The measurement of caring relationships in associate degree nursing students

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The measurement of caring relationships
in associate degree nursing students

by

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in partial fulfillment of the requirements for the degree of

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CHAPTER I. INTRODUCTION

Background

Managed Capitated Care—Integrated Health Systems—Preferred Provider Organizations—Health Maintenance Organizations—Welfare reform—Medicare financial crisis. The health care scene is changing daily as government, the insurance industry, and health care providers struggle for power and control of health care delivery. (Eagleton, 1996)

One group of health care workers is endeavoring to manage the tides of change; nursing faces many challenges as it is being called upon to do more with less. As hospitals downsize, reorganize, redesign, and transform, nursing strives to continue to provide quality care during a period of transition (Hagenow, 1996; Iowa Nurse Reporter, 1996). Since approximately 65% of the United States' nurse workforce is employed in hospitals, reorganization of that institution has a major impact on the number of nursing positions available, and the role of the nurse in reorganized health care (Eagleton, 1996; Huber, 1996; National League for Nursing, 1994b).

As the profession itself is enmeshed in change, nursing education faces its own challenges, due not only to changes in health care, but to forces operating in the fields of nursing education and higher education. Nursing training in the form of apprenticeships began in hospital schools of nursing in the late nineteenth century (Leddy & Pepper, 1989). Hospital based diploma education for nurses continued to dominate the field until the 1970s, although some collegiate programs were started soon after the turn of the
Cincinnati was the first to offer a degree option in 1916, followed by Teacher's College at Columbia University (Deloughery, 1979).

In the 1940s, several factors influenced coming changes. Major reports by Brown in 1948 and Ginsberg in 1949 recommended moving nursing education into baccalaureate programs in colleges (Bullough & Bullough, 1984). Another major influence on nursing education was Mildred Montag's 1951 proposal for "nursing technicians" to be prepared in community colleges (Montag & Gotkin, 1959). In 1962, 3.7% of American nurses graduated from the new associate degree programs; by 1972, they comprised 37% of nursing graduates (Bullough & Bullough, 1984).

In 1980, there were 311 diploma nursing programs, 377 baccalaureate programs, and 697 community college-based associate degree programs (Bullough & Bullough, 1984).

According to the National League for Nursing (NLN, 1995), in 1994 there were 1,501 basic nursing programs; 509 were baccalaureate, 868 were associate degree, and 124 were diploma schools. In that same year, 94,870 students graduated from registered nurse programs; 28,912 were from baccalaureate programs, 58,839 were associate degree graduates, and 7,119 were diploma program graduates. In Iowa there were 423 diploma graduates in 1985; that number dropped to 254 in 1994. In 1995, the NLN listed 124 approved diploma programs in the United States. Nine of those were reported as closing; six more are now in the process.

The site of the current study was a hospital-based diploma program since 1899. Many curriculum changes took place over the years. In the 1980s, as they recognized the trend to academic degrees in nursing education, the faculty investigated becoming a
college. Visits were conducted to institutions such as Clarkson College in Omaha, which had successfully transitioned, and consultation was obtained. Action was deferred until 1994, when school administrators attended the National League for Nursing (NLN) Council of Diploma Programs Biennial Convention. The theme of change at that conference sparked renewed zeal to transition to degree granting status. A proposal to corporate administration to establish a college was approved in July 1994. The hospital Board of Directors established the college on July 14, 1995. A College Board of Directors was formed, the college was organized, and the first degree seeking students started classes on August 26, 1996.

As the nursing curricula (associate and baccalaureate) were being developed, the necessity to measure outcomes became evident, leading to the development of the current study.

**Need for the Study**

The health care environment is currently volatile, with organizational changes, new practice models, and a move to bottom line thinking (Curtin, 1996; Harrison, 1995). Patients in hospitals are more critically ill, yet health promotion is blossoming. What can nursing contribute to ease the chaos of this new environment? Balancing high tech with high care is nursing’s strength and contribution to a multidisciplinary approach to patient centered care (Curtin, 1996; White, 1989).
The concept of caring is fundamental. White (1989) stated:

Since time began, caring has been an essential part of living, growing, maturing, and dying. Without caring, families, friends, and children would perhaps cease to exist. Caring is a positive force that influences every part of our lives. (pp. 25A-26A)


Watson (1988), Leininger (1991) and a host of nurse theorists proposed a variety of models for caring in nursing. The National League for Nursing has published numerous treatises on the value of caring in nursing. Consequently, caring is viewed by nursing faculty at the study site as a concept integral to nursing and to the curriculum. The group developed a definition of caring as a basis for curriculum development. As the curriculum is implemented, it is necessary to evaluate its effectiveness.

The faculty asked what instruments were available to measure caring; could any of them operationalize the definition of caring developed at the study site?

In previous searches of the literature and in past contact with other nursing educators, no useful information was discovered about the measurement of caring. So the need to evaluate caring as a concept basic to the curriculum was the impetus for this study. The study provided guidance as the faculty made decisions about methods to use in measuring one component of the curriculum—caring.

As the plan for this study evolved, other questions emerged. The focus shifted from mere measurement of caring, to linking it with other concepts to explore new knowledge. Some of the questions this study sought to answer were: As students enter a
nursing curriculum, do they use a caring or justice moral voice? Do they use the Thinking or Feeling approach to decision-making? Is there a link between caring as a moral voice, caring as nursing behavior, and the Feeling dimension of the Myers-Briggs Type Inventory? Will there be any changes as students move through the curriculum? All of these questions prompted the current study, which investigated the status of these concepts in a cohort of incoming associate degree nursing students. Baseline findings are the core of this study. Future study will be necessary to measure the outcomes of these variables and determine the degree of change which was influenced by the college experience.

Problem Statement

Can the concept of caring be measured with sufficient validity and reliability to be considered an outcome of nursing education? Are there relationships between caring as a moral voice, caring as professional behavior and the Thinking/Feeling dimension of the Myers-Briggs Type Inventory?

Purpose of the Study

The concept of caring is a focal point in nursing today. It has been discussed and debated, but there is no general agreement on its definition or measurement. Nevertheless, many educational programs incorporate the caring concept as a basis for curriculum development. These programs face the challenge of presenting evidence to their constituents and to accrediting bodies that they are meeting their educational
objectives. There has been little research in the measurement of caring as an outcome of nursing education (King, 1992).

Outcomes assessment may be viewed as a variety of activities designed to measure student learning for the purpose of improving student learning and enhancing quality in education. Assessment has always been part of education, but several factors have recently accelerated its growth and importance. State legislatures have responded to public demand for quality control, so outcomes assessment has been mandated for public higher education in 24 states, including Iowa (The Nation: Chronicle of Higher Education, 1996). Minnesota and Missouri are 2 of the 18 states requiring performance-based budgeting. At least some of their appropriations from the state are based on their level of meeting selected objectives. All six voluntary regional accrediting associations, such as North Central Association in the Midwest, also require institutions seeking or maintaining accreditation to document the use of assessment to lead to improvement of educational outcomes (Marchese, 1990).

The National League for Nursing, currently the national accrediting body for nursing programs seeking voluntary accreditation, requires that schools document effectiveness in meeting educational outcomes. Criteria 13 and 14 for the evaluation of baccalaureate and higher degree programs address assessment and outcomes (National League for Nursing Accreditation Commission, 1996), and Criteria 1 and 24 do the same for associate degree programs (National League for Nursing, 1991a).

Nursing leaders continue to seek knowledge about the concept of caring as a basis for nursing practice, and to attempt to develop psychometrically sound instruments to measure caring. This study seeks to add to the knowledge base about caring in nursing,
and to contribute to instrument development, with the ultimate goal of improving the assessment of educational outcomes and enhancing the quality of nursing education.

Caring has many definitions; one way of viewing it is as a professional behavior (Cronin & Harrison, 1988; Horner, 1989; Wolf, 1986). Another view of caring is as a voice in moral decision making (Gilligan, 1982; Watson, 1988). As such, caring encompasses regard for others' feelings and considering the effects on others when making moral choices. The caring voice has been linked with the Thinking/Feeling Dimension of the Myers-Briggs Type Inventory (Liddell, Halpin, & Halpin, 1992). The Feeling dimension is an approach to decision making based on concern for others, compassion, personal values and subjectivity—as opposed to the Thinking dimension which uses analysis, reasoning, and impersonal logic to make decisions (Myers, 1993).

The present study, under the umbrella concept of outcomes assessment, was designed to discover whether there is a link between the constructs of caring as a nursing behavior, caring as a moral voice and the Thinking/Feeling Dimension of the Myers-Briggs Type Inventory.

**Research Questions**

Following a review of the literature and examination of the questions originally providing the impetus for this study, the following research questions were developed to guide data collection, analysis, and interpretation of findings.

1. Can caring behavior be measured with sufficient validity and reliability to substantiate caring’s emphasis in today’s nursing curricula?
2. What instruments are faculties using to measure caring behavior as an outcome of the nursing curriculum?

3. What are the psychometric properties of the instruments available to measure caring behavior in nursing?

4. Does a caring voice in moral decision making correlate with the Feeling scale of the Myers-Briggs Type Indicator in associate degree nursing students?

5. Does a caring voice in moral decision making correlate with caring behavior in nursing practice?

6. Does caring behavior in nursing practice correlate with the Feeling scale of the Myers-Briggs Type Indicator?

Hypotheses

Based on previous findings reported in the literature (Liddell et al., 1992; Rodgers, 1990), the following hypotheses are proposed:

1. A caring voice in moral decision making will correlate positively with the Feeling scale on the Myers-Briggs Type Indicator in associate degree nursing students.

2. A caring voice in moral decision making will correlate positively with caring behavior in nursing practice.

3. There will be a positive correlation between caring behavior in nursing practice and the Feeling scale on the Myers-Briggs Type Indicator.
Definition of Terms

1. **Caring Behavior.** Caring behavior is central to the educational experience and the practice of nursing. This behavior reflects relationships which are a nurturing process characterized by commitment and responsibility toward another person. Caring behavior is based on a fundamental belief in the value of persons and a commitment to facilitate personal integration. Caring behavior begins with the self and embraces all persons we touch within the environment (Mercy College of Health Sciences Catalog, 1996).

   Caring behavior was measured using an instrument found during the course of this study. The Professional Caring Behaviors Instrument (Horner, 1989), Appendix G, was used to provide a self-report of caring. It measures instrumental and affective caring. The Professional Caring Behaviors Instrument may be used by nurses and students as a self-report and by patients or families to evaluate caring behaviors of nurses.

2. **Nursing.** Nursing is a practice discipline which combines the art of caring and the science of healing. The art of nursing is the unique way in which the individual invests the self into interactions with clients and health team members. Caring communication and behavior, creativity, and compassion permeate interactions with clients and health team members. The science of nursing includes the unique body of knowledge that nursing possesses, uses, and continues to develop through research. It also includes knowledge drawn from other disciplines utilized to enhance current practice. The decision making process, which includes the ability to think critically and analytically, is integral to the science of nursing (Mercy College of Health Sciences Catalog, 1996).
The component of Nursing operationalized in this study was the measurement of caring behavior, using Horner's (1989) Professional Caring Behaviors Instrument (Appendix G).

3. Caring voice. A basis for morality which stresses the necessity to be responsible in relationships, sensitive to others' needs, and to avoid causing pain is referred to as the caring voice in moral decision making. Gilligan (1982) developed this model to describe the moral decision making used predominately by women, in contrast to the predominately male model of ethical development described by Kohlberg (1969), which is based on justice, individual rights and autonomy, liberty, and duty.

Moral orientation toward care and justice was measured with the Measure of Moral Orientation (Liddell, 1990), Appendix H. It is a forced choice instrument providing scores for the scales of care, justice, self-care and self-justice.

4. Feeling. Feeling is a process of making judgements experientially, based on person centered values, assessment of the impact on others with concern for harmony, appreciation, and support of others (Myers, 1993). The polar process of judgment is Thinking, in which objective, impersonal, and logical sorting and analysis are used to make decisions. Everyone is capable of using both processes, but one is preferred and better developed in each person. Thinking and Feeling are two functions in a dynamic model of ego development, a developmental theory of personality type preferences (Jung, 1971; Myers, 1980).

Feeling was measured with the Myers-Briggs Type Indicator (MBTI), Form G (Appendix F). It is a forced choice instrument used to measure four polar dimensions of personality based on Jung's theory of type preferences.
5. **Gender.** There had been no attempt to predict nursing students' preference for Thinking/Feeling, Justice versus Care, or a caring predisposition based on gender. Due to the small number of males in the study, it was not possible to generate sufficient data to draw any conclusions. Nursing may attract people of both genders who want an opportunity to care for others (Chapman, 1983; Meyer, 1995).

**Limitations**

1. This study used a deliberate sample of associate degree nursing students. Therefore, the findings are limited to this select population.

2. The selection of nursing educators was a combination of deliberate (transitioned schools), stratified and random sampling. Findings are limited to the sample.

3. Lack of norms for one of the three instruments used in this study precluded comparisons between the sample and other groups.

4. The attempt to empirically link concepts which have been linked conceptually was an exploratory process. Correlation was sought between Feeling, caring as a moral voice and caring as professional behavior. Further study with other populations is warranted.

**Assumptions**

The basic assumption upon which this study rested is that caring can be quantitatively measured—and that the measure selected reflects the conceptual definition developed by the faculty at the study site. A related assumption was that the students provided honest responses to the questions on the instruments, and that their orientation
to the college did not bias their responses to statements about caring. It was assumed that
caring is central to nursing practice and that it is an integral curriculum component at the
study site. A final assumption was that as a curriculum component, caring needs to be
defined and measured, in order to demonstrate achievement of intended curriculum
outcomes.

**Significance of the Study**

This study was planned to serve several purposes: generation of new knowledge,
support of previous findings, and generation of data for outcomes assessment. This study
was designed to lead to new knowledge in discovering whether the theoretical link
between caring as a moral voice and caring as a professional behavior could be
demonstrated empirically. There was a correlation found in previous studies between the
Feeling dimension of the MBTI and caring as a moral voice. Would that be a finding in
this group of beginning nursing students? This study could contribute to the knowledge
base of nursing educators and theorists.

In addition to the search for knowledge, there was a practical benefit to the study
site in the conduct of this research. The data generated by the study were a baseline
measure of caring in entering nursing students. In the future, repeating these and using
other measures of caring during and upon completion of the program will hopefully
demonstrate the effectiveness of the curriculum and college climate in educating caring
nurses.
Organizational Overview

The organization of this dissertation is as follows: the introduction to the study is found in Chapter I. The second chapter presents highlights of the review of the literature; the third chapter identifies the research methods used in this study and findings are described in Chapter IV. The responses of nursing educators to a survey are described, as well as student nurses' replies to the Myers-Briggs Type Indicator, Professional Caring Behaviors Instrument, and Measure of Moral Orientation. The fifth chapter discusses the findings in light of other research, identifies conclusions and suggests recommendations for future study.
CHAPTER II. REVIEW OF THE LITERATURE

As the central focus of this study, caring was explored in this review of the literature. Two separate but potentially related aspects of caring were investigated here, caring as a professional behavior in interpersonal relationships, and caring as a moral voice. Theories of moral development were the framework for the discussion of caring as a moral voice.

Personality types were another factor examined in this study, so background about type theory has been provided. Outcomes assessment was the umbrella concept under which this study was conducted; key information about outcomes assessment concludes this section.

Caring in Nursing

Caring has been described in multiple ways in the nursing literature; most authors agree that it is basic to nursing practice, but there is little agreement on the definition, structure, philosophical underpinnings, or nature of caring. A brief survey of the meanings of caring in nursing follows.

Leininger and Watson are two nursing leaders who have developed major theories of caring in nursing. Their works will be examined initially, then consideration given to other selected nurse theorists, and finally, the philosophical bases for nursing theories of caring will be explored. It is important to note that caring is a human phenomenon, which has been valued for centuries in Eastern philosophy, and by women in Western
culture (Li, 1994). Smerke (1989) assembled an anthology of cross-disciplinary caring literature which demonstrates the growing interest in caring as a human core value.

Leininger (1991) differentiated between generic and professional caring. She defined professional caring as:

formal and cognitively learned professional care knowledge and skills used to provide assistance, support, enabling or facilitative acts to or for another individual or group in order to improve a human health condition (or well being), disability, lifeway, or to work with dying clients. (Leininger, 1991, p. 38)

Leininger's anthropological grounding was evident in her "Sunrise Theoretical/Conceptual Model of Transcultural Care Diversity and Universality" (1991). Leininger's model of caring viewed humans as inseparable from their historical, cultural, and social context. Sociocultural factors, meanings, and expressions of health influence nursing care. Leininger's anthropological background strongly influenced her language and approach to nursing research. The term emic refers to the point of view or world view of respondents in ethnographic research (Bloom, 1995). The outside interpretation of those views, as seen through the researcher's world view, is the etic form of knowledge. Leininger stated:

Most importantly, I theorized that cultural care knowledge, derived from the people, the emic culture knowledge, could provide the truest knowledge base for culturally congruent care so that people would benefit from and be satisfied with nursing care practices held to be healthy ways of serving them. The nurse's etic, or outside knowledge, would have to be considered with the people's emic, or generic folk knowledge to discern areas of conflict or compatibility of ideas. (1991, p. 36)

The Sunrise model has wide applicability; it can be used with individuals, groups or institutions (Leininger, 1991).
Leininger has had a tremendous impact on nursing practice and education (Cohen, 1991). Her culture care model helped move nursing education and research away from the medical model which bases nursing care on pathology and medical care. The proliferation of transcultural nursing courses has coincided with the "shrinking" of the globe and the growth of multiculturalism in American society (Cohen, 1991).

A different view of caring and nursing was developed by Watson. Caring has been called the essence or core of nursing (Watson, 1985). Caring is the moral ideal of nursing with concern for "humanity, dignity and fullness of self" (Watson, 1985, p. 14). Watson, influenced by existential phenomenology, developed a Model of Human Care which conceptualizes caring as an interpersonal process between two people.

"'Transpersonal caring' occurs when the nurse detects the subjective world of the patient, experiences union with it and 'expresses the union in such a way that both experience a freeing from isolation'" (Watson, 1988, p. 79). Watson added that transpersonal caring is a spiritual union between two people transcending "self, time, space, and life history of each other," allowing patient and nurse to enter the phenomenal field of the other (Cohen, 1991, p. 903).

Watson viewed caring as an end in and of itself, freeing nursing from conflict with the curing ideology of the larger health care system. She emphasized that nurses must care whether or not cure is possible, and especially when it isn’t (Watson, 1988). Watson also noted:

Viewing nursing within a transpersonal caring-healing perspective attends to the human center and caring-healing consciousness of both the nurse and the one being cared for; it embraces both a physical embodiment as well as a metaphysical transcendent dimension of nursing and the caring-healing process; it is concerned
with preserving human dignity and restoring and preserving humanity in the fragmented, technological, medical cure-dominated systems. (1990, p. 278)

Koldjeski contrasted the theories of Watson and Leininger:

The two perspectives of caring developed by Leininger and Watson illuminate and connect particular aspects of nursing depending on the centrality each gives to philosophical, cultural and empirical concerns. Each has different strengths and different emphases. For Leininger, caring is embedded in transcultural phenomena central to all of nursing. For Watson, caring has human dimensions that are imbedded in an ethic and moral ideal of human value accompanied by a commitment to preserve and restore the human center to nursing theory and practice. Guiding the unification process throughout is the view ... that the proper object of nursing science is the human experience of health and illness, that this experience is uniquely human and this fact places nursing within a dimension of reality that is different from technology. (Koldjeski, 1990, p. 46)

Roach (1991), another nurse theorist who studied caring, agreed with May’s 1969 study that the human capacity to care may need strengthening, but that it is nearly indestructible. Roach stated that caring in nursing is the concept which encompasses all other aspects of nursing as a human, helping discipline. She added, "To understand this multiform expression of caring further, I have found it helpful to categorize it under five C’s—Compassion, Competence, Confidence, Conscience, and Commitment" (Roach, 1991, p. 9).

Roach viewed caring as more than an emotive expression, but a total approach to patient care. "When we cease to care, we cease to be human. Our humanity is the ground for our professional identity" (1991, p. 134). Roach introduced an element not explicitly stated in the previous approaches, that of competence, which implies technical as well as interpersonal skills.
Eriksson (1992) explored the meaning and substance of a phenomenon she named "caring communion" (p. 93). The meaning is "the ability to do good for one another" (p. 93). The substance is:

the art of making something special out of something less special.

... a creative act with intensity and vitality characterized by warmth, presence, respect, rest, frankness and tolerance. Fundamental modes of togetherness were eye contact, listening and language. Caring communion was further characterized by fighting to get through something together and being successful. ... In summary, caring communion is healing and requires connecting in time and space and being an absolute presence. Time as a quantity is of no great significance, but the experience of sharing time is important. Caring communion implies choices which include both joy and pain. Most importantly ... it presupposes a conscious effort to be with others in such a way that communion can be achieved. (Eriksson, 1992, p. 93)

Boykin and Schoenhofer (1990) identified five dimensions in their analysis of caring knowledge: ontological (philosophical study of the nature of being), anthropological/cultural, ontical (philosophical study of reality), epistemological (the study of the nature of knowledge), and pedagogical (teaching). The concept of caring was alternatively analyzed by Morse, Bottorff, Neander, and Solberg (1990) within the framework of the five following major categories: caring as a human trait, as a moral imperative, as an affect, as an interpersonal interaction, and as an intervention.

Valentine (1989) proposed a data-supported Integrated Model of Caring, incorporating affective, cognitive, and interactional elements. Caring is also affected by philosophical beliefs and structural elements of the environment. Valentine saw the model as useful in educating others about caring and guiding research.

Vezeau and Schroeder (1991) analyzed caring approaches in light of origin, balance of power, embodiment, time and space, and intended outcomes. They surveyed selected conceptualizations of caring in nursing, philosophy and literature to enlighten
nurses about the various approaches to caring. They advocated not choosing one model as superior to the others, but having a general awareness of available models.

The sources for various approaches to caring theories of nursing include the works of a number of philosophers. Cohen (1991) cited the works of Hegel, who transformed thesis to antithesis to form new truth, and Kierkegaard, an existentialist who questioned the reason for human existence. The latter's framework was shared by Sartre, Camus, Buber, and Tillich (Cohen, 1991). Other thinkers who inspired nursing caring theories were Ludwig von Bertalanffy who rejected reductionism and accepted open systems; Bertrand Russell who concluded that traditional scientific views on causation are invalid and that change is continuously innovative; Pierre Teilhard de Chardin who viewed human beings as evolving into ever more complex and integrated wholes who will ultimately self-transcend into a mystical unity with all; and Michael Polyanyi who proposed that scientific knowledge cannot exist without personal knowledge in the interpretation of facts (Cohen, 1991).

Some elements of Eastern and Hindu philosophy, such as soul, dualism, harmony, causality, and time have also influenced approaches to caring (Sarter, 1987). Theoretical statements about caring have been made by philosophers, psychologists, nurses, and theologians (Leininger, 1980).

Fry (1993) identified various models of human caring, including Leininger's Cultural Care Model (1984), a Feminist Care Model (Gilligan, 1977; Noddings, 1984), a Humanistic Model of Caring (Pellegrino, 1985), Christian Love Model (Frankena, 1983), Obligation Model emphasizing compassion and beneficence (Roach, 1991), and introduced a Covenant Model emphasizing fidelity in relationships.
Swanson (1993) proposed that "nursing is informed caring for the well-being of others" (p. 352). She based her definition on Carper's (1978) statement that nurse caring is informed by empirical knowledge derived from the humanities, clinical experience and personal and societal values and expectations. She added, the goal of nurse caring is to enhance the well-being of its recipients. It is the blend of knowledge/information and the goal of practice that distinguishes nursing from others whose practice includes caring. . . . To be with another is to give time, authentic presence, attentive listening, and contingent, reflective responses. . . . To be with another is simply to give of the self and to do so in such a way that the one cared for realizes the commitment, concern, and personal attentiveness of the one caring. (Swanson, 1993, pp. 354-355)

The faculty at the site of the study leaned heavily on the writings of Swanson and Watson in their search for a definition of caring which would embody all of their combined thoughts about caring. They decided that their definition of caring is behavior which reflects relationships which are a nurturing process characterized by commitment and responsibility to another person. Caring behavior is based on a fundamental belief in the value of persons and a commitment to facilitate personal integration. Caring behavior begins with self and embraces all persons we touch within the environment (Mercy College of Health Sciences Catalog, 1996).

The various aspects of caring have been the focus of numerous nursing investigations. The qualitative approach has been widely used, especially in examining perceptions, interpretation of events, and describing exemplary incidents. Selected publications include: Benner (1984), Bradby (1990), Bush (1976), Chipman (1991), Davis (1991), Field (1981), Klisch (1990), Kososky (1995), Leininger (1984a, 1984b), Nelms (1990), and Watson (1987, 1988).
Streubert and Jenks (1992) reviewed selected qualitative studies of caring in nursing. Annual International Conferences on Human Caring have been the arena for the presentation of research based on caring. The majority of these studies have used qualitative methods (Gaut, 1992).

Other nurses have used a quantitative approach to explore selected aspects of caring; one of those topics is nurses' and patients' perceptions of nurses' caring behaviors. Three such studies will be examined in depth, because they are relevant to the current study.

Larson (1986) used a Q sort method, a forced choice method in which the respondents sort cards to rank the order of importance. The Care-Q Instrument was developed by Larson after a Delphi Survey of nurses on the caring components of nursing, and a study of patients' perceptions of nurse caring behaviors. An expert nurse panel and then a patient and staff nurse panel independently reviewed the instrument, eliminating 19 items and retaining 50 which were ordered in six subscales of nurse caring behavior items. There were no similar tests available which could be used to establish criterion validity. Reliability was addressed using the test-retest method, with 79% consistency for the five most important items.

The 57 cancer nurses who completed the Care-Q ranked affective items as 8 of the top 10. Quick response to patient call and giving good physical care rounded out the most important items. Larson reported that she had used the same instrument and procedure previously with cancer patients. Unlike the nurses, they valued monitoring and follow-through as the most important nurse caring behaviors. Interestingly, Larson (1986) noted that:
Selecting only one of the 50 items as the most important nurse caring behavior proved difficult for most participants. Frequently, a nurse remarked that it was a "frustrating study to participate in . . . I did it one way and then wanted to sort the items another way." . . . Several nurses said they would like to respond . . . from the viewpoint of the patient. . . . Another response was: "I wish I had done it the way I really wanted to, not the way I felt I should. (p. 90) Larson (1986) speculated that the validity of the study could have been affected by subjects' offering socially acceptable responses. Larson also recommended that until more is known about patients' perceptions of caring, nurses should validate with their patients that their intended caring is being perceived as such.

Before considering the next study, the comments of Dennis (1988) should be considered. She identified Q-Methodology as a means of collecting quantifiable data on subjective phenomena such as attitudes. Dennis noted:

With Q-Methodology, it is important to remember that reliability and validity reside in the data, not in the measure, and that items rather than persons receive scores. Discarding the notions of psychometric properties while emphasizing the concepts of reliability and validity are essential for maintaining a Q-perspective. . . . Reliability in Q is the consistency with which results are obtained for the same sample of people over time, or across another sample of people drawn from the same population. . . . Since there is no outside criterion for a person's point of view, familiar approaches to ascertaining construct or predictive ability are inappropriate and irrelevant. Therefore, approaches to validity in Q more closely approximate those used in qualitative rather than quantitative methodologies. (1988, p. 413)

This passage illustrated that Larson (1986) employed the correct procedures, but did not assist the reader to understand reliability and validity in Q-Methodology.

Cronin and Harrison (1988) interviewed patients in a coronary care unit after myocardial infarction (heart attack) using their instrument, Caring Behaviors Assessment (CBA), and an open ended question to identify indicators of caring.
Consenting participants were initially asked, "While in the coronary care unit, what things did nurses say or do that made you feel cared for and about?" Then the authors developed the CBA, a list of 61 nursing behaviors derived from Watson's work. Face and content validity were established by a panel of four nursing theory specialists. Items with interrater reliabilities of less than 0.75 were recategorized into more appropriate subscales. Internal consistency was established using Chronbach’s alpha. Reliability coefficients for each of the CBA subscales ranged from 0.66 to 0.90.

Using a five point Likert-type scale, 22 subjects in ICU units identified whether each listed behavior communicated caring to them. The top nine responses included four items related to clinical skills and judgment and four items related to affective skills. The last item was teaching about the illness, which combines skills and affect.

In discussing the results, the authors’ interpretation was that the clients had high acuity levels, which caused them to focus on their physical needs, although they recognized the necessity of learning about their condition and its management. Another point not noted by the authors is that something that is present may be taken for granted, and only noticed in its absence. In other words, the caring behaviors of the nurses in the unit were not particularly valued because they were taken for granted. Had the nurses not been caring, the strained atmosphere in the unit would have been a source of concern to the patients.

E. Harrison (1995) conducted a similar study of perception of caring with inhospital hospice nurses and families of hospice patients as subjects, using Horner’s (1989) Professional Caring Behaviors Instrument. The basis for Horner’s development of the instrument was a survey of 356 patients using four open-ended questions about nurse
caring behaviors. Content analysis resulted in development of 10 themes. Two positive and two negative statements were developed for each theme.

Content validity was established by a panel of four nurse experts. Four additional themes were identified. The number of items was increased to 56. These were divided into two instruments containing 28 items each. Test-retest reliability was 0.81 and Chronbach's alpha for test A was 0.81 and for test B was 0.94. Correlation (r) between positive and negative statements was 0.001. Harrison (1995) cited these figures reported by Horner in describing development of the instrument. Harrison did not report any testing of the instrument with a subset of her population prior to using the instrument to conduct her study.

A convenience sample of 16 staff nurses (the total of those working on the selected unit) and 15 family members were asked to complete the survey. Usable data resulted from 14 nurses and 14 family members.

Families' top response in rating nursing caring was related to cleanliness and orderliness of the patient's room, followed by three items related to affective skills; giving clear explanations was also valued. Least important were, in order, giving explanations before proceeding, staying when the patient is in discomfort, and being well organized. The major difference in the nurses' responses was that they valued respecting the spiritual beliefs of the patient, a finding lacking in the family group. Nevertheless, this study resulted in the highest accord between family/patient and nurses' responses reported to date. There has been an overall gap between lay and professional responses to lists of caring behaviors, with patients valuing entry level skills, such as technical skills and timeliness, and nurses valuing coordination of care and psychosocial expertise

A brief discussion of related studies about nurse caring follows. Larson (1986) reported Brown's 1982 study which showed that Home Care patients, in contrast to hospitalized patients, most valued special attentions from the nurse and the nurse showing interest in them. It is possible that lower illness acuity levels allow patients to focus more on interpersonal skills and less on technical skills and professional judgment.

Bader (1988) measured affective and instrumental activities of nurses that led to patient satisfaction. The findings were that 12 predictor variables were related to the affective dimension of nursing care, and only 3 were from the professional/technical subscale. These results are contrary to those of Larson (1986) which were reported above.

Mangold (1991) used Larson's (1986) CARE-Q to compare senior nursing students' and professional nurses' perceptions of effective caring. The professional nurses' responses were consistent with the results of Larson (1986). Nursing students' responses agreed with most of the registered nurses, except that their rating of the trust subscale was lower at a statistically significant level. The author attributed this difference to the youth of the student sample.

Perceptions of caring held by nurse educators were the focus of a study by Komorita, Doehring, and Hirschert (1991). The 72 educators' responses were compared with a sample of 38 nurse managers and clinician/specialists. The entire sample of 110 agreed with previous nurse samples that comfort and trusting relationships were the most important caring behaviors as identified with the Larson CARE-Q (1986).
Studies conducted with nurses and patients have demonstrated that both groups value caring behaviors in nurses, although there is some discrepancy in the specific behaviors valued most. Mangold (1991) recommended measuring nursing students' perceptions of caring at intervals to compare changes and measure the impact of the education program on students' perceptions of caring.

In summary, caring is regarded as the concept central to nursing practice, yet there has been poor definition of caring and the term is used inconsistently by nurses. Patients and families value a combination of technical and affective nursing skills. A number of theories of caring have been discussed, including Leininger's and Watson's. The latter considers caring to be the moral imperative for the profession of nursing. The morality of caring in nursing will be explored further.

**Moral Development**

The concept of morality will be discussed before its development will be explored. Webster's II new Riverside University dictionary defined moral as "Of or concerned with the principles of right and wrong in relation to human action and character" (Soukhanov, 1984, p. 769). Morality is "The quality of being in accord with standards of good or right conduct" and "a system of ideas of right and wrong conduct" (Soukhanov, 1984, p. 769). Ethics are "the rules or standards of conduct governing the members of a profession <medical ethics>" (Soukhanov, 1984, p. 445).

Thiroux (1980) stated, "Ethics, then, seems to pertain to the individual character of a person or persons, whereas morality seems to point to the relationships among human beings" (p. 2). He based his definitions of terms on his translation of the Greek
ethos, as character, and the Latin moralis, as customs or manners. Thiroux (1980) identified two major approaches to the study of morality, which is called ethics. One is scientific; psychologists observe human behavior, then draw conclusions. The other is philosophical, and is comprised of the normative or prescriptive aspect, informing people how they should behave, and the metaethical approach, which concentrates on language, reasoning and logical structure. Despite slight differences in language, Callahan (1988) agreed with these definitions.

Callahan (1988) focused on professional ethics, involving situations in which a dilemma must be decided. The dilemma approach has been used frequently to demonstrate application of principles. Then the question arises, which principles should be applied? Thiroux (1980) proposed that regardless of which ethical system one embraces, there are ultimate values to which all of them adhere, either explicitly or implicitly. They are: the value of life principle (revere life, accept death); the principle of goodness or rightness (strive for good and avoid wrong); the principle of justice or fairness; the principle of truth telling or honesty; and the principle of individual freedom.

How these principles are applied depends upon the ethical system one uses to guide one’s behavior. Thiroux (1980) identified two major approaches to morality: consequentialist (teleological) which is the basis of utilitarianism; and nonconsequentialist (deontological) which includes Kant’s Duty Ethics. All ethical systems are normative and prescriptive.

Quinn (1990) suggested that in selecting ethical content for nursing students, consideration of professional ethical codes are essential, as well as the values identified by the American Association of Colleges of Nursing in 1986. The values to which the
professional nurse should be committed are altruism, equality, aesthetics, freedom, human dignity, justice, and truth. Quinn (1990) cited Styles’ 1982 admonition to student nurses to reflect upon professional moral values and consider fundamental questions such as:

What does it mean to be a nurse? What am I as an individual nurse promising my clients? How must I behave in order to fulfill my promise of nursing and live up to the ideals of the profession? While such reflections may seem far afield of clinical ethical dilemmas, they are an essential step in the student’s assimilation of the moral values upon which ethical-practice decisions are made. (1990, p. 728)

Piaget was one of the first scholars to study morality from a developmental perspective (Crittenden, 1990). Kohlberg built on the work of Piaget to propose six stages of progressively more adequate forms of moral reasoning (Rich & De Vitalis, 1985). Kohlberg claimed that moral development was sequential and dependent on the level of cognitive development. He based his theory on research conducted initially with male subjects. The "justice voice" observed by Kohlberg rests on rules, principles of fairness and justice, impartial analysis, and reciprocity. Kohlberg’s later research with women revealed that they scored lower than men in moral development.

Gilligan (1982) studied women experiencing a real life moral dilemma, that of deciding whether to have an abortion. Gilligan observed another approach to moral reasoning in her subjects, based on care and responsibility. Moral dilemmas are seen in terms of collaboration, maintaining relationships, preventing harm, and are resolved through actions of support, healing, and care. Gilligan referred to this moral reasoning as the "care voice" (1982). A comparison of the voices is made in Table 1, based on the work of Lyons (1993).
Table 1. Central moral issues of care and justice

<table>
<thead>
<tr>
<th>Morality of Care</th>
<th>Morality of Justice</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A. Defining a Moral Problem</strong></td>
<td><strong>A. Defining a Moral Problem</strong></td>
</tr>
<tr>
<td>Basis of morality: moral problems concern relationships or the activities of care.</td>
<td>Basis of morality: justice as fairness or reciprocity between separate individuals.</td>
</tr>
<tr>
<td>Conflicts: breaks in relationships; breaking ties between people; or conversely, with restoring or maintaining relationships; itself; responding within the context of the situation; promoting the welfare or relieving the physical or psychological stresses of another; concerns about self-care especially in regard to care of others.</td>
<td>Conflicts: obligation, duty or commitment arising from different role-relationships or to personal values and principles. There is a need to have impartial, objective measures of choice to insure fairness.</td>
</tr>
<tr>
<td><strong>B. Resolving Moral Conflict</strong></td>
<td><strong>B. Resolving Moral Conflict</strong></td>
</tr>
<tr>
<td>Resolutions are sought:</td>
<td>Resolutions are sought:</td>
</tr>
<tr>
<td>(1) which restore relationships and connections between people;</td>
<td>(1) to meet one's obligations or commitments or to perform one's duties;</td>
</tr>
<tr>
<td>(2) which complement activities of care, allowing good to come to others or stopping hurt and suffering for others or self.</td>
<td>(2) to maintain or not violate one's standards and principles, especially fairness.</td>
</tr>
<tr>
<td><strong>C. Evaluation of the Resolution</strong></td>
<td><strong>C. Evaluation of the Resolution</strong></td>
</tr>
<tr>
<td>The evaluation considers:</td>
<td>The evaluation considers:</td>
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<tr>
<td>(1) measure of restoration or maintenance of relationships</td>
<td>(1) how the decision was justified and thought about</td>
</tr>
<tr>
<td>(a) everyone is happy</td>
<td>(a) living up to one's obligations or of fairness</td>
</tr>
<tr>
<td>(b) people talk to one another</td>
<td></td>
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<tr>
<td>(c) everyone is comfortable with the solution</td>
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</table>
Table 1. (continued)

<table>
<thead>
<tr>
<th>Morality of Care</th>
<th>Morality of Justice</th>
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<tbody>
<tr>
<td>(2) how the situation is resolved</td>
<td>(2) whether values, standards, or principles were maintained, especially fairness</td>
</tr>
<tr>
<td>(a) time is necessary to actually know</td>
<td>(a) ability to live up to one's obligations or principles</td>
</tr>
<tr>
<td>the results</td>
<td>(b) standards used in decision making</td>
</tr>
<tr>
<td>(b) one may never actually know the</td>
<td></td>
</tr>
<tr>
<td>outcomes</td>
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</table>

Adapted from Lyons, N. P. (1993). In A. Garrod (Ed.), Approaches to moral development: New research and emerging themes.
Milette (1994), in discussing the justice and care orientations, stated:

Gilligan (1977, 1979, 1981, 1982a, 1982b) does not say that either perspective is better but that they are different approaches to solving dilemmas. Nor does she contend that caring is an exclusively feminine perspective ... the care and justice orientations can be evident in the same story. Their question is, Which orientation is present, which predominates, and which prevails? (p. 663)

Several studies done in the health care field support Gilligan's view that care and justice coexist, although one usually predominates. Milette examined moral decision-making in registered nurses and found "the caring orientation was clearly present, as was the justice orientation to a lesser degree" (1994, p. 660).

Chally (1995) reported a study of moral decision making by nurses in intensive care, contrasting responses from those staffing newborn and adult units. Care was the predominant moral perspective, used by 63% of the sample of both units. A combined approach was used by 25%, and 12% used the justice voice alone. There were no statistically significant differences between nurses working with adults or infants.

Viens (1995) studied the moral reasoning of nurse practitioners. They valued caring primarily, but other values influencing their decision making were responsibility, trust, justice, honesty, helping, sanctity/quality of life, empathy, beneficence, religious beliefs, intuitive values, and respect for persons (Viens, 1995, p. 279).

Dobrin's (1989) examination of the ethical judgments of male and female social workers used Rest's Defining Issues Test (DIT), which is based on Kohlberg's work, using justice as the ultimate value. Surprisingly, women had higher scores than men in this sample. The scores were related to years of education, rather than gender.

In medical students, Shapiro and Miller (1994) found that women tended to identify situations as moral issues if they involved broad social perspectives, patient and family
rights, and personal responses. Men identified issues of personal control, authority, and responsibility, and relied exclusively on abstract, logical arguments.

Two studies compared moral reasoning in subjects from nursing and medicine. Peter and Gallop (1994) examined 119 nursing and medical students. Nursing students used care more than justice considerations, but their moral orientation was mixed. Differences were found between nursing and medical students, but these were related to gender, not professional role.

Norberg and Uden (1995) selected 40 student nurses, 38 registered nurses, and 30 physicians in geriatric and surgical care to give accounts of morally difficult care situations. There were no gender differences in care orientation. The student nurses demonstrated a greater care orientation, while the RNs and physicians, to an equal degree, showed both a justice and care orientation.

The more traditional approach to nursing ethics is demonstrated by the work of Ketefian and Ormond (1988) who conducted a review of nursing studies focusing on moral reasoning and ethical practice. They stated that the two concepts were muddied in the studies they examined. Ketefian and Ormond defined moral reasoning as "the cognitive processes of reasoning about moral choice, often referred to in the literature as moral judgment or moral development" (1988, p. 3).

Ketefian stated, "Ethical practice relates to the domain of nurses' moral behavior, actions, decisions and ethical decision making regarding ethical dilemmas" (1988, p. 3). The studies included in Ketefian's review were based on both moral reasoning and ethical practice. Kohlberg's notion of justice as the paramount virtue grounded these studies; none of these nursing studies used care as a voice in moral decision making.
Rest (1994) proposed that stage development described by Kohlberg is only one component of the psychology of morality. Rest (1994) introduced the concept of the "Four Component Model," comprised of moral sensitivity (interpreting the situation), moral judgment (judging which action is right or wrong), moral motivation (prioritizing moral values relative to other values), and moral character (having courage, persisting, overcoming distractions, and implementing skills).

Duckett and Ryden (1994) reported teaching ethics to nursing students in core content units across the curriculum with augmentation content in selected courses. Citing the move toward caring as an ethical framework for nursing decisions, these authors questioned whether caring can be integrated with justice to become an integrative theory of nursing ethics. They discussed how caring could be a component of the Four Component Model (Rest, 1994), but nothing in their results or discussion demonstrated that caring was studied by these authors. Their data consisted of students' scores on Rest's Defining Issues Test (DIT), first published in 1979. The DIT is a multiple choice test which can be given to groups and computer scored. It includes Kohlberg's Heinz dilemma and several others to which subjects respond by ranking 12 items to be considered in resolving the problems. The DIT is based on Kohlberg's justice model; caring is not a component in the DIT. Rest (1994) stated that there is no empirical evidence that the Care orientation is developmental and has stages, or that it has a universally accepted definition. He concluded that Care is merely a form of verbal expressiveness, not a moral voice.

Condon (1992) analyzed several perspectives of caring from a feminist standpoint. She stated that historically, women have never reached full human status due to the
masculine world view that has preempted women's full participation in the world. The contemporary women's movement foresees human liberation creating a social utopia in which "social life is characterized by nurturant caring, expressive and nonrepressive relationships between self and other, self and nature" (Condon, 1992, p. 15). Nurses can contribute to positive change through development of an ethics of caring because nurses participate in the public domain as members of a profession. Condon (1992) stated that nurses can become visible caregivers and help society to recognize the worthiness of caregiving. Condon viewed caring as a more appropriate ethic for nurses, based on women's connected experiences, as opposed to previous male metaphors such as battling illness, which is based on separateness and adversity.

Watson (1988) identified caring as the moral imperative for nursing, the highest form of commitment to patients, the ethical principal or standard by which curative interventions are measured. Watson viewed caring as based on a humanistic-altruistic value system. Her model involves action and attitude. It involves an expectation of mutuality and reciprocity and leads to growth in both the carer and the cared for. A number of authors have agreed with Watson's identification of caring as an ethical basis for nursing practice (Carper, 1979; Fry, 1988; Gadow, 1985; Gaut, 1986; Harrison, 1990; Kelly, 1988; Kitson, 1987; Kurtz & Wang, 1991).

In order for caring to have moral value, Fry (1988) stated that caring must be viewed as 'good' for specific reasons. Caring must be: viewed as an ultimate value, considered a universal value, considered prescriptive, and characterized by other-regarding (not considering one's own welfare). Cooper (1989) correlated nursing's caring
ethic with Gilligan’s theory of moral development based on a perspective of care. Cooper believed that Gilligan’s theory of moral decision making more faithfully reflects the nursing experience than Kohlberg’s contractual theory, which currently dominates the nursing literature.

Balasco stated, "The research of Carol Gilligan affirms the experience of caring as a moral experience . . . Gilligan provides empirical evidence for a feminine, gender-related 'perspective of care' which serves as a paradigm for the practice of nursing" (1989, p. 174).

Fry (1989) supported developing a theory of nursing ethics. Her position was that bioethics, rights-based notions of autonomy, or professional social contract theories underlying medical practice should not underlie nursing ethics, but that the nursing values are derived from the nature of the nurse-patient relationship. In focusing on a moral view of persons rather than a system of moral justification, the central value in a theory of nursing ethics should be caring. Fry added that nurses must consider medical ethics when developing nursing ethics, because the links between them are important, and they must articulate.

Nokes (1989) cited several studies showing that nurses had lower scores on tests of principled moral reasoning than other professionals, and that years of experience in nursing correlated negatively with principled moral reasoning. Nokes suggested that gender differences in moral reasoning may have contributed to those results. Nokes cited Gilligan’s (1982) position that social experiences are perhaps more crucial than cognitive growth in contributing to moral development. Nokes concluded that:
a theory of caring that assimilates Kohlberg and Gilligan’s positions needs to be developed. In this new theory of caring, moral problems would be expressed in terms of accommodating the needs of self and others, of balancing competition and cooperation and of maintaining the social web in relations in which one finds oneself (Tronto, 1987). This theory of caring would not reflect a superiority of one gender over another but rather a synthesis of the good from both models. (Nokes, 1989, p. 175)

Meyer (1995) noted that normative ethics are derived from a masculine perspective, written, reasoned, and adhered to by men, including the work of Piaget and Kohlberg. In response to the rhetorical question of what is wrong with that, Meyer replied, "NOTHING IF YOU ARE A MAN IN A MASCULINE THINKING AND ACTING PROFESSION" (1995, p. 23) (author’s emphasis). She stated, "Carol Gilligan developed a theory around the feminine perspective of relationships and responsibility . . . Caring is what nursing is all about; it comes from the feminine side of moral development concerned with responsibility and relationships" (Meyer, 1995, p. 23).

Sellin (1995) agreed:

The expectation in the nurse-patient relationship is that the nurse (1) will care, (2) will take care of, and (3) will engage in caring acts for patients based on the nurse's respect for the patient as a person. Noddings and others describe caring as the feminine approach to moral problems and maintain that gender, socialization, cultural understanding, and the principle of respect for persons, combine in women to form the foundation of an ethic of care, respect and responsibility, which thus becomes both the ethic and the essence of nursing. (p. 20)

Oberle (1995) attempted to design a method of evaluating moral reasoning in student nurses. Faculty members from six institutions evaluated written responses of students to hypothetical scenarios. These ethics instructors were unable to agree about the 'best' response. Oberle (1995), concluded, "the 'care' ethic appears to be no more successful in helping nurses to answer difficult clinical questions than is the 'justice' orientation it seeks to replace" (p. 312).
Three additional studies are significant to the conduct of the current study. They examine the role of gender in moral reasoning. Ford and Lowery (1986), recognizing that care and justice orientations are not gender specific, studied psychological sex roles in relation to moral development. They found that although there were no significant differences, men, especially those with high masculinity ratings, tended to use the justice orientation more in moral decision making. Women tended to use the care voice more frequently, but both genders used both voices to resolve dilemmas.

Another group recognized that caring and justice orientations were not gender specific; they explored the effect of thinking or feeling preferences on moral reasoning. The study of Liddell, Halpin, and Halpin (1993) will be discussed in the examination of typology later in the literature review.

Mennuti and Creamer (1991) conducted a qualitative study of 16 (9 female and 7 male) community college presidents' moral reasoning. Their purpose was to examine the effect of gender and context on moral decision making. Their findings demonstrated the use of both care and justice orientations regardless of gender. They also discovered that a third factor was operative in moral decision making in this sample, that of self-orientation. This may be defined "as a consideration of the primacy of self-respect in judgments of moral value. This self-respect forms the basis of concern for others" (Mennuti & Creamer, 1991, p. 245).

Gadow (1996) suggested a preferable ethical narrative, constructed jointly by patient and nurse. Ethical certainty is not the result, but it alleviates vulnerability and combines nurse and patient views of good into a new view to which both can be committed. It is "a
form of shelter, a provisional account of the good constructed by patient and nurse as a way of making their situation inhabitable" (Gadow, 1996, p. 8).

McFadden (1996) agreed with Gadow (1996) that the client is a key player in the decision making process, but added that the health care team is also involved, and that the nurse is often cast in the role of moderator in this process. McFadden advised self-assessment by the nurse to determine a personal stance, using principles of bioethics, caring, and justice to determine the realities of personal moral development. Only then can the nurse be prepared to assess moral voice in the client and help to resolve moral dilemmas.

To summarize this discussion of morality, moral development, and moral decision making, it is evident that there are many approaches to these areas, and no general consensus about any one. Nokes (1989) called for a new model of moral development, a synthesis of the good from both models. This proposal for a model based on a synthesis of care and justice was endorsed by Delworth and Seeman (1984) and Lidell, Halpin, and Halpin (1992, 1993) in student development work; Freedberg (1993) in social work; and Fry (1989), Gadow (1995), Hepburn (1993), Meyer (1995), Ray (1994) and Van Hooft (1990) in nursing. Perhaps the best known advocate for blending both the caring and justice voices is Carol Gilligan (1982), who proposed that the ideal moral orientation is a blend of justice and caring.

**Personality Types**

Modern psychotherapy was invented at the turn of the 20th century in Vienna (Cox, 1968). The basic principles were developed by Sigmund Freud. A Swiss doctor, Carl
Gustav Jung, an early admirer and colleague of Freud, eventually split with Freud and two schools of thought evolved into two professional societies. The Institute of Psychoanalysis is based on the work of Freud; the Society of Analytical Psychologists follows Jungian thought.

Jung's long career was devoted not only to working with those having severe emotional problems, but extended to the study of healthy personality development, as well. Personality refers to the accumulated characteristic behaviors, adjustment techniques, and thoughts unique to each person (Barry, 1989).

McCaulley (1990) quoted Jung in explaining his work on type:

If one is plunged, as I am for professional reasons, into the chaos of psychological opinions, prejudices and susceptibilities, one gets a profound indelible impression of the diversity of individual psychic dispositions, tendencies, and convictions, while on the other hand, one increasingly feels the need for some kind of order among the chaotic multiplicity of points of view. This need calls for a critical orientation and for general principles and criteria, not too specific in their formulation, which may serve as "points of departure" in sorting out empirical matter. (p. 182)

Jung's typology "assumes a dynamically interactive model of personality manifested at two levels of conscious development" (Murray, 1990, p. 1188).

Jung has suggested that we should divide people into types in two ways which complement one another . . . people may usually use one or another function, and that they may also take one of two different attitudes to the people and things they meet. The functions are Thinking, Feeling, Sensation and Intuition, and the Attitudes are Introversion and Extraversion, and each of the four functions may be introverted or extraverted. (Cox, 1968, p. 98)

Jung proposed that introversion-extroversion was "fundamental to personality and that only the relative predominance of one or the other determined the type . . . there could never be a pure introversive or extraversive type in the sense that one possessed one attitude without the other" (Murray, 1990, p. 1188).
Cox (1968) described a function as a way of coping with and evaluating the things one encounters. The dominant function refers to the way people usually behave.

Jung believed that people intrinsically preferred one form of functioning over the others (McCaulley, 1990). His theory was that youth is a time to develop the skills associated with the preferred processes, but as one develops throughout life, one may become a generalist, developing and appreciating the functions less preferred earlier.

Jung’s work was noted by two Americans who developed an instrument allowing people to describe themselves using Jung’s model (McCaulley, 1990). Isabel Briggs Myers and her mother, Katherine C. Briggs intensely studied Jung’s theory. Then Myers began initial development and refinement of forms of the Myers-Briggs Type Indicator (MBTI) in 1942. The MBTI is an inventory of basic preferences, an operationalization of Jung’s typology. During the 1950s Myers collected data on approximately 10,000 subjects. By 1962, the instrument was published for research purposes only. In 1975, the MBTI was ready for use in applied counseling. In that same year, the authors created a nonprofit center for MBTI research and training. The MBTI is used in research, and in personal, academic, and career counseling. It is useful in working with families and groups, and has been widely used in business and industry as well as in academic settings.

Jung’s theory proposed that the basic attitudes in dealing with the world were Extraversion-Introversion. Murray (1990) described Introversion as concerned with the inner world of psychological processes, receiving energy from solitary activities, and being unconcerned with others’ opinions of oneself. The Extravert, on the other hand, is more inclined to build his self-concept on the view of others toward him and to receive
energy from the outside world. Myers (1993) added that characteristics of extraverted people include: attuned to external environment, prefer talking, are sociable, expressive, have a range of interests, and take initiative. Introverts, on the other hand, prefer their inner world, are private, contained, deeply focused, and prefer to communicate in writing.

The Thinking-Feeling dichotomy reflects preferences in making judgments or decisions. Barry (1991) stated that the Thinker objectively, impersonally uses logic to arrive at decisions, whereas the Feeling person subjectively and personally considers values of choices and how they impact others.

Hillman (1979) quoted Jung's definition of Feeling as:

feeling is a kind of judging, differing, however, from an intellectual judgment, in that it does not aim at establishing an intellectual connection but is solely concerned with the setting up of a subjective criterion of acceptance or rejection. ... feeling, like thinking, is a rational function, since, as shown by experience, values in general are bestowed according to the laws of reason, just as concepts in general are framed after the laws of reason. (p. 90)

Perhaps the most succinct statement which defines the Feeling function is Hillman's explanation: "The developed feeling function is the reason of the heart which the reason of the mind does not quite understand" (1979, p. 91).

Two different modes of perceiving are Sensing-Intuition. Sensing prefers the perception of the observable directly through the senses. Murray (1990) noted that the Intuitive type goes beyond the sensate and looks for possibilities, relationships and meanings of experiences.

In the last dichotomous set of choices on the MBTI, the person identifies the preference to approach life using either Judgment or Perception (Barry, 1991). Murray
(1990) cited Myers and McCaulley (1985) in noting that Jung implied, but never specifically defined this dimension. The person who Judges prefers a decisive, planned and orderly existence and aims to regulate and control events. The person who Perceives enjoys spontaneity, flexibility, and tries to understand life and adapt to it. Rodgers (1990) added, "P's are open to new perceptions, make decisions more slowly, start more often than finish, and are often late in finishing if they finish at all" (p. 71).

Barry (1991, p. 63) used Lawrence's (1982) shorthand version of the 16 types which result from the MBTI's preferences:

ENTJ—intuitive, innovative ORGANIZER; ISFP—observant, loyal HELPER;
ESTJ—fact-minded, practical ORGANIZER; INFP—imaginative, independent HELPER;
INTP—inquisitive ANALYZER; ESFJ—practical, HARMONIZER;
ISTP—practical ANALYZER; ENFJ—imaginative HARMONIZER;
ESTP—REALISTIC ADAPTER-material things; ENFP—warm enthusiastic CHANGE PLANNER;
esfP—REALISTIC ADAPTER-human relations; INFJ—people-oriented INNOVATOR-ideas
ISTJ—analytical MANAGER-FACTS & DETAIL; INTJ—logical, critical INNOVATOR;
isfJ—sympathetic MANAGER-FACTS & DETAIL; ENTP—analytical CHANGE PLANNER

To summarize, preferences or temperament are evident early in life. Preferences may be developed systematically, and everyone uses a combination of modes, but everyone has a preferred mode for operating on a day to day basis.

There are four polar ways of operating. Introversion and Extraversion are attitudes about interacting with others in information processing. Sensing and Intuition are two opposite ways of taking in information. Thinking and Feeling are opposite ways of
making judgments, and Judgment and Perception are ways in which people interact with the external world.

There have been multiple studies conducted which link typology as measured on the MBTI and various constructs. This study explored possible correlations between Feeling, and two manifestations of caring. Studies which have relevance to the current investigation are discussed here. These studies examined nursing students, cognitive development, moral development, empathy, individual differences, and moral decision making.

One group reviewed the common factors in five measures of cognitive style (Bokoros, Goldstein, & Sweeney, 1992). They found three underlying factors, a Thinking-Feeling dimension, an information-processing domain, and an attentional focus dimension. This research supports the use of the Thinking-Feeling scale of the MBTI.

Despite Pittenger's (1993) insistence that there is insufficient evidence to support claims about the utility of the MBTI, Tzeng, Ware, and Bharadwaj (1991) found high validity and reliability for the MBTI. Similarly, despite the inability of Harvey, Murry, and Stamoulis (1995) to find support for the factor loadings of the MBTI, and Lorr’s (1991) assertion that the MBTI is defective as a classification scheme, Tischler (1994) found the structure of the test nearly perfect when factor analysis was used on a large adult sample.

The MBTI has been used extensively in educational research. Chu and Spires (1991) compared typology on the MBTI with scores for computer anxiety and found that Intuitive, Thinking individuals had lower computer anxiety than Sensing and Feeling
Another study demonstrated that Sensing individuals have greater learning success than Intuitives when using interactive videodisc instruction tools (Matta & Kern, 1991).

Schurr, Herriksen, Alcorn, and Dillard (1992) used the MBTI to study classroom achievement and standardized test scores which measure specific educational objectives and general ability. A sample of teachers' and nurses' performance on testing throughout the curriculum and on National Teacher Examinations and nursing licensing examinations (NCLEX) demonstrated that subjects with strong Sensing and Judging characteristics have good grades in the classroom, and do well on tests having curriculum specific validity, but do less well on standardized professional entry examinations. The authors recommended that educators and test designers stay balanced, neither disadvantaging the types that are most drawn to service professions (Sensing-Judging people), nor allowing them to enter the field without necessary skills.

Recent studies indicated a correlation between learning style and personality type (Carey, Fleming, & Roberts, 1989; Cooper & Miller, 1991; Drummond & Stoddard, 1992). Hodges (1988) studied these variables and sex role identification in nursing students.

Findings indicate that a significant student profile exists among beginning students of professional nursing. This dominant profile includes a personality type characterized by Sensing (72%), Feeling (66%), Judging (74%), and feminine behaviors. . . . Based on findings from the study, the typical beginning student of nursing favors a learning environment characterized by a caring relationship, structure, permission to be assertive and utilize nurturing behaviors, use of practical material that relates to concrete realities and learning activities that require touch, muscular sensations, and kinesthetic senses. (Hodges, 1988, p. 68)
The Introversion/Extroversion dimension in these nursing students was 50% and 49%, respectively. The percentages in Hodges' (1988) sample can be compared with the latest figures for the population as a whole. Cummings' (1995) analysis of key tables in the Myers-Briggs Type Indicator Atlas of Type Tables (Macdaid, McCaulley, & Kainz, 1986) led to the estimation of new population norms, as depicted in Table 2.

<table>
<thead>
<tr>
<th>Preference</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraverts</td>
<td>49.2</td>
<td>51.2</td>
</tr>
<tr>
<td>Sensors</td>
<td>56.3</td>
<td>55.9</td>
</tr>
<tr>
<td>Thinkers</td>
<td>68.7</td>
<td>38.7</td>
</tr>
<tr>
<td>Judgers</td>
<td>66.5</td>
<td>65.9</td>
</tr>
</tbody>
</table>


Comparison reveals that Hodges' (1988) sample of nursing students had a larger proportion of Sensers, Feelers, and Judgers than the population as a whole. The Extrovert/Introvert dimension was comparable to the general population. Research has also been conducted focusing on the MBTI and cognitive development. Brown and DeCoste (1991) studied these variables in nursing students with the intent to add to construct validity of the MBTI. There was support for the construct validity of the MBTI, specifically the developmental component of the instrument. Intuitive individuals had higher conceptual scores, and age was positively correlated with conceptual development.
Piper and Rodgers (1992) examined theory-practice congruence in student affairs professionals. Those who intentionally used Perry's (1970) theory of intellectual development in their daily practice were more likely to be Feeling and Perceiving types on the MBTI and Perry Relativists. Sensing types were more likely to be Dualistic and Intuitives were likely to be Multiplistic or Relativistic. Although Piper and Rodgers focused only on the intellectual aspects of Perry's scheme, it mixes intellectual and ethical development (Moore & Upcraft, 1990). Persons in the higher stages of Perry's scheme view knowledge as contextual, pluralistic, and relative. They appreciate others' point of view, but make decisions based on personal values to which they are committed. Perry's scheme has similarities to Kohlberg's cognitive stage theory of moral judgment. Both are staged theories of moral development based on the precursor of cognitive development. The use of personal values and contextual knowledge in decision making, however, is characteristic of Feeling types.

A study investigated relationships between Kohlberg's (1969) theory and MBTI preferences. Faucett, Morgan, Poling, and Johnson (1995) used Rest's (1990) DIT to measure moral reasoning. They found that moral reasoning scores of those who were Introverts were higher than those of Extroverted subjects. Intuitive subjects were higher than Sensing types, and Perceptive people were higher than Judgers. Thinking and Feeling people were not significantly different. The latter makes sense because Feeling types may not be inclined to use abstract thinking, but their preference for personal considerations and underlying value systems does not preclude the use of abstraction. "Because a strong value of justice underlies Kohlberg's postconventional stages, Fs who value justice should be no less likely to reason at these stages than Ts" (Faucett et al.,
The authors suggested that their findings support that different personality
types may prefer different types of moral reasoning and that Kohlberg's stages may, to
some extent, reflect type preferences rather than lower levels of moral reasoning. One
concern with using the DIT as the sole measure of moral reasoning is that it includes only
the justice approach to morality. It does not include the caring voice.

Another study of moral development using the DIT and the MBTI was conducted
by Redford, McPherson, Frankiewicz, and Gaa (1995). In this study of two samples of 74 each, only Intuition was correlated with level of moral reasoning. The authors explained their results based on the concept of empathy. Justice is the principle underlying Kohlberg's (1969) levels of moral reasoning, and "one must possess empathic sensitivity to be able to judge that a situation is just for all parties involved" (Redford et al., 1995, p. 91).

Redford et al. (1995) cited several studies which found that moral development was related to empathy and role taking. Empathy is the ability to imagine oneself in another's place. Intuition is the process underlying this ability to imagine, so the Redford group hypothesized a link between Intuition and moral development which was supported by the results of their study.

Another group investigated the relationship between the MBTI and empathy. Jenkins, Stephens, Chew, and Downs (1992) hypothesized that empathy is multidimensional and possibly molded by interpersonal perceptions, attitudes and beliefs. They used the MBTI to assess those factors and the Carkhuff Accurate Empathy Rating Scale (Carkhuff, 1969) to measure the construct of empathy. Subjects responded to a
training film in which actors portrayed people with personal problems. Trained raters judged the level of empathic response.

Jenkins et al. (1992) found a weak positive relationship between empathy and the Feeling dimension of the MBTI. They noted that Feeling individuals are sympathetic, understanding of others, and attentive to others' values, and that those same qualities are essential for an empathetic response. Although their results demonstrated no relationship between Intuition and empathy, Jenkins et al. noted that since Intuition is associated with insight, imagination, and possibility, that dimension may well contribute to the development of empathy. The authors concluded that further study is needed.

Individual differences (measured with the MBTI) as a factor in the accomplishment of student development tasks was the focus of a study by Anchors and Robinson (1992). The task of Developing Mature Interpersonal Relationships on the Student Development Task Inventory (SDTI-2) developed by Winston, Miller, and Prince (1979) involves openness, honesty, respect, and trust. These are some of the characteristics identified as important in nurse caring relationships (Euswas, 1993). Anchors and Robinson found a positive relationship between Mature Interpersonal Relationships and Extraversion for males and females, Intuition for males, and Thinking for both sexes. The Extroversion-Introversion scale was the best predictor for Mature Interpersonal Relationships, accounting for 18% of the variance in a stepwise multiple regression analysis.

Robert Rodgers (1990) found that Feeling types, both male and female, preferred the care voice in moral decision making, and that the Thinking types, both male and female, preferred the justice voice. In the general population, about 75% of women are Feeling and 75% of the men are Thinking (Rodgers, 1990). He suggested that social
conditioning may reinforce innate type preferences (for Feeling females and Thinking males), or may make some college students "swim upstream" (Feeling males and Thinking females). Rodgers' statistics about the population are based on older norms. Currently, about 61% of women are Feeling. Of greater significance is the correlation between Feeling and the caring voice in moral decision making. The previous studies of moral decision making used Rest's (1990) DIT, which is based only on the justice framework. Rodgers (1990) went beyond looking at only one approach to moral decision making and included the care voice. Liddell et al. (1993) used Liddell's (1990) Measure of Moral Orientation to ascertain whether there was a relationship between a care or justice orientation with the Thinking/Feeling scale of the MBTI. Their findings also suggest that Thinking/Feeling preferences, not gender alone, may help explain the preference for justice or caring. Females were more Feeling oriented and more care oriented than males, but both genders used the justice voice equally.

Does it follow, then, that nursing students who are Feeling will extend the caring disposition from moral decision making to caring behaviors in their interactions with clients? This study sought to explore relationships between caring as a moral voice, caring as professional behavior, and Feeling as a preference in decision making.

**Educational Outcomes**

Higher education has traditionally engaged in self-assessment. Harcleroad (1980) stated that program evaluation began in America in 1642, when John Winthrop journeyed to Harvard and served as one of 12 external overseers of the public final examination given to nine senior sophisters. In recent years, there has been a surge of interest in
assessment of educational outcomes. Several forces have contributed to this phenomenon, especially state demands and the requirements of accrediting bodies.

A glossary was developed by the Education Commission of the States in 1988. It defines "assessment" as:

Any process of gathering concrete evidence about the impact and functioning of undergraduate education. The term can apply to processes that provide information about individual students, about curricula or programs, about institutions, or about entire systems of institutions. The term encompasses a range of procedures including testing, survey methods, performance measures or feedback to individual students, resulting in both quantitative and qualitative information. (Boyer & Ewell, 1988, p. 4)

The document narrows the scope of assessment with this definition:

College outcomes assessment: Assessment of the results of undergraduate education. Can include cognitive, skill or attitudinal outcomes, postgraduate behavior such as job or graduate school placement or performance, or more general impacts on a community, region or society. (Boyer & Ewell, 1988, p. 5)

Another definition of outcomes assessment is provided by the Middle States Commission on Higher Education:

Outcomes assessment is a process by which evidence for congruence between an institution's stated mission, goals and objectives, and the actual outcomes of its program and activities, is assembled and analyzed in order to improve teaching and learning. (Mayhew & Simmons, 1990, p. 37)

Terenzini (1993) quoted Hutchings, Marchese, and Wright's (1990) definition:

Assessment is best understood broadly ... as a range of methods (interviews, surveys, tests, portfolios . . .) used to gather information about student learning (as opposed to the many other factors one might use to judge "institutional effectiveness") for the purposes of improvement (of the many things that affect student learning). (p. 14)

In further delineating his beliefs about assessment, Terenzini (1993) agreed with Astin (1991) that assessment is about quality; it lies in what is done after the student is enrolled. Terenzini (1993) considered assessment to be "a process . . . (which) answers
questions about student learning . . . is ongoing, formative, and developmental, and . . . finally, assessment is part of good education" (p. 15).

Terenzini offered some ideas about what assessment is not: "assessment is not simply testing . . . should not be part of an institution's faculty-evaluation system . . . is not solely an administrative activity" (1993, pp. 15-16).

Another important aspect of outcomes assessment is accountability. Ewell (1991) commented that state assessment mandates were intended not only to prompt change based on outcomes data, but to inform the public about the performance of public institutions of higher education. Ewell, as Senior Associate of the National Center for Higher Education Management Systems, made recommendations to the Colorado Commission on Higher Education about the role of accountability in the plan for higher education in that state (Jones & Ewell, 1987). In addition to accountability at the state level, there has been a move toward federal intervention in three areas: "ability to benefit" legislation mandating a single national performance standard for admission to higher education; "Student Right to Know" legislation which standardizes methods for calculating and reporting statistics on college outcomes; and a recommendation to develop national standards for performance based assessment of the ability of graduating seniors' ability to "think critically, communicate effectively, and solve problems" (Ewell, 1991, p. 16).

Astin (1987) emphasized that multiple outcome measures are not very useful unless there is a baseline, that is, input measure, upon which to provide a basis for measuring growth and change. His I-E-O model (1991) incorporated three factors. The first was Input, that is the personal qualities and the level of talent the student has developed at the
time of entry into college. These must be measured so that the growth occurring during college can be truly assessed.

The next component of Astin's (1991) model was Environment, which Astin defined as the student's actual experiences during the educational program. Information about the courses, programs, facilities, faculty, and peer groups is necessary to promote improvement in these areas so that educational excellence can be achieved.

The Outcomes, of course, are the talents developed during undergraduate education (Astin, 1991). "A fundamental purpose of evaluation, it should be emphasized, is to learn as much as possible about how to structure educational environments so as to maximize talent development" (Astin, 1991, p. 18).

Astin (1984) proposed that true institutional quality rests on the ability of the institution to affect its students favorably, to enhance their lives; he referred to this as the "value added" approach. Jacobi, Astin, and Ayala (1987) noted that assessment involves identifying what constitutes effective performance of the institution's mission.

Implementation of Astin's (1991) model involves testing newly admitted students. This provides baseline data. The same or similar assessments are used when the student completes a course of study. This approach may use a variety of measures: objective tests, essays, interviews, departmental examinations, or other appropriate devices might be appropriate. Many colleges use standardized testing but fail to use the resulting data as part of outcomes assessment. Astin (1987) recommended using any available data to begin an assessment program, including program completion, cognitive development, and student involvement and satisfaction. In a presentation at the Annual Forum of the Association for Institutional Research, Knight (1994) presented results of a study based
on Astin’s (1991) model, using the Community College Student Experience Questionnaire to gather data about student characteristics and college environment as well as students’ growth and satisfaction. This is but one example of the implementation of Astin’s model for outcomes assessment research.

Astin (1988) called for those doing assessment to measure those values basic to the institution, such as "honesty, free expression and nonviolence. . . . Let’s begin to introduce longitudinal measures of qualities such as empathy, concern for others, tolerance, social responsibility, and the like into our assessment programs" (p. 18). The proposal to measure caring as an outcome of a nursing education program fits Astin’s call to measure affective outcomes of higher education.

The measurement of affective outcomes creates special problems, although measurement problems have been a long-term concern of those in the assessment movement (Erwin, 1991). Early efforts at measuring outcomes leaned heavily on standardized tests, and were often a response to state mandates, such as in Florida, Virginia, New Jersey and the performance funding mandate in Tennessee (Banta, 1988; Banta & Fisher, 1984; Banta & Moffett, 1987). Many of these early discussions of outcomes assessment favored standardized testing, but in recent years, a growing body of research has identified major problems with standardized testing (Banta, 1991, 1993; Banta & Pike, 1989, Darling-Hammond & Lieberman, 1992; Ewell & Jones, 1993; Pike & Banta, 1989; Takalkar, 1993).

Banta (1991) cited Thorndike’s (1989) findings that the ACT COMP, the Academic Profile, and the CAAP, all of which are normed, standardized tests, failed to measure the academic skills they purported to measure. Instead of measuring communication,
computation, and critical thinking, these tests measured verbal and quantitative aptitude. Pike and Banta (1989) reported similar findings. They concluded that the instruments measured academic ability of students, not program quality.

Model alternative assessment programs have been implemented at institutions such as Alverno in Milwaukee, King's College in Pennsylvania, and James Madison University. Banta (1991) endorsed these institutions' use of "a variety of homegrown assessment methodologies. Most of these could be characterized as qualitative in nature" (p. 219). Examples of these include: questionnaires, interviews, portfolios, written thesis or project with oral defense, written or oral comprehensive examinations, and external examiners (Fong, 1988).

The National League for Nursing (NLN) requires evidence of outcomes assessment as a component of nursing's program specific accreditation process. In an accreditation workshop, the following definition was distributed to attendees: "Assessment of educational outcomes: The systematic, continuous process of collecting and analyzing data about program elements in order to make decisions that will improve the quality and effectiveness of the program" (National League for Nursing, 1991, p. 1). Institutional mission, input, environment, and process, and outcomes measurement are the key components of assessment of educational outcomes program. At another NLN outcomes assessment workshop in 1995, the focus was the specific outcomes used by nursing programs to document educational effectiveness, and the process of constructing and organizing the outcomes criteria and the accreditation self-study report. Participants spent time working in small groups and developing specific criteria, then sharing their work with the larger group. NLN leaders circulated among the groups, offering assistance and
advice. Educational efforts such as these promote quality nursing education programs, which is a goal of the NLN. The NLN is also a major publisher of educational materials for nurses and nursing educators. Assessing Educational Outcomes (Garbin, 1991) is but one effort to keep nursing educators current in national educational trends.

A concern for nursing programs at this time began with the June 1996 recommendation made by the National Advisory Committee on Institutional Quality and Integrity to the United States Secretary of Education to withdraw the Department of Education's recognition of the NLN's accrediting authority (Personal Communication, Ryan, 1996). The NLN appealed the decision, noting that the organizational changes necessitated by the Department of Education's new accreditation requirements have taken more time than allowed by the Department. In a letter to all NLN members, Sheila Ryan, the new NLN president, has assured members that the NLN will continue to remedy the problem and bring it to a satisfactory conclusion (Personal Communication, July 12, 1996). The NLN was granted an 18 month time frame to establish patterns of evidence demonstrating that it meets DOE regulations (Geraldene Felton, Personal Communication, May 20, 1997). Meanwhile, another organization, the American Association of Colleges of Nursing, has initiated proceedings to form a competing accrediting agency for baccalaureate and higher degree nursing programs. This unfortunate situation may further splinter nursing education.

No assessment program can investigate all possible outcomes of college experience or meet all planning, policy, or political ends (Ewell, 1990). An assessment program reveals institutional values, but also reflects current problems in assessment conceptualization and practical application. The purposes of assessment may vary from
establishing accountability to external agencies, to cost containment efforts, program
development and evaluation, goal setting, basic research, strategic planning, and even
marketing (Jacobi et al., 1987).

Due to multiplicity of goals, uses, and motives for assessment programs, there is no
single definition of outcomes assessment, nor agreement of when, how, or whom to
measure. Ewell (1990) noted that the following dimensions have been studied in most
assessment efforts: knowledge, skill, attitudes and values, and behavior of students. A
variety of measures have been utilized: standardized tests, locally developed
examinations, tracking student behavior, surveys, and on a limited scale, individualized
assessment.

Van Vught and Westerheijden (1994) observed:

As is well known, in the United States and Canada, the market is the dominant
form of coordination in higher education. Competition between higher education
institutions is generally accepted . . . the influence of governmental steering is not
completely absent . . . (but) higher education institutions are supposed to regulate
themselves. If they do not, they will lose resources, students and scholars to their
competitors. (pp. 358-359)

In order to avoid governmental regulation of higher education, the American higher
education system developed a process for quality assessment through a system of
institutional accreditation (Van Vught & Westerheijden, 1994). Self-assessment of
institutional effectiveness has become enmeshed with the self-study process for
accreditation (Ewell & Lisensky, 1988). Accountability is also an issue confronting
institutions of higher education in the process of seeking regional and specialized program
accreditation. Special issues affecting community colleges are of interest in this discussion
of outcomes assessment because the setting for this study is an associate degree program.
Prager (1993) identified several issues confronting two-year colleges in achieving regional accreditation. One of these is the role of general education in career curricula; others include concerns over instrumentation, costs associated with accreditation, preparation for onsite visits, and the role of the president in the accreditation process.

Doucette and Hughes (1990) identified several aspects of institutional mission unique to associate degree programs. One is the transfer mission, where the focus is achieving educational outcomes, accomplishing transfer, succeeding as a transfer student, and articulating courses and programs (Carroll, 1990). For many students in an associate degree nursing program, articulation into a baccalaureate program is desirable.

The career preparation mission (Seybert, 1990) is another consideration in associate degree nursing programs. Certification of associate degree nursing program completion allows the graduate to sit for the professional licensure examination, NCLEX. Passing NCLEX and fulfilling employer expectations are measures of success in this area.

The associate degree also aims to assist the student in gaining basic skills (Quinley, 1990). Nursing programs require that entering students have achieved minimal basic skills, but the general education component of the curriculum seeks to develop those further.

Altieri (1994) proposed a model for community college student outcomes assessment. Using the mission areas identified by Doucette and Hughes (1990), he developed a grid of information sources on the vertical and types of student outcomes on the horizontal, and indicated where appropriate information might be available.

Wills (1995) described efforts to establish a National Skill Standards Board, which became part of the Goals 2000: Educate America Act (Public Law 103-227). The goals
are to improve workforce performance and to promote the development of skills and competencies in students so they are qualified to enter the workforce. Community colleges already work with professional standards and competencies, but over the next few years, standards will become an even more important component of curricula and outcomes assessment. Although there has been controversy over establishing standards jointly with employers, "needs-oriented community based education means staying in touch with consumers and the community. . . . All parties want the same output—students able to perform at a level that will ensure success in their life after the community college" (Bryant, 1994-95, p. 22). The Handbook of Accreditation, 1994-1996, of North Central Association (NCA), noted that overall institutional effectiveness must be addressed in self-study by institutions seeking accreditation, not just student achievement. Student achievement is the focus of this investigation, however, so criteria for measurement of that outcome will be discussed.

The NCA Handbook of Accreditation echoed a theme common in the literature: "The shape and content of an assessment program rests with the institution's mission and educational purposes and is shaped by the institution's constituencies" (1994, p. 152).

NCA redefined hallmarks of a successful assessment program in the 1996 working draft of a revision to Criteria Three and Four. Criterion Three states "The institution is accomplishing its educational and other purposes" (NCA, 1996, p. 3). Criterion Four is: "The institution can continue to accomplish its purposes and strengthen its educational effectiveness" (NCA, 1996, p. 12). The Commission demands a strong assessment program and expects institutions to build on the plans that were approved in 1991-1995. In addition, assessment programs must be linked to curricular and budget planning.
processes. Criterion Four demands that the institution has the resources necessary to support changes directed by self-assessment.

At the NCA Annual Meetings in Chicago, on March 23-25, 1996, and April 20-22, 1997, speakers demonstrated how their institutions vivified the assessment requirements of NCA. Conference handouts were invaluable as the study institution planned its initial self-study. At the sessions, the investigator recognized that the plan for institutional assessment is vital to the college, but the issue of caring as a nursing outcome is more critical to the requirements of the National League for Nursing and program accreditation.

The college/institution is responsible for developing a plan to assess institutional effectiveness, but each school/program must determine whether it is meeting its stated objectives. A central tenet of the nursing school is that nursing practice rests on caring relationships with clients manifested by professional caring behavior. Is the school meeting its objective of preparing caring practitioners of nursing? The answer to that question awaits. It is one focus of the plan for outcomes assessment of the associate degree nursing program. This study is but one step in the establishment of that program—(partial) initial data collection.

Summary

This review of the literature explored some of the ramifications of caring in nursing practice. Nursing is viewed as relationships with clients focused on promotion of personal integration—the holistic health and well being of the client. Caring is manifested by
behavior perceived as promoting the client's well-being; this behavior has been measured in a number of nursing studies.

Although the view of caring as a moral voice is evident in the nursing literature, the leading proponent of this idea (Gilligan, 1982) introduced it to counter Kohlberg's (1969) position that women were morally inferior to men. Gilligan proposed that caring is a value different than justice, but equally valid as a basis for moral decision-making.

Instruments to measure caring as nursing behavior and caring as a moral voice are new and have not reached the levels of psychometric integrity of widely used psychological instruments. The Myers-Briggs Type Indicator has well established evidence of validity, reliability, and population norms (Myers & McCaulley, 1985). In studies by Rodgers (1990), Liddell et al. (1992) and Liddell and Davis (1996), caring as a moral voice was linked with the Feeling dimension of the MBTI. There has been no empirical evidence linking caring as a moral voice and caring as a nursing behavior. This study was constructed to explore that link and to ascertain whether the previous association between Feeling and caring as a moral voice is found in entering nursing students.

This study of nursing caring was planned under the framework of outcomes assessment. Since caring is central to the nursing curriculum, it must be measured. Several models for outcomes assessment such as Astin's (1987) were reviewed.

In light of recent recommendations (Banta, 1991; Pike & Banta, 1989), it was decided by the faculty to use not only the Professional Caring Behaviors Instrument (Horner, 1989) to measure caring as an outcome, but also to use selected "home-grown" measures to measure caring.
Conceptual Framework

Although caring is viewed as a universal human trait, nursing has identified caring as a central tenet of nursing practice (Leininger, 1991). There are many definitions of caring in the nursing literature; the faculty at the study site blended several to form one which blends institutional philosophy with their personal philosophies. Watson (1985) described caring as an interpersonal process between two people. The college’s definition includes that notion, plus facilitation of integration in the client based on the belief that persons have value. Caring is demonstrated by the nurse’s professional behavior which encompasses a range of affective and instrumental skills.

Caring is also viewed as a voice parallel to justice (Kohlberg, 1969) in moral decision-making (Gilligan, 1982; Watson, 1985). Consideration of both of these values as well as the patient’s values is seen as necessary for nurses’ professional moral/ethical decision-making. In the literature, there is a conceptual link between caring as professional behavior and caring as a moral voice.

A caring voice in making ethical decisions correlated positively with the Feeling dimension of the MBTI (Liddell et al., 1992; Liddell & Davis, 1996; Rodgers, 1990). The MBTI is an inventory of preferences determined by personality type. Myers and Briggs based their measure on Jung’s theory (Myers, 1993). Jung postulated that people have a full range of abilities, but prefer to interact with others and function in a particular way. There are two attitudes: Introversion and Extroversion, and four functions: Thinking, Feeling, Sensation, and Intuition. A last dimension, Judging and Perceiving was added by Myers and Briggs (Myers & McCaulley, 1985). Sixteen personality types result from MBTI preferences.
Since caring is the core of the nursing curriculum, it follows that in the measurement of outcomes, caring must be measured. The search for a measure of caring appropriate to the institution's definition and practice of caring led to the development of this study. Outcomes assessment is the measurement of curricular effectiveness for the purpose of improving learning. In this instance, caring was measured as a component of a nursing curriculum. Measures of caring as professional behavior and moral voice and the Feeling dimension (MBTI) were made and the extent of their correlation was assessed.

Conceptual Model

![Conceptual Model Diagram]

Figure 1. Roberts' umbrella model of relationships between study variables

The model depicts the author's view that the component of personality which manifests itself as Feeling in making decisions is related to aspects of caring, both as a moral voice and as professional behavior/relationships. The umbrella covering these concepts is measurement, which is basic to identifying the effectiveness of the
curriculum. Outcomes assessment is the assessment and analysis of the results of
undergraduate education for the purpose of improving teaching and learning.

This study was designed to measure the concepts of Feeling and caring, both as
professional behavior and moral voice, in entering nursing students and ascertain the
relationship of these concepts. A future study will measure the effects of the curriculum
on these characteristics in graduating nursing students.
CHAPTER III. METHODOLOGY

Overview

The ultimate, long-term goal to which this study will contribute is to find a valid, reliable, quantitative measure of caring in nursing students so that caring can be demonstrated as an outcome of the nursing curriculum. During this study, only initial measurements of subjects were conducted and analyzed. This study sought to find relationships between caring as a professional behavior, caring as a moral voice, and the Feeling dimension of the MBTI.

The research questions that this study sought to answer were based upon the assumptions that caring can be quantitatively measured, that caring relationships are central to nursing practice, and that caring, as a curriculum component, needs to be defined and measured.

The achievement of the goals of this study were met through the following activities:

1. Literature survey
2. Survey of nursing educators to find a quantitative instrument to measure nurse caring
3. Investigation of psychometric data for the instruments
   a. Validity
   b. Reliability
4. Administration of the Professional Caring Behaviors Instrument (Appendix G) to measure caring in nursing students

5. Administration of the MBTI to subjects to ascertain Feeling scores (Appendix F)

6. Administration of the Measure of Moral Orientation to determine voice in moral decision making (Appendix H)

7. Statistical analyses to test the null hypotheses

8. Rejection or failure to reject the null hypotheses based on the results of statistical analyses

9. Presentation of the results

10. Discussion of the findings and recommendations for further study

The survey sent to colleges and its accompanying cover letter were submitted to the Human Subjects Review Committee of the University. Approval was granted, and the survey was mailed. Then the remainder of the instruments were selected and sent to the Human Subjects Review Committee. The Human Subjects Review Committee approved all cover letters and instruments used in this study.

**Research Design**

The study was designed as a descriptive survey. First, practices in measuring caring in colleges of nursing were assessed through a mailed survey. Then measures were made of the constructs of caring, Feeling and moral orientation in nursing students. The relationships of those constructs are described in Chapter IV.
Setting and Sample

Setting

The setting of the study was a medical center based, religiously affiliated, private college of health sciences. The institution is located in a midwest metropolitan area of approximately 400,000. The nursing school transitioned from a diploma program after 97 years of continuous operation. It is now an associate degree and baccalaureate completion program, known as a 2+2 program. It is one school in a college of health sciences which offers five majors in health sciences. The transition took place to keep current with changes in nursing education. The first class of the associate degree nursing program entered the college in August 1996. Data were collected during the students’ first week in the program.

Samples

The samples were drawn from two populations. First, a population of faculty of nursing colleges was surveyed, and second, a population of nursing students completed questionnaires.

Nursing programs in the United States are varied. Colleges may be part of research universities, freestanding, etc. They may also be divided by regions of the country, and also classified according to their accreditation status. For the purposes of this study, it was useful to survey all known transitioned (diploma to degree granting) programs, because the number is small (approximately 60) and they are in the same category as the program in the study. For the sake of comparison, and because traditional college
faculties have a vast amount of expertise in the education of nursing students, a sample was made from National League of Nursing (NLN) accredited programs in the North Central Association (NCA) region. Random selection of 60 associate degree and 60 baccalaureate degree programs comprised the remainder of the sample. In addition, a list was discovered in an NLN publication which identified 12 nursing programs using instruments to measure caring (NLN, 1987). Surveys were sent to all 12 programs.

The population of nursing students to which findings can be directed is very limited, because of the exploratory nature of this study. The population is limited to the nursing student body at the site of the study. All beginning freshmen nursing students were invited to participate. The class size was 64; sample size was 61. Had the sample size been less than 30, the study would have continued into the following semester, when a second class of incoming freshmen was admitted.

Procedure

The selected sample of nursing educators each received a copy of the survey (Appendix B) with a cover letter explaining the study and asking for participation (Appendix A). If no reply was received within the time frame of three weeks, a postcard was sent to remind the subjects about the study and invite them to request materials if their packet did not arrive. A second copy of the survey was sent to nonrespondents three weeks later.

Replies to the survey were compiled and sorted according to program type. All data was reported in the aggregate.
Instruments to measure caring that were received were examined by the investigator initially to ascertain whether they fit with the conceptual approach to caring used at the college. No instrument received in the survey met criteria. One instrument, Horner's PCBI (1989), found through continued literature review, was forwarded to the study site's faculty for review. This procedure was used to establish content-related validity for the program being studied. The faculty agreed to use Horner's instrument as one measure of nurse caring. Discussion of validity and reliability has been drawn from Ary, Jacobs, and Razevieh (1990) and Borg and Gall (1989). Validity refers to the degree to which a test measures what it purports to measure. Reliability refers to the level of consistency in measurement. Description of their psychometric properties will be addressed as each instrument used in the study is introduced.

Pilot Study

In order to begin the process of establishing reliability for the instruments used in this study, a pilot study was conducted, using a volunteer sample of 24 juniors in the diploma nursing program.

The pilot test was useful in providing the investigator with a "practice run." Timing of instrument administration was a concern, since completion times for the Professional Caring Behaviors instrument and the Measure of Moral Orientation have not been clearly reported. For the pilot group, 10 minutes was excessive for the caring behaviors instrument. The seven minutes allowed for the alternate form were sufficient. Twenty-five minutes was allotted successfully for the completion of the MMO.
The pilot study provided a chance to practice giving directions about completing the questionnaire. One fact emerged; the demographic questionnaires need explanation. The investigator provided verbal instructions to subjects in the study group based on questions from the pilot group.

A coefficient of equivalence was calculated between scores on the alternate forms of the Professional Caring Behaviors Instrument and Cronbach's Coefficient Alpha was used to estimate the reliability of the Measure of Moral Orientation in this population. Alpha can be used when tests are not scored dichotomously. Reliability for groups of nurses has been reported for the MBTI. The step of establishing reliability of the instruments in this population was necessary prior to conducting the study.

**Study**

Administration of the instruments to the sample in the study took place during the first week of the academic year. Due to scheduling conflicts, completion of the questionnaires could not be completed for the entire sample at one time. Students were measured in groups of 7 to 35 during two-hour time blocks on three occasions. Every effort was made to keep testing conditions as similar as possible. The testing environment was in the same classroom setting and instructions were consistent. The investigator administered all instruments to the subjects. Subjects were informed that the three instruments are self-reports of the constructs being studied. They were informed about the potential different uses for the data collected—outcomes assessment and nursing study. They were encouraged to participate in both efforts, but were also informed of their rights via the cover letter. Written consents were witnessed by a faculty member and kept
in a locked file with data resulting from the study. The instruments were administered in the same order to each group: demographic questionnaire including the nursing values survey (values identified by American Association of Colleges of Nursing, 1986, cited by Quinn, 1990); Professional Caring Behaviors Instrument, Measure of Moral Orientation; and last, the Myers-Briggs Type Inventory. The shorter instruments were administered first; length gradually increased. The demographics and first two questionnaires are more serious in the nature of the questions; the MBTI is more lighthearted, asking about leisure and partying as well as decision making and daily routines.

Since the hypotheses proposed correlation between paired variables, Pearson's $r$ was determined to be the best correlational analysis for the data generated using the three instruments. The null hypotheses were to be rejected at the .05 level of significance.

Instrumentation

The MBTI (Appendix F) is a well established instrument with demonstrated psychometric properties. The manual to the MBTI (Myers & McCaulley, 1985) reports that the MBTI computer data bank has more than 250,000 MBTI records. More than 10 pages were needed to cover the description of the samples included in the bank.

Item analysis was used to identify and select items which contributed to only one scale. Items were analyzed on all scales and eliminated if they contributed to more than one scale.

Reliability was reported for split-half scores, ranging from 0.57 to 0.95. Internal consistency based on Coefficient Alpha for scores of over 10,000 subjects ranged from
0.71 to 0.85. Test-retest product moment correlations of continuous scores ranged from 0.63 to 0.93.

Construct validity has been established between the scales of the MBTI and scores on a variety of other instruments. To summarize:

<table>
<thead>
<tr>
<th>Scale</th>
<th>Significant Correlations (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extraversion</td>
<td>.77 to .40 with extraversion (other instruments) self-integration, leadership, assertiveness, talkative</td>
</tr>
<tr>
<td>Introversion</td>
<td>.75 to .40 with autonomy, self-sufficiency, self-control</td>
</tr>
<tr>
<td>Sensing</td>
<td>-.67 to -.40 with realism, practical outlook, common sense</td>
</tr>
<tr>
<td>Intuitive</td>
<td>.62 to .40 with flexible, complex, academic interests, aesthetic, liberal</td>
</tr>
<tr>
<td>Thinking</td>
<td>.57 to .40 with counteraction, masculine, abstract, dominance</td>
</tr>
<tr>
<td>Feeling</td>
<td>.55 to .40 with concern, nurturance, social service, creativity</td>
</tr>
<tr>
<td>Judging</td>
<td>.59 to .40 with order, endurance, self-control, rule-bound</td>
</tr>
<tr>
<td>Perceiving</td>
<td>.57 to .40 with complex, flexible, autonomous, sentient, blame-avoidance</td>
</tr>
</tbody>
</table>

The caring voice was measured using the Measure of Moral Orientation (MMO, Appendix H). It is a scaled, self-reported, quantifiable inventory consisting of 89 items. Subjects respond to 9 moral dilemmas, then provide a 12 item self-description of how they resolve dilemmas most of the time. Psychometric properties have been reported (Liddell et al., 1992). Estimates of internal consistency (Cronbach’s coefficient alpha) for the four scales were: 0.84 for care; 0.73 for justice; 0.59 for self-description of care; and 0.60 for self-description of justice. Liddell et al. (1993) reported that these estimates of internal consistency were comparable to or greater than other measures of moral
development as reported by Kurtines and Grieg (1974). Liddell and Davis (1996) repeated these tests on a sample of 381 students and found intercorrelations and reliability estimates on the MMO for Care .83; Justice .70; Self-Description of Care .64; and Self-Description of Justice .70.

Pearson product moment correlation coefficients were calculated for the four scales. Intercorrelation between justice and care ($r = .17$) was low enough to support the measurement of two constructs. Other $r$ coefficients: self-justice and self-care, $r = -.44$; thinking and feeling on the MBTI, $r = -.92$. Liddell and Davis (1996) reported intercorrelations between Care and Justice as .28; Care and Self-Description of Justice -.11; Self-Description of Care and Self-Description of Justice -.32.

Relationships between the scales for justice, self-justice, and Thinking and between the scales for care, self-care and Feeling were explored. Although statistically significant relationships were found in the predicted direction, they were lower than expected. Table 3 summarizes those findings.

Liddell and Davis (1996) reported establishing convergent validity with correlations of .50 for care and self-description of care, and .39 for justice and self-description of justice. They also ran a confirmatory principal components factor analysis using care or justice items as underlying factors. Loadings for the Care x Dilemmas factor range between .38 and .64. The authors interpreted any factor loading ±.30 as significant. Factor loadings for Justice x Dilemmas were weaker, with only three factors above .30; two loaded below .10. Since Justice contributes little to the variance of the other justice items, the questions for this scale need further study.
The MMO was compared to the World View Questionnaire (WVQ) reported by Stander and Jensen in 1993, which was designed to assess a person's preference for caring for others as a possible "world view." Reliability was reported as .86 for this instrument (Liddell & Davis, 1996). Construct validity has not been reported, but items were considered similar enough by Liddell and Davis to compare to the caring items on the MMO. The intercorrelations between MMO Care and WVQ Care were .27; between MMO Justice and WVQ -.12.

Table 3. Reliability estimates and intercorrelations among scales of the Measure of Moral Orientation and the Thinking-Feeling Scale of the Myers-Briggs Type Indicator

<table>
<thead>
<tr>
<th>Scale</th>
<th>Care</th>
<th>Justice</th>
<th>Self-Care</th>
<th>Self-Justice</th>
<th>Feeling</th>
<th>Thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care</td>
<td>.84</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Justice</td>
<td>.17**</td>
<td>.73</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Care</td>
<td>.32***</td>
<td>-.01</td>
<td>.59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Justice</td>
<td>-.08</td>
<td>.22***</td>
<td>-.44***</td>
<td>.60</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feeling</td>
<td>.36***</td>
<td>-.13**</td>
<td>.34***</td>
<td>-.33***</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Thinking</td>
<td>-.38***</td>
<td>.09*</td>
<td>-.34***</td>
<td>-.31***</td>
<td>-.92***</td>
<td>.85</td>
</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001


The MMO was also correlated with the Defining Issues Test (DIT) (Rest, 1986), constructed to measure Kohlberg's theory of moral development. Reliability estimates are generally .76 or .77. Validity has been well established in hundreds of studies. The P-score represents principled moral considerations (Liddell & Davis, 1996). Both the MMO justice and Care scales correlated negatively with the DIT P score at -.23 and -.37, respectively.
Liddell and Davis (1996) proposed that the DIT and MMO may be measuring different moral components. "The DIT is written as a measure of moral judgment (deciding which action is morally right or wrong) . . . the MMO seems more consistent with the measurement of moral sensitivity (interpreting the situation)" (Liddell & Davis, 1996, p. 492). Liddell and Davis (1996) concluded: "Initial results indicate that the MMO is a useful tool that provides a reliable and valid measure of voice in college students" (p. 492).

The MMO is an easy to administer, easy to score, psychometrically sound objective measure. The authors recommended the MMO for research linking relationships between moral voice and other noncognitive variables (Liddell et al., 1992).

In the pilot, Cronbach's Alpha for the group was .432. This group was older (median age 30) than the incoming freshmen, so it was decided to administer the MMO to the sample despite the low estimate of internal consistency in the pilot.

The Professional Caring Behaviors Instrument (Appendix G), a measure of nurse caring, was discovered during the course of this study, not through the mailed survey, but through a continued search of the literature.

Harrison (1995) reported the results of a study using Horner's Professional Caring Behaviors Instrument. The investigator in the current study preferred this instrument to others found in the mailed survey and to others reported in the literature because it can be used for self-report as well as for evaluation of nursing care by patients and by instructors. This makes it very useful in the present study and in future outcomes assessment. Harrison was contacted by telephone; she provided the investigator with information about Horner's location.
Homer agreed in a telephone conversation and in writing that her instrument could be used by nursing students and sent both forms of the tool and psychometric data. The instrument was developed based on 356 qualitative responses by patients in a four-year survey about nurse caring.

Content analysis was used to create 40 statements depicting 10 caring themes identified in the data. Two positive and two negative statements for each theme were written, then split into two "equivalent forms" of the tool.

The first draft was a four point Likert-like instrument. A pilot test with a small sample of nurses and patients was conducted and the instrument was found to discriminate between the two groups.

The first draft was reviewed by four content experts who have conducted research on the concept of nurse caring. They were: Joyceen Boyle, Ph.D., at the Medical College of Georgia; Marilyn Ray, Ph.D., at Florida Atlantic University; Joyce Murray, Ed.D., at Emory University; and Jean Watson, Ph.D., at the University of Colorado in Denver.

Homer (1996) stated in personal correspondence that she used Lynn's (1986) guidelines for determining a Content Validity Index with the panel's responses. Based on the panel's feedback and pilot study data, the tool was revised.

The revised tool continues in two forms, each has 28 statements, one positive and one negative for each of 14 themes. The refined tool was tested by Horner (1989) with a convenience sample of 23 junior nursing students and retested two weeks later, with a test-retest reliability of .81. Additionally, the numeric scaling format was changed to alphabetic because some of the older patients in the pilot study were confused by the 1 to 4 scale. So the refined tool indicates "SD" "D" "A" and "SA" for each statement to
eliminate the implied bias towards the number four. The positively worded items use those numbers for scoring. Negatively worded items use reverse scoring.

The instrument was then tested by Horner with 235 nurses attending a caring conference. Form A was given at the beginning of the conference and Form B was given at the end. There was no significant difference in a paired $t$-test for Forms A and B. Cronbach's alpha for Form A is .92, and .94 for Form B. The instrument was then administered to 74 lay persons in an effort to increase the heterogeneity of the respondents. The pooled data (lay and nurse) were subjected to Pearson's Correlation procedures, correlating the positive and negative statements. All themes were found to be highly correlated at the .001 level.

In a second study, Horner sampled 403 nurses and 394 lay persons. Factor analysis of the total sample revealed a single factor with an eigenvalue of 9.36 and which accounted for 33.4% of the variance in the sample. The item loading on the factor ranged from .46 to .68.

During the current pilot, Pearson $r$ for forms A and B of the PCBI was .732, $p = 0.01$ (two tailed). An $r$ of .7 is considered satisfactory evidence of reliability for research purposes, in the median range (Borg & Gall, p. 258). The only student feedback received about the Professional Caring Behaviors Instruments was in the form of additional comments about caring. None of the subjects commented about preference for either Form A or Form B. Form A was used in this study because the open-ended statement was more appropriate for a self-report than the Form B. Form A ends with the statement, "Describe other caring behaviors that come to mind"; Form B states, "Please describe the caring behaviors you remember the most."
Descriptive data about both the nursing faculty and nursing student samples is presented in Chapter IV. Summaries of responses from nursing programs are presented with graphic details. Correlations between the variables are presented in Chapter IV.

Protection of Human Subjects

The proposal for the study was presented to and approved by the Human Subjects Review Committee of the university. Approval for conduct of the study was obtained from administration of the college where the study was conducted.

All subjects in the mailed survey signified willingness to participate by returning the completed survey (Appendix B). They were informed that consent to participate in the study could be withdrawn at any time without penalty (Appendix A). Students in the pilot and the actual study received a full explanation of the procedures to be used and were informed of their right to not participate or to withdraw at any time without penalty (Appendices C and D). They were informed that only aggregate data would be reported to protect anonymity. They were informed that this study gathered baseline data about their status upon entering the program and that the college will track group achievement of curriculum objectives in order to document reaching college objectives. They were strongly urged to participate in outcomes assessment studies as well as this study. All data required for institutional research is stored in secured student files in the Associate Degree Nursing Program Director’s office.
CHAPTER IV. FINDINGS OF THE STUDY

This study investigated relationships between the variables of caring as a moral orientation, caring as professional behavior, and the Feeling dimension of the MBTI. The findings of the study are the focus of this chapter. They are presented with the research questions serving as the organizing theme. Description of the samples and data related to each question are presented as they apply to the research questions.

**Question One**

*Can caring behavior be measured with sufficient validity and reliability to substantiate caring's emphasis in today's nursing curricula?*

There are several components identified in this multifaceted question. Selected issues surrounding precision, reliability, and validity will be discussed in Chapter V. Caring as a component of the nursing curriculum will be addressed in Study Question Two.

The component of Question One which had primary relevance for this study was that of instrument selection/development to measure caring in a group of incoming associate degree nursing students. A literature search and mailed survey did not initially locate a suitable instrument, but one month before the study was scheduled, an instrument was located which met the requirements for this study. The Professional Caring Behaviors Instrument (PCBI) (Horner, 1989) has established preliminary evidence of validity and reliability. This data was presented in Chapter III. The PCBI is a written
survey in which the respondent rates nursing behaviors which demonstrate professional nurse caring. It has been used with families, patients, and nurses. The author, Sharon Horner, Ph.D., R.N., agreed that it would be suitable for use with entering nursing students to assess their beliefs about nursing caring.

Prior to conducting this study, the instrument was reviewed by the entire nursing faculty at the test site. There was unanimous agreement that the instrument fit well with the philosophy of nursing and the definition of caring developed by the faculty for the nursing programs. It was deemed acceptable for initial data collection for the outcomes measurement of caring. The psychometric properties of the PCBI were determined to be acceptable for the conduct of this study.

**Question Two**

*What instruments are faculties using to measure caring as an outcome of the nursing curriculum?*

To answer this question and locate an instrument to measure caring, a survey was sent to a sample of 192 nursing programs. The sample was selected randomly in part and deliberately in part. Sixty nursing programs belonging to a group of specialized colleges of nursing and allied health were contacted, as were the 12 schools listed in an NLN publication as utilizing instruments to measure caring. In addition, 60 associate degree and 60 baccalaureate programs in the Midwest were randomly selected to be included in the sample. This resulted in a sample size of 192. Sample size was reduced to 182 because 8 of the surveys could not be delivered by the postal service, and two surveys
were returned by the sponsoring institutions with a notation that the nursing program had closed.

Three mailings resulted in 109 responses, providing a return rate of 59.89%. Borg and Gall (1989) advocated contacting nonrespondents if more than 20% of the surveys are not returned. That was not done in this situation, because although there was interest in knowing how many programs use a caring approach, a major objective of the survey was to locate a useful instrument to measure caring in nursing students.

The respondents did not consistently report their classifications on the survey form, so categories reported are not consistent with those on the forms. Since names were an optional response, there was no way to identify some of the respondents. Identification was made by postal zip code.

Profile: Survey Respondents

Seventy-five of the 109 respondents (68.8%) reported no caring component in the curriculum. Thirty-four of the respondents (31.2%) reported that caring was central to their curriculum. Figure 2 presents the composite of the respondents.

Five of the respondents with a caring curriculum identified themselves as programs which had transitioned from diploma to degree granting. One of those programs sent the only objective measure of caring with a description of psychometric properties. It did not fit with the approach of using student self-report. Five respondents sent copies of their clinical evaluation tools and of their nursing philosophy, and five other programs sent a copy of the nursing department’s philosophy, but no instruments. One respondent noted
PLEASE NOTE

Page(s) missing in number only; text follows. Filmed as received.

UMI
that they had developed an instrument to measure a caring college atmosphere. That instrument was not useful to the current study.

In summary, the survey of nursing educators yielded the information that the majority of nursing programs in the sample did not incorporate caring as a major curriculum component. Those programs which incorporated caring used clinical evaluation tools with no psychometric properties to measure caring. The survey failed to elicit a useful instrument to measure caring in a sample of incoming nursing students. A serendipitous finding was the report of an instrument designed to assess a caring campus climate; this may prove useful in assessing institutional effectiveness in a future study.

**Question Three**

*What are the psychometric properties of the instruments available to measure caring behavior in nursing?*

Information about the psychometric properties of instruments used to measure caring is somewhat difficult to obtain. No instrument used to measure caring has been used and studied sufficiently to be critiqued in the published literature related to measures, such as the Mental Measurement Yearbooks published by the Buros Institute (Kramer & Conoley, 1992). Instruments used to measure caring may need to be traced to the author in order to accurately identify research conducted to determine psychometric properties.

The literature search which preceded this study produced information about 10 instruments designed to measure caring. Table 4 summarizes psychometric properties of caring measures found in the literature.
Table 4. Reported psychometric characteristics of instruments to measure caring

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Instrument</th>
<th>Validity</th>
<th>Reliability</th>
<th>Sample Size</th>
<th>Reports of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cronin &amp; Harrison 1988</td>
<td>CBA Caring Behaviors Assessment</td>
<td>Face Content (Cronin &amp; Harrison, 1988)</td>
<td>Coefficients for subscales 0.66-0.90</td>
<td>22</td>
<td>Cronin &amp; Harrison, 1988</td>
</tr>
<tr>
<td>Smith 1990</td>
<td>Caring Behaviors</td>
<td>Face (based on Wolf, 1986) Modifications by author; validity not addressed</td>
<td>Not addressed</td>
<td>not reported</td>
<td>Smith, 1990</td>
</tr>
<tr>
<td>McDaniel 1990</td>
<td>CBC Caring Behavior Checklist</td>
<td>Content Validity Index .80</td>
<td>Interrater reliability .82-.99</td>
<td>21</td>
<td>McDaniel, 1990</td>
</tr>
<tr>
<td>McDaniel 1990</td>
<td>CPCS Client Perception of Caring Checklist</td>
<td>Content Validity Index 1.00</td>
<td>Alpha .81</td>
<td>21</td>
<td>McDaniel, 1990</td>
</tr>
<tr>
<td>Nkongho 1990</td>
<td>CAI Caring Ability Inventory</td>
<td>Content Validity Index .80</td>
<td>Alpha .71-.84 test-retest 64-80%</td>
<td>462</td>
<td>Nkongho, 1990</td>
</tr>
<tr>
<td>Eriksen 1988</td>
<td>Nursing Care Questionnaire</td>
<td>Construct: Factor analysis reduced six subscales to two—environment and the art and technique of care. Predictive: Nurse managers accurately predicted which units would show higher patient satisfaction.</td>
<td>&quot;Inferred reliability&quot;</td>
<td>90</td>
<td>Eriksen, 1988</td>
</tr>
<tr>
<td>Horner 1989</td>
<td>PCBI Professional Caring Behaviors Instrument</td>
<td>Content* Test-retest .81</td>
<td>Alpha .92-.94</td>
<td>238</td>
<td>Harrison, 1995</td>
</tr>
</tbody>
</table>
Table 4. (continued)

<table>
<thead>
<tr>
<th>Author/Year</th>
<th>Instrument</th>
<th>Validity</th>
<th>Reliability</th>
<th>Sample Size</th>
<th>Reports of Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hinshaw &amp; Atwood 1982</td>
<td>PSI Patient Satisfaction Instrument</td>
<td>Construct; factor analysis</td>
<td>Alpha .784-.876</td>
<td>50</td>
<td>Bader, 1988; Hinshaw and Atwood, 1982</td>
</tr>
</tbody>
</table>

* Reported in the literature.
** Personal communication with Horner; factor analysis revealed one factor with Eigenvalue of 9.36

**Question Four**

*Does a caring voice in moral decision making correlate with the Feeling Scale of the Myers-Briggs Type Indicator in associate degree nursing students?*

In this non-random sample of 61 associate degree nursing students, there was a nonsignificant correlation of -.205 between using a caring voice in moral decision making and the Thinking Feeling Scale of the Myers-Briggs Type Inventory (MBTI). Hypothesis one stated that there would be a relationship between Caring and Feeling. The null hypothesis was retained. The scattergram (Figure 3) visually displays the spread of scores. It is evident that the Thinking-Feeling scores cluster at the Feeling end of the scale, and although there is a wider spread of scores on the caring voice, the greatest number of cases fall between 75 and 95. It is evident that there is no linear relationship between these variables, however, there was a nonsignificant relationship with Thinking of .205.

A values survey (Appendix I) accompanied the demographic questions. In 1996 the American Association of Colleges of Nursing published a list of core values which ideally underlie the practice of nursing (Quinn, 1990). Assessing students’ responses to these
Figure 3. Plot of Thinking Feeling (TF) dimension (continuous scale) vs. caring as a moral voice.
items upon entering and upon completing the program is part of the plan to document program effectiveness. The responses were also correlated with study variables to see if there were relationships present. The value of altruism had statistically significant positive correlations at \( p = .05 \) with Feeling (.274), the PCBI total (.330), and the value of caring (.368). It correlated negatively with Caring as a moral orientation (-.280). The value of caring correlated at \( p = .05 \) with the PCBI total (.416) and negatively with caring as a moral orientation (-.357).

The sample's preferences on the MBTI were quite different from the general population, which includes 68.7% Thinkers in males and 31.3% in females. The sample included five males; one (20%) preferred Thinking, and 8 of the 55 females in the group (14.54%) were Thinkers. This yielded a preponderance of 85.24% of the sample with a preference for Feeling. Table 5 summarizes the differences in MBTI preferences between the sample and the general population.

Table 5. Percentages of MBTI preferences by sex in the sample vs. the general population*

<table>
<thead>
<tr>
<th>Preference</th>
<th>Sample</th>
<th>General Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>F</td>
</tr>
<tr>
<td>Extraverts</td>
<td>100.0</td>
<td>54.5</td>
</tr>
<tr>
<td>Sensors</td>
<td>100.0</td>
<td>81.8</td>
</tr>
<tr>
<td>Thinkers</td>
<td>20.0</td>
<td>14.5</td>
</tr>
<tr>
<td>Judgers</td>
<td>60.0</td>
<td>61.8</td>
</tr>
</tbody>
</table>

* Figures from CAPT data bank (Cummings, 1995).
In this sample there were five males; there was one ESTP, one ESFP, one ESTJ, and there were two ESFJs. One subject represents 20% of the male sample; since there can be no meaningful comparison with national norms for males, a table was not used to illustrate the data. The incidence of types by percentages in the sample of females are portrayed in Table 6. Norms for the population as a whole are not available; Myers and McCaulley (1985) reported frequencies based on gender.

Table 6. Percentage of MBTI types*: Distribution in female subjects vs. traditional age female college studentsb

<table>
<thead>
<tr>
<th></th>
<th>ISTP</th>
<th>ISFP</th>
<th>INFP</th>
<th>INTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>T Coll*</td>
<td>2.22</td>
<td>6.14</td>
<td>5.78</td>
<td>1.94</td>
</tr>
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<td>7.14</td>
<td>8.92</td>
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<tbody>
<tr>
<td>T Coll*</td>
<td>2.56</td>
<td>8.54</td>
<td>12.32</td>
<td>3.06</td>
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<tr>
<td>Sample</td>
<td>1.78</td>
<td>16.07</td>
<td>5.35</td>
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<tbody>
<tr>
<td>T Coll*</td>
<td>7.53</td>
<td>16.20</td>
<td>6.88</td>
<td>1.85</td>
</tr>
<tr>
<td>Sample</td>
<td>3.57</td>
<td>26.78</td>
<td>1.78</td>
<td>0</td>
</tr>
</tbody>
</table>

Female Sample N = 56


b: T Coll = Traditional female college students age 18-24 inclusive.
Another aspect of MBTI scores is the level of preference for each scale. Myers and McCaulley (1985) caution that quantitative interpretation of MBTI scores is not recommended. They note that scores show the direction of a preference, not the intensity, and that higher scores do not imply excellence in an area, but reflect a clearer choice on the part of the respondent. Using Myers' cutoff points to cluster data, Table 7 demonstrates the distribution of the sample's scores on the T-F scale for females. The male sample's small number precluded meaningful comparisons with population norms.

**Student Profile**

The group did not reflect characteristics of the general population. Career choice was the first characteristic which marked the sample as unique. All of the sample had selected a career in nursing. They also selected a small, specialized college of health sciences which is affiliated with a medical center, where the emphasis is on clinical experience. It is primarily a commuter college which lacks the "collegiate" atmosphere associated with a large campus with many departmental buildings, dormitories, and spacious lawns. Other attributes which were unique include: The sample consisted of single (75%) females (93.3%) who hailed from small midwestern towns (60%), had previously taken a course relating to ethics or religion (54%), and had moderate to strong religious beliefs. Their reasons for entering nursing were primarily altruistic—a desire to help others was the predominate motive. The mean age of the sample was 24.4, the median was 21, and the mode was 20.
Table 7. Percentages at each level of preference: Intensity of female sample preferences vs. population preferences* on Form G of the MBTI

<table>
<thead>
<tr>
<th></th>
<th>Slight</th>
<th>Moderate</th>
<th>Clear</th>
<th>Very Clear</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Population</td>
<td>24.8</td>
<td>25.7</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>3.5</td>
<td>10.7</td>
<td>30.3</td>
</tr>
<tr>
<td>I</td>
<td>Population</td>
<td>28.1</td>
<td>25.2</td>
<td>35.9</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>21.4</td>
<td>8.9</td>
<td>12.5</td>
</tr>
<tr>
<td>S</td>
<td>Population</td>
<td>22.8</td>
<td>23.2</td>
<td>38.5</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>26.7</td>
<td>16.0</td>
<td>16.0</td>
</tr>
<tr>
<td>N</td>
<td>Population</td>
<td>27.6</td>
<td>22.9</td>
<td>37.1</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>12.5</td>
<td>1.7</td>
<td>7.1</td>
</tr>
<tr>
<td>T</td>
<td>Population</td>
<td>37.0</td>
<td>27.0</td>
<td>29.2</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>1.7</td>
<td>7.1</td>
<td>1.7</td>
</tr>
<tr>
<td>F</td>
<td>Population</td>
<td>30.3</td>
<td>29.9</td>
<td>24.6</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>16.0</td>
<td>23.2</td>
<td>28.5</td>
</tr>
<tr>
<td>J</td>
<td>Population</td>
<td>20.6</td>
<td>23.3</td>
<td>40.0</td>
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<td>10.7</td>
<td>10.7</td>
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<td>P</td>
<td>Population</td>
<td>29.4</td>
<td>24.3</td>
<td>32.3</td>
</tr>
<tr>
<td></td>
<td>Sample</td>
<td>10.7</td>
<td>7.1</td>
<td>14.2</td>
</tr>
</tbody>
</table>

* From Myers and McCaulley, 1985, p. 59. Myers classifies preference scores as: slight 1-9, moderate 11-19, clear 21-39, very clear 41 or over. For Feeling, clear is 21-29 and 31 or over is very clear.

**Question Five**

*Does a caring voice in moral decision making correlate with caring behavior in nursing practice?*

The correlation between scores for a caring moral orientation and scores for caring in nursing was -.156 and not statistically significant. The second hypothesis stated that
there would be a positive correlation between these variables. The null hypothesis was
retained. Figure 4 demonstrates the location of scores on the Measure of Moral
Orientation (MMO) and the Professional Caring Behaviors Instrument (PCBI). The means
on the MMO for the study sample compared to a sample of 381 students at a large public
midwestern university reported by Liddell and Davis (1996) are identified in Table 8.

Table 8. Means of university students vs. sample nursing students: Measure of Moral
Orientation

<table>
<thead>
<tr>
<th>Student Group</th>
<th>n</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
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<tr>
<td>Females</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>248</td>
<td>105.71</td>
<td>.70</td>
<td>100.7</td>
<td>.53</td>
</tr>
<tr>
<td>Sample</td>
<td>56</td>
<td>85.21</td>
<td>10.25</td>
<td>68.36</td>
<td>9.56</td>
</tr>
<tr>
<td>Males</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td>133</td>
<td>101.84</td>
<td>.95</td>
<td>98.81</td>
<td>.72</td>
</tr>
<tr>
<td>Sample</td>
<td>5</td>
<td>90.25</td>
<td>6.89</td>
<td>72.25</td>
<td>6.95</td>
</tr>
</tbody>
</table>

In observing the face values in Table 8, it appeared that there were major
differences between the means. To test for statistical significance, t tests were done.

Due to the small number (5) of males in the nursing sample, a meaningful
comparison between male samples was not possible. In the female samples, there was a
difference between the means for Caring; $t = -15.09$, df = 56, $p = .000$. There was
also a difference between the means for Justice in females; $t = -25.52$, df = 56, $p =
.000$. The null hypotheses were rejected; there was a statistically significant difference
between the means for Justice and Caring in the female samples.
Question Six

Does a higher score for caring behavior in nursing practice correlate with the Feeling scale of the Myers-Briggs Type Indicator?

The correlation between nurse caring and the Thinking Feeling scale was -.205. The third hypothesis stated that there would be a positive correlation between those variables. The null hypothesis was retained. This nonsignificant correlation with Thinking is demonstrated by the scattergram which is Figure 5. There is a restricted range of scores on the PCBI as well as on the MBTI Feeling scale. Consequently, there is no linear relationship in this sample between caring as a moral orientation and caring as professional behavior. Rather, there is a nonsignificant correlation with Thinking. There are no population means available for the PCBI, so comparisons could not be made between the sample and other groups. Cronbach's alpha for internal consistency for the PCBI for this study group was .42. Horner reported alphas of .92 and .94 using larger samples. In the pilot, both forms A and B were administered and \( r \) was .732.
Figure 4. Plot of professional caring behavior vs. caring as a moral voice.
Figure 5. Plot of professional caring behavior vs. Thinking Feeling (T F) dimension (continuous scale)
Summary of Findings

This study included a survey mailed to nursing educators to ascertain whether caring was a component of the curriculum, and if so, how caring was measured. The majority of the respondents indicated that caring was not a major concept in the curriculum. Of the college curricula incorporating caring, only one used a psychometrically tested instrument, the format of which was inappropriate for use in this study.

There are a small number of instruments which have been developed to measure caring in nursing. However, they are difficult to locate and data may not be published about their psychometric properties. A summary of data found in this study was included in Table 4, Chapter IV.

In this sample, there were no statistically significant correlations between any pairs of the three variables: caring as a moral orientation, caring as professional nursing behavior, or the Feeling scale of the Myers-Briggs Type Inventory. There were nonsignificant correlations between caring moral voice and Thinking, and between professional caring behavior and Thinking. This sample had unique characteristics; one was that scores on the instruments were restricted in range. This homogeneity of the sample influenced the strength of $r$. Hinkle, Wiersma, and Jurs (1988, p. 116) stated, "As the group under study becomes increasingly homogeneous on one or both variables, the absolute value of the correlation coefficient tends to be smaller."
Discussion about the implications of the findings will be organized around the study questions. Further discussion about the samples will be included.

**Question One**

*Can caring behavior be measured with sufficient validity and reliability to substantiate caring's emphasis in today's nursing curricula?*

The first part of this study question deals not only with psychometric issues, but philosophical bases for the study of caring. Many nurses approach the concept of caring from a constructivist point of worldview, and conduct only qualitative research on caring (Newman, 1992). Others have viewed caring as a concept which can be objectively defined and measured. The science of measuring caring, however, is in its infancy. Instrument development is in the early stages. Few instruments have been used by nurses other than the authors of each tool, and psychometric data is scarce.

The Professional Caring Behaviors Instrument (PCBI), selected for use in this study, comes with preliminary data to support beginning validity and reliability. Other instruments found in the literature were no further along in development, and lacked the characteristics required for a baseline study of caring in entering student nurses. The investigator was looking for the ideal tool for this study—one which fit the college's philosophy and definition of caring—that could be used throughout the curriculum by students as a self-report of the importance of caring behaviors, by instructors in rating their perception of students' caring behaviors, and by patients and families to rate students. The PCBI met these criteria. The ideal instrument would also show strong evidence of validity and reliability, and receive favorable review by theorists and
statisticians alike. The reality is that no instrument developed to measure caring has established a wide base of validity. If a study of caring is to be conducted, one selects an appropriate instrument from those available, using an instrument with an acceptable level of reported psychometric properties, or one begins instrument development and all that such a major undertaking entails. Practical considerations such as time and financial constraints are factors to be considered.

Goodwin (1997) stated that the definition of validity has changed over the past few years. She quoted the Standards for Educational and Psychological Testing (AERA, APA, & NCME, 1985), "Validity refers to the appropriateness, meaningfulness, and usefulness of the specific inferences made from test scores. Test validation is the process of accumulating evidence to support such inferences" (p. 103). "Validity is a unitary concept, although various types of evidence--typically referred to as content, criterion-related, and construct--need to be sought for a measure . . . evidence about the consequences of the use of the instrument is part of the overall validation effort" (p. 104).

Stewart and Archbold (1997, p. 99) noted, "At the same time the picture of validity has simplified, it has also become more complex, with the kinds of evidence that can support validity becoming richer and more varied."

Kachoyeanos (1997) pointed out that convergent and divergent validity are necessary to achieve construct reality. "In convergent validity, measures of similar concepts from different scales are significantly related. In discriminating validity, though two similar but discrete concepts may be related, the relationship is weak; that is, the two concepts can be clearly differentiated" (p. 53).
Construct validity of the PCBI was measured using factor analysis; Horner found one factor in her instrument (Personal Communication, July 11, 1996). This finding is not unusual. Eriksen (1988) developed an instrument to measure patient satisfaction; it initially had four subscales. Subsequent factor analysis revealed the presence of an environmental factor and one factor for nurse caring which included affective and instrumental elements. Eriksen (1988) reported that Ware, Snyder and Chu (1975) and Hinshaw and Atwood (1982) also found that care and technical skills loaded as one factor. This is consistent with Horner's finding of one factor for affective and instrumental caring behaviors in the PCBI.

The first part of Study Question One, then, poses a question which can only be answered in the context of each study situation. The investigator must determine whether any of the existing instruments developed to measure nurse caring behavior meets the theoretical framework from which the study is evolving. Another consideration is whether any of the instruments are framed in language which is suitable to the purpose of the study, the subjects and the proposed methodology. Next, one needs to consider the level of validity of the instrument and whether it is sufficient to meet the purpose of the study. These factors need to be considered by each investigator; there are no definitive answers covering all situations.

The second part of Study Question One centers on the current emphasis on caring in the nursing curriculum. Results of the current survey indicate that there is little emphasis on caring, since 75 of the 109 respondents (68.8%) had no caring component in the curriculum. This finding is inconsistent with other studies. Slevin and Harter (1987) surveyed all 450 NLN approved baccalaureate nursing programs in the United States in
1984-85. They found that 97.4% included a caring component. The measurement of caring included clinical evaluation instruments, nursing care plans, process recordings, clinical conferences, nursing process records, logs, journals, written papers, self-evaluation, anecdotal notes, client reporting, clinical personnel reports, and peer evaluations.

King (1992) surveyed all 542 NLN approved baccalaureate nursing programs in the United States in 1991. She found that 53.5% were evaluating or planning to evaluate caring behaviors as a component of outcomes assessment. Clinical and classroom evaluation was used by 30.5%; 20.5% evaluated caring only in the clinical setting. "Only 180 (45%) indicated that their clinical evaluation tool specifically identified caring behaviors which needed to be demonstrated by nursing students" (King, 1992). Her sample reported using multiple measures, including client perception, student evaluation, pen and paper test, peer evaluation, clinical personnel perception, role modeling by student, creative projects, and other methods. Almost 73% of King's sample agreed that the caring movement will continue in nursing education.

Considering that more than 94% of nursing programs incorporated caring in the mid 1980s, and 53.5% were evaluating caring in the early 1990s, but only 31.2% of the current sample reported incorporation of a caring curricular component, it appears that the concept of caring is no longer a major basis for the nursing curriculum. However, the question in the survey, "Does your curriculum include a caring component?" might have been subject to misinterpretation by nurse educators. Some faculties have made a paradigm shift from the behaviorist model to an emancipatory-educative-caring model (Bevis & Watson, 1989) as the basis for the "curriculum revolution." If a college's
curriculum has not transformed to the new model, nursing educators might have denied existence of a "caring component" that is, in fact, part of the curriculum. In addition, this was not a nationwide, comprehensive survey of associate and baccalaureate nursing programs, so no inferences can be made. A comprehensive study is needed which uses clearer conceptual definitions.

Whether or not caring continues to be emphasized in other curricula, it is unlikely that the study site will abandon this concept which is integral not only to the nursing program, but the philosophical basis for the mission of the institution. Caring is addressed in the college's objectives, and is incorporated in all nursing courses. It is the basis for a general education course in the curriculum that is required for students of all majors. It is part of the culture of the institution.

Question Two

What instruments are faculties using to measure caring as an outcome of the caring curriculum?

Except for one program using an instrument which had established psychometric properties, the nursing educators responding to the survey reported using clinical evaluation tools to measure caring in the nursing curriculum. Although there are exceptions, these are usually instruments without psychometric properties. If programs are using only one type of unvalidated instrument to measure the outcome of caring, the accuracy and validity of the assessment may be questioned.

Triangulation is a process used frequently in qualitative research. It incorporates the collection of several kinds of data to measure one construct. It may involve
questionnaires, interviews, direct observation, content analysis, etc. (Borg & Gall, 1989). Triangulation is recommended in outcomes assessment (Astin, 1988; Banta, 1991; Banta & Pike, 1989; Fong, 1988).

The plan for outcomes assessment for the study setting has not been finalized, but the current plan for the measurement of caring is to include the PCBI at intervals, use clinical evaluation tools, ask patients and families for evaluations of student performance, seek feedback from co-assigned staff nurses, and ask for students' self-report at intervals. In addition, the curriculum includes a required first semester course in caring, which combines philosophical, ethical, and psychological aspects of caring. Students write a personal philosophy of caring at the start of the course and modify it at the end. In the final semester of the nursing program, students will be asked to revisit their earlier philosophy of caring. The final work will be evaluated by the general education faculty to ascertain the student's development during the curriculum. It will be incorporated into the student's portfolio. This use of multiple measures is planned to increase validity in the measurement of caring as a curriculum outcome.

**Question Three**

*What are the psychometric properties of the instruments available to measure caring behavior in nursing?*

This issue was addressed in discussion of the first study question. The study of caring is an important factor in developing a growing knowledge base for the practice of nursing. Despite the possible decreased emphasis on caring in the nursing curriculum, it continues to be a significant value and an essential component of nursing practice (Bevis,
101

1990; Bevis & Watson, 1989; Farley, 1989; Harrison, 1995; Larson, 1986; Symonds, 
1990; Valentine, 1989; Watson, 1988, 1990b). Therefore, it is important to continue to 
research the psychometric properties of instruments used to measure caring.

**Question Four**

Does a caring voice in moral decision making correlate with the Feeling Scale of 
the Myers-Briggs Type Indicator in associate degree nursing students?

In this sample of 61 entering nursing students, there was a nonsignificant 
correlation of -.205 between the variable of a caring moral orientation and the Thinking 
Feeling scale of the MBTI. This finding is not congruent with other studies which found 
a relationship between caring as a moral voice and Feeling (Liddell & Davis, 1996; 
Liddell, Halpin, & Halpin, 1993; Rodgers, 1990). In this sample, caring moral 
orientation correlated not with Feeling, but with Thinking. This unexpected finding may 
have been influenced by several factors, including sampling, MBTI type and level of 
preference, and scoring of the MBTI.

The MBTI Manual states that in correlational analyses, MBTI scores are 
transformed to continuous scores by setting the midpoint at 100. Scores for Extraversion, 
Sensing, Thinking, Judging are subtracted from 100, and scores for Introversion, 
Intuition, Feeling, or Perceiving are added to 100 (Myers & McCaulley, 1985). Analyses 
using continuous data should be interpreted with caution (McCaulley, 1990). Myers 
developed this method to allow correlational techniques to be used with the MBTI, but
McCaulley (1990, p. 184) stated:

Researchers who use correlational methods with MBTI data need to take into account in their interpretation that they are violating assumptions of type theory and the psychometrics of the MBTI. Data presentations that compare means of research variables for the types, or groupings of the types, are more consistent with type theory and the MBTI.

There is concern because the types are assumed to be dichotomies and continuous scores violate this assumption of the MBTI. However, it is difficult to comprehend any other way to correlate other variables with MBTI preferences, so it is understandable that Myers provided a method which would "ensure consistency in reporting these data" (McCaulley, 1990). In light of these cautions, and since the correlation was not statistically significant, the meaning of this finding is difficult to interpret, but several factors were considered.

Faucett et al. (1995), in explaining their failure to find a significant difference between Thinking and Feeling subjects' scores in post-conventional moral reasoning, stated that the T-F index of the MBTI has been less psychometrically sound than the other three scales, leading to speculation that Thinking and Feeling may not be inseparable poles of just one dimension; rather they may be two distinct dimensions which develop independently. If so, this may necessitate additional caution in interpreting results of this study. An alternative explanation might involve the influence of other scales on moral reasoning. Redford, McPherson, Frankiewicz, and Gaa (1995) found that the Sensing Intuition and Judging Perception scales influenced moral reasoning, but the Extraversion, Introversion, and Thinking Feeling scales did not.

Another area to consider is that of strength of preference. Myers and McCaulley noted that slight preferences (1-9) on any scale could result in a change of letter
designation if responses to one or two questions change. In other words, when a
preference is slight, a counselor should submit results of the MBTI to the respondent,
who either verifies responses or re-evaluates them, which may result in a change in the
reported type. Individual follow-up to verify type was not done in this study. Since
17.7% of the sample had scores in the 1-9 range on the Thinking Feeling scale, their
scores could have varied upon verification of their true Thinking Feeling preference. This
is another reason to interpret the findings of the study with caution.

Sampling undoubtedly played a role in the results of this study. The sample in this
study was deliberately chosen. A comprehensive plan for assessing student learning in the
associate degree nursing program will incorporate the data collected in this study as part
of the baseline for measuring caring. The data were also collected to explore potential
relationships between the variables of nursing caring, caring as a moral orientation, and
the Feeling dimension of the MBTI. Because of the dual purpose in collecting this data,
the principle of randomness in sample selection was violated. The group displayed
characteristics which are unique, and which negate the potential for generalization to
other populations. The group tended to be homogeneous, with a restricted range of scores
on all of the instruments used in this study. This precluded finding significant linear
relationships among the variables.

Sample size was comparatively small. The study could have been strengthened by
increasing sample size, either by including students in other majors at the study site, or
by extending the study to one or more additional nursing programs.

A variable with a moderate restriction in range was the caring orientation on the
Measure of Moral Orientation (MMO). The subjects in this sample had scores
significantly below the means for college students at a midwestern state university. The implications of these results are unclear. Are nursing students less moral than university students? Or, because so many of them are Sensers, did they fail to connect with the scenarios in the MMO and not respond as they would in a real life situation? Myers and McCaulley (1985) stated that sensing types lack imagination, cannot make conceptual leaps, and have difficulty in making generalizations. This characteristic may have hindered the sample in responding to the MMO. Another characteristic of the sample which might have contributed to these results is that the sample elected to attend a specialized health sciences college which emphasizes clinical practice and commuting. The students may have had difficulty identifying with the residential collegiate lifestyle depicted in the MMO. In addition, Faucett et al. (1995) considered that their use of hypothetical dilemmas was a possible limitation in their study of moral reasoning. They believed there are major differences between fiction and real life dilemmas. They continued, "Perhaps the use of hypothetical dilemmas gives an unfair advantage in moral reasoning tasks to Is, Ns, and Ps who enjoy dealing with the hypothetical more than do Es, Ss, and Js" (Faucett et al., 1995, p. 22). They noted, however, that "although NTs and NFs may be more inclined . . . toward abstract moral reasoning, they may or may not be any more likely to behave morally" (p. 22). It will be interesting to see how the responses to these situations in the MMO are influenced by the courses in the first semester of the curriculum, when the students take a nursing course with class and clinical components and the caring course, and how students respond at the end of the curriculum.
The scores on the MMO were comparatively low, which is consistent with the findings of Nokes (1989). She found that nurses ranked lower than other professions on tests of moral reasoning. The caring voice, however, predominated in this sample. This is theoretically consistent with Feeling types' decision making based on personal values and the effect decisions have on others. However, the statistical correlation was in the direction of Thinking. The sample rated the value of caring as 3.8 on a 4.0 scale on the values inventory included with the demographic questionnaire. Thinkers in the sample used the caring voice in moral decision making—but that group also subscribed to caring as a value. The suggestion of Chapman (1983) and Meyer (1995) is supported by the results of this study. They proposed that nursing may attract people of both genders who want an opportunity to care for others. Now it can be added—whether they are Thinking or Feeling types. Faucett et al. (1995) noted that Thinkers prefer to use impersonal logic to solve problems and Feeling people focus on personal values and effects on others when making decisions. They stated, "Because a strong value of justice underlies Kohlberg's postconventional stages, Fs who value justice should be no less likely to reason at these stages than Ts" (Faucett et al., 1995, p. 22). Conversely, Thinkers who value persons would be able to use the caring voice in making moral decisions—and that is what the Thinkers in this sample did.

Another observation about the scores on the MMO is that caring was the preferred mode for moral decision making, but the scores were fairly balanced. The mean, median, and mode for Justice were about 10 points below those for Care. The sample used a balance of Caring and Justice in moral decision making—which meets the recommendations of experts in the field (Delworth & Seeman, 1984; Fry, 1989; Gadow,

The sample diverged from population norms on preferences on the MBTI. Tables 5, 6, and 7 in Chapter IV illustrate the preferences of this group. Extraverted Sensing Feeling types predominate, with Judgers outnumbering the Perceivers. This is somewhat consistent with the findings of Hodges (1988), whose sample of 93 nursing students tied on the Extraversion Introversion scale, but 72% of the sample were Sensing, 66% were Feeling, and 74% were Judging. In allied health groups, Judging and Feeling predominated, and there was balance between the Extroversion, Introversion, and Sensing Intuition scales (Rezler & French, 1975, quoted in Hodges, 1988).

Garden (1989, p. 224) quoted McCaulley (1981), Keen (1982), and Myers and McCaulley (1985) as reporting that in "health-related, counseling and education fields of the human services the proportion of 'feeling types' to 'thinking types' is at least 80/20."

Myers and McCaulley (1985, p. 34-35) stated:

In consequence of their preferences for sensing and feeling, SFs tend to be sympathetic and friendly. In theory, their best chances for success and satisfaction lie in fields where their personal warmth can be effectively applied to concrete situations. The combinations of sensing and feeling can be valuable in selling tangibles, service-with-a-smile jobs, teaching (especially in the early grades and applied fields), nursing, pediatrics and other health fields involving direct patient care.

Extraverted Seners are characterized by Myers and McCaulley (1985) as action-oriented realists who are the most practical of the types. Extraverts are frank and
communicate with ease. In describing Sensing people, Myers and McCaulley (1985) use the terms realism, acute powers of observation, and memory for details. Those who prefer Feeling are attuned to the values of others, are concerned with the human aspects of problems, have a need for affiliation, have a capacity for warmth and value harmony. Years of experience as a nurse lead the author to agree with Myers and McCaulley (1985) that all of these attributes will serve the subjects well as neophytes in their chosen field.

Should members of the sample wish to move into more advanced positions, however, it will be necessary for them to develop their less preferred functions. Myers (Myers & McCaulley, 1985) disagreed with those advocating equal development of both kinds of judgment and both types of perception. However, she stated:

Full development of one's type is a lifelong adventure. It involves getting to be very good with the favorite, best-trusted process . . . getting to be good, though not as good, with the second-best process, the auxiliary process . . . (it) involves learning to use one's two less-favored, less-developed processes when these processes are needed.

Each step toward full command of one's natural gifts is rewarding. Good type development is a journey which opens up new abilities and understanding. (Myers & McCaulley, 1985, p. 65)

The subjects will need to develop their Intuitive potential to be open to new possibilities, develop ingenuity in problem solving, prepare for the future, and tackle problems with zest (Myers & McCaulley, 1985). They will need to develop their Thinking potential for analyzing, organizing, reforming, and remaining firm and consistent (Myers & McCaulley, 1985). Developing these less preferred processes will enable them to enhance the skills needed in a rapidly changing health care climate, where innovation, farsightedness, and creating change are the keys to survival.
Another area to consider is the assertiveness level of the group members. Sensing and Feeling types tend to be less assertive than the other types (Williams & Bicknell-Behr, 1992). Successful nurses must be able to resolve conflicts, act as patient advocates, supervise other health care workers, and interact in multiple situations which require assertiveness. The predominance of Sensing Feeling types in this sample should be noted by student services personnel at the institution as they plan developmental activities. The results of this study also have implications for recruitment and counseling activities. Griffin and Salter (1993) found that Extraverted Thinking Perceivers were statistically more frequent offenders of the judicial system in a university residence hall. Komisin (1992) found that suicidal behavior was influenced by type and was moderated by personality. Bayne (1995) found that type influences decision making; Feeling types may need assistance in being more objective, coping with conflict and negative feelings and learning to challenge. Sorensen and Robinson (1992) designed a class to assist Feeling types to succeed in college by strengthening their thinking orientation. Myers and McCaulley (1985) also noted that retention was increased when Sensing types are taught how to generalize, Intuitive types learn not to make multiple choice questions more complex than intended, and Sensing Perceivers are assisted to accept practice and routine.

The MBTI profiles of the sample may also guide the faculty of the study site. Extraverts predominated, and they enjoy learning in groups (Myers & McCaulley, 1985). Prorak, Gottschalk, and Pollastro (1994) found no relationship between group learning and type. However, the group learning method was more interesting to instructors, and although students did not learn more with this method of instruction, neither did they fall asleep as they did with lecture.
Sensing types respond to learning activities and materials they view as practical and functional, including television, audiovisual aids, and interactive video (Matta & Kern, 1991). They lack imagination, and become lost if the teacher skips any steps in explanations. They cannot make conceptual leaps and have more difficulty in generalizing from examples to concepts and from textbooks to clinical situations. For Sensers, the most productive learning takes place when it is connected to concrete realities that fully engage the senses (Hodges, 1988; Myers & McCaulley, 1985). McCaulley (in Myers & McCaulley, 1985) used type to predict academic aptitude and grade point average. She found greater academic ability in students with preferences for Intuition, Introversion, and Perception. Since the sample is low on these traits, academic success may be more difficult to achieve. Instruction based on typology supplemented with academic counseling may help these students succeed. Schurr, Herriksen, Alcorn, and Dillard (1992) found that Sensing-Judging nursing students do well on teacher constructed tests, but less well on the standardized entry into practice examination (NCLEX). This has implications for the faculty in expanding the preparation for NCLEX for these students.

Since Feeling types predominate, it is important that caring relationships between teachers and students are nourished to maintain motivation and achievement (Hodges, 1988). Carrell and Monroe (1993) identified value, merit, learning through personal relationships, harmony, friendship, and social awareness as learning preferences for Feeling types. These preferences fit well with "connected" teaching, described by Belenky, Clinchy, Goldberger, and Tarule (1986) as emphasizing "connectedness over separation, understanding over assessment, and collaboration over debate" (p. 229). They suggested that the teacher acts as midwife, allowing students to give birth to their own
ideas, make their own knowledge explicit, and elaborate it. Nursing educators have adopted this premise, and have talked about redefining the student-teacher relationship (Symonds, 1989), a shared adventure (Farley, 1989), a curriculum revolution (Bevis, 1990), and a new morality of caring as a basis for the curriculum (Watson, 1990). Bevis and Watson's (1989) book on the caring curriculum is subtitled "A new pedagogy for nursing." The faculty of the study site has incorporated some of these ideas into the new curriculum, but enhancement of caring in the curriculum is supported by the typology of the students currently in the program.

Baxter Magolda's (1992) research about college students' ways of knowing led her to recommend teaching strategies to enhance students' progress through the stages of cognitive development. She found that engaging in collegial relationships with students and creating opportunities for mutual responsibility enhanced contextual knowing, which is the most advanced way of thinking in Baxter Magolda's schema. This approach to teaching fits well with the needs of Feeling types.

Other implications for teaching include the fact that Feeling types make decisions subjectively, and weigh choices and how they matter to others. It is important for nursing educators to emphasize the Thinking dimension, including critical thinking and decision making skills which are necessary in the clinical area. Structured pre and post conferences and the use of case studies offer opportunities to develop these skills.

In the fourth semester courses at the study site, leadership is emphasized. Knoop (1994) found a relationship between leadership and type, and that effective type development enhances leadership ability. This information can be useful in classroom leadership exercises and in the clinical setting where students practice leadership skills.
The last aspect of the sample's MBTI types is the intensity of strength of preferences. As Table 7 in Chapter IV demonstrates, the sample falls below national norms in all cells except for the female Feeling types, where the percentages with a clear and very clear choice for Feeling outnumber the percentage in the general population. Although this incidence does not indicate excellence in the use of Feeling, it does indicate the strength of Feeling within the group.

The clustering of scores was one factor affecting the linear relationships found in this study. Although the MMO fit the conceptual framework for the study, the fit of the MMO with the sample is now suspect, based on the large numbers of Sensing Feeling types in the group. These types cannot make conceptual leaps and have trouble generalizing. Since they chose a specialized health sciences college, they might have had difficulty in responding to the "collegiate" lifestyle depicted in the MMO.

**Question Five**

*Does a caring voice in moral decision making correlate with caring behavior in nursing practice?*

There was a nonsignificant correlation of -.156 between the scores for the variables of moral caring and nursing caring in this sample of nursing students. There were no empirical studies linking these variables in the literature, so results cannot be compared to other findings; however, the nursing literature links them theoretically. Watson (1988, 1990b) identified caring as the moral imperative for nursing, the ethical principal or standard by which curative interventions are measured. Many nurses agreed with that

Caring as a moral basis for nursing manifested by caring behaviors has appeal as a concept, but the negative correlation found in this study suggests that there are two related but separate concepts operating here, and that they are independent of each other.

Boykin and Schoenhofer (1990) analyzed major theories of nursing. They examined the relationship aspects of caring identified by Watson (1988) and Roach (1987), and linked those to the ethical basis for caring, also espoused by Watson and Roach.

Another approach was used by Morse, Bottorf, Neander, and Solberg (1994). They organized theories of caring into five categories: Caring as a Human Trait, as a Moral Imperative, as an Affect, as an Interpersonal Interaction, and as a Therapeutic Intervention. These authors placed Roach's (1987) theory in the Human Trait category, and Watson's (1988) into the Moral Imperative. Discussion, however, demonstrated the overlap between features of both models into both categories.

Perhaps one of the greatest difficulties in attempting to measure caring in associate degree nursing students is the lack of precision in nursing's use of the term caring. From major theorists, cited above, to faculties' definitions of caring, there is no clear agreement on using the term. Kyle (1995) stated, "Caring is a complex process including moral, cognitive, and emotional components which are culturally derived" (p. 512).

In examining the conceptual definition of caring behavior as developed by nursing faculty at the study site and used in this study, caring behavior reflects relationships which are a nurturing process characterized by commitment and responsibility toward
another person, based on a belief in the value of persons and a commitment to facilitate personal integration.

Using Morse et al.'s (1994) analysis, it becomes evident that there is an overlap of categories blended into this definition. First, caring is defined as a relationship, which places it into the Interpersonal Interaction category of Morse et al. (1994). As an interpersonal interaction caring is conceptualized as *mutual* communication, trust, respect, and commitment. The patient and nurse are both enriched as a result of reciprocal interaction (Morse et al., 1994). Feelings and actions must be integrated in a caring encounter so that the caring nursing intervention is qualitatively different than a non-caring encounter (Horner, 1988). Weiss' (1988) analysis of a caring encounter integrated verbal caring, nonverbal caring, and technically competent behaviors. Benner and Waubel (1989) also identified caring as thoughts, feelings, and actions, being "connected and concerned" so it becomes possible to give and receive help (p. 4).

Although the faculty did not operationalize caring in their definition, they agreed that verbal, nonverbal, and technical behaviors were components of caring when they approved the use of Horner's (1989) Professional Caring Behaviors Instrument in this study.

A concern with the interpersonal interaction approach is that there is an implication that the patient and nurse have established mutual goals. Studies have demonstrated that patients value instrumental nursing behaviors but nurses value expressive behaviors (Harrison, 1945; Larson, 1986). This points to the need to initially clarify goals with the patient so that mutual goals will be established.
It also lends a degree of support to the critics of the caring movement in nursing. They charge that in the move to escape the medical/behaviorist model, some caring theorists have shifted focus from humanism to theological/religious emphasis (Barker, Reynolds, & Ward, 1995). Barker et al. (1995) are concerned that the "hidden agendas" of differing religious beliefs could "muddy the waters of academic discourse" (p. 388).

Morse et al. (1990) questioned how caring makes a difference to the patient. Dunlop (1986) noted that "the emerging use of the term 'caring' seems to involve a form of love" (p. 661). She considered that there was too much emphasis on the psychosocial, and a negation of physiological needs—which she stated, "provided the access that allowed the nurse to be an effective teacher and nurturer" (Dunlop, 1986, p. 664). She characterized this as "a tendency to lose the bedpan" (p. 664).

These comments reinforce the need to view the patient holistically and individually, focusing on health related issues, and sharing goals and decision making. Considering psychosocial and physiological needs and the patient’s right to autonomy will provide care which provides satisfaction to both the patient and the nurse.

In further analysis of the faculty’s definition of caring used in this study, it becomes evident that another category of caring is blended into the definition, because beliefs are introduced: value of persons, responsibility, commitment, facilitating "personal integration." These are elements of the Moral Imperative of Caring, with concepts similar to Watson’s (1988) ideal of preserving humanity, inner harmony, and potential healing.

Caring as Moral Imperative was espoused by Watson (1988). As a key player in the caring in nursing movement, she used caring in both the moral and the interpersonal sense of the word, thus adding to the fuzziness of the definition of caring. Caring is a
moral virtue, focusing on patient good and maintaining dignity and respect for patients as people (Morse et al., 1994). In this approach, caring is a value which underlies interactions with others. Noddings (1984) views caring as a reciprocal process of ethical decision making with a particular person within a specific context.

Gadow (1995) sees the nurse-patient relationship based on a commitment to the protection and enhancement of human dignity. In contrasting the Kantian approach to making moral choices by transcending the person's particularity in making choices which are universal, she states, "Caring, on the other hand, values persons as particular, embodied, and irreplaceable; ethical choices affirm the individual as unique and situated, not transcendentally universal" (p. 242).

Gadow (1994) added that relational ethics involves caring, and valuing an individual "who is always under construction and yet always whole" (p. 243). She emphasized the need for engagement, for decisions made jointly with the patient based on mutual views of the good toward which the patient wants to move.

It becomes evident, then, that there is a blurring between caring as moral imperative, nursing actions, and ethical decisions based on the value of the person and caring as an interpersonal intervention. The current study found an insignificant negative relationship between caring as a moral voice and caring as a nursing behavior. Perhaps, despite the circular definitions in the literature, there are indeed two separate yet related concepts of nurse caring. One is a relational mode of making ethical decisions based on the value of the individual person, and the other is a way of relating to the patient in everyday caregiving situations which do not involve an ethical dilemma.
Although the two aspects of caring are unique, one involving ethical decision making and one related to everyday interpersonal interactions, there is a commonality between them. They are both focused on relationships which hold human beings as unique and valuable.

This finding of statistical support for the separation of the concepts of caring in nursing moral decisionmaking and caring in nursing interpersonal relationships with clients is significant in that it is a guide to further study and concept clarification. The critics (Barker et al., 1995; Dunlop, 1986) will find less ground for dissension if nurses can be more articulate in defining the different meanings of the term caring.

Based on the above analysis, a modification of the faculty's 1994 definition of caring is suggested, to delineate the concepts of caring as a component of ethical decision making, and caring as a way of interacting with clients, both based on the value of the individual.

Morse et al. (1994) introduced the question of whether caring can be reduced to behavioral tasks, that is, measured. The answer to that question, in the author’s mind, is yes, it can be measured. Caring as a moral voice can be and has been measured (Liddell, Halpin, & Halpin, 1993; Stander & Jensen, 1993). Caring as an interpersonal relationship has been measured. Cronin and Harrison (1988), Horner (1989), Larson (1986), and McDaniel (1990) developed instruments to measure caring.

The intent of this study was to explore the relationship of caring as professional nursing behavior and caring as a moral voice. The study results supported two separate concepts. Selected literature supported the same conclusion. The prediction of linear
relationships in this study was unsupported. It is suggested that the relationship between these variables is their common value—humanity.

In the definition of caring used in the current study, the faculty indicated that personal integration was the goal of caring. The term was later explicated to mean development of the person’s potential for holistic (physical, psychosocial, spiritual) health. In considering the aspect of health, one must involve another element in the categories of Morse et al. (1994), that of caring as a human trait. Although the faculty did not directly address this issue, Morse et al. identified those who claim that caring in nursing is unique (Leininger, 1980; Roach, 1987; Watson, 1988), and those who recognize caring as a human trait forming the foundation of human society (Bevis, 1981; Fry, 1989; Horner, 1988).

In debating the universality of caring, the faculty acknowledged the work of Gilligan (1982), Fry (1989), and Noddings (1984), who approach caring from different disciplines as a human trait. But is there a special focus on caring in nursing, as opposed to teaching or social work? The faculty, in identifying personal integration as an outcome of caring, join Sime, Corcoran-Perry, and Newman in their conclusion that "the focus of nursing as a professional discipline can be characterized as caring in the human health experience" (Newman, 1992, p. 12). Thus, the faculty agreed that caring is a human trait, and the aspect of caring unique to nursing is its focus on health.
Question Six

Does a score for caring behavior in nursing practice correlate with the Feeling Scale of the Myers-Briggs Type Indicator?

Another nonsignificant negative correlation (of -.205) was found between nurse caring behavior and the Thinking Feeling scale of the MBTI. There have been no studies correlating these variables found in the literature, so no comparisons can be made. This study question was formulated to test the researcher’s hypothesis that if a caring moral orientation and Feeling on the MBTI are linked, as they have been in other studies, then it follows that caring as nursing professional behaviors and Feeling should also be linked. Instead, the negative correlation indicated a statistically nonsignificant correlation with Thinking rather than Feeling.

Scores on the Professional Caring Behaviors Instrument (PCBI) were very homogeneous and clustered at the high end of the scale. There are several factors that could play a role in this high scoring. First, the group responded almost universally to the question, "Why did you enter nursing?" by responding that they wanted to help people. They seemed altruistically motivated and idealistic. The Thinking students, valuing persons, rated Professional Caring Behavior even higher than did the Feeling students. In addition, there could have already been a certain degree of socialization to the college’s values. All of these students had seen the college catalog, attended orientation, and attended the first day of nursing class prior to completing the questionnaires. The faculty and student services personnel who are involved in all of these activities certainly attempt to convey the philosophy and values of the college and
nursing program during these events. These factors, and the transparency of the language of the instrument, may have led to artificially high scores.

Another consideration regarding the high scores on the PCBI is their impact on outcomes assessment. The intent is to measure caring with the PCBI at intervals; upon matriculation, after the first semester, and at graduation. Although there are no "right" answers on the PCBI, the phenomenon known as regression toward the mean could occur. Borg and Gall (1989) explained that students who score high on a pretest will earn a somewhat lower score on a posttest. Even if students don't score lower on the PCBI at the end of the program, there is very little room for them to improve scores. The cluster of scores was close to the upper limit; the group mean was 106 and the highest possible score was 112. This reinforces the need for triangulation in measuring caring as a professional behavior. The PCBI may not provide meaningful information, so the other methods planned to measure caring will determine the caring status of the new graduates; the PCBI scores may lend support to the other measures, but they cannot stand alone. As implemented in this study, the PCBI measured attitudes, not behavior, which is important in nursing; this reinforces the necessity of using other methods in the measurement of caring as a curriculum outcome.

An interesting development occurred when the investigator contacted Doctor Homer at the University of Texas to enquire about group means on the PCBI in the author's samples. Doctor Homer stated that she did not sum the scores, but treated each item as an independent measure; she was examining comparisons for each item between different samples. In her 1996 written directions for scoring the PCBI, however, she stated, "the scores for each item on one form are added together (after correcting for the reversed
scored items) for a summated score" (Horner, Personal communication, July 11, 1996). This discrepancy is the reason there is no comparative data about population norms for the PCBI.

In analyzing the results of this study, aspects of the definitions of these variables must be considered. Caring as a moral voice has been identified as an approach to ethical decision making wherein the primary value is that of the person as a unique individual.

Feeling is a personality dimension proposed by Jung (Meyer, 1985) to be an approach to decision making which relies on values and the effects of the decision on others. Feeling considers personal and group values. Feeling types are concerned with the human aspects of problems, have a need for affiliation and harmony, are warm, and are described as "tender-minded" as opposed to the "tough-minded" Thinking approach to decision making (Myers & McCaulley, 1985, p. 13).

Thinking is a decision making process marked by an impersonal logic; its goal is objective truth (Myers & McCaulley, 1985). Impersonal thinkers are organizers and analyzers. Thinkers link ideas by making logical connections, using principles of cause and effect. Their characteristics include analytical ability, objectivity, criticality, and concern with the principles of justice and fairness (Myers & McCaulley, 1985).

Using this description of Thinkers, it would seem unlikely that caring would be important to them. Yet the Thinkers in the current study valued caring—both as a professional behavior (mean 106 out of possible 112 on Professional Caring Behaviors Instrument), and as a voice in moral decision making (over 93% of the sample preferred the caring voice).
So, whether Thinking or Feeling, the sample valued both forms of caring—hence, the lack of a linear relationship, when scores were clustered on both caring scales.

A possible explanation of these findings is that they may be a result of socialization—not just during the orientation to college, but in previous life experiences. Regardless of religious preference, all of the sample had moderate to strong religious beliefs. Although religion is not the sole basis for moral decision making, it does introduce people to values. The Christian basis for interacting with others includes the Golden Rule, "Love thy neighbor as thyself...do unto others as you would have them do unto you" (Thiroux, 1980, p. 129). This indicates that all persons are moral equals regardless of social, religious, or economic standing.

In response to the question, "Why did you enter nursing?" the sample provided altruistic reasons. "I want to help people" was the common theme. So, because Thinkers in the sample valued persons and caring, they responded to the questionnaires even more positively than the Feeling types responded, ruling out a linear relationship between Feeling and Caring—and demonstrating that people-centered students are drawn to nursing.

One other factor should be considered. The Measure of Moral Orientation was used in this study because it measured both the caring and justice voices. It was considered necessary to measure students' use of both voices in moral decision making because previous research indicated that most people use both voices in making moral decisions (Chally, 1994; Ford & Lowery, 1986; Viens, 1995).

Considering subjects' responses to the questionnaire in light of their Sensing Feeling personalities, perhaps another measure of caring/justice moral voices would be more
useful in a nursing sample. Continued research has located a study by Stander and Jensen (1993) which used the World View questionnaire developed by Jensen, McGie, and Jensen in 1991 at Brigham Young University. This survey uses acontextual, paired adjectives with the instruction to "Circle the contrasting adjective you think is more important to you personally" (Stander & Jensen, 1993, p. 46). The 40 pairs of adjectives include Logic/Intuition, Compromise/Power, Kindness/Character, Consistency/Forgiveness, Competitive ability/Cooperative ability, Justice/Mercy, and Human relationships/Moral law.

This instrument may be better suited to the study site and its practical, realistic students than a situationally based questionnaire (MMO) with which they have difficulty in identifying. Further study is indicated.

Conclusions

The lack of correlations between the study variables in this sample of nursing students indicates the lack of linear relationships; it does not preclude relationships between the variables. In examining the description of the sample, it is evident that caring as a moral orientation was the preferred voice for 93.45% of the group, although it was balanced by the use of justice. The minority preferred justice tempered with caring. Feeling was the decision making mode of 85.24% of the sample, and caring as a professional behavior was rated very highly by 100% of the sample.

Although there were concerns about measurement, there was preliminary evidence that caring as a moral orientation is a construct separate from but related to caring as a professional behavior. The proposed common link between the three study variables is the
value of persons as a basis for ethical decision making, making decisions which affect others, and relating to patients while providing nursing care.

The unique characteristics of the sample have many implications for student services personnel and faculty at the study site, but no inferences can be made to other settings or groups.

The implications for the education of the current student group were addressed, but in addition, an inservice should be held for general education as well as professional faculty and student services staff to assist them in understanding and meeting the students’ educational needs. It is also important to remember that there are other MBTI types in the group, so a variety of learning experiences need to be offered.

Implications for the future of the program need to be considered. The current group of students was imbalanced on several preferences on the MBTI. This could have personal ramifications for the students, especially if they do not develop their less preferred modes, but it also has an impact on the profession of nursing. Nursing does require practical, caring bedside nurses at the entry level, but the profession also requires administrators, educators, researchers, nurses in advanced practice (practitioners who provide primary health care), and nurses practicing independently in community settings. Providers of continuing education for nurses must consider this when planning educational offerings. Nursing must also attract a balance of types so that the multiple roles of nurses will be filled with qualified personnel ready to face the challenges of rapid change, the continuing technology explosion, and the social and economic challenges of the 21st century.
Definition of Caring

Suggestions were made for revising the definition of nursing caring behavior to clearly delineate between the caring moral voice in ethical decision making in which nurses participate, and caring as an interpersonal relationship incorporating both affective and instrumental components. Caring is a human trait; nurse caring centers on the patient’s health.

Conceptual Framework

The conceptual framework for this study was reexamined in light of the study findings. The discussion of nursing caring focused on an interpersonal process and caring as a human trait; a more explicit reference to health and instrumental nursing behaviors needs to be added. Valuing persons is identified clearly.

Explication of the value of humans should modify discussion of caring and Feeling. In addition, the proposal that Feeling is the link between the caring moral voice and nursing caring behavior was not supported by study results. Instead, it is proposed that the three variables, caring voice, nursing caring behavior, and Feeling, are separate concepts which share the commonality of valuing persons.

Recommendations for Further Study

There are several recommendations resulting from the conduct of this study. They relate to the study site and to other nursing programs. The study questions, rather than ranking by significance, will guide the order of the recommendations.
1. Based on the current psychometric status of instruments used to measure caring, it is suggested that nurses continue instrument development.

2. Questions continue about the theoretical bases for nursing practice, especially the concept of caring. Is caring the moral imperative for nursing practice? Should it be balanced with justice? These questions need further study to lend additional empirical evidence to support theory.

3. A nationwide study of nursing programs could be conducted to ascertain the prevalence of caring as a curricular component. The sample could be stratified with percentages based on numbers of associate degree, baccalaureate, and diploma programs. Using a clear definition of caring in the curriculum is suggested.

4. At the study site, a follow-up study with the current sample may be useful. Students could be interviewed using open ended questions to allow them to clarify their attitudes and feelings about the study variables and the instruments used. This step could become part of the overall effort to collect data for use in the assessment of the effects of the curriculum and college environment.

5. Further statistical analysis on the data resulting from this study could be conducted, examining correlations between care and self-care and justice and self-justice on the MMO. Stepwise regression to ascertain relationships between all MBTI scales and caring moral voice on the MMO could provide additional insights.

6. Depending on the results of further statistical analysis, a repeat of this study may be indicated, using a larger sample to find support for the current findings. In addition, the search should continue for appropriate instruments to measure caring moral voice and nursing professional caring behaviors.
7. In the next data collection at the study site, the current instruments plus the World View Questionnaire could be used. Then results from this instrument could be correlated with those of the Measure of Moral Orientation. Follow-up student interviews could assess their preference for instruments.

8. How are caring moral voice and professional caring behaviors related? This study found no linear relationship, but the newly proposed conceptual relationship needs validation. Studies with larger, random samples would either support or fail to support the current findings. Inferences could then be made about the relationship of these variables in the population of nurses.

9. Further study of the measures planned to assess caring as an outcome of the nursing program would be useful in establishing psychometric properties of the instruments and validity of the findings.
APPENDIX A

COVER LETTER FOR SURVEY OF NURSING EDUCATORS
May 31, 1996

Dear Nursing Educator:

As part of a plan to assess outcomes of a new associate degree nursing program, this survey seeks to find quantitative measures of caring in nursing students. If you are currently using such an instrument, and are willing and able to share it (them) with the investigator, please send a copy with the enclosed survey. Your immediate response to this request will be highly appreciated, since the program begins in the fall, so pilot testing must begin this June in order to implement the testing plan with the admission of the first class. Ideally, baseline testing will take place at orientation in early August, before students are introduced to caring in the curriculum.

This survey is also part of a study to be described in a dissertation, "The Measurement of Caring Relationships in Nursing Students," to partially fulfill the requirements for a Ph.D. degree at Iowa State University.

The dual nature of this research necessitates that the psychometric properties of the instrument(s) employed to measure caring be investigated. Therefore, if you have such data about the instrument you use, please include it with your response.

Your response to this survey implies informed consent to participate. It is important, however, to gain permission to use the instrument you share. Please indicate the procedure for acquiring permission to use the instrument. If you are not the author, please include the source and contact person, address and telephone number, if available.

All data reported will be only in the aggregate, although instruments may be reproduced if permission is granted by the author. Respondents may withdraw from the study at any time without penalty.

Results of the survey will be shared with respondents upon request. There is a box to check on the survey form to indicate that a summary is requested.
If there are any questions or discussion about this project, please address them to the author, or to her major professors (advisors) at Iowa State University. They are:

Elizabeth Stanley, Ph.D.
Director of Institutional Research
215 Beardshear
Iowa State University
Ames, Iowa 50011

Thank you for your prompt reply to this survey. Your contribution to the knowledge base in nursing education is greatly appreciated.

Sincerely,

Helen Roberts, R.N., M.S.
Program Director
Associate of Science in Nursing Program
and
Graduate Student, Iowa State University

Daniel C. Robinson, Ph.D.
Professor, Professional Studies in Higher Education
College of Education
N 241 Lagomarcino
Iowa State University
Ames, Iowa 50011
APPENDIX B

SURVEY FORM FOR NURSING EDUCATORS
Survey — Measurement of Caring in Nursing

1. Type of Institution (please check all that apply)

- Generic 4-year baccalaureate degree
- Baccalaureate completion for RNs
- Generic associate degree
- Associate degree completion (for LPNs)
- Other: Please specify:
- Transitioned specialized college
- Private, independent
- Private, religious affiliation
- Public 2 year
- Public 4 year

2. Location of institution: State

3. Total students (FTE) in Nursing Program

4. Does your curriculum incorporate a caring component?

- No This ends the questions which apply to your institution. Please complete and return in the prepaid envelope.
- Yes Please continue answering the remaining questions

5. Are you willing to share a copy of your philosophy/conceptual framework explicating the caring concept in your curriculum? If so, please enclose it/them.

6. Does your institutional assessment plan/systematic evaluation plan include outcomes measurement of caring exhibited by nursing students?

- Yes
- No

7. If you are willing, please send a copy of EACH instrument you use to measure caring.

8. Have you taken steps to establish validity and/or reliability in the instrument(s) used at your institution to measure caring? Please provide psychometric data about the instrument.

9. Please complete the grid on the other side of this page. You may set up your own table if you prefer.

   Institution (optional) 
   Name (optional) 

☐ If you would like a summary of survey results, please provide a complete mailing address below:

   
   
   
   
   
   
   
   
   

Please complete the following grid (add additional data as needed).

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APPENDIX C

COVER LETTER/INFORMED CONSENT
FOR NURSING STUDENTS: PILOT
July 22, 1996

Dear Nursing Student:

You are invited to participate in a nursing study which is a "trial run" or pilot study. The purpose of this study is to discover and eliminate possible problems before a larger study begins in August. That study will be conducted with incoming nursing students, and will measure caring and personality types. The study is being conducted by Helen Roberts, a graduate student at Iowa State University.

Your participation in the study will consist of completing three questionnaires, which will take 1 1/4-2 hours. The timing for completing the instrument and other aspects of the testing situation will be studied by the researcher. You will be asked to write your feedback comments about the testing experience. This will be very helpful in planning the larger study.

Although your responses to the questionnaires will not in any way influence your standing in the current course or the nursing program, your careful answers to each question and thoughtful comments about the questionnaires are very important to the outcomes of this study. Your input will affect conduct of the larger study which will measure the effects of the new curriculum.

Your responses to the questionnaires will be held in strictest confidence. The data will be stored in a locked file in the graduate student's office until February, 1997. Then it will be destroyed. You need not put your name on the questionnaires, unless you would like to review your results. If so, you may make an appointment to review your responses with the researcher, but no one else will have access to the data. Results will not be published; the data will be used only to conduct statistical tests. The tests will establish the level of reliability for using the questionnaires with nursing students. Reliability refers to the consistency to which a research instrument collects information. The reliability coefficient will be reported. Additional tests will look for any correlation between scores on the three questionnaires. Results of those tests will not be reported.

There is no penalty for deciding not to participate in this study. Students are also free to withdraw at any time during the course of the study without penalty. There are no known risks related to taking part in this study.

Any questions about the study may be directed to the graduate student or to her major professors (advisors). They are:

Elizabeth Stanley, Ph.D.
Director of Institutional Research
215 Beardshear
Iowa State University
Ames, Iowa 50011

Daniel C. Robinson, Ph.D.
Professor, Professional Studies in Higher Education
College of Education
N 241 Lagomarcino
Iowa State University
Ames, Iowa 50011
Your signature below indicates that you have read the material, your questions have been answered and grants your consent to participate in this research project. Thank you for taking part in this effort to contribute to the growing body of nursing knowledge.

_________________________________________  ________________________________
Student                                                                 Witness

_________________________________________  ________________________________
Date                                                                 Investigator
APPENDIX D

COVER LETTER/INFORMED CONSENT
NURSING STUDENTS: SAMPLE
August 26, 1996

Dear Freshman Nursing Student:

It is very important for Mercy College to demonstrate that we are meeting the objective of providing quality higher education. There are many ways to measure educational outcomes; generally, it is considered important to use a variety of approaches to demonstrate outcomes.

In order to establish that your Mercy education is effective, we cannot just measure your knowledge, attitudes and thinking at graduation. We need baseline (entry) measures, so you will be asked to complete a variety of measures in this first semester. There will be other measures at intervals during the program and at graduation. Your responses to the questions will be confidential. The data will be locked in a file in the Program Director's office. No individual responses will be reported to accrediting bodies. Only aggregate (group) data will be reported. Your responses will in no way affect your standing or progress in the program. However, honest thoughtful answers will provide the college with data needed to document program effectiveness.

The college catalog identifies retention and graduation rates and NCLEX success rates. We will collect that data on your class, but we are looking more deeply into whether we are meeting our goal of educating competent entry level professional nurses.

The answer sheets in the study will be coded numerically. The Program Director will have access to names and code numbers so that data collecting and analysis can proceed during the program and upon your graduation. No one else will have access to this information.

The three questionnaires you will complete today serve a twofold purpose. The responses will be used not only to measure program effectiveness, but they will also be part of a nursing study. The researcher, Helen Roberts, is a graduate student in Special Studies in Higher Education at Iowa State University. The study will explore relationships between two aspects of caring and personality types. Since you will be completing the instruments as part of college assessment activities, agreeing to participate in the study involves only your agreement to allow your responses to be used as part of the data base. There will be no additional time involved.

The responses on your questionnaires will be pooled with the other respondents' for data analysis. No participant's response will be identifiable; only pooled or aggregate data will be reported. Data for the nursing study will be stored separately from the data for outcomes assessment. All data will be destroyed within one year of your date of graduation or leaving the program.

If you agree to participate in the study, your signature on this form indicates that you have read the information provided, your questions were answered, and you will allow the investigator to include your responses in the data reported. If you decide not to participate or want to withdraw at any time, you may do so without penalty. Notify Helen Roberts of your decision.
You may have a copy of this form if you desire. If you have any questions about the study, please contact Helen Roberts at 515-247-3180 or her major professors. They are:

Elizabeth Stanley, Ph.D.  
Director of Institutional Research  
215 Beardshear  
Iowa State University  
Ames, Iowa 50011

Daniel C. Robinson, Ph.D.  
Professor, Professional Studies in Higher Education  
College of Education  
N 241 Lagomarcino  
Iowa State University  
Ames, Iowa 50011

Your signature below indicates that you have read the material, your questions have been answered and grants your consent to participate in this research project. Thank you for taking part in this effort to contribute to the growing body of nursing knowledge.

_____________________________  ________________________________
Nursing Student  
Witness

_____________________________  ________________________________
Date  
Investigator
APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE
Demographic Questionnaire

<table>
<thead>
<tr>
<th>Code</th>
<th>Name (optional)</th>
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<tbody>
<tr>
<td>Educational level (not including nursing school). Please check all that apply to you.</td>
<td></td>
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<tr>
<td>☐ GED  ☐ High School Diploma  ☐ College Degree</td>
<td></td>
</tr>
<tr>
<td>College credits</td>
<td>College Major</td>
</tr>
<tr>
<td>Number of college credit hours (whether or not they transferred)</td>
<td>Name of College</td>
</tr>
<tr>
<td>Location</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Hometown (and State)</th>
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</thead>
<tbody>
<tr>
<td>High school from which you graduated</td>
</tr>
<tr>
<td>Number of students in your high school</td>
</tr>
</tbody>
</table>

| Please check to indicate marital status: | ☐ S ☐ M ☐ W ☐ D |
| Gender: | ☐ M ☐ F Age |

| Please check appropriate items. Have you taken a course or courses which focused on: |
| ☐ Ethics  ☐ Humanitarian Values |
| ☐ Moral decision making  ☐ Philosophy |
| ☐ Religious Values  ☐ Caring |

| Please indicate your religious preference: |
| ☐ Protestant  ☐ Jewish |
| ☐ Catholic  ☐ None |
| ☐ Other (please identify your preference if you wish) |

| How important are your religious beliefs in your everyday life? |
| ☐ Not important  ☐ Somewhat important  ☐ Moderately important  ☐ Very important |

As you consider your developing practice of nursing, how important do you feel it is that you practice as a caring nurse?

| ☐ Not important  ☐ Somewhat important  ☐ Moderately important  ☐ Very important |
APPENDIX F

MYERS-BRIGGS TYPE INDICATOR
Please Note

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Pages 142-148

UMI
APPENDIX G

PROFESSIONAL CARING BEHAVIORS INSTRUMENT
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Pages 150-151

UMI
APPENDIX H

MEASURE OF MORAL ORIENTATION
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Pages 153-163

UMI
APPENDIX I

VALUES SURVEY
1. Which of these values are important in nurses and to what degree? Please circle your response using the following key: 1=Not important 2=Somehwat important 3=Moderately important 4=Very important

<table>
<thead>
<tr>
<th>Value</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
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<tbody>
<tr>
<td>Altruism</td>
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<tr>
<td>Caring</td>
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<td>Equality</td>
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<td>Aesthetics</td>
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<td>Freedom</td>
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<tr>
<td>Human Dignity</td>
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<td>Justice</td>
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<tr>
<td>Truth</td>
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2. Using the key provided above, please indicate the degree to which the following values are important to you on a day to day basis.

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<tr>
<th>Value</th>
<th>1</th>
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3. Why did you enter nursing?
REFERENCES


Sincere thanks to my Co-Major Professors Elizabeth C. Stanley and Daniel C. Robinson. Their complimentary styles of advice and encouragement gave inspiration and direction to this work. Each of the other committee members provided valuable insights which strengthened the end product; thank you to Beverly Kruempel, Martin Miller and John Wilson. ALL of the faculty of Iowa State University who shared their expertise contributed in various ways to this effort. I wish to acknowledge my gratitude to all of them.

This work could not have succeeded without the total support of my husband exemplar, Mel Roberts, nor the encouragement of my adult offspring, Maureen Allen, Paul Roberts and Laura Roberts, and my sister, Patrice Rog. To all of my colleagues at Mercy College—kudos for their encouragement and support, especially during data collection and deadlines.

I especially want to thank the students whose caring participation made this work possible, and Michele Kennard, Marva Ructher and Dorothy Barnes for their key contributions.