as "the act of imparting to, and receiving information from, people" (Bucknall, p. 30). This included any member of the health care team, patients, or visitors. Examples of communication decisions included communicating patient status with other members of the health care team, verifying information, confirming decisions with others, and updating patients and family on care status. Evaluation decisions were described as "any

deliberate activity which observed, measured, or recorded or reviewed data to make an informed clinical decision on the patient's current health status" (Bucknall, p. 30).

Data analysis revealed that the average number of decisions observed in the two hour observation period was 238 or approximately one clinical decision every 30 seconds. The most frequently observed type of decision was evaluation (51.4%), followed by communication (29.5%) and intervention (19.3%). Data analysis across all demographic variables indicated that nurses tended to make more "old" decisions than "new" decisions. This was consistent for intervention, communication, and evaluation decisions. Contrary to results reported by Hoffman et al. (2004), Bucknall (2000) found that level of experience was likely to be a factor in decision-making; nurses with five or more years of experience were more likely to make both new and old communication and evaluation decisions. Nurses with less than five years of experience were more likely to make evaluation decisions, suggesting that they might defer implementing a new intervention until they were sure that the trending data supported the decision. These less experienced nurses were likely to refer patient problems to more experienced nurses rather than make the clinical decisions themselves. These results indicated that the inability of inexperienced nurses to make clinical decisions might jeopardize patient safety and well being.

Aitken (2003) investigated the use of decision-making strategies of critical care nurses, specifically whether the nurses used hypotheses during decision-making and what data collections strategies were used in the decision-making process. The framework for the study consisted of a rationalist approach using attributes, concepts, and strategies to describe decision-making. Attributes were described as features which vary over time, e.g., signs and symptoms exhibited by the patient. These included such things as vital

signs, breath sounds, pulses, and past patient history. Attributes were collected and linked to form concepts. For example, attributes of heart rhythm, heart rate, fluid status, and preload might be considered when developing the concept of cardiac output. The final step in the process is the strategy used to develop the decision. The objective of a decision-making strategy is to arrive at a decision with the least amount of information while achieving the greatest amount of certainty of the correctness of the decision. decision-making strategies identified in the study included simultaneous scanning strategy, successive scanning strategy, conservative focusing strategy, and focus gambling strategy. The steps in the decision-making process were identified as attribute acquisition, hypothesis generation, and hypothesis evaluation.

Simultaneous scanning strategy is characterized by the collection of many attributes in the attribute acquisition phase and the generation of many hypotheses. Hypotheses are maintained, adapted, or eliminated after each phase of attribute acquisition. This process is repeated many times during the course of a decision. This strategy is most useful when the nurse knows the subject well. Successive scanning strategy involves the collection of a few attributes and the generation of one specific hypothesis at a time. New hypotheses are generated and reviewed based on new acquisition of attributes. This strategy is best used when the nurse is not familiar with the subject. Conservative focusing strategy is most useful when the decision maker can identify some but not all important aspects of the clinical problem. It involves the collection of few significant attributes and the generation of a specific hypothesis related to the attributes. Further collection of attributes is focused around the specific hypothesis. Few new hypotheses are generated and hypotheses are adapted by changing only one element at a time. Finally, the focus gambling strategy is used most frequently by experts

in a clinical area. Attributes are collected and hypotheses generated, although no obvious rational path may be apparent. Further attributes are collected that relate to the hypotheses and hypotheses are evaluated and refined based on new information.

Eight registered nurses with at least five years of critical care experience, including critical care certification, were observed during a two hour period of caring for a critically ill patient. Patients were newly admitted from cardiac surgery and all were in a similar phase of recovery. The nurses observed had not previously cared for the patient. Nurses used the “thinking aloud” method to explain their assessment and management of the patient. Using the thinking aloud method, nurses were equipped with portable recording devices and asked to verbalize thoughts and actions during the care of the patient. Recorded tapes were then transcribed and analyzed (Aitken & Mardegan, 2000). Aitken (2003) followed up the recorded and transcribed data collection with an interview with each nurse for clarification and explanation. Data analysis consisted of identification of formation of hypothesis related to concepts and attributes of hemodynamic monitoring. Results indicated that hypothesis generation to link between attributes and concepts occurred 73% of the time for seven of the participants (range 59% to 85%). The eighth participant identified hypotheses only 33% of the time. The focused gambling strategy was most often observed by these experienced nurses, although all strategies were observed ranging from scientific to intuitive. Results of this study were consistent with the views of Thompson (1999) who stated that nurses move along a continuum during the decision-making process from highly structured and scientific to a more intuitive approach based on the situation based on the complexity and context of the task, the time frame, and the experience of the nurse.

Clinical decision-making by nurses often has the potential for life and death consequences for patients. Cioffi (2000) conducted a qualitative study to describe the experiences of nurses who made the decision to call for emergency assistance for patients for whom they were caring. Thirty-two experienced registered nurses were interviewed. The mean number of years of experience was 14. The author designed the study to limit participation to registered nurses with at least five years of clinical experience to include only nurses defined as expert by Benner (1984). Interviews were audio recorded and transcribed verbatim. Data analysis revealed five main categories with several subcategories identified for each category.

The first category was described as “uncertainty” with nurses questioning if they were doing the right thing by calling for emergency assistance. Nurses expressed concern that they would look incompetent if they called and it was deemed that the emergency assistance was unnecessary. Nurses also indicated that they sought the opinion of colleagues prior to making the call when faced with uncertainty, e.g., unfamiliarity with the patient or the patient’s condition. The second category was “identification of change in patient’s condition”; subcategories included “a gut feeling and a sixth sense, something you cannot put your finger on, something is going to happen, ‘knowing’ the specific patient, past experiences with similar patients, and patterns built up” (Cioffi, 2000, p. 110). Category three was “identification of ‘at risk’ situations.” This involved situations where the nurse felt the available staff was not satisfactory to care for the patient and made the decision to call for emergency assistance. This decision was sometimes viewed as “going over the top” of other health care personnel and at other times was viewed as a “collaborative decision” (Cioffi, p. 110). The fourth category involved the feelings nurses had when deciding to call for emergency assistance. These feelings ranged from

nervousness over whether it was the correct decision to confident that they had made the right decision for the patient. Finally, the fifth category was described as valuing the emergency system and feeling grateful that the emergency assistance was available.

Cioffi (2000) identified the use of deductive reasoning, pattern recognition, and intuition in the descriptions of the decision-making by nurses. She also stated that the study emphasized the role of experience in the decisions of nurses and the need to provide opportunities for less experienced nurses to refine their clinical decision-making skills.

### Decision-making and Nursing Students

It is apparent that clinical decision-making is a high priority for nursing practice. It stands to reason that the development of clinical decision-making is vital for nursing education to prepare nursing students for the requirements of the nursing profession. Much of the research regarding clinical decision-making in nursing students deals with the relationship of decision-making to critical thinking, knowledge acquisition, and confidence. Exploration of clinical decision-making in nursing students will provide nurse educators valuable insights to facilitate the development of this necessary component of nursing practice.

There is much discussion about the relationship of critical thinking and decision-making (Bowles, 2000; Girot, 2000; Hoffman & Elwin, 2003). Bowles found a significant, positive relationship between critical thinking skills and clinical judgment in a study of 65 baccalaureate nursing students. Using the California Critical Thinking Skills Test (CCTST) and the Clinical Decision Making in Nursing Scale (CDMNS). Bowles found that although the total scores for the two tests were significantly correlated,

only inductive reasoning and inference subscales on the CCTST were significant predictors of clinical judgment on the CDMNS.

These results are in contrast to Girot (2000) who found no significant relationship between critical thinking and decision-making using the same instruments. Girot's study also intended to explore clinical decision-making related to education and clinical practice. The sample of 82 participants included first year nursing students (Group P,  $n = 32$ ), fourth year nursing students (Group Q,  $n = 19$ ), mature practitioners who had recently completed a degree program (Group R,  $n = 17$ ), and mature practitioners who were recently enrolled in a degree program (Group S,  $n = 15$ ). The only significant difference between groups on the total score of the CDMNS was between Groups S and Q and Groups S and R. Both Groups Q and R demonstrated higher levels of clinical decision-making than Group S for both the total score on the CDMNS and subscale A on the CDMNS, which is the search for alternatives or options. Girot asserted that these findings supported the hypothesis that exposure to academia has a significant effect on the clinical decision-making abilities of nurses. Recommendations for nursing education included the development of teaching strategies to develop critical thinking and decision-making in nursing students, e.g., incorporation of reflection and analytical exercises into clinical experiences.

Contrary to results found by Bowles (2000) and Shin (1998) who found a significant positive relationship between critical thinking and clinical judgment and Girot (2000) who found no significant relationship between critical thinking and confidence in clinical judgment, Hoffman and Elwin (2003) found a significant, negative relationship between critical thinking and decision-making in their study of 83 new graduates from 11 different universities in Australia. The authors suggested that the findings may indicate

that students with higher critical thinking levels may be more hesitant to make clinical decisions while analyzing data and seeking answers to clinical data.

Botti and Reeve (2003) studied clinical decision-making in 60 second and third year nursing students with high and low academic scores. Students were provided with simulated clinical problems classified as easy, difficult, and impossible. Each of the simulations contained confirming information that would support the final diagnosis, contextual information that included information about the patient such as demographic information that had no relevance to the clinical problem, and disconfirming information that included information that could lead to possible explanations for the clinical problem other than the accurate problem.

Easy cases contained only confirming and contextual information. Difficult cases contained confirming and contextual information as well as disconfirming information. Impossible cases contained only contextual and disconfirming information that would not support any particular diagnosis. Students were provided with the case study in written format and asked to suggest possible causes for the patient's symptoms, indicate the usefulness of the information on a scale from 1 to 5, request further information if needed, and suggest what information they would like provided. The researchers sought to identify the students' ability to generate alternative hypotheses, identify disconfirming information, recognize the need for additional information, and diagnose the problem. Data analysis included a two way ANOVA with student level of study and academic achievement. For the easy case studies, high academic students made more accurate diagnoses than did lower academic students regardless of year of study, suggesting that academic ability influences diagnostic accuracy more than experience. However, for the difficult case studies, the third year students were better able to identify disconfirming



information than second year students regardless of academic ability. There was no significant difference in diagnostic accuracy with years of study or academic ability. Second year students were more likely to seek additional information for the impossible case study than were third year students. Higher academic ability students generated more alternative hypotheses than the lower academic ability students, although the values were not significant. The findings indicated that both intellectual ability and domain-specific knowledge were important factors in decision-making. The researchers recommended that nurse educators provide increasingly complex patient assignments and clinical simulations to encourage critical thinking and decision-making (Botti & Reeve).

Several researchers sought to explore clinical decision-making in nursing students and new graduate nurses through qualitative studies. Etheridge (2007) interviewed nurses within one month after their orientation with a preceptor, two to three months later, and then eight to nine months later to study the meaning of making clinical judgments. The researcher described the transition from being a student to being a nurse as “learning to think like a nurse” (p. 25). Themes identified from the data analysis included developing confidence in making decisions, learning to be responsible for patient care and clinical decisions, and the development of relationships with other members of the health care team. New graduate nurses related that the most important learning strategy was clinical experience and exposure to interactions with the entire health care team including physicians. The participants expressed surprise at the responsibilities of a nurse, many of which they were not aware of as nursing students. Nurses interviewed felt that more autonomy and opportunities to think for themselves would have been helpful as students. “New graduates believe faculty members are their role models and want faculty to ask them questions and challenge them to think like nurses” (Etheridge, p. 29).

White (2003) interviewed 17 senior nursing students to identify how the students learned to make clinical decisions. Five themes were identified. The first theme was “gaining confidence in skills” (p. 115). Students expressed that gaining confidence in both technical and communication skills assisted them in being able to make clinical decisions. When students were unsure of their skills, they focused more on their anxiety than the patient situation and the clinical decision to be made. The second theme identified was “building relationships with staff” (p. 115). A trusting and helping relationship with the nursing staff enabled the student to feel confident in their skills and decision-making capabilities. The third theme was identified as “connecting with patients” (p. 116). Students described listening to and learning about the individuality of patients. This created an atmosphere of relying less on rules and more on patient needs for decision-making. The fourth theme was identified as “gaining comfort in self as a nurse” (p. 117). As students became more confident in their abilities, their comfort with the environment increased and they were more focused on clinical decision-making than the anxiety of the unknown. The first four themes combined to lead to the fifth and final theme--“understanding the clinical picture” (p. 117). Students began to realize that the clinical picture was more than the sum of the parts. In their ability to consider the entire clinical picture, students were able to proceed to decision-making regarding patient issues. It was recommended that nurse educators seek teaching strategies and environments that empower nursing students to gain the confidence necessary to develop clinical decision-making abilities (White).

Garrett (2005) conducted a phenomenological study of 21 senior baccalaureate nursing students to explore their perceptions of clinical decision-making. Data triangulation was accomplished by using a variety of data collection methods. Students

completed individual self assessments and a group concept mapping exercise. In addition, 12 of the students participated in a focus group interview. Data from the self assessment questionnaires and the focus group interviews were analyzed and themes were identified. Content analysis from the concept map was compared to data from the self assessment questionnaires and the focus group interviews to identify seven major themes: “quality of care, professional practice, clients/patients, skills of knowledge and attributes, external factors, decision-making process, and personal impact” (p. 34). Students appeared to be primarily concerned with the impact and implications of clinical decisions rather than the clinical decision-making process. Students displayed a tendency to view decision-making in absolute terms by applying templates based on previous experience. However, students included intuition as part of the concept map (Garrett).

Closed questions on the self assessment questionnaire asked students to rank their own skill in decision-making as novice, beginner, advanced beginner, competent, or expert. The majority of students ranked themselves as advanced beginner, followed by beginner. Three students rated themselves as competent and two students felt they were novices. A second question asked students if they felt confident making clinical decisions. Fourteen of the 21 students answered that they did not feel confident making clinical decisions. The remaining seven students responded that they felt confident in decision-making only sometimes. Clearly, although students were beginning to feel competent in clinical decision-making, that did not translate to confidence in decision-making. Students indicated that more experience in reflection and problem solving during their nursing education would be beneficial to facilitate the development of clinical decision-making skills (Garrett, 2005).

Baxter and Rideout (2006) explored clinical decision-making with second year baccalaureate students. Twelve students who were enrolled in their first clinical rotation completed a structured journal after each clinical day for two weeks. In addition, unstructured interviews were also conducted, and were audio recorded and transcribed. Three key encounters were identified as significant in decision-making: encounters with patients, encounters with nursing staff, and encounters with clinical faculty. The most significant of these was the encounter with the patient; patients represented a source of help and knowledge, but also fear and conflict. Students identified that they wanted to satisfy the patient's wishes even if it meant making a clinical decision that they knew was unsafe. Responses to the patient encounter included emotional responses and knowledge based responses. The emotional based response most identified was lack of confidence, which impacted the student's ability or inability to make a clinical decision. However, when students felt confident in the knowledge of a situation, they were better able to make clinical decisions (Baxter & Rideout).

Student and nursing staff encounters could be positive or negative. Students found it helpful to have role models for decision-making. However, students frequently identified that they felt fear of and intimidation from nursing staff. Students related that they often made decisions based on what the nurse told them to do even if they felt it was not the correct action. Students did not feel empowered to question the nurses' decisions (Baxter & Rideout, 2006).

Interestingly, the encounter between the student and the clinical faculty received the least amount of attention from students. Students viewed clinical faculty as a source of information and support in clinical decision-making. However, students indicated that they accessed the clinical instructor far less than the nursing staff. The authors

recommended that nursing curricula be adapted to include issues of staff intimidation and opportunities for students to role play such negative encounters. They also suggested that nursing faculty must be aware of their role in modeling decision-making in clinical settings (Baxter & Rideout, 2006).

### Decision-making and Nursing Education

Nursing faculty must be aware of the importance of teaching clinical decision-making to nursing students and nursing curricula must be designed to facilitate the development of clinical decision-making. Some colleges of nursing have developed specific courses and models designed to develop the clinical decision-making abilities of nursing students (Haffer & Raingruber, 1998; O'Neill, 1999; Roche, 2002). O'Neill reported on a course for graduate faculty designed to help future faculty develop clinical decision-making skills in nursing students. Recommendations included teaching both intuitive and analytical decision-making in didactic content, fostering self awareness through reflective journaling, infusing clinical reasoning throughout the curriculum, encouraging self evaluation by students, and creating a trusting environment where students are free to question alternatives.

Roche (2002) described a model of clinical nursing education, the Clinical Educator Model, where students are paired one on one with clinical staff nurses who have been trained as clinical educators. This eliminated the traditional clinical experience where up to 10 students are assigned to one clinical faculty, limiting the amount of experience students are able to achieve with an experienced nurse. A pilot study of 50 senior nursing students compared clinical decision-making abilities of students in two universities--one with a traditional clinical curriculum and one university that used the Clinical Educator Model. Clinical decision-making was assessed using a standardized

assessment published by the National League for Nursing, *Assessing Nursing Practice: Medical-Surgical Problems*. Students in the Clinical Educator Model group scored significantly higher than the students in the traditional clinical group. While these results were promising, the authors cautioned that the study had several limitations including the lack of a pretest to determine any difference in the group prior to the clinical experience. In addition, while the curricula of the universities were similar, there was no way to determine the potential difference in faculty and quality of instruction. Additional research was recommended to further explore this possibility for enhancing clinical decision-making skills of nursing students (Roche).

Haffer and Raingruber (1998) found that senior nursing students who were nearing completion of nursing school and ready to embark on a career in nursing were concerned about their readiness to practice as nurses and their ability to make necessary clinical decisions. Therefore, a clinical reasoning course was developed and offered as an elective course. Narratives of clinical cases were presented by students, faculty, and invited experienced nurses. Clinical decisions were explored incorporating feelings, contextual aspects of the case, and complexities of the developing case. Case presentations were videotaped and examined by course participants. In addition, students kept journals that were submitted at the end of the course. Videotapes and journals were analyzed to discover themes. Based on analysis of the data, faculty concluded that student confidence in decision-making increased throughout the duration of the course. Students progressed from decisions related only to the prevention of harm to decisions that promoted positive actions. Other comments that indicated diminished confidence at the beginning of the course included “being overwhelmed by inexperience, perceiving peers as more capable, lacking confidence to question, feeling total responsibility, and being

disorganized and scattered” (p. 64). Comments collected at the end of the course that indicated increased confidence in decision-making included “drawing strength from others’ experience, learning one’s capabilities are similar to peers, discovering power in questioning, experiencing comfort in shared responsibility, and finding ways to focus under stress” (p. 64). The authors stated that implications for nursing education included empowering students to ask questions and seek answers, encouraging students to collaborate with other members of the health care team, and providing opportunities for reflection on clinical experience.

### Summary

It is apparent that there are many challenges facing the profession of nursing--the shortage of qualified professional nurses, increased demands related to increasing acuity of health care needs of a growing population in need of health care, and the historic lack of nursing involvement in decisions regarding policies and practices that impact the nursing profession. Nurses are increasingly responsible for decisions regarding patient care issues. Research indicates that novice nurses do not feel prepared for the challenges related to nursing practice. Empowerment has been shown to be an important concept in nursing. Nurses, and nursing students, who are empowered and function in empowering environments are more actively engaged in their work and demonstrate a greater commitment to their profession and their organization. Caring has been described as central to nursing; evidence regarding the impact of caring is supportive of this premise. Nurse educators must accept the responsibility of redesigning educational curricula to better prepare new graduate nurses to be equal partners in health care including designing curricula and teaching strategies to empower students. A caring curriculum has been

described as one where attitudes of mutual trust and respect contribute to an empowering environment where students are encouraged to grow and develop in their abilities to care.



## CHAPTER III

### METHODOLOGY

#### Research Design

This non-experimental, quantitative study was a causal-comparative design. This research design was chosen to investigate the effect of an independent variable upon the dependent variables. The independent variable (type of curriculum structure) is not manipulated for this study. Gall, Gall and Borg (2007) state that the independent variable in a causal-comparative study is measured in the form of categories. These categories can either be nominal or ordinal scales. In this research study the category of the independent variable was nominal. Students surveyed in this research study were enrolled either in a curriculum based on a theory of caring or a curriculum that is not based on a theory of caring. While a strong conclusion regarding cause and effect is not possible with a causal-comparative study, this research design is appropriate for initial exploratory studies where the independent variable cannot be manipulated (Gall et al., 2007).

The purpose of the study was to determine whether baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived empowerment and perceived clinical decision-making abilities than baccalaureate nursing students who are enrolled in a curriculum not based on a theory of caring.

#### Research Method

The target population for this research study was baccalaureate nursing students in their final two semesters of the program of study. The research sample was obtained by

purposive sampling. The subjects were recruited from a university identified as having a curriculum based on a theory of caring and a comparable university with a curriculum not based on a theory of caring. A review of literature was conducted searching for universities or colleges that explicitly described the program of nursing as having a philosophy that caring is central to nursing. The theoretical framework of this study is based on the theory of Nursing as Caring (Boykin and Schoenhofer, 2001). University X was chosen as the university that represents a curriculum based on a theory of caring because the curriculum of University X is based on the Nursing as Caring Theory of Boykin and Schoenhofer. The published mission and vision of University X baccalaureate of nursing program describe caring as central to nursing and to the nursing curriculum. All didactic and clinical courses are designed around “nursing situations” as described in Boykin & Schoenhofer (2005) and the concept of caring is included in each course description. Several of the courses include caring in their titles, such as Nursing Situations in Practice: Health Assessment and Technological Caring; Art, Aesthetics, and Caring in Nursing; Spiritual Caring in Nursing; and Caring Communities in Nursing Seminar (University X website, 2010).

A comparative university, University Y, was identified through review of the American Association of Colleges of Nursing (AACN) list of Commission on Collegiate Nursing Education (CCNE) approved colleges and universities offering baccalaureate degrees in nursing. University Y does not identify that the nursing curriculum is based on a specific nursing theory and the theory of caring is not described in the mission, vision, or philosophy of the nursing program. University Y was selected as the comparative university with a curriculum that is not based on a theory of caring based on the similarities of the universities. Both universities are public, 4 year degree granting

institutions. Both have similar numbers of students enrolled in the nursing program. An examination of the college or university web sites provided information regarding the mission, vision, and philosophy of the nursing departments to determine if the universities met the criteria for a caring or a traditional curriculum.

Deans of the colleges of nursing of identified colleges and universities were contacted to obtain permission to conduct the research. All nursing students who were enrolled in either of the final two semesters of nursing school prior to graduation and who met the inclusion criteria were invited to participate in the research study. Students who are in the final two semesters of study from a baccalaureate program are usually considered senior students and have completed the majority of their nursing education. It was decided to include the final two semesters rather than the final semester to increase the sample size and include students in their first semester of the senior year as well as the second semester of the senior year. After obtaining approval from the Dean of the College of Nursing an email was sent to the Dean inviting senior nursing students to participate in the research study. The email contained a link to an online survey which contained the questionnaires. The Dean was asked to distribute the email to senior nursing students. Students completed the demographic data form, the Learner Empowerment Measure (LEM), and the Clinical Decision Making in Nursing Scale (CDMNS).

### Research Subjects

Research subjects for this study were baccalaureate nursing students who were enrolled in one of their final two semesters of nursing school. There were no gender restrictions. Subjects were required to be at least 18 years of age. Subjects were required to be able to read and understand English. Registered nurses who were in a degree

completion program were excluded from this study. It was assumed that previous experience as a registered nurse may predispose one to higher levels of perceived empowerment and perceived clinical decision-making abilities.

Inclusion criteria were as follows:

1. Students must be enrolled (full time or part time) in a baccalaureate degree nursing program.
2. Students must be enrolled in one of the last two semesters prior to graduation.
3. Students must be at least 18 years of age.
4. Students must read and understand English.
5. Students must not have a previous nursing degree including degrees as a Licensed Practical Nurse, Licensed Vocational Nurse, or Registered Nurse with a diploma or associate degree.

A statistical power analysis is required to minimize the likelihood of a Type II error (Gall et al., 2007). Power is influenced by sample size, level of significance, and effect size. Power increases with increased sample size. Statistical power can also be increased by setting the level of significance at a level to decrease the risk of a Type I error. Effect size is the magnitude of the effects in the sample and is described as small, medium, and large. It was assumed that this study would have a medium effect size, assuming that students enrolled in a curriculum based on a theory of caring would demonstrate a moderately increased amount of empowerment and perceived clinical decision-making when compared with students who are enrolled in a traditional curriculum. Statistical power level refers to the level of certainty of rejecting a null hypothesis that is actually false. Olejnik (as cited in Gall et al.) created tables to determine sample size based on statistical power, effect size, and level of significance.

Statistical power may be set at .7 or .5, with .7 being the more rigorous. The alpha level for this research was set at .05 and statistical power at .7. Based on this power analysis for *T-test*, the desired sample size was determined to be 100 students.

#### Protection of Human Subjects

Since the study was conducted using students, application was made to the Institutional Review Board of the University of Northern Colorado prior to the initiation of the study. However, the study posed no risk of injury to the participants. All students were at least 18 years of age. Informed consent was obtained by providing a letter to each study participant describing the purpose of the research and the research procedure. Completion of the questionnaires constituted informed consent. Confidentiality was maintained by numerical coding of the research instruments, storage of the data in a secured location, reporting of aggregate data rather than individual data, and the destroying of data once the research was complete.

#### Instruments

##### *Learner Empowerment Measure (LEM)*

In the development of the Learner Empowerment Measure (LEM), Frymier et al. (1996) expanded on previous research by Thomas and Velthouse (1990) where task empowerment had four dimensions: meaningfulness, competency, impact, and choice. Thomas and Velthouse (1990) describe meaningfulness as the determination of the value of a task in relation to one's beliefs, and competence is described as the feeling of being qualified and capable performing tasks toward reaching a goal. Impact is the individual perception that the accomplishment of a task is perceived to be relevant and will make a difference to a situation. Choice is the degree to which persons self-determine their goals

and methods whereby goals are achieved. The model suggests that a greater amount of choice leads to increased feelings of empowerment (Thomas & Velthouse).

Validity of the LEM was determined through two separate pilot studies. The first study was conducted with 470 undergraduate students at a Midwest university using a 30 item Likert scale questionnaire. Responses to items were on a scale of 0 (*never*) to 4 (*very often*). Scores ranged from 0 to 120 on the scale with higher numbers indicating higher levels of empowerment. Factor analysis with iteration was conducted, resulting in the emergence of three of the four expected dimensions accounting for 74% of the variance. The first factor--meaningfulness--accounted for 31% of the variance, had an alpha reliability of .89, with  $M = 16.70$ , and  $SD = 6.94$ . The second factor—competence—accounted for 21% of the variance, had an alpha reliability of .83, with  $M = 18.63$ , and  $SD = 3.48$ . Impact was the third factor which accounted for 22% of the variance, had an alpha reliability of .81, with  $M = 6.97$ , and  $SD = 3.66$ . The fourth factor—choice--did not emerge as a factor. The factors of meaningfulness, competence, and impact were summed to create an overall empowerment measure. The overall empowerment measure had an alpha reliability of .90, with  $M = 42.3$ , and  $SD = 11.47$  (Frymier et al., 1996).

The first study also examined the relationships between “learner empowerment and teacher immediacy, student motivation, relevance, and self-esteem” (Frymier et al., 1996, p. 184). Learner empowerment was significantly correlated with teacher immediacy (.64 for verbal and .47 for nonverbal), student motivation (.75 for state motivation), relevance (.59), and self-esteem (.15). All three dimensions of empowerment (meaningfulness, competence, and impact) were positively associated with teacher immediacy, both verbal and non verbal; with state motivation, but not trait motivation;

and with relevance. Self-esteem was significantly associated with meaningfulness and competency, but not impact (Frymier et al., 1996).

A second study was conducted with 340 undergraduate students. The purpose of the second study was to further establish validity and reliability as well as refine the LEM. Motivation and relevance which were measured in the initial study were again measured in the second study. In addition, a measure of affective learning was included in the second study to test the assumption that students who are more empowered and feel that their efforts are worthwhile and meaningful will learn more than students who feel disempowered. Eighteen of the original 30 items were retained for the second study and an additional 20 items were added or refined. Some items were rewritten to better reflect the measurement of feelings of empowerment by students rather than the efforts of teachers to empower students. Factor analysis indicated that three factors accounted for 71% of the variance in affective learning. The first factor—impact—had an alpha reliability of .95, with  $M = 30$ , and  $SD = 6.40$ . All impact *a priori* items loaded on this factor. Meaningfulness was the second factor with an alpha reliability of .94, with  $M = 20.99$ , and  $SD = 8.08$ . All meaningfulness *a priori* items loaded on this factor. The third factor was competence with an alpha reliability of .92,  $M = 26.83$ , and  $SD = 6.40$ . Nine of the 10 competence *a priori* items loaded on this factor. Consistent with the first study, choice did not emerge as a separate factor, although six of the choice *a priori* items loaded on the impact factor (Frymier et al., 1996).

The reliabilities of each dimension improved from the first study to the second study. The reliability for meaningfulness increased from .89 to .94, the reliability for competence increased from .83 to .92, and the reliability for impact increased from .81 to .95. Further evidence of construct validity was the association of empowerment with

immediacy, relevance, and self-esteem in the first study and the association of empowerment with relevance in the second study. Correlations among the dimensions were similar between the two studies for meaningfulness and competence. However, the correlation was much larger for impact, most likely due to the increased number of impact items on the second measure (Frymier et al., 1996). The final instrument contains 35 items to measure the categories of impact (16 items), meaningfulness (10 items), and competence (9 items).

#### *Clinical Decision Making in Nursing Scale (CDMNS)*

The Clinical Decision Making in Nursing Scale (CDMNS) is a 40 item, 5 point Likert scale designed to measure the self perceived clinical decision-making skills of nursing students (Jenkins, 1985). Likert scale possibilities are 1 (*never*) to 5 (*always*). Overall scores can range from 40-200 on the total scale with lower scores indicating lower self perception of decision-making. Scores on the individual subscales can range from 10 to 50. Jenkins based the tool construction on seven criteria for decision-making described by Janis and Mann (as cited in Jenkins): (a) a thorough consideration of alternatives; (b) consideration of the objectives to be accomplished and the implications of the choice selected; (c) consideration of the risks and benefits of each course of action; (d) searching for relevant new information in the evaluation of alternatives; (e) assimilation of new information and available expert judgment whether or not the information or expert judgment supports the chosen action; (f) reexamining all alternatives, including those deemed unacceptable, before making the final decision; and (g) making plans for implementation of the plan including alternative plans of action should the need for modification arise.



Jenkins (1985) based the construction of the CDMNS on a combination of theories related to self perception and decision-making. Self perception arises from individual beliefs and attitudes about self and is formed through interactions and evaluations of others. Jenkins asserted that “any experience may be a source of beneficial self-evaluation, just as it may also be a source of devaluation” (Jenkins, pp. 222-223).

Jenkins used a normative model of decision-making based on the work of Janis and Mann (as cited in Jenkins, 1985) to develop the CDMNS. The seven criteria of decision-making described by Janis and Mann were consolidated into four subscales for the CDMNS: criteria one and two remained stable and constitute subscale A and B; criteria three, six, and seven were combined into subscale C; and criteria four and five were combined into subscale D. The categories of decision-making include the following subscales: “(1) search for alternatives or options, (2) canvassing of objectives and values, (3) evaluation and reevaluation of consequences, and (4) search for information and unbiased assimilation of new information” (Jenkins, p. 224).

Content validity was established for the CDMNS by a review of relevant literature during the construction of the items. In addition, the tool was reviewed by senior nursing students for clarity of the items and nurse educators for “representativeness, sense of construction, appropriateness, and degree of independence from other items” (Jenkins, 1985, p. 225). Each item was evaluated using a specification matrix which yielded a total score for each item: items that scored 77% agreement were rated as good items and retained for inclusion in the tool, items that scored between 70 and 76% were reevaluated for inclusion and rewritten, and items that scored less than 70% were excluded (Jenkins).

Reliability was assessed using Cronbach’s alpha and standardized-item alpha. An initial Cronbach’s alpha for the first questionnaire containing 44 items was 0.79. The four

items with the lowest coefficients were dropped, yielding a final Cronbach's alpha of 0.83 and a standardized alpha of 0.85 (Jenkins, 1985).

Testing of the CDMNS took place in three phases with generic baccalaureate students in their sophomore, junior, and senior years. Pretesting was conducted with 32 students; nurse faculty also reviewed the tool. The purpose of the pretest was to determine the clarity of instructions, identify the practicality of administering the tool, and discover items that may be misunderstood or confusing. The tool was then pilot tested with 30 subjects who did not participate in the pretesting (Jenkins, 1985).

The formal testing of the CDMNS was conducted with 111 students: 27 sophomores, 43 juniors, and 41 seniors. Data were analyzed using analyses of variance to test the hypothesis that there would be a difference in student perception of decision-making between the levels of students. The only significant difference was on subscale A, which tests for the students' ability to search for alternatives or options during the decision-making process, where junior students differed significantly from senior students ( $F = 5.45$ ,  $df = 2/108$ ,  $p < 0.01$ ). Data were further analyzed using factor analysis. Fourteen factors emerged with the first three factors accounting for 50.6% of the variance. An additional principal-factor analysis was conducted and four factors emerged. Examination of the four factors indicated that no individual construct was consistently identified in any of the four factors (Jenkins, 1985).

#### *Demographic Survey*

A demographic data questionnaire developed by the researcher was used to obtain information about the subjects, such as age, gender, race, and highest level of previous education. Statements designed to obtain students' perceptions of caring in the nursing program were also included. An open ended question asked participants to identify

previous work experience to determine if participants have previous employment related to health care.

### Statistical Analysis

Descriptive statistics were performed on demographic data with frequencies and percentages for age, gender, and number of years of education. Mean scores were determined for the overall CDMNS and for each subscale. An overall mean score for the LEM was determined as well as mean scores for the three factors (meaningfulness, competence, and impact). T-tests were used to compare the mean scores of the CDMNS and LEM between the university with the curriculum that is based on a theory of caring and the university with the curriculum that is not based on a theory of caring. Additional data analysis consisted of correlation tests to assess for relationships between demographic data and measures of empowerment and clinical decision-making. Correlation studies were also conducted to identify any relationships between levels of empowerment and clinical decision-making.

### Limitations

The following limitations were identified.

1. The purposive sample included students from only one university with a curriculum that is based on a theory of caring and one university with a curriculum that is not based on a theory of caring, thus, the results cannot be generalized to the population of nursing students.

2. The causal-comparative research design can determine relationship but not definitively determine causation. Data were collected from students using valid and reliable instruments. However, other variables, such as ethnicity and gender, may have

influenced the responses of the students, limiting the reliability that the results of the measurements of the dependent variable are caused by the independent variable.

3. Data obtained was self reported by students leading to the possibility of biased data.

4. The sample consisted of students enrolled in baccalaureate programs only and may not be generalizable to students enrolled in other nursing programs. Students enrolled in Associate Degree programs or second degree programs may not have similar results.

## CHAPTER IV

### ANALYSIS OF DATA

The purpose of this study was to investigate whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring reported higher levels of perceived empowerment as learners and higher levels of perceived clinical decision-making ability than senior baccalaureate nursing students enrolled a curriculum not based on a theory of caring. This study also investigated whether there is a relationship between the level of empowerment as learners and the level of perceived clinical decision-making ability in senior baccalaureate nursing students.

After a description of the sample, this chapter will describe the analysis of data conducted to address the following research questions and hypotheses:

- Q1 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived learner empowerment than senior baccalaureate nursing students enrolled in a curriculum which is not based on a theory of caring?
- Q2 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring?
- Q3 Is there a relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students?
- H1 Senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring will report higher levels of perceived learner empowerment than senior nursing students enrolled in a curriculum which is not based on a theory of caring.
- H2 Senior baccalaureate nursing students enrolled in a curriculum based on theory of caring report will higher levels of perceived clinical decision-

making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring.

- H3 There will be a significant positive relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students.

### Description of the Sample

Surveys were distributed online to senior nursing students at two universities.

Although the exact number of surveys distributed is unknown, communication with officials at both universities indicated that surveys were sent to approximately 70 students at each university. Thirty-five students from University X responded to the survey for a response rate of 50%. Thirty-four students from University Y responded to the survey. The response rate from University Y was 48.5%. Seven surveys were eliminated either because the students did not meet the eligibility requirements or the respondents did not complete at least two of the three questionnaires. A power analysis was completed prior to data collection to determine the desired sample size. Statistical power may be set at .7 or .5, with .7 being the more rigorous. The alpha level for this research was set at .05 and statistical power at .7. Effect size was considered to be moderate. Based on this power analysis for *T-test*, the desired sample size was 100 students. The initial survey was distributed to all senior students at the identified universities with reminder surveys sent every two weeks. Data collection was considered complete when no new surveys were received after the final two reminders. The final sample size was 62.

Demographic data displayed in Tables 1 (University X) and Table 2 (University Y) shows that the majority of students were in the 19-25 years age group (45.2% at University X and 77.4% at University Y), were female (90.3% at University X and 100% at University Y), were single and had never been married (54.8% at University X and

71% at University Y), and were Caucasian (74.2% at University X and 90.3% at University Y). The majority of students who responded to the survey had an anticipated graduation date of spring, 2011 (67.7% at University X and 58.1% at University Y). The percentage of students with previous degrees was higher at University X (83.9%) than University Y (22.6%). Specific information regarding the previous degree was not collected. Students were asked whether or not they were employed in health care. The majority of students at University X indicated that they were employed in health care (71.0%) while the students at University Y were more evenly divided between being employed in health care (58.1%) and not being employed in health care (41.9%). Students were asked to list their job if employed in health care. The majority of students who responded to the question identified that they were certified nursing assistants. Other responses included radiology assistant, nurse extern, and employment in clinics.

Students were asked to identify the most common learning activity for students in courses specific to nursing content, such as medical/surgical, obstetric and pediatric nursing; courses which focus on professional aspects of nursing, such as ethics, nursing theory, and communication; skills lab and/or simulation sessions; and on-site practicum settings. The purpose of these questions was to identify whether students in a curriculum based on a caring theory identified different learning strategies than the students who were enrolled in the curriculum which was not based on a caring theory.

Students at both universities identified that lecture was the most common learning activity utilized for the nursing courses. A small number of students at each university identified group work as a learning activity. One student at University X identified a learning activity of “patient care through evidence based practice and caring.”

Common learning activities identified for courses which focus on professional aspects of nursing, such as nursing theory, communication, culture, ethics and research, included lecture, group activities, paper writing, and online discussions.

Table 1

*Demographic Profile for University X (n=31)*

Variables	Frequency	Percentage
<b>Age</b>		
19-25 Years	14	45.2%
26-30 Years	7	22.6%
31-35 Years	4	12.9%
36-40 Years	4	12.9%
> 40 Years	2	6.5%
<b>Gender</b>		
Female	28	90.3%
Male	3	9.7%
<b>Marital Status</b>		
Single, never married	17	54.8%
Married	11	35.5%
Separated	0	0.0%
Divorced	3	9.7%
Widowed	0	0.0%
<b>Race</b>		
African American	0	0.0%
Asian	0	0.0%
Caucasian	23	74.2%
Hispanic/Latino	6	19.4%
Native American	0	0.0%
<b>Graduation Date</b>		
Fall, 2010	3	10.3%
Spring, 2011	21	72.4%
Summer, 2011	5	17.2%
Fall, 2011	0	0.0%
<b>Previous Degree</b>		
Yes	26	83.9%
No	5	16.1%
<b>Employed in Health Care</b>		
Yes	22	71.0%
No	9	29.0%



Table 2

*Demographic Profile for University Y (n=31)*

Variables	Frequency	Percentage
<b>Age</b>		
19-25 Years	24	77.4%
26-30 Years	1	3.2%
31-35 Years	2	6.5%
36-40 Years	0	0.0%
> 40 Years	4	12.9%
<b>Gender</b>		
Female	31	100.0%
Male	0	0.0%
<b>Marital Status</b>		
Single, never married	22	71.0%
Married	8	25.8%
Separated	0	0.0%
Divorced	1	3.2%
Widowed	0	0.0%
<b>Race</b>		
African American	1	3.2%
Asian	1	3.2%
Caucasian	28	90.3%
Hispanic/Latino	1	3.2%
Native American	0	0.0%
<b>Graduation Date</b>		
Fall, 2010	5	16.1%
Spring, 2011	18	58.1%
Summer, 2011	7	22.6%
Fall, 2011	1	3.2%
<b>Previous Degree</b>		
Yes	7	22.6%
No	24	77.4%
<b>Employed in Health Care</b>		
Yes	18	58.1%
No	13	41.9%

One student at University X wrote that the university “bases its curriculum on a caring attitude towards nursing. Every class emphasizes that nurses need to be culturally aware of the patient and the importance of a holistic approach to nursing.”

Responses to the question regarding common learning activities in the skills or simulation areas were predominantly focused on hands on learning of skills and use of simulation. Students identified that the most common learning activity in the on-site practicum with nursing instructors or preceptors was actual patient care. Students also identified shadowing other nurses, application of information to real life situations, and group discussion in pre and post conference times. One student from University Y mentioned caring in the response to the question, stating “caring behaviors and overall competence is of the utmost importance in the clinical environment.”

Students were asked to respond to six statements to ascertain their opinion on the prevalence of caring behaviors exhibited in their nursing school. Responses were obtained using a Likert scale. Options for responses ranged from 1 (Strongly Disagree) to 5 (Strongly Agree). The statements were as follows:

1. I feel that I am respected in my nursing school
2. I feel that faculty in my nursing school are receptive to students’ ideas
3. I feel that faculty in my nursing school are interested and supportive of each student
4. I feel that there is a mutual trust between faculty and students
5. I feel that I can be creative in my work in my nursing school
6. I feel that I am encouraged to express my opinion in my nursing school

Means for responses for each university are displayed in Table 3.

Table 3

*Mean Responses for Perceived Caring Behaviors (n=62)*

Variables	Mean	SD
I feel that I am respected in my nursing school		
University X (n=31)	3.97	0.87
University Y (n=31)	3.97	0.79
I feel that faculty in my nursing school are receptive to students' ideas		
University X	4.00	0.77
University Y	3.77	0.76
I feel that faculty in my nursing school are interested and supportive of each student		
University X	3.90	0.79
University Y	3.94	0.81
I feel that there is mutual trust between faculty and students		
University X	3.52	0.96
University Y	3.84	0.86
I feel that I can be creative in my work in my nursing school		
University X	3.65	1.14
University Y	3.68	0.70
I feel that I am encouraged to express my opinion in my nursing school		
University X	3.97	0.75
University Y	3.55	0.92

A t-test for independent means was conducted for each of the six statements to determine if there was a difference between the mean scores of students enrolled at each university. Data were analyzed using paired t-tests assuming equal variance between the two groups. There was a significant difference in the mean scores for the statement "I feel

that I am encouraged to express my opinion in my nursing school,”  $t(60) = 1.96, p=.05$ .

There was no significant difference in the mean scores for any of the other statements.

Results are reported in Table 4.

Table 4

*Comparison of Means of Caring Behaviors (n=62)*

Variable	df	t	p values
I feel that I am respected in my nursing school	60	.00	1.00
I feel that faculty in my nursing school are receptive to students' ideas	60	1.16	0.25
I feel that faculty in my nursing school are interested and supportive of each student	60	-1.56	0.87
I feel that there is mutual trust between faculty and students	60	-1.39	0.17
I feel that I can be creative in my work in my nursing school	60	-0.13	0.89
I feel that I am encouraged to express my opinions in my nursing school	60	1.96	0.05

### Learner Empowerment Measure

Students at each university were surveyed using The Learner Empowerment Measure (LEM) to answer research question 1 as to whether senior nursing students enrolled in a curriculum based on a theory of caring reported higher levels of learner empowerment than students who are enrolled in a curriculum which is not based on a theory of caring. The Learner Empowerment Measure contains 35 items to measure the categories of impact (16 items), meaningfulness (10 items), and competence (9 items). The 35 item instrument uses a Likert scale and possible responses range from zero (never) to four (very often). Individual scores can range from 0 to 140. Nine items are reversed scored. Students were asked to consider a class in which they were currently enrolled when answering the questionnaire. Although Frymier et al. (1996) do not provide information on interpreting results, higher scores indicate higher levels of empowerment. An individual score of 122.5 would indicate that the student answered the majority of questions with the response of “often” or “very often.” Individual scores of total empowerment for students enrolled at University X ranged from 87 to 140, with a mean of 122.55. Individual scores of total empowerment for students enrolled at University Y ranged from 100 to 140, with a mean of 122.07. Comparison of mean scores for the total empowerment measure did not indicate a significant difference in the total empowerment scores,  $t(60) = .13, p = .48$ .

The three subscales of the LEM were analyzed individually. The subscale Impact consisted of 16 items. The Competence subscale consisted of 9 items, and there were 10 items in the Meaningfulness subscale. Results for both universities are exhibited in Table 5. There were no significant differences between the mean scores of the two groups on

the Impact items,  $t(60) = -.24, p=.82$ , Competence items,  $t(60) = .57, p=.57$ , and Meaningfulness items,  $t(60) = .20, p=.84$ .

Table 5

*Means of Subscales of Learner Empowerment Measure (LEM)*

Subscale	University	N	Mean	SD
Impact	X	31	32.23	10.23
	Y	31	33.71	5.19
Competence	X	31	27.74	4.14
	Y	31	27.19	3.42
Meaningfulness	X	31	26.52	6.59
	Y	31	26.23	4.45

#### Clinical Decision Making in Nursing Scale

Research question 2 asked whether senior baccalaureate nursing students enrolled in a curriculum based on theory of caring reported higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring. Students were surveyed using The Clinical Decision Making in Nursing Scale (CDMNS) to determine if students enrolled in a curriculum based on a theory of caring reported higher levels of clinical decision-making than students who were enrolled in a curriculum that is not based on a caring theory. The CDMNS is a 40 item, 5 point Likert scale designed to measure the self perceived clinical decision skills of nursing students (Jenkins, 1985). Likert scale possibilities are 1 (*never*) to 5 (*always*). The potential range of scores is 40-200 on the total scale with lower scores indicating lower self perception of decision-making. The CDMNS is further divided into four

subscales, each containing 10 items. Subscales are described as “(A) search for alternatives or options; (B) canvassing objectives and values; (C) evaluation and reevaluation of consequences, and (D) search for information and unbiased assimilation of new information” (Jenkins, 1985, p. 224). Scores on the individual subscales can range from 10 to 50. Some participants did not respond to all items on the CDMNS. The total score for CDMNS is computed based on the completion of every item, whereas the total score for each subscale is analyzed based on the number of responses to the items in each subscale. Therefore, the number of respondents for the total scale differs from the number of respondents on each of the four subscales.

Individual scores on the total CDMNS ranged from 105 to 138 for University X ( $\mu = 120.42$ ,  $SD = 10.77$ ) and 104 to 133 for University Y ( $\mu = 120.62$ ,  $SD = 8.38$ ). A mean score of 120.42 for University X on the total CDMNS reflects a mean score of 3.0 on the 5 point Likert scale. The mean score of 120.62 for University Y also reflects a mean score 3.0 on the Likert scale. Scores for the subscales of the CDMNS ranged from 26.56 for University X on subscale C (evaluation and reevaluation of consequences) to 33.52 for subscale D (search for and assimilation of new information). A score of 26.56 reflects a score of 2.65 on the 5 point Likert scale and a score of 33.52 reflects a score of 3.35 on the 5 point Likert scale. Scores for University Y on subscales of the CDMNS ranged from 27.38 on subscale C (evaluation and reevaluation of consequences) to 32.63 for subscale D (search for and assimilation of new information). These scores reflect a score of 2.73 and 3.26 respectively on the 5 point Likert scale. Results for the total CDMNS scores and each subscale category for each university are presented in Table 6.

Table 6

*Clinical Decision Making in Nursing Scale (CDMNS)*

Variable	University	N	Mean	SD
Total CDMNS	X	26	120.42	10.77
	Y	21	120.62	8.38
Subscale A (Search for options)	X	28	28.07	3.89
	Y	23	28.61	1.97
Subscale B (Objectives and values)	X	27	30.15	3.38
	Y	24	29.79	2.73
Subscale C (Evaluation of consequences)	X	27	26.56	3.82
	Y	24	27.38	2.65
Subscale D (Search for and assimilation of new information)	X	27	33.52	3.77
	Y	24	32.63	3.28

Independent t-tests were conducted to determine any difference in scores on the total CDMNS scale and each subscale. Results of these tests are presented in Table 7.

Research question 2 asked whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring reported higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring. Results of the data analysis indicated that there were no significant differences in levels of perceived clinical decision-making in students enrolled in a curriculum based on a caring theory and students who are enrolled in a curriculum which is not based on a caring theory.



Table 7

*Comparison of Means of Total Clinical Decision Making and Subscales*

Variable	df	t	p value
Total Clinical Decision Making	45	-.68	.56
Subscale A (Search for options)	49	-.60	.55
Subscale B (Objectives and values)	49	.41	.68
Subscale C (Evaluation of consequences)	49	-.88	.38
Subscale D (Search for and assimilation of new information)	49	.89	.37

Relationship Between Perceived Learner Empowerment  
and Perceived Clinical Decision-making

Research question 3 asked if there was a relationship between the perceived level of empowerment and perceived clinical decision-making. Pearson Correlation tests were conducted to determine if a relationship existed between total clinical decision-making and total empowerment, as well as each subscale. No significant correlations were found between total empowerment and clinical decision-making. Additionally, there were no significant correlations between any of the subscales of the Learner Empowerment Measure and the Clinical Decision Making in Nursing Scale. Negative, non significant correlations were found between subscale C, “evaluation and reevaluation of

consequences” and all categories of the LEM. Results of these tests are presented in Table 8.

Table 8

*Pearson Correlations, LEM and CDMNS*

	Total Empowerment	Impact	Meaningfulness	Competence
CDMNS	.32	.26	.27	.27
Subscale A (Search for options)	.32	.28	.23	.28
Subscale B (Objectives and values)	.50	.41	.44	.40
Subscale C (Evaluation of consequences)	-.15	-.17	-.11	-.04
Subscale D (Search for and assimilation of new information)	.23	.24	.18	.09

Additional correlations were tested to determine if there was a relationship between demographic variables and empowerment and clinical decision-making. The only significant correlation was between the variable “employed in health care” and subscale C on the CDMNS, “evaluation and reevaluation of consequences.” Results are reported in Table 9.

Table 9

*Pearson Correlations, Demographic Variables and LEM and CDMNS*

	Age	Marital Status	Previous Degree	Employed in Health Care
CDMNS	.02	.08	.25	.05
Subscale A (Search for options)	-.05	.02	.25	.21
Subscale B (Objectives and values)	.23	.12	.02	-.13
Subscale C (Evaluation of consequences)	-.21	-.22	.23	.29*
Subscale D (Search for and assimilation of new information)	.09	.18	.08	-.12
Total Empowerment	.09	.01	.04	-.07
Impact	.07	-.01	.10	-.10
Meaningfulness	.17	.05	.00	-.02
Competence	-.07	-.07	-.03	-.03

\*Significant at .05 (2-tailed)

In order to more fully investigate potential correlations, Pearson correlation analyses were done with the statements related to students' perceptions of caring behaviors in their nursing school and the LEM and CDMNS and each subscale for both instruments. There was a significant correlation between each of statements related to

caring and the LEM. There were also several instances of significant correlations between the statements and the LEM subscales of Impact, Competence, and Meaningfulness. Results of the Pearson Correlations between the statements regarding caring and the LEM and subscales are presented in Table 10.

Table 10

*Pearson Correlations, Demographic Statements of Caring and LEM*

	Total Empowerment	Impact	Competence	Meaningfulness
Statement 1 (Respected)	.40**	.28**	.56**	.22
Statement 2 (Faculty are receptive to students' ideas)	.51**	.42**	.27**	.36**
Statement 3 (Faculty interested and supportive of each student)	.48**	.40**	.38**	.37**
Statement 4 (Mutual trust between faculty and students)	.52**	.51**	.27*	.40**
Statement 5 (Creative in work)	.48**	.51**	.13	.38**
Statement 6 (Encourage to express opinions)	.44**	.41**	.31**	.31**

\*Significant at .05 level (2-tailed)

\*\*Significant at .01 level (2-tailed)

There were no significant correlations between any of the statements related to caring behaviors and the total CDMNS. There were significant correlations between

subscale A of the CDMNS (search for alternative or options) and the statements related to the perception of interested and supportive faculty ( $r=.28$ ,  $n=62$ ,  $p=.05$ ), and the ability of students to be creative in their work ( $r=.31$ ,  $n=62$ ,  $p=.03$ ); and subscale B of the CDMNS (canvassing objectives and values) and the perception of mutual trust between faculty and students ( $r=.29$ ,  $n=62$ ,  $p=.04$ ), and the ability of students to be creative in their work ( $r=.37$ ,  $n=62$ ,  $p=.01$ ). There was a significant negative correlation between subscale C of the CDMNS (evaluation and reevaluation of consequences) and the statement regarding the perception that faculty are receptive to students' ideas ( $r=-.34$ ,  $n=62$ ,  $p=.02$ ). Results of the Pearson Correlation test on the statements related to caring behaviors and the CDMNS are presented in Table 11.

Table 11

*Pearson Correlations, Demographic Statements of Caring and CDMNS*

	CDMNS	A (Options)	B (Objectives)	C (Consequences)	D (Search)
Statement 1 (Respected)	.02	.23	.22	-.25	-.14
Statement 2 (Faculty are receptive to students' ideas)	-.04	-.15	-.17	-.34*	-.04
Statement 3 (Faculty interested and supportive of each student)	.10	.28	.22	-.06	-.04
Statement 4 (Mutual trust between faculty and students)	.05	.18	.29*	-.24	-.11
Statement 5 (Creative in work)	.18	.31*	.37**	.22	.06
Statement 6 (Encouraged to express opinions)	.01	.06	.14	-.12	-.15

\*Significant at .05 level (2-tailed)

\*\*Significant at .01 level (2-tailed)

### Summary

This chapter has provided results of the statistical analysis of the data used to answer the three research questions. Sixty-two students (31 students from University X and 31 students from University Y) responded to the online survey. Demographic data indicated that the majority of the respondents were in the 19-25 year old age group (61.3%), single (62.9%), female (95.2%), and Caucasian (82.3%). More students from

University X had a previous degree (83.9%) than University Y (22.6%). Also, more students enrolled at University X were employed in health care (71%) than students who were enrolled at University Y (58.1%).

Descriptive and inferential statistics were used to answer each of the three research questions. Data analysis indicated that there were no significant differences in the mean scores of perceived learner empowerment and perceived clinical decision-making between the students enrolled in a curriculum based on a caring theory and a curriculum which was not based on a caring theory. Therefore, the evidence suggests that the answer to research questions 1 and 2 is that senior baccalaureate nursing students enrolled in a curriculum based on a caring theory do not report higher levels of perceived levels of empowerment or clinical decision-making than senior baccalaureate enrolled in a curriculum which is not based on a caring theory.

Research question 3 asked if there was a relationship between perceived levels of empowerment and perceived levels of clinical decision-making. Data analysis indicated that there was no significant correlation between the reports of perceived empowerment and perceived clinical decision-making.

Pearson Correlation statistical tests were conducted to determine whether any significant relationships exist between demographic variables and LEM and subscales of Impact, Competence, and Meaningfulness, and the CDMNS and each of the four subscales. The demographic variable of employment in health care was significantly correlated to subscale C of the CDMNS, which is “evaluation and reevaluation of consequences.”

Students were asked to respond to 6 statements to determine the students’ perception of caring behaviors in their nursing schools. Data analysis revealed significant

correlations with all 6 statements and perceived learner empowerment. All six statements were significantly correlated with the LEM and all subcategories of the LEM, with the exception of Question 1 (I feel that I am respected in my nursing school) with the subcategory of Meaningfulness, and Question 5 (I feel that I can be creative in my work in my nursing school) with the subcategory of Competence. There were few significant correlations between the caring behavior statements and the CDMNS and the four subscales. There was a significant correlation between statement 5 and subscales A (search for alternatives or options), and B (canvassing of objectives and values). There was also a significant correlation between question 4 (I feel that there is mutual respect between faculty and students) and subscale B of the CDMNS.



## CHAPTER V

### DISCUSSION OF RESULTS

The purpose of this study was to investigate whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring reported higher levels of perceived empowerment as learners and higher levels of perceived clinical decision-making ability than senior baccalaureate nursing students enrolled a curriculum not based on a theory of caring. This study also investigated whether a relationship existed between the perceived level of empowerment as learners and the level of perceived clinical decision-making ability in senior baccalaureate nursing students. This chapter will discuss the findings of the study in relation to each of the research questions and hypotheses and propose possible explanations of the findings based on existing literature.

#### Conceptual Framework

This research study was based on a theoretical framework built around the concepts of caring curriculum, learner empowerment and clinical decision-making. A curriculum based on a theory of caring is described as one based on anticipatory-innovative learning where students are provided opportunities for creative critical thinking (Watson, 2000). The caring curriculum exists in an environment of support and respect where learning occurs through dialogue and reflection (Boykin & Schoenhofer, 2001). Collegial relationships and open dialogue and debate between faculty and students are encouraged. Nursing in a caring curriculum is based on “interconnectedness and collegiality rather than on esoteric knowledge, technical expertise, and

disempowering hierarchies (Boykin & Schoenhofer, 2001, p. 16). In addition, faculty “support an environment in which students are free to choose and to express self in various ways” (Boykin & Schoenhofer, p. 45). Using both Watson’s Theory of Caring (Watson, 2008) and Boykin and Schoenhofer’s Theory of Nursing as Caring (Boykin & Schoenhofer, 2001), the conceptual model represents the nursing student in a caring curriculum where trust, mutual respect and open dialogue are evident between students and faculty. Additionally, students are free to be creative in their work and are encouraged to engage in creative inquiry and reflection in their study of nursing. It is proposed that students who are engaged in such a curriculum structure will report higher levels of learner empowerment and clinical decision-making abilities than students who are not enrolled in such a curriculum structure. It is proposed that students who perceive that they are trusted and encouraged to be creative and inquisitive will feel empowered in their learning and will report higher levels of clinical decision-making. It is also suggested that there will be a relationship between levels of perceived learner empowerment and clinical decision-making as students who perceive higher levels of empowerment will also perceive higher levels of clinical decision-making abilities.

### Discussion of Results

Research question 1 asked:

Q1 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived learner empowerment than senior baccalaureate nursing students enrolled in a curriculum which is not based on a theory of caring?

Considering research question 1, the following hypothesis was proposed:

H1 Senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring will report higher levels of perceived learner empowerment than senior nursing students enrolled in a curriculum which is not based on a theory of caring,

The mean scores for the LEM indicated that students enrolled in both the curriculum based on a theory of caring and the curriculum which was not based on a theory of caring reported moderately high levels of perceived learner empowerment. Each of the three subscales of the LEM was also analyzed to determine if a difference in mean scores between groups existed for any of the subscales of meaningfulness, competence, and impact. There was no significant difference in the mean scores for any of the subscales.

Although no significant difference in mean scores of learner empowerment was found between the two groups of nursing students, it is interesting to note that students in both groups report moderately high levels of perceived learner empowerment. Kanter (1993) stated that structural empowerment, the ability to obtain and utilize resources, is a necessary prerequisite to individual empowerment. In addition, psychological empowerment is described in the literature as being in control of one's environment and possession of a positive self image (Kuokkanen & Leino-Kilpi, 2000; Bradbury-Jones, et al., 2008). It may be that students at each university felt empowered by the environment that they were in at their respective universities, regardless of the curriculum structure.

Watson (2000) has stated that traditional educational systems and curriculum structures are not conducive to empowerment of students, and therefore inhibit the development of empowered nurses. Curricula which are based on a theory of caring are described as ones in which human freedom is recognized and valued, where students are encouraged to engage in self reflection and consider the possibility of alternate realities in each nursing situation. Interactions between students and faculty are described as open, honest, and evidenced by mutual trust and respect.

Students were asked to respond to a series of statements designed to obtain their opinions about caring behaviors exhibited by faculty and/or evident in the environment of their respective nursing schools. Based on literature, curricula based on a theory of caring include opportunities for nursing students to engage in reflection, creative critical thinking, and freedom of choice and expression. A curriculum based on caring theory also reflects mutual respect and open and honest dialogue between faculty and students (Bevis & Watson, 2000; Boykin & Schoenhofer, 2001). Students were asked to respond to a series of statements on a Likert scale from 1 to 5 (strongly disagree to strongly agree). The statements were designed to determine if students perceived that characteristics described in the literature as being those of a caring curriculum were observed at their nursing school. The following statements were presented in the demographic survey:

1. I feel that I am respected in my nursing school
2. I feel that faculty in my nursing school are receptive to students' ideas
3. I feel that faculty in my nursing school are interested and supportive of each individual student
4. I feel that there is mutual trust between faculty and students
5. I feel that I can be creative in my work in my nursing school
6. I feel that I am encouraged to express my opinion in my nursing school

Mean scores for the responses from students at University X ranged from 3.52 (I feel that there is mutual trust between faculty and students) to 4.00 (I feel that faculty in my nursing school are receptive to students' ideas). Mean scores for students at University Y ranged from 3.55 (I feel that I am encouraged to express my opinion in my nursing school) to 3.97 (I feel that I am respected in my nursing school). Clearly

students in both universities feel that the characteristics described in the literature as those apparent in a caring curriculum are evident in their respective nursing schools. Therefore, it may be that the lack of significant difference between groups in the mean scores of learner empowerment is based on the fact that students in both universities feel that their learning environment is caring and empowering, regardless of the specific curriculum structure.

Another factor which could contribute to the results is the fact that the survey was distributed online and instructions regarding completion of the LEM were that students were to consider a course in which they were currently enrolled. There was no specification that the course was a nursing course. Also, although students were in their final two semesters prior to graduation, it is unknown what courses the students were enrolled in at the time that the surveys were completed. Course format and design could have influenced the responses. For example, students enrolled in a leadership course may perceive higher levels of empowerment than students who may be enrolled in another type of course.

Validity of the LEM was determined through two separate pilot studies. Frymier et al. (1996) reported validity of the three separate dimensions as .95 for impact, .94 for meaningfulness, and .92 for competence. Although this does indicate that the LEM is a reliable instrument for measurement of learner empowerment, it has rarely been used with nursing students. It may be that the respondents in this study reported high levels of learner empowerment because they perceived that the course they were considering while responding to the survey was in fact meaningful for their chosen career, would have an impact on their career, and they felt competent in the subject matter.

No significant difference in the mean scores of perceived learner empowerment was found between the groups of students. Therefore, Hypothesis 1 is not supported. However, mean scores of the statements regarding perceptions of caring indicate that students at both universities perceive that behaviors which are described as caring in the literature are evident at their university. This could indicate that perceptions of faculty characteristics and environment may have a greater impact on students' report of perceived learner empowerment than the specific curriculum structure.

Research question 2 asked:

Q2 Do senior baccalaureate nursing students enrolled in a curriculum based on theory of caring report higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring?

Considering research question 2, the following hypothesis was proposed:

H2 Senior baccalaureate nursing students enrolled in a curriculum based on theory of caring report will higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring,

This study sought to discover if students who were enrolled in a nursing curriculum which was based on a theory of caring reported higher levels of perceived clinical decision-making than students who were enrolled in a nursing curriculum which was not based on a theory of caring. Students were asked to complete the Clinical decision-making in Nursing Scale (CDMNS) (Jenkins, 1985). Considering the description of characteristics of a caring curriculum described in the literature where students are encouraged to use creative reflection, have a spirit of inquiry, and consider alternate options to nursing situations, students enrolled in a caring curriculum may be encouraged by faculty to explore alternatives and consider options when making clinical

decisions. Therefore, it was felt students enrolled in the curriculum based on a caring theory may report higher levels of perceived decision-making than students who were enrolled in the curriculum which was not based on the caring theory. There was no significant difference in the mean scores for the overall CDMNS or for any of the four subscales of the CDMNS. Therefore, hypothesis 2 is not supported.

A possible explanation for the lack of significant difference in mean scores between the groups may again be the results of the students' perceptions of the characteristics of their nursing school environment. Students in both universities perceived that they were respected, encouraged to express their opinions, and encouraged to be creative in their work as nursing students. These are characteristics which have been attributed to caring curricula. The fact that students at both universities perceived the environments as possessing the characteristics of a caring curriculum may explain the lack of significant difference between the groups in mean scores of clinical decision-making.

Another consideration related to the results found in the CDMS survey was the varying number of respondents to the survey. Although 31 students in each university completed the demographic survey and the LEM, not all of those respondents completed the CDMNS. It may be that students tired of the length of the survey and opted not to complete the last survey. In addition, some respondents completed portions of the CDMNS but did not complete all questions.

Research Question 3 asked:

Q3 Is there a relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students?

With respect to research question 1, the following hypothesis was proposed:

- H3 There will be a significant positive relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students

This study explored whether a relationship existed between the levels of perceived learner empowerment and the perceived levels of clinical decision-making. Empowerment has been described as “the ability to get things done, to mobilize resources, to get and use whatever it is that person needs for the goals he or she is attempting to meet” (Kanter, 1993, p. 166). It is reasonable to assume that higher levels of perceived empowerment may lead to higher levels of perceived clinical decision-making described by Jenkins (1985) as searching for alternatives and options during the decision-making process, considering the objectives sought as a result of the decision, evaluation of consequences of the decision and reevaluation of the decision based on potential consequences, and searching for new information in the making of clinical decisions.

Pearson correlations were conducted with the total LEM and each of the three categories of impact, meaningfulness, and competence and the total CDMNS and each of the four subscales. No significant correlations were found. Hypothesis 3 is not supported. Potential explanations may be the small sample size and the homogeneity of the sample.

Nurse educators, nurse managers, and professional nurses recognize the importance of empowerment of nurses to continue the advancement of the nursing profession. Furthermore, clinical decision-making is a vital component of nursing practice. It is important to study methods which will increase both perceptions of empowerment and perceptions of clinical decision-making abilities. No previous research which explored a relationship between learner empowerment and clinical decision-



making was found in the literature. Additional research is needed to explore potential relationships between learner empowerment and clinical decision-making.

Pearson correlation analysis was conducted to determine if any relationships existed between any demographic variables and perceived learner empowerment. No significant relationships were found between any of the demographic variables and the total learner empowerment scores and the subscales of impact, meaningfulness, and competence. However, when Pearson correlation analysis was conducted between the demographic statements regarding perception of characteristics of a caring curriculum and the total LEM and each of the three subscales, numerous significant relationships were discovered. This again supports the conclusion that the students' perceptions of the demonstration of characteristics of a caring curriculum may have a stronger relationship to perceived learner empowerment than the actual curriculum structure.

Pearson correlations were also conducted on the series of statements designed to obtain students' opinions of caring behaviors exhibited by faculty and/or evident in the environment of their respective nursing schools and the CDMNS and each of the four subscales. A significant correlation was found with statement 4 (I feel that there is mutual trust between faculty and students) and subscale B of the CDMNS (canvassing objectives and values). There were also significant correlations between statement 5 (I feel that I can be creative in my work in my nursing school) and subscale A of the CDMNS (search for alternatives or options), and subscale B (canvassing objectives and values). Statements 4 and 5 regarding demonstration of caring characteristics are consistent with the literature regarding promotion of students' creative search for alternatives. Students who perceive that they are trusted and supported and encouraged to be creative may be more likely to explore alternative options during decision-making.

Also, students who perceive trust between faculty and students may be more likely to take objectives and values into consideration when considering decisions.

Consideration was given to the possibility that certain demographic variables may be related to perceived clinical decision-making abilities. Pearson correlations were conducted to search for correlations between demographic variables and perceived clinical decision-making. The only significant relationship was between the demographic variable “employed in health care” and subscale C of the CDMNS, evaluation and reevaluation of consequences. The majority of students who responded on the demographic survey that they were employed in health care indicated that they were employed in jobs such as certified nursing assistant, radiology assistant, nurse extern, and employed in clinic settings. It stands to reason that students who are exposed to decision-making in their jobs might perceive higher levels of decision-making abilities than students who do not have opportunities to witness clinical decision-making at their jobs. However, it is interesting to note that the only significant correlation was with the subscale “evaluation and reevaluation of consequences.” It is possible that students were more aware of potential consequences of decisions than the actual consideration of alternative options for decisions, consideration of values, and searching for new information in the decision-making process.

#### Limitations

Limitations to the study were identified. The sample size for this study was small. Although data were collected using recommended methods for online surveys, the sample size was less than desired based on power analysis. Three instruments were used in the data collection, which may have led some students to choose not to participate. In

addition, some students completed the first one or two surveys but did not complete the third survey.

Only two public universities were utilized for the study and the study included only baccalaureate nursing students. This limited the number of potential respondents. In addition, the sample was highly homogenous. Statistical analysis revealed that there was little variance in the scores between the groups on all survey questions.

#### Recommendations for Future Research

The following recommendations are evident at the conclusion of this study. Although empowerment has been described in the literature as being of paramount importance to nursing, there are few valid and reliable research instruments which are designed to be used with nursing students. Instrument development must be continued and researched to improve methods of measuring this important concept.

Clinical decision-making has been identified as a critical component of nursing practice. Much of the existing research focuses on the process of decision-making among nurses. More research should be conducted with nursing students to identify methods and strategies to enhance clinical decision-making.

The results of this study imply that curriculum structure may not be a contributing factor to learner empowerment and clinical decision-making of nursing students. However, the information related to the statements regarding perceptions of caring characteristics of the nursing school/faculty is important. Further research should be conducted to determine what factors students identify as caring and whether these factors may influence empowerment and clinical decision-making.

Based on the realities of the requirements of graduate nurses and the recommendations of both the AACN and the NLN regarding the future of nursing

education, nurse educators must continue to study pedagogies, teaching strategies and methods, and innovative curriculum structures which facilitate the development of clinical decision-making in nursing students. In addition, empowerment of nurses must begin with nursing students. Valid and reliable research instruments must be developed and tested for both empowerment and clinical decision-making.

The research should continue using larger sample size with more diversity among subjects and academic settings, including both public and private colleges and universities. The sample should include associate degree nursing students in addition to baccalaureate nursing students.

It is interesting to note that students at both universities indicated that lecture was the most commonly used teaching strategy in their nursing courses. This is contrary to the description in the literature of innovative teaching strategies used in a caring curriculum. This suggests that although caring is identified in the mission, vision, and philosophy of University X, the true essence of a caring curriculum may not have been apparent to the nursing students enrolled at the university. Further research should be conducted to explore students' perceptions of caring in their nursing schools, including faculty characteristics and teaching methods. Further research should also be conducted to study factors, including faculty characteristics and teaching methods, which students feel are empowering.

### Conclusion

Although no significant differences were found in perceived learner empowerment and perceived clinical decision-making abilities of senior nursing students enrolled in a curriculum based on a caring theory and a curriculum which is not based on a caring theory, several interesting factors were discovered. It is important to note that

students enrolled at both universities reported moderately high levels of perceived empowerment and perceived clinical decision-making abilities. It is necessary to explore what factors may contribute to those reports. Students at both universities reported high scores in response to the statements designed to determine the perception of caring behaviors evident at the nursing school. It may be that the specific curriculum structure is not as important as the evidence of the characteristics of a caring curriculum as described in the literature.

The continued development of clinical decision-making abilities of nursing students, and the enhancement of empowerment of nursing students, will be beneficial to the nursing profession. Nurse educators and nursing school administrators must continue to study variables which better prepare students for the realities of nursing practice. Continued exploration of curriculum structure, environmental characteristics, faculty attributes, and teaching strategies must continue in order to facilitate the development of empowered graduate nurses who are well prepared to contribute to the increasingly complex health care system.

## REFERENCES

- Aitken, L. (2003). Critical care nurses' use of decision-making strategies. *Journal of Clinical Nursing, 12*(4), 476-483.
- Aitken, L., & Mardegan, K. (2000). Using "thinking aloud" as a means of data collection in the natural setting. *Western Journal of Nursing Research, 22*(7), 841-853.
- American Association of Colleges of Nursing. (2008). *The essentials of baccalaureate education for professional nursing practice*. Retrieved October 1, 2008, from <http://www.aacn.nche.edu/Education/pdf/BEdraft.pdf>
- Anthony, S., & Landeen, J. (2009). Evolution of Canadian nursing curricula: A critical retrospective analysis of power and caring. *International Journal of Nursing Education Scholarship, 6*(1), 1-25.
- Baldursdottir, G., & Jonsdottir, H. (2002). The importance of nurse caring behaviors as perceived by patients receiving care at an emergency department. *Heart and Lung, 31*(1), 67-75.
- Banning, M. (2007). A review of clinical decision-making: Models and current research. *Journal of Clinical Nursing, 17*(2), 187-195.
- Barry, C., & Purnell, M. (2008). Uncovering meaning through the aesthetic turn: A pedagogy of caring. *International Journal of Human Caring, 12*(2), 19-23.
- Baxter, P., & Rideout, E. (2006). Second-year baccalaureate nursing students' decision-making in the clinical setting. *Journal of Nursing Education, 45*(4), 121-127.
- Benner, P. (1984). *From novice to expert: Excellence and power in clinical nursing*. Reading, MA: Addison-Wesley.

- Berkow, S., Virkstis, K., Stewart, J., & Conway, L. (2009). Assessing new graduate nurse performance. *Nurse Educator, 34*(1), 17-22.
- Bevis, E., & Watson, J. (2000). *Toward a caring curriculum*. Sudbury, MA: Jones and Bartlett Publishers.
- Billings, D., & Halstead, J. (2005). *Teaching in nursing: A guide for faculty*. St. Louis, MO: Elsevier Saunders.
- Bosley, C. (2005). Organizational culture and student empowerment in baccalaureate nursing programs. *Dissertation Abstracts International, 66*(11), 5897.
- Botti, M., & Reeve, R. (2003). Role of knowledge and ability in student nurses' clinical decision-making. *Nursing and Health Science, 5*(1), 39-49.
- Bowles, K. (2000). The relationship of critical-thinking skills and the clinical-judgment skills of baccalaureate nursing students. *Journal of Nursing Education, 39*(8), 373-376.
- Bowling Green State University. (2010). *Basic BSN Nursing Program*. Retrieved March 25, 2010, from [www.bgsu.edu](http://www.bgsu.edu).
- Boykin, A. (1994). *Living a caring-based program*. New York: National League for Nursing Press.
- Boykin, A., & Schoenhofer, S. (2001). *Nursing as caring: A model for transforming practice*. Sudbury, MA: Jones and Bartlett Publishers.
- Boykin, A., Smith, N., & Aleman, D. (2003). Transforming practice using a caring-based nursing model. *Nursing Administration Quarterly, 27*(3), 223-230.
- Bradbury-Jones, C., Sambrook, S., & Irvine, F. (2008). Power and empowerment in nursing: A fourth theoretical approach. *Journal of Advanced Nursing, 62*(2), 258-266.

- Brancato, V. (2007). Psychological empowerment and use of empowering teaching behaviors among baccalaureate nursing faculty. *Journal of Nursing Education, 46*(12), 537-544.
- Brilowski, G., & Wendler, M. (2005). An evolutionary concept analysis of caring. *Journal of Advanced Nursing, 50*(6), 641-650.
- Britt Pipe, T. (2008). Illuminating the inner leadership journey by engaging intention and mindfulness as guided by caring theory. *Nursing Administration Quarterly, 32*(2), 117-125.
- Bucknall, T. (2000). Critical care nurses' decision-making activities in the natural clinical setting. *Journal of Clinical Nursing, 9*(1), 25-36.
- Bulfin, S. (2005). Nursing as caring theory: Living caring in practice. *Nursing Science Quarterly, 18*(4), 313-319.
- Campbell, S. (2003). Cultivating empowerment in nursing today for a strong profession tomorrow. *Journal of Nursing Education, 42*(9), 423-426.
- Carlson-Catalano, J. (1988). The empowerment of nurses by nurse educators for effective nursing practice. *Dissertation Abstracts International, 49*(10B), 4228.
- Cho, J., Spence Lashinger, H., & Wong, C. (2006). Workplace empowerment, work engagement and organizational commitment of new graduate nurses. *Nursing Research, 19*(3), 43-60.
- Cioffi, J. (2000). Nurses' experiences of making decisions to call emergency assistance to their patients. *Journal of Advanced Nursing, 32*(1), 108-114.
- Cronin, S., & Harrison, B. (1988). Importance of nurse caring behaviors as perceived by patients after myocardial infarction. *Heart & Lung, 17*(4), 374-380.



- Curtis, J., Bowen, I., & Reid, A. (2007). You have no credibility: Nursing students' experiences of horizontal violence. *Nursing Education in Practice*, 7(3), 156-163.
- Daiski, I. (2004). Changing nurses' dis-empowering relationship patterns. *Journal of Advanced Nursing*, 48(1), 43-50.
- Dillon, R., & Wright Stines, P. (1996). A phenomenological study of faculty-student caring interactions. *Journal of Nursing Education*, 35(3), 113-118.
- Dingel-Stewart, S., & LaCoste, J. (2004). Light at the end of the tunnel: A vision for an empowered nursing profession across the continuum of care. *Nursing Administration Quarterly*, 28(3), 212-216.
- Donahue, M., Piazza, I., Quinn Griffin, M., Dykes, P., & Fitzpatrick, J. (2008). The relationship between nurses' perceptions of empowerment and patient satisfaction. *Applied Nursing Research*, 21, 2-7.
- Eklund-Myrskog, G. (2000). Student nurses' understanding of caring science. *Nurse Education Today*, 20(2), 164-170.
- Espeland, K., & Shanta, L. (2001). Empowering versus enabling in academia. *Journal of Nursing Education*, 40(8), 342-346.
- Etheridge, S. (2007). Learning to think like a nurse: Stories from new nurse graduates. *The Journal of Continuing Education in Nursing*, 38(1), 24-30.
- Evans, B. (2004). Application of the caring curriculum to education of Hispanic/Latino and American Indian nursing students. *Journal of Nursing Education*, 43(5), 219-228.
- Faulkner, J., & Spence Laschinger, H. (2008). The effects of structural and psychological empowerment on perceived respect in acute care nurses. *Journal of Nursing Management*, 16(2), 214-221.

- Finfgeld-Connett, D. (2008). Qualitative convergence of three nursing concepts: Art of nursing, presence and caring. *Journal of Advanced Nursing*, 63(5), 527-534.
- Fletcher, K. (2006). Beyond dualism: Leading out of oppression. *Nursing Forum*, 41(2), 50-59.
- Frymier, A., Shulman, G., & Houser, M. (1996). The development of a learner empowerment measure. *Communication Education*, 45, 181-199.
- Fulton, Y. (1997). Nurses' views on empowerment: A critical social theory perspective. *Journal of Advanced Nursing*, 26(3), 529-536.
- Gall, M., Gall, J., & Borg, W. (2007). *Educational research*. Boston: Pearson, Allen and Bacon.
- Garrett, B. (2005). Student nurses' perceptions of clinical decision-making in the final year of adult nursing studies. *Nurse Education in Practice*, 5(1), 30-39.
- Gibson, C. (1991). A concept analysis of empowerment. *Journal of Advanced Nursing*, 16, 354-361.
- Gillespie, M., & Peterson, B. (2009). Helping novice nurses make effective clinical decisions: The situated clinical decision-making framework. *Nursing Education Perspectives*, 30(3), 164-170.
- Girof, E. (2000). Graduate nurses: Critical thinkers or better decision makers. *Journal of Advanced Nursing*, 31(2), 288-297.
- Haffer, A., & Raingruber, B. (1998). Discovering confidence in clinical reasoning and critical thinking development in baccalaureate nursing students. *Journal of Nursing Education*, 37(2), 61-70.

- Hausner, J. (2002). An examination of the relationship between psychological empowerment and professionalism in nursing. *Dissertation Abstracts International*, 63(12), 5763.
- Hawks, J. (1999). Organizational culture and faculty use of empowering teaching behaviors in selected schools of nursing. *Nursing Outlook*, 47(2), 67-73.
- Heller, B.R., Oros, M.T. & Durney-Crowley, J. (2000). The future of nursing education: 10 trends to watch. *Nursing and Health Care Perspectives*, 21(1), 9-13.
- Hoffman, K., Donoghue, J., & Duffeld, C. (2004). Decision-making in clinical nursing: Investigating contributing factors. *Journal of Advanced Nursing*, 45(1), 53-62.
- Hoffman, K., & Elwin, C. (2003). The relationship between critical thinking and confidence in decision-making. *Australian Journal of Advanced Nursing*, 22(1), 8-12.
- Holland Wade, G., & Kasper, N. (2006). Nursing students' perceptions of instructor caring: An instrument based on Watson's theory of transpersonal caring. *Journal of Nursing Education*, 45(5), 162-167.
- Hoover, J. (2002). The personal and professional impact of undertaking an educational module on human caring. *Journal of Advanced Nursing*, 37(1), 79-86.
- Hughes, L. (1998). Development of an instrument to measure caring peer group interactions. *Journal of Nursing Education*, 37(5), 202-207.
- Hughes, L., Kosowski, M., Grams, K., & Wilson, C. (1998). Caring interactions among nursing students: A descriptive comparison of two associate degree nursing programs. *Nursing Outlook*, 46(4), 176-181.

- Itzhaky, H., Gerber, P., & Dekel, R. (2004). Empowerment, skills, and values: A comparative study of nurses and social workers. *International Journal of Nursing Studies, 41*(4), 447-455.
- Iwasiw, C., Goldenberg, D., & Andrusyszyn, M. (2005). Curriculum Development in Nursing Education. Sudbury, MA: Jones and Barlett.
- Jenkins, H. (1985). A research tool for measuring perceptions of clinical decision-making. *Journal of Professional Nursing, 1*, 221-229.
- Jenkins, B. (2006). Emotional intelligence of faculty members, the learning environment, and empowerment of baccalaureate nursing students. *Dissertation Abstracts International, 67*(07), (UMI 3225156).
- Kanter, R. (1977). *Men and women of the corporation*. New York: Basic Books.
- Kanter, R. (1981). Power, leadership, and participatory management. *Theory Into Practice, 20*(4), 219-224.
- Kanter, R. M. (1993). *Men and women of the corporation* (2nd ed.). New York: Basic Books.
- Kapborg, I., & Bertero, C. (2003). The phenomenon of caring from the novice student nurse's perception: A qualitative content analysis. *International Nursing Review, 50*(3), 183-192.
- Karaoz, W. (2005). Turkish nursing students' perceptions of caring. *Nurse Education Today, 25*(1), 31-40.
- Khademian, Z., & Vizeshfar, F. (2008). Nursing students' perceptions of the importance of caring behaviors. *Journal of Advanced Nursing, 61*(4), 456-462.
- Kluska, K., Spence Laschinger, H., & Kerr, M. (2004). Staff nurse empowerment and effort-reward imbalance. *Nursing Leadership, 17*(1), 112-128.

- Kuokkanen, L., & Katajisto, J. (2003). Promoting or impending empowerment? *Journal of Nursing Administration*, 33(4), 209-215.
- Kuokkanen, L., & Leino-Kilpi, H. (2000). Power and empowerment in nursing: Three theoretical approaches. *Journal of Advanced Nursing*, 31(1), 235-241.
- Lauri, S., Salanterä, S., Chalmers, K., Ekman, S., Kim, H., Kappeli, S., et al. (2001). An exploratory study of clinical decision-making in five countries. *Journal of Nursing Scholarship*, 33(1), 83-90.
- Liu, S. (2004). What caring means to geriatric nurses. *Journal of Nursing Research*, 12(2), 143-151.
- McCarthy, V., & Holbrook Freeman, L. (2008). A multidisciplinary concept analysis of empowerment: Implications for nursing. *The Journal of Theory Construction & Testing*, 12(2), 68-74.
- Mackintosh, C. (2006). Caring: The socialization of pre-registration students nurses: A longitudinal qualitative descriptive study. *International Journal of Nursing Studies*, 43(8), 935-962.
- Mailloux, C. (2006). The extent to which students' perceptions of faculties' teaching strategies, students' context, and perceptions of learner empowerment predict perceptions of autonomy in BSN students. *Nurse Education Today*, 26, 578-585.
- Manias, E., Aitken, R., & Dunning, T. (2004). Decision-making models used by graduate nurses managing patients' medications. *Journal of Advanced Nursing*, 47(3), 270-278.
- Manogin, T. W., Bechtel, G. A., & Rami, J. S. (2000). Caring behaviors by nurses: Women's perceptions during childbirth. *Journal of Obstetric, Gynecological and Neonatal Nursing*, 29(2), 153-157.

- Minick, P. (1995). The power of human caring: Early recognition of patient problems. *Scholarly Inquiry for Nursing Practice*, 9(4), 303-317.
- Mount Saint Mary's College. (2010). *Bachelor of Science in Nursing Program*. Retrieved March 25, 2010, from [www.msmc.la.edu](http://www.msmc.la.edu).
- Murphy, F., Jones, S., Edwards, M., James, J., & Mayer, A. (2009). The impact of nurse education on the caring behaviors of nursing students. *Nurse Education Today*, 29(2), 254-264.
- National League for Nursing. (2003). *Position statement: Innovation in nursing education: A call to reform*. Retrieved October 10, 2008, from <http://www.nln.org/aboutnln/PositionStatements/innovation082203.pdf>
- Nedd, N. (2006). Perceptions of empowerment and intent to stay. *Nursing Economics*, 24(1), 13-18.
- Norman, V., Rutledge, D. N., Keefer-Lynch, A. M., & Albeg, G. (2008). Uncovering and recognizing nurse caring from clinical narratives. *Holistic Nursing Practice*, 22(6), 324-335.
- Olson, M. (2009). The "Millennials": First year in practice. *Nursing Outlook*, 57(1), 10-17.
- O'Neill, E. (1999). Strengthening clinical reasoning in graduate nursing students. *Nurse Educator*, 24(2), 11-15.
- Owen-Mills, V. (1995). A synthesis of caring praxis and critical social theory in an emancipatory curriculum. *Journal of Advanced Nursing*, 21(6), 1191-1195.
- Patrick, A., & Spence Laschinger, H. (2006). The effect of structural empowerment and perceived organizational support of middle level nurse manager's role satisfaction. *Journal of Nursing Management*, 14(1), 13-22.

- Preheim, G. (2008). Clinical scholar model: Competency development within a caring curriculum. *Annual Review of Nursing Education*, 6, 3-23.
- Pryzby, B. (2005). Effects of nurse caring behaviors on family stress responses in critical care. *Intensive and Critical Care Nursing*, 21(1), 16-23.
- Rhodes, B. (1985). Occupational ideology and clinical decision-making. *International Journal of Nursing Studies*, 22(3), 241-257.
- Roche, J. (2002). A pilot study of teaching clinical decision-making with the clinical educator model. *Journal of Nursing Education*, 41(8), 365-367.
- Sarmiento, T., Spence Laschinger, H., & Iwasiw, C. (2004). Nurse educators' workplace empowerment, burnout, and job satisfaction: Testing Kanter's theory. *Journal of Advanced Nursing*, 46(2), 134-143.
- Severtsen, B., & Evans, B. (2000). Education for caring practice. *Nursing and Health Care Perspectives*, 21(4), 172-177.
- Shin, K. (1998). Critical thinking ability and clinical decision-making skills among senior nursing students in associate and baccalaureate programmes in Korea. *Journal of Advanced Nursing*, 27(2), 414-418.
- Sitzman, K., & Leners, D. (2006). Student perceptions of caring in online baccalaureate education. *Nursing Education Perspectives*, 27(5), 254-259.
- Spence Laschinger, H., & Finegan, J. (2005). Using empowerment to build trust and respect in the workplace: A strategy for addressing the nursing shortage. *Nursing Economics*, 23(1), 6-13.
- Spreitzer, G. (1992). When organizations dare: The dynamics of individual empowerment in the workplace. *Dissertation Abstracts International* 53(3993), 11A.

- Thomas, K., & Velthouse, B. (1990). Cognitive elements of empowerment: An “interpretive” model of intrinsic task motivation. *Academy of Management Review, 15*, 666-681.
- Thompson, C. (1999). A conceptual treadmill: The need for “middle ground” in clinical decision-making theory in nursing. *Journal of Advanced Nursing, 30*(3), 1222-1229.
- Touhy, T., & Boykin, A. (2008). Caring as the central domain in nursing education. *International Journal for Human Caring, 12*(2), 8-15.
- Utley-Smith, Q. (2004). 5 competencies needed by new baccalaureate graduates. *Nursing Education Perspectives, 25*(1), 166-170.
- Wade, G., & Kasper, N. (2005). Nursing students’ perceptions of instructor caring: An instrument based on Watson’s theory of transpersonal caring. *Journal of Nursing Education, 45*(5), 162-167.
- Wagner, L. (1999). A study of baccalaureate nursing students’ reflection on their caring practice through creating and sharing story, poetry, and art. *Dissertation Abstracts International, 59*(08), 4022.
- Watson, J. (2000). Transformative thinking and a caring curriculum. In E.O. Bevis & J. Watson (Eds.). *Toward a caring curriculum: A new pedagogy for nursing* (pp. 51-65). Sudbury, MA: Jones and Bartlett.
- Watson, J. (2006). Caring theory as an ethical guide to administrative and clinical practices. *Nursing Administration Quarterly, 30*(1), 48-55.
- Watson, J. (2008). *Nursing: The philosophy and science of caring*. Denver, CO: University Press of Colorado.



- Watson, J., & Foster, R. (2003). The attending nurse caring model: Integrating theory, evidence, and advanced caring-healing therapeutics for transforming professional practice. *Journal of Clinical Nursing, 12*(3), 360-365.
- White, A. (2003). Clinical decision-making among fourth-year nursing students: An interpretive study. *Journal of Nursing Education, 42*(3), 113-120.
- Wilkes, L., & Wallis, M. (1998). A model of professional nurse caring: Nursing students' experience. *Journal of Advanced Nursing, 27*(3), 582-589.
- Wilkin, K., & Slevin, E. (2004). The meaning of caring to nurses: An investigation into the nature of caring work in an intensive care unit. *Journal of Clinical Nursing, 13*, 50-59.
- Wolf, Z., Miller, P., & Devine, M. (2003). Relationship between nurse caring and patient satisfaction in patients undergoing invasive cardiac procedures. *MEDSURG Nursing, 12*(6), 391-396.

APPENDIX A

INSTITUTIONAL REVIEW BOARD FORMS

**UNC IRB: Expedited Review Requested****Project Title: A Comparison of Levels of Empowerment and Clinical decision-making In Senior Bachelor of Science Nursing Students Enrolled In Caring And Traditional Nursing Curricula****A. Purpose**

The purpose of this study will be to investigate whether senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived empowerment as learners and higher levels of perceived clinical decision-making ability than senior baccalaureate nursing students enrolled in a curriculum which is not based on a theory of caring. This study will also investigate whether there is a relationship between the level of empowerment as learners and the level of perceived clinical decision-making ability in senior baccalaureate nursing students.

Graduate professional nurses are expected to be capable of decision-making related to complex health care issues. Graduate professional nurses must feel empowered to fully participate in clinical decision-making and decisions regarding the nursing profession. Nurse educators are interested in discovering strategies to increase clinical decision-making abilities and empowerment of nursing students, i.e., teaching strategies and curriculum structure. This research will investigate senior baccalaureate nursing students' perceptions of their level of empowerment as learners and their perceived clinical decision-making abilities for professional nursing practice.

The concept of empowerment is important to both nursing education and the profession of nursing. Campbell (2003) asserted that empowerment in nursing education is paramount; nursing education is the beginning of future nurses' beliefs and values about the profession of nursing. While much research has been conducted regarding empowerment in organizations, there is limited research on empowerment of nursing students other than Campbell (2003).

Patient safety and well being are largely dependent upon the ability of the registered nurse to make clinical decisions. Many new graduates identified that they do not feel prepared for the magnitude of the decision-making required in clinical practice (Etheridge, 2007; Olson, 2009).

In 2003, The National League for Nursing (NLN) issued a position statement that called for "dramatic reform and innovation in nursing education to create and shape the future of nursing practice" (p. 1). The NLN states that nursing curricula must be focused less on content and more on relationships and teaching strategies that are innovative and based on pedagogical research. Additional pedagogical research is necessary to determine if innovative teaching strategies and curriculum structures result in graduate nurses who are better prepared to think independently and able to rise to the challenge of the complexity of the current and future health care issues.

This research will contribute to the knowledge of nurse educators regarding the impact of curriculum structure on perceived levels of empowerment of nursing students

and the students' perceptions of their ability to make clinical decisions. By contributing to the body of knowledge related to nursing education, nurse educators will be better prepared to design nursing curricula that are most likely to produce nursing graduates who feel empowered and perceive themselves as prepared to be clinically competent professional nurses.

This study qualifies for Expedited review because the participants are adults and not a vulnerable population. The risks inherent in this study are no greater than those normally encountered during normal classroom participation.

Q1 Do senior baccalaureate nursing students enrolled in a curriculum based on a theory of caring report higher levels of perceived learner empowerment than senior baccalaureate nursing students enrolled in a curriculum which is not based on a theory of caring?

Q2 Do senior baccalaureate nursing students enrolled in a curriculum based on theory of caring report higher levels of perceived clinical decision-making ability than senior nursing students enrolled in a curriculum which is not based on a theory of caring?

Q3 Is there a relationship between the levels of empowerment and clinical decision-making in senior baccalaureate nursing students?

## **B. Methods**

### **1. Participants**

The target population for this research study is baccalaureate nursing students in their final two semesters of the program of study. The research sample of approximately 100 students will be obtained by purposive sampling. The subjects will be recruited from a university identified as having a curriculum based on a theory of caring and a comparable, geographically similar university with a curriculum which is not based on a theory of caring.

. Inclusion criteria are as follows:

1. Students must be enrolled (full time or part time) in a baccalaureate degree nursing program.
2. Students must be enrolled in one of the last two semesters prior to graduation.
3. Students must be at least 18 years of age.
4. Students must read and understand English.
5. Students must not have a previous nursing degree including degrees as a Licensed Practical Nurse, Licensed Vocational Nurse, or Registered Nurse with a diploma or associate degree.

6. Students must be enrolled in a generic baccalaureate degree program, not an accelerated degree program.

## **2. Data Collection Procedures**

Deans of the two colleges of nursing will be contacted to obtain permission to conduct the research. All nursing students whose expected date of graduation is within the next two semesters and who meet the inclusion criteria will be invited to participate in the research study.

1. After obtaining approval from the Dean of the college of nursing an email will be sent to the Dean of the college of nursing inviting senior nursing students to participate in the research study. The email will contain a link to an online survey which will contain the questionnaires. The Dean will distribute the email to senior nursing students. The email will include an invitation to participate in the study and will indicate that completion of the survey indicates consent (Attachment #1).

2. Students will complete online questionnaires, including a demographic data form (Attachment #2), the Learner Empowerment Measure (Attachment #3), and the Clinical decision-making in Nursing Scale (Attachment #4). All questionnaires will be numerically coded and no student names will be recorded. It is anticipated that completing the questionnaires will take participants approximately 30 to 40 minutes.

There will be no form of deception used in the collection of data for this study. The full study title which contains language about comparison of caring and traditional curricula is not included on the consent form to minimize any bias students might express related to the concept of a caring curriculum. There are no plans for the debriefing of the research participants.

## **3. Data Analysis Procedures**

Descriptive statistics will summarize demographic data with frequencies and percentages for age, gender, and number of years of education. Mean scores will be determined for the overall Clinical decision-making in Nursing Scale (CDMNS) and for each subscale. An overall mean score for the Learner Empowerment Measure (LEM) will be determined as well as mean scores for the three factors (meaningfulness, competence, and impact). *T-tests* will be used to compare the mean scores of the CDMNS and LEM between the university with the caring curriculum and the university with the traditional curriculum. Additional data analysis will consist of correlation tests to determine relationships between demographic data and measures of empowerment and clinical decision-making. Correlation studies will also be conducted to determine any correlational relationships between levels of empowerment and clinical decision-making.

## **3. Data Handling Procedures**

Data will be collected by the lead investigator using an online survey in which participants' names are never requested. Data from completed questionnaires will be kept in the possession of the lead investigator and will be stored in a password protected

computer file which will only be accessible to the lead researcher. Results of the research will be reported as aggregate data rather than individual data. Data will be securely stored for a period of three years and then destroyed. Confidentiality will be maintained by numerical coding of the research instruments.

#### **4. Data Handling Procedures**

There are no special arrangements to protect the safety of atypical participants as it is not foreseen that there will be any atypical participants.

#### **C. Risks, Discomforts and Benefits**

The risks inherent in this study are no greater than those encountered during normal classroom participation. Participants may experience mild emotional discomfort or anxiety as they examine their perceptions of caring in their nursing school experiences, their perceptions of empowerment and their perceptions of their abilities to make clinical decisions.

There are no direct benefits to the participants of the study. Indirect benefits of participation in the study may include contributing to the body of knowledge related to nursing education which may play a role in the design of nursing curricula.

#### **D. Costs and Compensations**

There will no cost to the participants. Participants will not be compensated.

#### **E. Grant Information**

This study is not funded by any grant.

## References

- Campbell, S. (2003). Cultivating empowerment in nursing today for a strong profession tomorrow. *Journal of Nursing Education*, 42(9), 423-426.
- Etheridge, S. (2007). Learning to think like a nurse: Stories from new nurse graduates. *The Journal of Continuing Education in Nursing*, 38(1), 24-30.
- National League for Nursing. (2003). *Position statement: Innovation in Nursing Education: A Call to Reform*. Retrieved October 10, 2008, from <http://www.nln.org/aboutnln/PositionStatements/innovation082203.pdf>
- Olson, M. (2009). The “Millennials”: First year in practice. *Nursing Outlook*, 57(1), 10-17.

UNIVERSITY of  
**NORTHERN COLORADO**  
 Institutional Review Board (IRB)



April 13, 2010

TO: Spencer Weiler  
 ELPS

FROM: Megan Babkas Stellino, Co-Chair *MBS*  
 UNC Institutional Review Board

RE: Expedited Review of Proposal, *A Comparison of Levels of Empowerment and Clinical Decision Making in Senior Bachelor of Science Nursing Students Enrolled in Caring and Traditional Curricula*, submitted by Karen M. Johnson (Research Advisor: Carol Roelofs)

First Consultant: The above proposal is being submitted to you for an expedited review. Please review the proposal in light of the Committee's charge and direct requests for changes directly to the researcher or researcher's advisor. If you have any unresolved concerns, please contact Megan Babkas Stellino, School of Sport and Exercise Science, Campus Box 39, (x1809). When you are ready to recommend approval, sign this form and return to me.

I recommend approval as is.

*Spencer Weiler*  
 Signature of First Consultant

*4-26-10*  
 Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is approved as proposed for a period of one year: *May 7, 2010 to May 7, 2011.*

*Megan Babkas Stellino*  
 Megan Babkas Stellino, Co-Chair

*5/7/2010*  
 Date

Comments:



APPENDIX B

DEMOGRAPHIC SURVEY

## Student Demographic Survey

1. What is your age?

\_\_\_\_\_ 19-25      \_\_\_\_\_ 26-30      \_\_\_\_\_ 31-35      \_\_\_\_\_ 36-40      \_\_\_\_\_ > 40

2. What is your gender?

\_\_\_\_\_ Male      \_\_\_\_\_ Female

3. What is your marital status?

\_\_\_\_\_ Single, Never Married      \_\_\_\_\_ Married/Separated  
 \_\_\_\_\_ Divorced      \_\_\_\_\_ Widowed

4. What is your race?

\_\_\_ African American      \_\_\_ Asian      \_\_\_ Caucasian  
 \_\_\_ Hispanic/Latino      \_\_\_ Native American  
 \_\_\_ Other (please specify) \_\_\_\_\_

5. What is your expected date of graduation from nursing school?

\_\_\_ May, 2010      \_\_\_ August, 2010      \_\_\_ December, 2010

6. Do you have a previous college degree?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

7. Are you employed in health care?

\_\_\_\_\_ Yes      \_\_\_\_\_ No

8. If you answered Yes to question 7, what is/are your job(s)? \_\_\_\_\_

9. Where do you attend nursing school? \_\_\_\_\_

10. Thinking about the classroom sessions in your nursing courses which focus on specialty information for practice (Med-Surg, Peds, OB, etc), please state what you think is the most common learning activity for students.  
 \_\_\_\_\_

11. Thinking about the classroom sessions in your nursing courses which focus on professional aspects of nursing (ethics, nursing theory, communication, culture, advocacy, history, research, etc), please state what you think is the most common learning activity for students.  
 \_\_\_\_\_

12. Thinking about the skills lab and/or simulation sessions in your nursing courses which focus on learning and improving various aspects of nursing practice, please state what you think is the most common learning activity for students.  
 \_\_\_\_\_

13. Thinking about the on-site practicum courses in your program which focus on providing care under supervision of nursing instructors or staff nurse preceptors, please state what you think is the most common learning activity for students.  
 \_\_\_\_\_

14. Please share any additional comments regarding questions 10-13. \_\_\_\_\_

15. Please respond to the following statement: "I feel that I am respected in my nursing school."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

16. Please respond to the following statement: "I feel that I am encouraged to express my opinions in my nursing school."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

17. Please respond to the following statement: "I feel that I can be creative in my work in my nursing school."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

18. Please respond to the following statement: "I feel that there is mutual trust between faculty and students."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

19. Please respond to the following statement: "I feel that faculty in my nursing school are interested and supportive of each student."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

20. Please respond to the following statement: "I feel that faculty in my nursing school are receptive to ideas of students."

\_\_\_ Strongly Disagree \_\_\_ Disagree \_\_\_ Neutral \_\_\_ Agree \_\_\_ Strongly Agree

21. Please share any additional comments regarding questions 15-20.

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APPENDIX C

LEARNER EMPOWERMENT MEASURE

### Learner Empowerment Measure

Instructions: Please respond to the statements in terms of a class you are currently taking. Visualize the class situation or atmosphere. Please use the following scale to respond to each of the following statements.

Never = 0    Rarely = 1    Occasionally = 2    Often = 3    Very Often = 4

1. I have the power to make a difference in how things are done in this class.
2. I have a choice in the methods I can use to perform my work.
3. I have the qualifications to succeed in this class.
4. I feel confident that I can adequately perform my duties.
5. My participation is important to the success of this class.
6. I feel very competent in this class.
7. I have freedom to choose among options in this class.
8. I can make an impact on the way things are run in this class.
9. Alternative approaches to learning are encouraged in this class.
10. I have the opportunity to contribute to the learning of others in this class.
11. I cannot influence what happens in this class.
12. This class is boring.
13. I feel intimidated by what is required of me in this class.
14. I have faith in my ability to do well in this class.
15. This class is not important to me.
16. I have the power to create a supportive learning environment in this class.
17. My contribution to this class makes no difference.
18. I can determine how tasks can be performed.
19. I can influence the instructor.
20. I feel appreciated in this class.
21. I have the opportunity to make important decisions in this class.
22. The information in this class is useful.
23. I believe that I am capable of achieving my goals in this class.
24. The tasks required of me in this class are personally meaningful.
25. I look forward to going to this class.
26. This course will help me achieve my future goals.
27. I have no freedom to choose in this class.
28. This class is exciting.
29. The tasks required in this class are a waste of time.
30. I feel unable to do the work in this class.
31. This class is interesting.
32. The tasks required of me in this class are valuable to me.
33. I lack confidence in my ability to perform the tasks in this class.
34. I make a difference in the learning that goes on in this class.
35. I possess the necessary skills to perform successfully in class.

APPENDIX D

CLINICAL DECISION-MAKING IN NURSING SCALE

### The Clinical decision-making in Nursing Scale\*

Directions: For each of the following statements, think of your behavior while caring for clients. Answer on the basis of what *you are doing now in the clinical setting*. There are no right or wrong answers. What is important is your assessment of how you ordinarily operate as a decision maker in the clinical setting. None of the statements cover emergency situations.

Do not dwell on responses. Circle the answer that comes closest to the way you ordinarily behave.

Answer all items. About 20 minutes should be required to complete this exercise.

#### Scale for the CDMNS

Circle whether you would likely behave in the described way:

- A – Always: What you consistently do every time
- F – Frequently: What you usually do most of the time
- O – Occasionally: What you sometimes do on occasion
- S – Seldom: What you rarely do
- N – Never: What you never do at any time

Sample statement: I mentally list options before making a decision.

Key:            A     F    O    S    N

The circle around response F means that you usually mentally list options before making a decision.

*Note:* Be sure you respond in terms of what you are doing in the clinical setting *at the present time*.

1. If the clinical decision is vital and there is time, I conduct a thorough search for alternatives.
2. When a person is ill, his or her cultural values and beliefs are secondary to the implementation of health services.
3. The situational factors at the time determine the number of options that I explore before making a decision.
4. Looking for new information in making a decision is more trouble than it's worth.
5. I use books or professional literature to look up things I don't understand.
6. A random approach for looking at options works best for me.
7. Brainstorming is a method I use when thinking of ideas for options.
8. I go out of my way to get as much information as possible to make decisions.
9. I assist clients in exercising their rights to make decisions about their own care.
10. When my values conflict with those of the client, I am objective enough to handle the decision-making required for the situation.
11. I listen to or consider expert advice or judgment, even though it may not be the choice I would make.

12. I solve a problem or make a decision without consulting anyone, using information available to me at the time.
13. I don't always take time to examine all the possible consequences of a decision I must make.
14. I consider the future welfare of the family when I make a clinical decision which involves the individual.
15. I have little time or energy available to search for information.
16. I mentally list options before making a decision.
17. When examining consequences of options I might choose, I generally think through "If I did this, then..."
18. I consider even the remotest consequences before making a choice.
19. Consensus among my peer group is important to me in making a decision.
20. I include clients as sources of information.
21. I consider what my peers will say when I think about possible choices I could make.
22. If an instructor recommends an option to a clinical decision-making situation, I adopt it rather than searching for other options.
23. If a benefit is really great, I will favor it without looking at all the risks.
24. I search for new information randomly.
25. My past experiences have little to do with how actively I look at risks and benefits for decisions about clients.
26. When examining consequences of options I might choose, I am aware of the positive outcomes for my client.
27. I select options that I have used successfully in similar circumstances in the past.
28. If the risks are serious enough to cause problems, I reject the option.
29. I write out a list of positive and negative consequences when I am evaluating an important clinical decision.
30. I do not ask my peers to suggest options for my clinical decisions.
31. My professional values are inconsistent with my personal values.
32. My finding of alternatives seems to be largely a matter of luck.
33. In the clinical setting I keep in mind the course objectives for the day's experience.
34. The risks and benefits are the farthest thing from my mind when I have to make a decision.
35. When I have a clinical decision to make, I consider the institutional priorities and standards.
36. I involve others in my decision-making only if the situation calls for it.
37. In my search for options, I include even those that might be thought of as "far out" or not feasible.
38. Finding out about the client's objectives is a regular part of my clinical decision-making.
39. I examine the risks and benefits only for the consequences that have serious implications.
40. The client's values have to be consistent with my own in order for me to make a good decision.