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## **Relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students within King's personal system**

Barbara Ann May

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To the Graduate Council:

I am submitting herewith a dissertation written by Barbara Ann May entitled "Relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students within King's personal system." I have examined the final electronic copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Nursing.

Martha R. Alligood, Major Professor

We have read this dissertation and recommend its acceptance:

Debra Wallace, Carol Seavor, Carol Kasworm

Accepted for the Council:

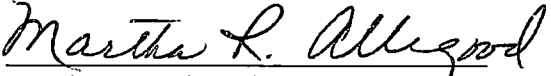
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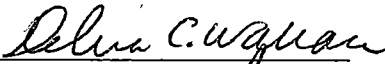
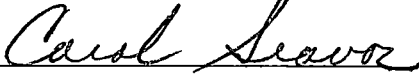

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To the Graduate Council:


I am submitting herewith a dissertation written by Barbara A. May entitled "Relationships Among Basic Empathy, Self-Awareness, and Learning Styles of Baccalaureate Pre-Nursing Students within King's Personal System." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Nursing.

  
Martha R. Alligood, Major Professor

We have read this dissertation  
and recommend its acceptance

Accepted for the Council:

  
Associate Vice Chancellor and  
Dean of the Graduate School

RELATIONSHIPS AMONG BASIC EMPATHY,  
SELF-AWARENESS, AND LEARNING STYLES OF  
BACCALAUREATE PRE-NURSING STUDENTS  
WITHIN KING'S PERSONAL SYSTEM

A Dissertation  
Presented for the  
Doctor of Philosophy  
Degree  
The University of Tennessee, Knoxville

Barbara A. May  
May 2000

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## DEDICATION

This work is dedicated to my husband, Dr. Charles May, whose love and support kept me going throughout my graduate education. You were always there for me. You believed in me and told me, "you can do it." As an educator for over 30 years, you helped me to set challenging goals and provided guidance for me to become aware of my true potential and to reach for the stars. Thank you for being such an exemplary role model, a friend and confidant, a leader, and a motivator who taught me that learning is a lifelong journey.

## ACKNOWLEDGMENTS

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Credit must also go to Dr. Jan Witucki and Dr. Clara Boland, two friends and student colleagues who provided unending support and empathy. A special thanks to my dearest friend, Joyce Domeyer, who believed in me and was always there for me in spite of significant personal obstacles she confronted.

Thanks to my grandchildren, Carl and Amanda May who generously gave of their time to help grandmother relax and who provided unconditional love. Also, thanks to my stepchildren, Randy, Sonia, Kathy, and Mark for their encouragement and support. I am also grateful to my parents, Andrew and Ida Bruce, for instilling the value and love of education in me.

## ABSTRACT

Although empathy has been studied extensively, the focus has been on trained empathy and interpersonal skill acquisition, rather than basic empathy. The purpose of this study was to explore the relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. This study examined basic empathy as a multidimensional construct and intrapersonal process. A middle-range theory of basic empathy, self-awareness, and learning styles derived from the personal system of King's General Systems Framework was tested. A descriptive cross-section correlational design was used to test the hypothesis: There are relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students.

A convenience sample of 380 participants selected from eight different National League for Nursing accredited baccalaureate nursing programs in two southeastern states, volunteered to complete the Hogan Empathy Scale (HES), the Emotional Empathic Tendency Scale (EETS), the revised Private Self-Consciousness subscale, the revised Public Self-Consciousness subscale, and the Learning Styles Questionnaire (LSQ) along with a personal information form. The scores on the HES, EETS, revised Private and revised Public Self-Consciousness subscales, and the LSQ were correlated using canonical correlation analysis.

The findings of this study provide initial support for the relationships hypothesized by the middle-range theory derived from the theory of personal system empathy. The first canonical variate explained 19.7% of the variance and indicated that



students who reported higher levels of self-awareness and who were less theoretical and less pragmatic in their learning styles had higher levels of basic empathy. Psychosocial factors accounted for a small percentage of the total variance. Previous training, previous education, or both previous training and education in counseling skills, human relationships skills, and counseling skills had no significant relationship to basic empathy.

Implications for nursing education include emphasis in the curriculum on students' intrapersonal development of basic empathy. Further research on basic empathy is suggested and further testing of the nursing theory of personal system empathy and the middle-range theory of basic empathy is indicated. Additional recommendations for future research include instrument development to measure basic empathy as a nursing phenomenon. The findings of this study begin to provide the basis for the development of such an instrument.

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## CHAPTER I

## INTRODUCTION

In a nurse-client interaction, empathy is more than saying the appropriate words; it is also a feeling within a person that provides understanding of others. However, most nursing studies have focused only on the training and learning of empathic behaviors and skills (Clay, 1984; Cox, 1989; Fernald, 1995; Friedrich, Lively & Schacht, 1985; Henderson, M. C., 1989; Hills & Knowles, 1983; Hodges, S. A., 1991; Kalisch, 1971; Keefe, T., 1979; Kirk & Thomas, 1982; LaMonica, 1983; LaMonica, Carew, Winder, Haase & Blanchard, 1976; LaMonica & Karshmer, 1978; LaMonica, Wolf, Madea, & Oberst, 1987; Layton, 1979; Norris, 1986; Peloquin, 1995; Reynolds & Presly, 1988; Vinton & Harrington, 1994; Young-Mason, 1991). Furthermore, although the importance of empathy in nurse-patient interactions has been discussed extensively in the literature over the past 40 years (Forsyth, 1979; Gould, 1990; Kalisch, 1973; Pareek, 1980), problems in conceptualizing empathy and methodological problems have resulted in conflicting findings (Forsyth, 1980; Gagan, 1983; Hardin & Halaris, 1983; LaMonica, 1981; Olsen, 1991; Raudonis, 1995). Some researchers have even questioned the conceptual fit of empathy for nursing (Diers, 1990; Gordon, M., 1983; Morse, J. M., Anderson, Bottorff, Yonge, O'Brien, Solberg, & McIlveen, 1992; Morse, J. M., Bottorff, Anderson, O'Brien, & Solberg, 1992; Pike, 1990). Others (Alligood, 1992; Reynolds, 1987) have reviewed these studies and proposed that inappropriate instruments

may have contributed to these confusing and conflicting findings. Although many of these studies have reported increases in empathy levels with training, none have found evidence of sustained effects of such training, even as early as six months post training (Daniels, Denny, & Andrews, 1988; Evans, Wilt, Alligood, & O'Neil, 1998; Herbek & Yammarino, 1990; LaMonica, 1983; Thomson, Hassenkamp, & Mansbridge, 1997).

To address these issues, Alligood (1992) discussed the importance of recognizing two types of empathy: basic and trained. While basic empathy was defined as a universal human trait, trained empathy was defined as a clinical skill state. Although other nurse researchers had identified different types of empathy, they assumed that these types were related. For example, Zderad (1969) distinguished between a natural empathic capacity and a clinical empathic process which she described as a skill developed by using one's natural empathic capacity. Also, Alligood was able to demonstrate that many authors from several disciplines have acknowledged two types. She proposed that basic empathy was different from trained empathy and suggested further studies be conducted for theoretical clarification of both types. A recent study supported the two types of empathy and the researchers recommended that measurement of empathy be based upon this differentiation (Evans et al., 1998). In addition, those researchers recommended that student nurses' basic empathy levels be determined prior to teaching empathic communication skills. Findings from a phenomenological study by Baillie (1996) also support the two types of empathy. Nurse participants in this study reported that nurses' empathy built on their natural ability to empathize. Also, they stressed the importance of the feeling aspect of empathy. However, the significant aspect of Alligood's proposal is

not that there are two types, but rather, the point is that nursing has focused on the wrong type. Most authors had merely acknowledged the trait (basic empathy) and then directed their attention to the state (trained empathy). Perhaps the most significant implication of Alligood's proposal of two types is the change in emphasis from trained empathy to basic empathy. This shifts the focus from interpersonal skill acquisition to intrapersonal development. While the focus of empathy studies has been on the trained type and interpersonal process, there is ample support for the development of new approaches which focus on basic empathy and the intrapersonal process. Therefore, this study acknowledges the significance of Alligood's work with a purpose of developing an understanding of the nature of the intrapersonal trait of basic empathy.

In addition to the two types of empathy, a multidimensional conceptualization of empathy has also been proposed by various researchers (Bennett, 1995; Davis, M. H., 1979, 1983a; Deutsch & Madle, 1975; Feshbach, 1975; Gladstein, 1983; Mielke, 1988; Nathanson, 1986; Williams, C. A., 1990). Different dimensions of empathy are considered as an interdependent, interactive system in which each dimension influences the other and can only be understood when other dimensions are considered (Davis, M. H., 1979). Other researchers (Marshall, W. L., Hudson, Jones, & Fernandez, 1995) view empathy as an unfolding staged process with each stage involving both emotional and cognitive dimensions. Most studies have focused on one dimension and only recently has more than one dimension been studied. Wheeler and Barrett (1994) recommended that several measures of empathy be administered and some authors have used two instruments to measure empathy (Koch, 1991; Marshall, W. L. & Maric, 1996). In the



present study, a multidimensional approach was addressed by using two trait instruments to measure basic empathy.

Empathy and self-awareness are viewed as integral to therapeutic relationships and are related positively to client and nurse outcomes such as satisfaction with nursing care (Holt-Ashley, 1987), increased self-concept (Williams, C. L., 1979), decreased patient distress (LaMonica et al., 1987; Reid-Ponte, 1992), behavioral changes (Krikorian & Paulanka, 1982), and patient perceived empathy and patient distress (Olson, 1995). However, while the concept of empathy has been discussed for many years, the concept of self-awareness is relatively new in nursing literature (Rawlinson, 1990). The discussion of self-awareness is primarily descriptive in nature and focuses on the development of self-awareness and facilitation of that development (Burnard, 1984, 1986, 1988; Jerome & Ferraro-McDuffie, 1992; Keighley, 1988; McGoran, 1978; Nealon, 1993; Rawlinson, 1990). Nurse educators have recognized the importance of self-awareness and have incorporated it into the curriculum, but methods of teaching self-awareness have been called into question (Burnard, 1984, 1988; Cook, 1999). Although self-awareness has been suggested as an important antecedent to understanding other people (Brooks, 1995; Burnard, 1984; Jay, 1995; Jerome & Ferraro-McDuffie, 1992; Smith, C., 1995), little is known about it or its relationship to other variables because few empirical studies have been conducted. Therefore, this study will add to the body of nursing literature on self-awareness by exploring the relationship between self-awareness and basic empathy.

Learning styles have been studied extensively in nursing (Brazen & Roth, 1995; Cavanagh, Hogan, & Ramgopal, 1995; Daly, 1996; Duncan, 1996; Highfield, 1988; Hodges, L. C., 1988; Hodges, S. L., 1988; Jambunathan, 1995; Katz, N. & Heimann, 1991; Keane, 1993; Kulig & Thorpe, 1996; Merritt, 1983; Rakoczy & Money, 1995; Remington & Kroll, 1990; Seidl & Sauter, 1990). Most of these studies have been descriptive in nature which identified preferences based upon demographic, educational level, or speciality areas or have focused on the relationship between a given learning style and various characteristics of the student or nurse. Only a few studies were found that address learning styles in relationship to personality types (Rezler & French, 1975) or other personality traits (Christensen, Lee, & Bugg, 1979; Garity, 1985, 1997; Linares, 1989).

Although empathic communication has been proposed to vary with cognitive style, the relationship between basic empathy and learning style has not been determined. Cross (1976) noted that people tend to be consistent over a wide variety of tasks, that learning styles remain stable over many years, and that learning styles have a broad influence on many aspects of personality and behavior, such as perception, memory, problem-solving, interests, and even social behavior. While theoretical linkage between empathy and learning styles has been suggested in the literature (Lange, 1979), few, if any studies have been conducted to provide empirical support for this relationship.

Some authors (McCarthy & Schmeck, 1988) have proposed that increasing self-acceptance will permit greater self-awareness and lead ultimately to a cognitive style characterized by greater versatility, flexibility, and adaptation in overall functioning.

While the linkage between self-awareness and learning styles has been implied in the literature, no studies were found to empirically support this relationship. Finally, no studies were found which explored the relationship among empathy, self-awareness, and learning styles.

### Purpose of the Study

The purpose of this study was to examine the relationships among basic empathy, self-awareness, and learning styles of pre-nursing baccalaureate student nurses. A middle-range theory was proposed to explain the relationships among pre-nursing students' basic empathy, self-awareness, and learning styles. This study tested the middle-range theory derived from the nursing theory of empathy (Alligood & May, in press) discovered within the personal system of King's General Systems Framework (1971, 1981).

### Theoretical Framework

King's (1981) General Systems Framework is the conceptual model from which a middle-range theory of basic empathy, self-awareness, and learning styles was derived. This conceptual model includes three dynamic interacting open systems: personal system, interpersonal system, and social system. The personal system pertains to individuals; the interpersonal system involves two or more individuals and the social system encompasses organizations and institutions, such as family, education, religious, and work systems. These open systems interact, and the concepts within each system are not exclusive to one system but are relevant among all the systems.

Most empathy nursing studies have concentrated on the interaction process or the interpersonal relationship between the nurse and client. However, since perceptions of the

nurse can influence the interaction process (King, 1981), it is important to study the characteristics of individuals that may influence their perceptions. Therefore, it is important to study characteristics of individuals to begin the development of an understanding of nursing empathy. Furthermore, a student nurse can be considered a multidimensional, unified, complex whole personal system, as King (1981) observed that "a personal system is a unified, complex whole self who perceives, thinks, desires, imagines, decides, identifies goals and selects means to achieve them" (p. 27). King (1981) assumes that individuals are sentient, rational, reacting, perceiving, purposeful, social, controlling, action-oriented, and time-oriented beings and that "the nurse as a person is a total system" (p. 10). Therefore, student nurses as personal systems are the subjects of this study.

Using interpretive hermeneutics, a nursing theory of empathy within King's personal system was formalized (Alligood & May, in press). That theory proposed that empathy organizes perceptions; facilitates awareness of self and others; increases sensitivity; promotes shared respect, mutual goals, and social awareness; cultivates understanding of individuals within a historical and social context; and affects learning. Based upon that theory of nursing empathy, a middle-range theory of basic empathy, self-awareness, and learning styles was proposed and tested.

Personal system concepts from King's General Systems Framework that are meaningful to a middle-range theory of basic empathy, self-awareness, and learning styles are perception, self, body image, and learning. These personal system concepts and

their interrelationships with basic empathy, self-awareness, and learning styles will be discussed individually.

### Perception

The major concept in the personal system is perception because it influences behavior. According to King (1981), perception is universal, subjective, personal and selective for each person. It is action oriented to the present and is influenced by current interests, needs, and future goals. "Perception is a process of organizing, interpreting, and transforming information from sense data and memory. It is a process of human transactions with environment. It gives meaning to one's experience, represents one's image of reality, and influences one's behavior" (p. 24). King emphasized the importance of perceptual accuracy and pointed out that perception is influenced by emotions. Based on King's ideas, empathy has been proposed as a dimension of sensory perception and a way of knowing that organizes, interprets, and transforms information into meaningful understanding (Alligood, Evans, & Wilt, 1995; Alligood et al, 1998). If empathy is a dimension of sensory perception, then basic empathy affects the way nursing students organize and interpret sense data (Alligood & May, in press).

Perception is an awareness of persons, objects, situations, and events, and it is related to past experiences, to concept of self, to biological inheritance, education and to socioeconomic groups (King, 1981). "It is through perception that an individual comes to know self, to know other persons, and to know objects in the environment" (p. 19). Because perception is an awareness of persons and is related to the concept of self,

perception includes an awareness of one's self (Alligood & May, in press). Therefore, basic empathy and self-awareness are both related to perception.

### Self

Perception is important for developing a concept of self. King's definition of the self was the following:

The self is a composite of thoughts and feelings which constitute a person's awareness of his individual existence, his conception of who and what he is. A person's self is the sum total of all he can call his. The self includes, among other things, a system of ideas, attitudes, values and commitments. The self is a person's total subjective environment. It is a distinctive center of experience and significance. The self constitutes a person's inner world as distinguished from the outer world consisting of all other people and things. The self is the individual as known to the individual. It is that to which we refer when we say "I". (Jersild, 1952, pp. 9-10)

King (1981) stated: "Knowledge of self is a key to understanding human behavior, because self is the way I define me to myself and to others. Self is what I think of me and what I am capable of being and doing" (pp. 26-27). "Awareness of self helps one to become a sensitive human being who is comfortable with self and with relationships with others" (p. 28). Empathy has been proposed as an affective dimension of human sensitivity discussed by King. "Therefore, through empathy, a wide range of human sensitivity is developed, increasing the nurse's use of self" (Alligood et al., 1995, p. 69). King (1981) also noted that if nurses interact with patients or clients as human beings,

nurses and patients would help each other grow in self-awareness and in understanding of behavior. If emotions, feelings, and beliefs are intrapersonal characteristics of self and empathy facilitates awareness of self and others (Alligood & May, in press), then basic empathy and self-awareness are related.

### Body Image

King (1981) defined body image as, "a person's perceptions of his [or her] own body, others' reactions to his [or her] appearance, and is a result of others' reactions to self" (p. 33). Perceptions about the self as a social entity that have an effect on others is a form of self-awareness that is called social awareness. Body image relies heavily on empathy because the reaction of others, which may be positive or negative, occurs as people see others reacting to them (Alligood et al, 1995). Therefore, empathy promotes the development of shared respect, mutual goals, and social awareness (Alligood & May, in press).

### Learning

Learning is a concept which was not initially included in the 1981 conceptual framework, but was included in the personal system in later publications (King, 1986, 1992). King (1986) formulated her definition of learning from characteristics which described the nature of learning. One of these characteristics is that learning is a self activity and requires active participation on the part of the learner. Learning requires communication of information through verbal or nonverbal messages. Additionally, learning is individual and learners bring to learning situations their personal interests, needs, and past experience and each individual has a different learning style. Another

characteristic of learning is that it is a dynamic and self-regulating process. Perception is essential for learning and factors that influence perception are socio-cultural, psychological, and physiological. Thus, King (1986) defined learning as “. . . a process of sensory perception, conceptualization, and critical thinking involving multiple experiences in which changes in concepts, skills, symbols, habits, and values can be evaluated in observable behaviors and inferred from behavioral manifestations” (p. 24). According to King (1986), learning is influenced by feelings and emotions. Because empathy is a feeling attribute (Alligood et al., 1995), it can influence learning. In addition, perceptions and learning are interrelated (King, 1981). Because empathy is a dimension of sensory perception that affects the way nurses organize and interpret sense data (Alligood et al., 1995; Alligood et al., 1998), the relationship of perception and empathy has been proposed to be fundamental to how nurses learn nursing (Alligood et al., 1995; Alligood et al., 1998, 1999). Therefore, empathy is a feeling attribute that influences learning as well as affecting the organization of perceptions, which in turn, affects learning (Alligood & May, in press). If self-awareness is learning about the self by bringing thoughts, feelings, strengths, and weaknesses to a conscious level and if self-awareness is learned rather than taught (Burnard, 1984), then self-awareness is also related to learning.

In summary, personal system concepts from King's General Systems Framework provided a structure for a nursing theory of empathy from which a middle-range theory of basic empathy, self-awareness, and learning styles was derived. Concepts of perception, self, body image, and learning were used to formalize the theory. A middle-range theory

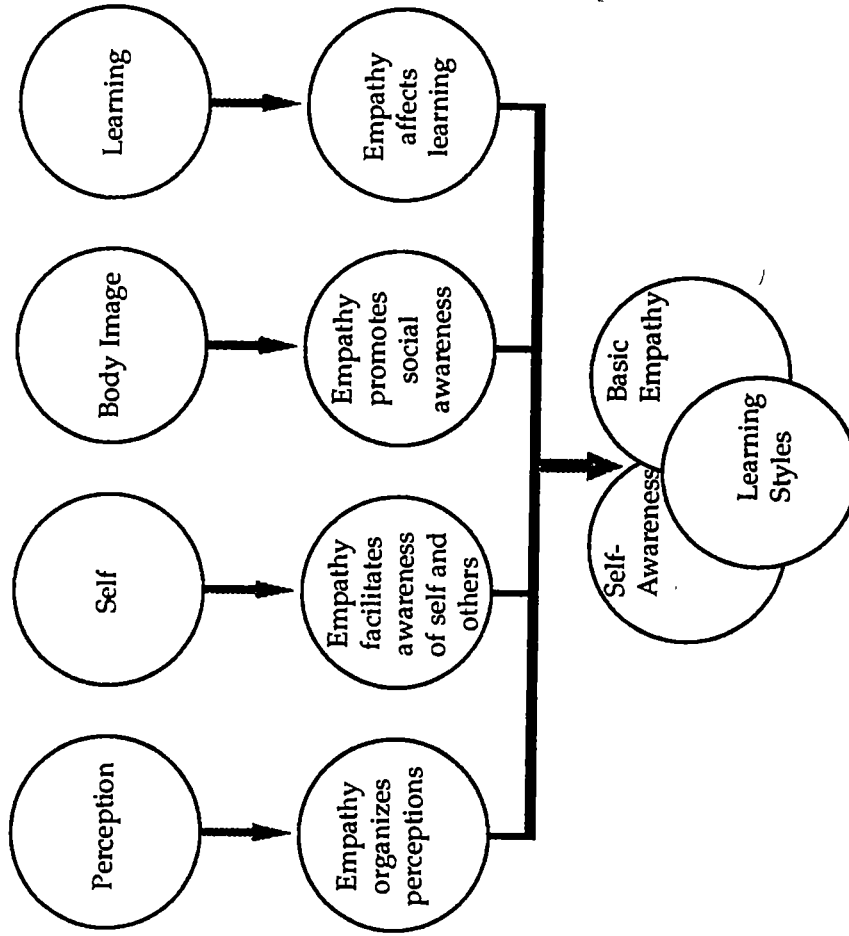


of basic empathy, self-awareness, and learning styles within the personal system can be theoretically stated by the following propositions:

If awareness of self helps one become a sensitive human being (King, 1981, p. 28), and if perceptions enable a human being to know self (King, 1981, p. 19), and if basic empathy is the affective dimension of human sensitivity and a dimension of sensory perception (Alligood et al., 1995, p. 68), then there is a relationship between self-awareness and basic empathy. Also, if learning requires sensory experiences through perception (King, 1986, p. 23), and if basic empathy affects the way nursing students organize and interpret sense data (Alligood et al., 1995), and if perceptions and learning are interrelated (King, 1986, p. 22), then there is a relationship between basic empathy and learning. Finally, if empathy is a dimension of sensory perception (Alligood et al., 1995), and if perceptions and learning are interrelated (King, 1981, p. 22), and if it is through perception that an individual comes to know self and to know other persons (King, 1981, p. 19), and if learning styles are indicators of how individuals perceive and influence perceptions (Cross, 1976; J.W. Keefe, 1979), and if each individual has a different learning style (King, 1986, p. 24), then there is a relationship among basic empathy, self-awareness, and learning styles. This proposed theory of basic empathy, self-awareness, and learning styles is illustrated in Figure 1.

#### Research Questions and Hypothesis

Based upon the middle-range theory of basic empathy, self-awareness, and learning styles, the following research question was asked: What is the nature of the relationships among basic empathy, self-awareness, and learning styles of baccalaureate



King's Personal System Concepts  
(1981, 1986)

Alligood and May's Nursing Theory  
of Personal System Empathy  
(In press)

May's Theory of Basic Empathy,  
Self-Awareness, and Learning Styles

Figure 1. Middle-Range Theory of Basic Empathy, Self-Awareness, and Learning Styles

pre-nursing students? In addition a secondary research question was asked: What is the nature of the relationships among basic empathy, self-awareness, learning styles, and psychosocial personal characteristics related to the concept of growth and development which included (1) age, (2) birth order, (3) highest educational level achieved, (4) previous training in communication skills, human relationships skills, or counseling skills, (5) previous education in communication skills, human relationships skills, or counseling skills, and (6) both previous training and education in communication skills, human relationships skills, or counseling skills of baccalaureate pre-nursing students? Furthermore, the following research hypothesis was formulated: There are relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students.

#### Definitions

For the purpose of this study, the following terms were defined:

Basic Empathy is a universal, developmental, attribute involving thoughts and feelings related to understanding another person through perceptions of self and others as one grows and develops (Alligood, 1992) and is operationalized by the Hogan Empathy Scale (Hogan, 1969) and the Emotional Empathic Tendency Scale (Mehrabian & Epstein, 1972).

Self-Awareness is the trait of attending to one's own perceptions of feelings, attitudes, motives, or personality characteristics operationalized by the revised Private Self-Consciousness subscale (Scheier & Carver, 1985) and the tendency to think about self-aspects that form impressions in other people's eyes

such as behavior, mannerisms, and expressive qualities and is operationalized by the revised Public Self-Consciousness subscale (Scheier & Carver, 1985).

Learning Styles are the attitudes and behaviors which determine an individual's preferred way of learning and are operationalized by the Learning Styles Questionnaire (Honey & Mumford, 1992).

Psychosocial Factors are the characteristics related to growth and development such as (1) age, (2), birth order, (3) highest educational level achieved, (4) previous training in communication skills, human relationships skills, or counseling skills, (5) previous education in communication skills, human relationships skills, or counseling skills, and (6) both previous training and education in communication skills, human relationships skills, or counseling skills.

Baccalaureate pre-nursing students are freshmen, sophomores or juniors over the age of 18 with a declared nursing major who are enrolled in an accredited generic baccalaureate nursing program.

#### Limitations and Delimitations

The delimitations and limitations of this study include the following:

1. This study confined itself to beginning generic baccalaureate nursing students in their first, second, or beginning of their third year of college who have not had prior nursing courses or clinical experiences.
2. This study was limited to a convenience sample of college students in Southeastern United States.

3. This study was limited to testing the nature of relationships through the use of a cross-sectional descriptive correlational design.
4. This study was not designed to investigate all the possible factors related to basic empathy but was limited to those factors associated with concepts in King's personal system.

### Significance

This study is significant because nursing students bring to the educational setting an existing pattern of knowing, that of basic empathy. A recognition of their natural empathic responses is important to student nurses because the literature has shown that strategies to learn empathic behavioral and communication skills are not sustained over time. Furthermore, rote trained responses to clients without the affective dimension may be inappropriate and even harmful to nurse-client relationships (Morse, J. M., Anderson et al., 1992). Often the emphasis on learning the *correct* response and the parroting of an appropriate word or phrase is seen as possessing a high level of empathy. However, “. . . being told to empathically listen is not the same as being taught to listen with empathy and in a critique of the empathy skills program a raised scale score still does not mean that empathy has been attained” (Gordon, R. D., 1985, p. 5). Student nurses need to be aware of, be comfortable with, and use their own natural ability to feel, to accept, and to communicate with their clients (Alligood et al., 1995).

In addition, student nurses bring to the education setting a personal knowing. Carper (1978) observed that personal knowledge concerns learning to be aware of self,

not only to other selves, but also to one's own self. Increased self-awareness can assist student nurses in understanding how they can best use their natural empathic responses.

While basic empathy cannot be taught, it can be identified, valued, reinforced and refined. Thus, an understanding of the relationship between basic empathy and self-awareness can have significance for nurse educators. Basic empathy must be encouraged and reinforced or nursing students' natural empathic responses will be hindered, suppressed, or even diminished (Baillie, 1995). For example, Gould (1990) suggested that the socialization and professionalization process which occurs during nursing education actually encourages nurses to lose their individuality and to lose their natural ability to empathize. How basic empathy is nurtured and sustained has been proposed to have major implications for nursing in recruitment, education, and postgraduation (Baillie, 1995; Evans et al., 1997). Because students bring this natural basic empathy to the educational setting, nurse educators need to recognize that these natural empathic responses do exist, and they need to know how to acknowledge, value and facilitate this basic empathy to further the students' empathy development. In addition, the development of higher levels of self-awareness will contribute to a better understanding of others. Both will in turn nurture and sustain student nurses' natural empathic feelings and responses. As a result, their natural empathic responses will facilitate formation of therapeutic relationships with their clients.

Students bring a myriad of prior experiences into the learning situation which may influence the way they learn. Today, those over 35 years of age make up the fastest growing group of students, and those over 25 make up half of the college population

Sullivan, E. J., 1997). Adult learners want learning experiences which facilitate cooperative learning, experiences which challenge and actively involve them in learning, and content which is presented by knowledgeable and organized faculty (Thompson & Sheckley, 1997). Therefore, nurse educators need to incorporate experiential learning theory into the teaching-learning process and take into consideration different learning styles. Assessment of learning styles will identify strengths and weaknesses within each learner which can then lead to building on those strengths or developing skills in the weak learning style areas (Goldrick, Gruendmann, & Larson, 1993). Nurse educators must provide a variety of learning experiences, since students need to develop the ability to learn in and adapt to a variety of future situations in order to practice nursing in a changing health care delivery system. In addition, nurse educators have a responsibility to assist students in the development of integrative learning of other learning styles and to ensure that teaching activities permit all students to learn. Finally, research findings have shown that matching learning styles and using appropriate teaching strategies for each learning style decreases student anxiety and increases staff and student satisfaction (Chase, 1995).

This study contributes to the knowledge about basic empathy, self-awareness, and learning styles and will be the basis for further study. Many studies have been conducted on empathy but these previous studies did not look at a specific type of empathy. Alligood (1992) recommended that further studies be conducted to understand the theoretical differentiation of the two types of empathy and to conceptualize empathy within a nursing perspective. Thus, this study differs from other studies, for it was the

first study which specifically used basic empathy, as distinguished from trained empathy, as the focus of a research study within a nursing theoretical framework.

Finally, this study contributes to the nursing profession by extending King's (1971, 1981) work. This will be done through the development of a middle-range theory of basic empathy, self-awareness, and learning styles within the personal system of King's General Systems Framework (1981). While King did not include the concepts of basic empathy, self-awareness, or learning styles in her personal system, these concepts have been made explicit through their relationship with perception, self, body image, and learning. Many previous studies have focused on the interpersonal processes of empathy. Use of the personal system in this study focuses on intrapersonal aspects of basic empathy, self-awareness, and learning styles.

#### Summary

In summary, empathy is an important concept in nursing for it is related positively to client and nurse outcomes. Methodological and conceptual issues continue to exist in empathy research studies. In this study, these methodological and conceptual issues are addressed by a multidimensional conceptualization of empathy, a focus on the basic type of empathy as differentiated from trained empathy, and a shift from an interpersonal to an intrapersonal process.

The concept of self-awareness, while relatively new in nursing literature, is also an important concept. Knowledge concerning self-awareness is primarily descriptive in nature focusing on the definition, perspectives, development, and facilitation of self-



awareness in nurses and student nurses. Only a few empirical studies on self-awareness have been conducted.

Learning styles have been studied extensively in nursing. The major focus of these studies has been to describe nursing populations and to relate learning styles with teaching strategies. Few empirical studies have been conducted to explore the relationship between self-awareness and basic empathy although theoretical support for such a relationship has been suggested. No studies were found which addressed this relationship using an intrapersonal nursing framework. Finally, no studies were found which explored relationships among empathy, self-awareness, and learning styles.

Although basic empathy, self-awareness, and learning styles are not made explicit in King's (1981) General Systems Framework, all have been related to concepts in the personal system and thus have been shown to be integral in the personal systems of nurses (Alligood & May, in press). Thus, a middle-range theory of basic empathy within the personal system can be theoretically stated as follows: basic empathy is a universal developmental attribute involving thoughts and feelings which are related to understanding another person through perceptions of self and others which mature as one grows and develops. Awareness of the self involves perceptions of self which evolve through the process of growth and development. Learning styles are the way students organize and interpret perceptions as they grow and develop. Thus, if perceptions enable a person to know self (King, 1981, p. 19), and if self-awareness helps one become a sensitive human being (King, 1981, p. 28), and if basic empathy is the affective dimension of human sensitivity and a dimension of sensory perception (Alligood et al.,

1995), and if learning styles are the way students perceive, organize, and interpret perceptions, then there are relationships among basic empathy, self-awareness, and learning styles of student nurses. Based upon an integration of these concepts, a middle-range theory of basic empathy, self-awareness, and learning styles within the personal system of student nurses was postulated. The theory proposed that basic empathy, self-awareness, and learning styles of pre-nursing baccalaureate nursing students are related. This study tested that middle-range theory.

## CHAPTER II

## REVIEW OF THE LITERATURE

The purpose of this study was to examine relationships among basic empathy, self-awareness, and learning styles of beginning nursing students. In order to know more about these concepts, a review of the literature is presented to describe what is already known about basic empathy, self-awareness, and learning styles. The literature review yielded few studies that have linked these concepts. Therefore, a broad approach to the literature was taken to establish an empirical linkage among these concepts. This chapter discusses that literature in five sections. The first section consists of literature that addresses the concept of empathy, including the development of the concept of empathy, theoretical perspectives of empathy, dimensions of empathy, and the measurement of theories of empathy. Section two is comprised of the literature that addresses self-awareness, including the concept of self-awareness, the perspectives of self-awareness, the models of self-awareness, the measurement of self-awareness, and empirical studies on self-awareness. Section three contains literature that reviews the concept of learning styles, including development of experiential learning theory, discussion of experiential learning theory, Kolb's Experiential Learning Theory, learning styles, models of learning styles, Honey and Mumford's Learning Styles Questionnaire, and nursing studies on learning styles. Section four reviews the literature which supports proposed relationships among basic empathy, self-awareness, and learning styles. Finally, section five presents

literature that addresses nursing science using King's systems framework. A summary of the literature review concludes the chapter.

## Empathy

### Development of the Concept of Empathy

#### Historical Evolution of the Concept of Empathy

What was later to become empathy was considered sympathy in the 1700s. Two forms of sympathy were recognized. One of these forms was instinctive sympathy which was an involuntary reaction to another person's experience (Smith, A., 1759). The other form was called intellectualized sympathy which was characterized by the ability to recognize the emotional experience of another person and to respond appropriately. The German psychologist, Theodor Lipps, first named the term *einfihlung*, or *feeling oneself into*, in his writings on aesthetic perception and appreciation (Goldstein & Michaels, 1985). Actually, the word empathy has two roots: *em*, meaning to put into, to bring about a certain condition or state, or to furnish with something, and *pathy*, from the Greek *patho*, meaning suffering, passion. The Latin equivalent, *pathos*, can mean feeling/perception. A Greek word, *empathia*, means affection and passion with a quality of suffering (Brink, 1991; Duan & Hill, 1996). Lipps used this term to describe the experience of individuals who on observing an object of art would lose their self-awareness and would become emotionally fused with the art object (Katz, R. I., 1963). It was not until 1909 that the German term *einfihlung* was translated into the English term empathy by Edward Titchener to describe a person who was very understanding

(Listowel, 1934). Clinical psychology began using the concept shortly thereafter and it became a dominant theme in the psychology literature in the following decades.

Important in the evolution of the concept was the delineation of two types of empathy, basic and trained, by Allgood in 1992. An analysis of the nursing and related literature revealed that these two types of empathy had been discussed in the literature, but they had not been clearly separated, or studied individually. Both types “. . . have seemingly not been understood to have theoretical or methodological differences. This lack of understanding has led to confusion concerning the concept of empathy and its measurement” (Allgood, 1992, p. 14 ). Allgood defined basic empathy as a universal human trait which had been referred to in the literature as natural (Zderad, 1969) raw (Ehmann, 1971), ordinary (Forsyth, 1980), or feeling for others (Kramer & Schmalenberg, 1977; Peplau, 1952). Trained empathy was defined as that which was taught or was learned and had been referred to in the literature as clinical (Zderad, 1969), practitioner’s application (Ehmann, 1971), professional (Forsyth, 1980), or role-taking (Kramer & Schmalenberg, 1977). Allgood (1992) proposed that trained empathy builds on basic empathy and that basic empathy should be determined before imposing trained empathy upon nursing students.

The delineation of two types of empathy has been supported by the work of Baillie (1995). She discussed the use of natural empathy with the illustration of a case study and concluded that recognition of nurses’ natural empathic qualities was important and needed to be reinforced and encouraged.

Another study which was conducted to determine stability of empathy over time supports two types of empathy. Seventy-nine students from three different Scottish Colleges of Nursing were measured with a basic empathy scale and a learned empathy scale at three different point of time in their educational programs (Reynolds & Presly, 1988). Analysis of variance revealed that the three groups had no statistical significant differences among the empathy scores prior to their first psychiatric nursing module. Findings revealed that basic empathy, as measured by the Hogan Empathy Scale (Hogan, 1969), did not change over time but trained empathy, as measured by The Empathy Construct Rating Scale (La Monica, 1981), was not stable. Also, basic empathy was shown to be more closely associated with other stable aspects of personality than was trained empathy.

Additional support for two types of empathy was found in a study conducted to examine specifically the differences between the two types (Evans et al., 1998). Data were collected over time with a voluntary sample of 106 nursing students at times prior to, during, and after completion of a BSN nursing program at a large southeastern university. The Hogan Empathy Scale (1969) was used to measure basic empathy and the Layton Empathy Test (1979) was used to measure trained empathy. Repeated measures of analyses of variance (ANOVA) were used to analyze the data. Results revealed that students do begin their nursing education with significantly different levels of basic and trained empathy. Also, findings supported previous research in that trained empathy scores of nurses improved significantly during their nursing education, but after one year post graduation, the scores had declined implying that learned empathy strategies were

not effective. The researchers noted that empathy provided a perspective for students to understand themselves and their personal interactions, and they also observed that the recognition of students' personal being is basic to their communication (Alligood et al., 1995).

### Theoretical Perspectives of Empathy

Many different theoretical perspectives about empathy have been proposed. The counseling/psychotherapy roots of empathy and the relationship to therapy stem from the investigations of Freud (1927), Reik (1948), and Stewart (1956). The psychoanalytic school views empathy as a process of identification. According to Freud (1927), an infant is initially incorporated into his mother. After a few months, the child is aware of separateness, but still identifies with mother. This identification process operates throughout life and serves as a means for gaining another person's perspective.

A four phased process involving identification, incorporation, reverberation, and detachment, resulting in empathy was proposed by Reik (1948). In addition, Reik referred to the instinctive ability to discern unspoken messages from others, and he pointed out that students are often taught to observe only what is presented to their conscious perception to the exclusion of other signs which are much richer. This ability to capture the meaning of these signs was a skill that could be demonstrated, but not taught. He called this ability to discern messages from others as *listening with the third ear*. This third ear could also be turned inward and would allow one to be aware of what is inside oneself.

On the other hand, Stewart (1956) used the ideas of Freud in a theory of ethical development. He argued that it was through empathy that individuals learn more about themselves. Empathy is necessary to understand people and “the psychologist as personal knower must in some degree identify with the person he wants to know, and know himself if the potential of human understanding and good is to be a realization” (p. 111).

Empathy, as a dimension of an individual’s personality, is a psychological view that has been consistently used since the term empathy was introduced in the English language (Davis, M. H., 1979; Dymond, 1949; Flesbach, 1975; Hogan, 1969; Ianotti, 1975; Kalisch, 1973; Shafer, 1959). For example, high scores on an empathy scale described an individual as charming, pleasant, friendly, dreamy, cheerful, sociable, sentimental, imaginative, discreet, and tactful. Low empathic scores, on the other hand, described an individual as cold, cruel, quarrelsome, hostile, bitter, unemotional, unkind, hard-hearted, argumentative, and opinionated (Hogan, 1969). Empathic individuals have also been conceptualized as possessing keen insight, imaginative perceptiveness, and social acuity about other people (Forsyth, 1979).

From a biological perspective, empathy processes have been proposed to be related to neurological concepts. Many theorists have suggested that the capacity for empathy exists at birth and that there is an innate biological tendency to react emotionally to emotions in others (Basch, 1983; Brothers, 1989; Zderad, 1969). Brothers (1989) explored the concept of empathy from an evolutionary, ontogenetic, and neurophysiological approach and stated that “there may be a specific neural or neurotransmitter subsystem for empathy” (p. 13). A study of empathy in twins supported



the heritability of affective empathy (Matthews, Batson, Horn & Rosenman (1981).

Findings from another study (Davis, M. H., Luce, & Kuaus, 1994) showed that affective empathy does seem to have a significant heritability factor, but cognitive empathy does not.

Other theorists have also suggested that empathy is inherited. Hoffman (1977b) found that newborns, especially females, are more responsive to human cries than to equally noxious aversive, nonhuman sounds. In addition, empathy has been used to describe the natural process in which emotions of mothers are conveyed to their infants (Zderad, 1969). According to H. S. Sullivan (1953), this process implied that newborns innately possess empathy, which he called empathic linkage. Peplau's (1952) conception of empathy was derived from H. S. Sullivan. She focused on the role of empathy in the mother-child relationship. The infant also empathizes what is felt about him, as it is communicated through the kind of handling that he receives. Empathy refers to an ability to feel what is going on in a situation without specifically being able to discuss and to identify elements of it in awareness. The infant feels what others feel as they relate to him.

From a psychosocial perspective, empathy has been viewed as an adaptive ability (Ehmann, 1971). Empathy is the ability to feel one's self in a role without losing individual identity. Role taking is part of social growth and necessary for adjusting to society. Bandura (1971) stated that appropriate behaviors are learned primarily through the psychological process of identification or role modeling. He proposed that role

modeling is applicable in all three learning domains, but the affective domain is impacted the most by imitation learning.

Developmentalists believe that the capacity to experience empathic feelings is dependent on maturation processes (Davis, M. H., 1979; Hoffman, 1977a; Hogan, 1969; Piaget, 1932; Selman, 1971). Although Piaget (1932), an early developmental psychologist, did not write about empathy specifically, his ideas concerning sympathetic tendencies, egocentrism, and decentering supported the developmental aspect of empathy (Bussa, 1993). Smither (1977) proposed that changes in life span experiences, interpersonal involvements and commitments will profoundly influence a person's ability to understand and share certain emotions. For example, a child's lack of experience in forming intimate relations may limit his or her ability to understand and share an older adult's feelings of emotional dependence or jealousy. Thus, changes in life span roles, identities, and orientations can facilitate or hinder the sharing of certain kinds of feelings. By three years of age, the majority of American and Chinese children can differentiate between happy and unhappy reactions in other people. Perceptions of fear, sadness, and anger develop somewhat later (Borke, 1973). Although basic empathy appears to be relatively stable across the life span (Davis, M. H., 1983b; Gladstein, 1987), differences develop in childhood as cognitive skills are acquired and as a result of interaction with other environmental influences. One study examined empathy in 184 pairs of twins during their second year of life and found that concern for others increased with age between 14 months and 20 months and that females scored higher than males (Zahn-Wexler, Robinson, & Emde, 1992). Change in level of empathy after adolescence

primarily involves changes in cognitive capacities such as memory, attention, fantasy, and self-awareness (Bennett, 1995).

A basic assumption of those who perceive empathy as a behavior is that the helping professional's observed behavior is indicative of empathy (Carkhuff, 1969; Gazda, Childers, & Walters, 1982). According to Orlando (1972), observed empathy is demonstrated in the process of verification in the therapeutic process. In addition to identifying empathic behaviors being observed by nonparticipants, some behavioral-oriented professionals and scientists have studied empathy as a communication component that can be recognized and described by individuals involved in the interaction. This variation, known as perceived empathy, was initially associated with Barrett-Lennard (1962) who examined empathy based on the experience of the person receiving empathy. Other conceptualizations of perceived empathy include the ability to judge the feelings of others (Kunst-Wilson, Carpenter, Poser, Venohr, & Kushner, 1981) and the ability of peers to judge empathy during observations (Kalisch, 1971; LaMonica, 1981). Wheeler (1990) used Carl Rogers's (1957) fulfillment/phenomenological frame of reference to develop the Perception of Empathy Inventory (PEI) to measure the patient's perception of the nurse's empathy.

With respect to perspectives of empathy, nursing has been slow to adopt the concept of empathy and has borrowed definitions and methods to study empathy primarily from the fields of psychology, philosophy, and psychiatry (Ehmann, 1971; Forsyth, 1979; Kalisch, 1971; Sparling & Jones, 1977; Zderad, 1969). Although Nightingale (1859/1969) had asked nurses to put themselves in the place of the patient, it

was not until the 1950's that Peplau (1952) introduced the term empathy in nursing. She used the term in reference to the relationship of infant to mother and defined empathy as the ability to feel what is going on in a situation without specifically being able to discuss and to identify elements of it in awareness" (p. 173). During this time, one of the earliest studies reported in *Nursing Research* concerned empathy (Kandler & Hyde, 1953). This study reported on the development of a test to measure changes in empathy levels of individuals and to ascertain whether empathy levels of student nurses changed during their psychiatric clinical experience. In this study, empathy was defined as the capacity to put one's self in another persons's place, both intellectually and emotionally, and to see things from the other person's point of view. Thus, the affective and cognitive dimensions of empathy were recognized. In 1956, Carl Rogers presented a paper to public health nurses at the American Nurses' Association convention stating that a therapeutic relationship must include empathy (Rogers, 1957). This resulted in further examination of the concept of empathy and its application to nursing practice (Holliday, 1961; Travelbee, 1963; Triplett, 1969; Zderad, 1969). However, Rogers' concept of client-centered therapy and all of its assumptions were applied *carte blanche* into the nurse-patient relationship (Dagenais & Meleis, 1982; Ehmann, 1971; Elder, 1963; Henderson, V., 1964; Kalisch, 1973; LaMonica, 1981; Weidenbach, 1964). Perhaps, the borrowing of the concept of empathy from psychology with its cognitive focus of empathy without the affective dimension led to the study of trained empathy rather than basic empathy. Thus, prior to the 1970s, nurses were more likely to be admonished to practice "the art of detachment" and to refrain from becoming "emotionally attached to

co-workers or to patients” (Kempf, 1950, p. 71). Without the recognition of the affective dimensions of empathy and with the focus on trained empathy, it is not surprising then that during the 1960s, health care providers were admonished for neglecting the emotional needs of the patients. For example, Jourard (1960, 1961) indicated that nurses have rigid interpersonal behaviors and a deficit in empathy. He pointed out that nurses should promote the real self and honest self-disclosure to their patients with the use of an empathic acknowledgment of what had been expressed.

In nursing during the 1970s, research studies on empathy focused on investigations that explored the existence of empathy, the level of empathy, and the influence of empathy on patient care. Also, during this time investigators refined the concept of empathy and the methods for measuring it (Anderson, 1990).

During the 1980s, research concerning empathy began to branch into several areas. Barrett-Lennard (1981) studied specific stages involved in empathic interactions and M. H. Davis (1983a) investigated the influence of individual differences in empathy. Nursing researchers studied the level of empathy in practicing professionals and the development of empathy training models for the practicing nurse (Brunt, 1985; LaMonica et al., 1987; Rawnsley, 1987). In the 1990s, the delineation of two types of empathy in nursing was proposed (Alligood, 1992).

Within all these perspectives, most investigations can be classified as focusing on empathy according to one of three categories. The first category entails the cognitive awareness of another person’s feelings and thoughts; the second pertains to the affective

response to another person's condition, and the third category is a combination of cognitive awareness and affective response.

### Empathy as a Multidimensional Concept

Up until the 1930s, the conceptualization of empathy was seen as the sharing of another person's emotions. K uhler (1929) was the first to define empathy not as a sharing but as the understanding of another person's emotions. This understanding implied cognitive processes. However, it was not until Piaget (1932) and Mead (1934) that there was a major shift in the definitional focus of empathy. Both Piaget and Mead considered empathy to be a cognitive process i.e., a role-taking skill which enhances understanding of others' reactions and makes smoother, more productive interpersonal relations (Bussa, 1993). Mead (1934), a symbolic interactionist, added a cognitive dimension which he described as an ability to understand. His work emphasized a differentiation between self and others in which the empathizer temporarily took the role of another person. During this time, the number of investigations of the empathic process increased, with researchers using this cognitive orientation. Thus, early experimental studies on empathy focused primarily on accuracy of perception (Bussa, 1993; Davis, M. H., 1979).

One of the most important theorists postulating the cognitive dimension was Carl Rogers (1951) who emphasized the importance of empathy for his client-centered counseling. Rogers (1957) described empathy as having three components: affective (sensitivity), cognitive (observation and mental processing), and communicative (helper's response). His classic definition of empathy, which is still frequently quoted in nursing studies, is "to sense the client's world as if it were your own, without ever losing the 'as

if' quality" (p. 99). Rogers' definition of empathy evolved out of the historical distinction made between the cognitive and affective dimensions of empathy, and it played a significant role in the conceptualization of empathy in nursing.

The revival of the emotional side of empathy began with Stotland's (1969) work. The affective dimension of empathy focuses on the aroused emotional response to the perceived emotional situation of another individual (Batson, 1991; Hoffman, 1984; Mehrabian & Epstein, 1972; Strayer & Eisenberg, 1987; Weil, 1990). Theorists of this viewpoint stated that, although it is impossible for an individual to experience an emotion that is identical with another person's feelings, it is possible for the experience to be similar and this similarity of emotional experience is empathy (Mehrabian and Epstein, 1972; Shantz, 1975). These perceived similarities of individuals can be based upon status, previous interaction, history, and personal orientation (Stotland, Mathews, Sherman, Hasson, & Richardson, 1978). According to Mehrabian and Epstein (1972), empathy is an innate human ability to identify the needs of another and respond to those needs. Empathy operates on a primitive level and is, therefore, primarily an emotional rather than a cognitive process.

Another view is that empathy is an affective response to others' behavior. According to Eisenberg (1986), there are three types of noncognitive, emotional reactions labeled as empathy. The first type is emotional contagion, which merely reflects the emotion of another individual, and occurs in very young children. This emotional response is biologically based and appears before children have acquired the cognitive ability to plan strategies for helping responses. The second type is sympathy, in which

concern is felt for another person who is unhappy. Finally, the third type is personal distress, a negative, self-concern brought on by observing another person's emotional state.

Various researchers have proposed a multidimensional conceptualization of empathy (Bennett, 1995; Davis, M. H., 1979, 1980, 1983a; Deutsch & Madle, 1975; Feshbach, 1975; Gladstein, 1983; Mielke, 1988; Nathanson, 1986; Williams, C. A., 1990). This conceptualization of empathy proposes that cognitive and affective components of empathy comprise an interdependent, interactive system in which each influences the other, and which can never be fully understood as long as research efforts concentrate on one aspect to the relative exclusion of the other (Davis, M. H., 1979).

To support this multidimensional view of empathy, a study was conducted that examined the relationship between emotional empathy and cognitive empathy and found a positive correlation (Mielke, 1988). Results suggested that the more cognitively empathic individuals are, the more likely they are to be emotionally responsive, or to show empathic concern.

In another study of empathy, a self-report measure based on a phenomenological format was utilized to obtain 27 participants' perceptions of an empathic interaction (Bachelor, 1988). Data were analyzed by two raters using a five-step content analysis procedure. Findings revealed four differential empathic perceptual styles with cognitive empathy and affective empathy accounting for 74% of these perceptual styles.

C. A. Williams (1990) described a multidimensional model of empathy which included situational influences. She observed that situations such as the current mental



status of the empathizer, the situation to be empathized with, and the nature of the relationship between the empathizer and empathizee influences the readiness to experience empathy. On the basis of their review, Wheeler and Barrett (1994) recommended the administration of several measures of empathy. Some researchers have implemented this recommendation and used multiple instruments in order to measure more than one dimension of empathy (Koch, 1991; Marshall, W. L. & Maric, 1996). In addition, recognition of the multidimensionality of empathy is more holistic and is congruent with King's characterization of human beings. She stated that individuals are reacting beings who perceive, think, and feel. Therefore, consideration must be given to multiple dimensions of empathy.

#### Measurement of Theories of Empathy

Since 1953, more than 20 different instruments for measuring empathy have been reported in the literature. However, most empathy instruments were developed for a unitary conceptualization of empathy rather than a multidimensional conceptualization. Some researchers have measured empathy as primarily an affective phenomenon (Eisenberg, Fabes, Bustamante, & Mathy, 1987; Feshbach & Roe, 1968; Mehrabian & Epstein, 1972; Stotland, 1969) and others measured empathy as primarily a cognitive construct (Barrett-Lennard, 1962; Chapin, 1942; Dymond, 1949; Hogan, 1969; Kerr & Speroff, 1954; Stotland et al., 1978; Traux & Carkhuff, 1967). Few have viewed empathy as a multidimensional concept (Davis, M. H., 1979, 1980, 1983a; Hoffman, 1977a).

Empathy has been measured as a personality trait or relatively stable human ability (Davis, M. H., 1979, 1980, 1983a; Hoffman, 1982; Hogan, 1969; Mehrabian & Epstein, 1972) while other researchers measured empathy as a state (Barrett-Lennard, 1962; Batson, 1987; Dymond, 1949; Eisenberg et al., 1987; Feshbach & Roe, 1968). Empathy has also been measured as a situation-specific cognitive-affective state (Barrett-Lennard, 1962; Traux & Carkhuff, 1967).

Many different types of collection methods have been used to gather data concerning empathy. These methods include: self reports (Barrett-Lennard, 1962; Batson, 1987; Hogan 1969), reports of others (Barrett-Lennard, 1962; Traux & Carkhuff, 1967), observer ratings (Carkhuff, 1969), and physiological measures (Berger, 1962; Eisenberg et al, 1987; Krebs, 1975; Stotland, 1969).

Of the many instruments used to study empathy, the most popular instruments in nursing have been the Hogan Empathy Scale, the Carkhuff Indexes, the Traux Accurate Empathy Scale and the Barrett-Lennard Relationship Inventory, empathy subscale (Gagan, 1983). Of these instruments, only the Hogan Empathy Scale measures empathy as a trait. In addition, three of the measures currently in use, the Empathy Construct Rating Scale (La Monica, 1981), the Empathy Test (Layton, 1979), and Perception of Empathy Inventory (Wheeler, 1990) have been developed by a nurse specifically for nursing; however, all three instruments measure the state or trained empathy.

### Summary

The historical evolution of the concept of empathy began in the 1700s and was introduced into the English language in the early 1900s. Empathy became a primary focus

of many different disciplines during the 1900s and was finally introduced into nursing in the 1950s. The evolution of empathy in other disciplines has resulted in a multidimensional concept. In nursing the evolution resulted in the conceptualization of two types of empathy, basic and trained.

While theoretical consideration of empathy in human relations began at the turn of the century, empirical study of empathy did not begin until the 1940s (Deutsch & Madle, 1975; Gladstein 1983; Hunsdahl, 1967). After years of research which dealt separately with cognitive and affective dimensions of empathy, the most recent research in this area once again focuses on its dual nature.

Theorists have discussed empathy from many different perspectives, but two common assumptions are shared among the perspectives (Erlanger, 1996). First, empathy is a social and personal phenomenon because it involves individuals reacting to their perception of another person's experiences (Batson, 1991; Buie, 1981; Dymond, 1949; Kerr & Speroff, 1954; Stotland, 1969; Wispe, 1987) and secondly, empathy develops over time and shapes human behavior (Eisenberg & Mussen, 1989; Hoffman, 1984; Mead, 1934; Piaget, 1932). However, these different perspectives have resulted in many different conceptualizations of empathy and many different ways of operationalizing the concept. Investigators have used a variety of approaches to measure empathy. Each approach originated from fundamental concepts of empathy, and instruments can be classified primarily into three groups: measurements based on behavior, measurements based on personality attributes, and measurements based on experienced emotion.

Empathy has not been easy to define. Olsen (1991) expressed this sentiment when he stated “. . . empathy is akin to the use of chocolate - one knows the experience, but words cannot adequately express it” (p. 68). As a result, there has been an extensive amount of research on the concept of empathy but a lack of consensus concerning a definition or nature of this concept still exists, and methodological and measurement issues have arisen.

Some initial studies have confirmed that two types of empathy do prevail. Most nursing studies have focused primarily on trained empathy and only a few studies were found which have examined basic empathy. Also, no studies were found that address the intrapersonal process. Further studies concerning basic empathy need to be conducted because of the importance of this concept to nursing. Thus, this study addresses the conceptualization of basic empathy as differentiated from that of trained empathy and with a focus on the intrapersonal process rather than the interpersonal process. In addition, this study recognizes the multidimensionality of basic empathy by administering two different trait instrument tools to assess levels of basic empathy as recommended in the literature. Finally, the present study extends the work of King by testing a middle-range theory of basic empathy in nursing students. The personal system concepts of perception, self, body image, and learning were linked to the concepts of basic empathy, self-awareness, and learning styles.

#### Self-Awareness

Self-awareness includes two terms. Self is defined as “a person or thing referred to with respect to complete individuality” or “a person’s nature, character, etc.”

(Webster's Encyclopedic Unabridged Dictionary, 1996, p. 1734). According to the dictionary, awareness is "having knowledge; conscious; cognizant" (Webster's Encyclopedic Unabridged Dictionary, 1996, p. 144). "Conscious implies to be awake or awakened to an inner realization of a fact, a truth, a condition, etc. . . . Aware lays the emphasis on sense perception insofar as they are the object of conscious recognition" (Webster's, 1996, p. 432). Burnard (1988) wrote that self-awareness involves bringing to consciousness thoughts, feelings, and behaviors. Self-awareness is important to nursing because one must understand self before understanding others (Brooks, 1995; Burnard, 1984; Jerome & Ferraro-McDuffie, 1992).

Although the concept of self-awareness is relatively new in nursing, it has generally been widely accepted as a meaningful phenomenon of interest to nurses, especially nurse educators. Rawlinson (1990) stated that ". . . consistent conscious awareness of aspects of self within the nurse may enable or enhance the effective delivery of appropriate, considered, responsive nursing interventions, which are sensitive, empathic and client centered" (p. 116). The importance of self-awareness to nurses and to the nurse-patient relationship have been discussed in the nursing literature in the following areas: development of therapeutic relationships (Burnard, 1988; Jerome, & Ferraro-McDuffie, 1992), improved interpersonal communications (Burnard, 1988; Rawlinson, 1990), coping with stress (Bond, 1986; Rawlinson, 1990; Wolinski, 1993), greater understanding of other people (Burnard, 1984, 1988), cultural understanding (Wilson & Weis, 1995), greater understanding of identity (Keighley, 1988), less

emotional exhaustion and burnout (Burnard, 1988), professional autonomy (Rawlinson, 1990), and in the nurse counselor role (Tschudin, 1986).

### Theoretical Perspectives of Self-Awareness

These studies on self-awareness defined the self in two ways: as consisting of different dimensions, or within different models (Burnard, 1985, 1986; Jay, 1995; Keighley, 1988; Rawlinson, 1990; Smith, C., 1995). Different dimensions of the self, such as the physical, psychological, spiritual, or social, have been addressed (James, 1890, 1892; Rawlinson, 1990; Smith, C., 1995).

In order to understand self-awareness better, consideration must first be given to what is meant by the self. *Self* has been discussed as consisting of several different dimensions (Argyle, 1993; James, 1890, 1892; Rawlinson, 1990). For example the dimensions of self most often cited in nursing are physical, psychological, spiritual, and social (Rawlinson, 1990; Smith, C., 1995). Physical self is more universally shared. There is less disagreement on the physical self because it is based on anatomy and physiology. In contrast, psychological self is not available to our physical senses, and therefore, one's perception of it is more interpretive (Rawlinson, 1990). This dimension of self is defined in terms of unique features, such as personality or the mind.

Many of the ideas about the psychological self originated with Freud's (1927) idea of the parts of the mind (ego, superego and id), and his ideas about conscious, subconscious and unconscious aspects of self. Another psychoanalytical theorist, Jung (1925), proposed an extension of the unconscious to something deeper than the personal, which he called a *collective unconscious* belonging to humankind.

In psychology, many variations of theories about the psychological self have evolved. The self-theory proposed by George Mead (1934) was the beginning of literature on self-awareness. According to Mead, self-awareness is the ability to look at yourself or to be the object of your own attention. Carl Rogers (1961) suggested the concept of an *ideal self*. He viewed therapy as a search for self, and saw therapists and teachers as facilitators of an individual's exploration of self and the realization of self potential (Rawlinson, 1990). The psychological self was also explored by G. A. Kelly (1971) in his personal construct theory. He stated that it was the individual's experience of reality which was important, rather than an objective reality.

The third perspective of self-awareness is that of spirituality. Spirituality has been defined as that dimension of self which seeks to find meaning in life (Rawlinson, 1990). According to James (1890, 1892) a spiritual self consisted of inner psychic qualities such as the sense of choosing decisions or the experience of emotions and desires. Christian views about self-awareness and spirituality vary from a dynamic view of God's influence on the self to the notion of a free self aspiring to a moral code. Furthermore, ideas of spiritual self differ in content and degree of importance in any individual's life (Rawlinson, 1990).

The final perspective of self-awareness that has evolved is that of the social self. The social self is made up of interpersonal aspects that includes the quality, extent and nature of relationships, social systems, culture, class, status, work, communication, as well as other aspects. Because these factors are outside of the individual, they are more available to observation and are open to interpretation. Awareness of professional identify

as a nurse enables an individual to become more cognizant of the influences, both positive and negative, of this role (Rawlinson, 1990).

Social psychologists such as Argyle (1969) and Duval and Wicklund (1972) have studied self-awareness and its impact on social interaction. Duval and Wicklund (1972) derived a general theory of objective self-awareness from Mead's self-theory. They postulated that one's state of conscious attention may be toward the environment or turned inwardly upon one's self. The latter was called objective self-awareness and is characterized by passivity, introspection, and self-evaluation. Self-aware individuals were more likely to behave in accordance with personal and social standards than were individuals who were not self-aware. When attention is focused inwardly, there is an evaluation of the self as compared to that individual's ideal self-image. A recognition of a discrepancy between the real self and the ideal self-image will motivate the individual to either work to reduce the size of this discrepancy or to avoid the self-aware state altogether. Studies based upon Duval and Wicklund's theory of objective self-awareness involved states of attentional focus.

While Duval and Wicklund proposed a unitary, objective self-aware state, beginning in the middle 1970s attention began to focus on self-awareness as a trait. Studies began to look at how individuals may differ on possessing more enduring tendencies to examine and be aware of one's own self (Carver & Glass, 1976; Carver & Scheier, 1978; Fenigstein, Scheier & Buss, 1975; Turner, Scheier, Carver & Ickes, 1978), and a scale was developed to assess these individual differences. Differentiation of self-awareness into two dimensions was proposed. These dimensions included: an awareness



of internal thoughts, events, and feelings; an awareness of one's self as a social stimulus, or a focus on both of these dimensions.

### Models of Self-Awareness

The self and self-awareness have also been discussed through the use of models.

Models of the self include the following: counseling, gestalt model, Transactional Analysis, simple model of self, and reflective processes (Burnard, 1985; Jay, 1995; Rawlinson, 1990).

A cyclical, gestalt model of awareness was proposed by Perls and Goodman (1951) and its application was described by Tillett (1984). The primary focus of this gestalt model is an awareness of self; therapists use their own awareness and encourage the development of self-awareness in their clients. Three aspects of awareness were applied to this model: outer world, inner world, and fantasy; the latter two are equated with self-awareness (Stevens, 1971).

In the counseling model used by Rogers (1951), the counselor is transparent, nonjudgmental, and accepting. Awareness of the self is used to understand the client's perception. Transactional Analysis is a popular theory adopted by many therapists and laypersons alike. This model of human interaction involves three ego states: child, parent, and adult (Berne, 1954, Harris, 1970), and it provides insight and understanding of another person's behavior. Poletti (1985) conducted a study in which the content of 200 problems elicited from student nurses was categorized into six different kinds of problems that included: problems with relations, problems with peers, problems with patients, problems with co-workers; problems with teachers, and problems with

themselves. An analysis of the nature of the problems revealed that there were difficulties with communication, fear of rejection, uneasiness in dealing with the very sick or aged, helplessness or hopelessness toward self or situation, difficulties structuring time, and psychosomatic problems. Once these problems were identified, Poletti described teaching strategies to achieve understanding and insight into each problem by using Transactional Analysis.

Another model of the self is the simple model of self (Burnard, 1985). In this model the self is composed of three domains: thoughts, feelings, and behavior. Thoughts are the ideas and problem-solving skills that make up one's mental life. Feelings are the emotional aspects of life, while behavior is any action carried out, or any verbal or nonverbal communication. All of these domains overlap. Keighley (1988) used an analogy of an onion to explain how the domains interconnect and increase self-awareness.

As with an onion, outer layers of awareness can be peeled away and reveal a deeper understanding of self. Self-development is not achieved until the development of each domain is completed.

The reflective processes model was developed by Atkins and Murphy(1993) and consists of three key stages in the reflective process. The first stage is an awareness of uncomfortable feelings and thoughts. Self-awareness allows an individual to analyze these feelings which then leads to stage two, constructive critical analysis. The outcome, or stage three, is learning or altered thinking at both the affective and cognitive level.

### Measurement of Self-Awareness

Self-awareness has been empirically studied in psychology since the 1970s. Prior to that time, only phenomenological approaches were used. With Duval and Wicklund's (1972) definition that self-awareness was the capacity to become the object of one's own attention, it was possible to manipulate self-focus or create a state of self-awareness by exposing subjects to stimuli that reminded them of their object status (Morin & Everett, 1991). Mirrors, tape recordings of one's own voice, and cameras have been very effective for creating a state of self-awareness (Carver, 1974; Carver & Scheier, 1978; Duval & Wicklund, 1972; Morin & Everett, 1991).

While instruments have been developed to study related concepts such as self-concept and self-esteem, few instruments were found that measure self-awareness. A self-consciousness scale was developed to measure a tendency of people to attend to their own feelings, attitudes, motives, or personality characteristics (Fenigstein, Scheier, & Buss, 1975). A distinction was made between self-consciousness and self-awareness. Self-consciousness is a trait and self-awareness is a state as a result of transient situational variables and/or chronic dispositions. The Self-Consciousness Scale was designed to measure the trait. This scale is composed of three separate but related components of self-awareness: private self-consciousness assesses a person's attention to inner thoughts and feelings; public self-consciousness assesses a person's awareness as an object of public interest, and social anxiety assesses personal discomfort in the presence of others. Nasby (1989) used this scale and reported that scores on the Private Self-Consciousness Scale

were related to reliability of self-reported personality traits, whereas, self-awareness was not.

### Empirical Studies on Self-Awareness

Much of the nursing literature on self-awareness is descriptive rather than empirical. This literature focuses on how self-awareness is developed and how its development is facilitated (Burnard, 1984, 1986, 1988; Jerome & Ferranro-McDuffie, 1992; Keighley, 1988; McGoran, 1978; Nealon, 1993; Rawlinson, 1990). However, few empirical studies have been reported in the nursing literature. One qualitative study was conducted to determine how nurses at different stages in their careers viewed self-awareness (Smith, C., 1995). The sample consisted of 30 individuals from three equal groups of educators, pre-registration student nurses, and staff nurses. Semi-structured interviews lasting a half an hour were conducted. These interviews were audio taped and later transcribed. Data were analyzed using content analysis. Results showed that none of the nurses felt enough time had been allowed for self-development, that the issue of self-awareness should be addressed at an early stage in a nurse's education, and that self-awareness is the recognition of the physical, social, psychological, and spiritual aspects of the individual.

Journal writing has been suggested by some authors to increase self-awareness (Keighley, 1988; Nealon, 1993; Smith, C., 1995). However, in a research study conducted by Landeen, Byrne, and Brown (1992), findings showed that the use of journals assisted nursing students in exploring and changing their attitudes but did not significantly affect their interpersonal development. One of the reasons postulated for this

lack of impact upon interpersonal development was that self-awareness involves more enduring behavior traits. This study was conducted with 35 student nurses to examine the relationship between self-awareness and journal keeping. The total sample was divided into three groups. The experimental group, consisting of 18 students, kept journals which were used to reflect on thoughts and feelings experienced in their clinical rotation with psychiatric clients. Two student control groups were included in which journals were not used. One control group was completing a psychiatric rotation, and the second group was completing a medical/surgical rotation. The Fundamental Interpersonal Relations Orientation-Behavior (FIRO-B) developed by Shulz (1978) was administered to assess self-awareness pre and post clinical experience. Chi-square was used for analysis. There were no statistically significant differences in the groups on demographic data. Findings did not show any statistical significant changes in self-awareness in relations with others in any of the groups.

Self-awareness and the therapeutic nurse-patient relationship was examined by Krikorian and Paulanka (1982). A tool called *Analysis of Personal Behavior in Groups* was used in a pre- and post-test design with both experimental and control groups of student nurses in the same long-term, psychiatric clinical setting. The experimental group used the tool as a stimulus around which discussion of self-awareness or progress toward individually-identified goals were verbalized during a conference. In the control group, individual goals were not shared or openly discussed. This group used the tool only on the first and last days, when they were asked to rate themselves according to 11 areas on a 0 to 7 point rating scale. The areas on the scale included: listening ability, trust,

willingness to express feelings, willingness to be influenced by others, tendency to monopolize the group, reaction to comments of personal behavior, awareness of the feelings of others, understanding of rationale for own actions, reaction to group conflict, reaction to expressions of warmth, reaction to opposing opinions. No sample size for this study was given. After marking all the scales, students were encouraged to identify two or three areas in which they desired the most personal change. During the one hour conference for every clinical day, members of the experimental group were encouraged to discuss their growth in self-awareness and their concomitant development in the nurse-patient relationship. Ethnographic techniques and simple statistical methods were used to analyze the data. Findings showed increased self-awareness for all students even in areas not designated for change and that those students who showed the most quantitative progress toward desired goals also demonstrated the greatest qualitative growth in their nurse-patient relationships. This increase was ascertained from verbal, written, and observational data. Although there was no statistical significance in their behavioral changes for both the experimental and the control groups, the authors concluded that self-awareness served as a catalytic agent for the nurse in developing a therapeutic relationship with the client.

All of these studies involved student nurses at some point in their educational experience. No empirical studies were found in the nursing literature that address the self-awareness levels of individuals entering the nursing profession at the beginning of their educational experiences.

### Self-Awareness and Empathy

Theoretical support for a relationship between basic empathy and self-awareness has been suggested in the literature. Some authors have suggested that self-awareness facilitates empathic functioning (Lammert, 1986; Seeger, 1977). In this respect, C. M. Davis (1990), a physical therapist, has noted that empathy cannot be taught, nor be made to occur at will; rather, empathy happens when an individual allows it to happen. His work supports the proposal of a relationship between empathy and self-awareness when he stated that empathy can be facilitated by developing other attitudes and behaviors such as self-awareness and values clarification. Furthermore, he noted that teachers can help develop empathy in students by facilitating experiences that increase self-awareness, listening skills, awareness of the similarities in all human beings, and respect and tolerance for differences in people. Davis concluded with the recommendation that professional socialization should be centered on experiential learning of self-awareness and therapeutic use of oneself with patients and colleagues. "Promoting attitudes and behaviors such as self-awareness, nonjudgmental positive regard for others, good listening skills, and self-confidence are suggested as important in the development of clinicians who will demonstrate an empathic willingness" (p. 707).

Based upon the work of Salovey and Mayer (1990), Goleman (1994, 1998) defined emotional intelligence in terms of monitoring and regulating one's own feelings and the feelings of others and the use of feelings to guide thought and action. He included five basic emotional and social competencies in his model of emotional intelligence. Two of these competencies are self-awareness and empathy.

Theoretical support for a relationship between empathy and self-awareness has also been discussed in the nursing literature. For instance, Watson (1979) stated that “. . . a balanced sensitivity to one’s feelings gives one a foundation for empathy with others. One must recognize, accept, and be willing to explore one’s own feelings. That allows one to recognize and accept the feelings of others” (p. 17). Also, it is interesting to note that empathy and self-awareness are both included by Carper (1978) in the four fundamental patterns of knowing. Empathy was discussed as an important mode in the aesthetic pattern of knowing and Carper referred to the self in the component of personal knowing. She stated that “personal knowledge is concerned with the knowing, encountering and actualization of the concrete, individual self. . . . Such personal knowing extends not only to other selves but also in relations with one’s self” (p.18).

The relationship between empathy and self-awareness has been reported in a few empirical studies. For example, a phenomenological study was conducted by Baillie (1996) on empathy of registered nurses. An open, unstructured interview approach was used with nine experienced staff nurses who each had over a year of surgical experience. The sample was chosen from three surgical hospital units, and it was comprised predominantly of females of various ages. The interviews were taped and were transcribed verbatim. Colaizzi’s method was used for analysis. The meanings were interpreted and seven main themes resulted. Findings revealed that for some nurses, empathy just happens, rather than being a deliberate strategy which was used. Empathy depended upon personal and human qualities, such as being able to understand, to trust, and to be honest. In addition, nurses need a natural ability to empathize, and self-



awareness and reflective ability were considered as important qualities. The essential structure of empathy derived from the analysis proposed that it is a feeling which is composed of thoughts and emotions. Also, the ability to empathize is affected by personal attributes, previous personal and professional experience, knowledge about people, and how the empathizer is feeling. Furthermore, Baillie suggested that it was the intrapsychic element, or what the nurse is actually feeling, which is reflected through their nonverbal communication.

In another study, an experimental research project was conducted with a volunteer sample of 106 senior baccalaureate nursing students at a major southeastern university to evaluate teaching with entertainment films (Wilt, Evans, Muenchen, & Guegold, 1995). The Layton Empathy Test was used four times in a semester as a measure of trained empathy. Three treatment groups were assigned a specific teaching strategy including the following: Film/Guidance, a guided experience; Role Play/Guidance, role play situations; or Film/Discussion, an open discussion group following the entertainment film. The control group did not receive a specific teaching strategy. Data were analyzed using repeated measures of analysis of variance (ANOVA). Findings showed that the use of entertainment films with guidance was effective in teaching empathic responses, but this learned empathy was not sustained over time. Although the focus of the study was not the correlation between empathy and self-awareness, the authors suggested that the key element in the treatment groups was the guided discussion which followed the films. "A guided discussion that fosters the individual's understanding of his or her own empathic response and when and how to use this response is proposed as the key to increasing

empathy scores" (Wilt et al., 1995, p. 13). In other words, self-awareness may be related to the development of empathy.

A naturalistic study with ten terminally ill adult hospice patients and their hospice nurses was undertaken to explore the development of empathy in nurse-patient relationships. Again, although the focus was not the relationship between empathy and self-awareness, findings did show that "the development of empathic relationships emphasizes the importance of a nurse's self-knowledge. . . . It is the personal knowing that nurtures the nurse's empathic capacity" (Raudonis, 1995, p.72).

Only a few empirical studies were found in the literature which actually tested some aspects of empathy and self-awareness. For instance, public consciousness or awareness of others with regard to how others view the self was studied by M. H. Davis (1983b). In his study with 760 undergraduate psychology students, findings showed a negative relationship between the Public Self-Consciousness Scale and the Perspective Taking subscale of the Interpersonal Reactivity Index (IRI), and a positive relationship between the Public Self-Consciousness Scale and Fantasy, Empathic Concern, and Personal Distress subscales of the IRI. However, this study did not correlate the IRI with the Private Self-Consciousness Scale which is concerned with awareness of one's inner thoughts and feelings.

Only one cognitive dimension of empathy from the IRI was studied by Franzoi, Davis and Young (1985). Their study focused on self-awareness and perspective taking in 131 married couples. Findings of this study suggest that heterosexual relationship problems may result from deficits in either awareness of oneself (private self-

consciousness) or awareness of others (perspective taking). These results support an important theoretical linkage between self-awareness and at least one dimension of basic empathy and have important implications for the nurse-client relationship.

Another empirical study conducted by M. H. Davis and Franzoi (1991) examined empathy and self-awareness in 307 high school students over a three year time span. Results revealed that increases were found in two subscales of the IRI, perspective taking and empathic concern, and a decrease in the personal distress subscale. Findings were consistent with the developmental view of empathy. Self-awareness, as measured by the Self-Consciousness Scale, remained stable over time with the degree of year-to-year stability increasing with age.

The samples in these studies were all populations other than nursing. Only one nursing study was found that provided support for the relationship between empathy and self-awareness (Carmon, 1992). A descriptive correlational study was conducted with 52 nursing students based upon a theory of perceptual empathy within the interpersonal system of King's General Systems Framework. A low but significant positive relationship was found between self-awareness and perceptual empathy ( $r = .37, p = .004$ ) with self-awareness accounting for 14% of the variance in perceptual empathy when all other variables were considered. No significant differences were found when comparing advanced clinical student nurses perceptual empathy with that of beginning clinical student nurses. Her proposed model of empathy used King's interpersonal system as her conceptual framework and conceptualized empathy as an interactive process that included three distinct phases: a perceptual phase, a communicative phase and a transactional

phase. While she can be commended for her use of a nursing conceptual framework, Carmon describes perceptual empathy as a uniquely personal process, and she stated that the perceptual phase of empathy should logically begin with the self. However, Carmon was only concerned with those characteristics of the self that might influence perceptual empathy, i.e., self-awareness and social anxiety. Self is a concept in the personal system and should be discussed in relation to that system. In addition, the instrument used to measure empathy was the Kagan Affective Sensitivity Scale which measures state empathy (i.e., trained) and this scale only measures the affective dimension of empathy. Based upon her findings, Carmon suggested that nurse educators needed to target personal characteristics, such as self-awareness as a way to enhance perceptual empathy. Also, she recommended that a larger, more diverse sample of undergraduate student nurses be used to explore this relationship further. The present study differs from Carmon's research in that it conceptualizes a theory of empathy and self-awareness. In the personal system and will measure trait (basic) empathy and the trait of self-awareness.

#### Summary

Various views on self-awareness have been discussed in the literature, and the nursing profession has borrowed many of these perspectives and incorporated them into education and practice. The self has been discussed in relation to models of the self or consisting of several aspects. Aspects of the self cited in the nursing literature are the physical self, the psychological self, the social self, and the spiritual self. Of the five models concerning the self and self-awareness that have been proposed, two are nursing models (Atkins & Murphy, 1995; Burnard, 1985). Self-awareness has been considered as

both a trait and a state. In this study, self will be conceptualized according to King's Personal System and measured as a trait which is consistent with that view.

Research of self-awareness in psychology has primarily involved experimental designs with manipulation of self-awareness through the use of mirrors, tape recorders, and cameras. Few self-report instruments have been developed. A self-consciousness scale was developed to measure the trait of self-awareness or the tendency to attend to one's own feelings, attitudes, and motives (Feningstein et al., 1975).

While many studies in psychology have been conducted to study self-awareness, few studies have been conducted concerning this concept in nursing. The focus of studies on self-awareness in nursing have been primarily descriptive in nature. A few empirical nursing studies have examined this concept in terms of self-awareness and the nurse-patient relationship, the use of journals to increase self-awareness in student nurses, and reflections on self-awareness by nurses at different stages of their professional development.

A theoretical linkage between self-awareness and empathy has been discussed in the nursing literature. However, only a few empirical studies exploring the relationship of self-awareness and empathy have been conducted. One nursing study was found that examined the relationship among self-awareness, empathy, and social anxiety.

Because basic empathy and self-awareness have been identified as traits, further research needs to be conducted to examine the association between these two traits. This study will address this need by studying basic empathy in relation to the trait of self-awareness (i.e., self-consciousness). This study will add to that body of nursing literature

on self-awareness and will address the lack of studies on self-awareness of baccalaureate pre-nursing students. In addition, the present study will extend the work of King with the testing of a middle-range theory of basic empathy, self-awareness, and learning styles which have been linked to King's personal system concepts of perception, self, body image, and learning.

### Learning Styles

#### Development of Experiential Learning Theory

Experiential learning theory has been developing for over 70 years (Daly, 1996). In the late 1920s, Jean Piaget (1932), a French developmental psychologist and genetic epistemologist, studied developmental cognitive processes in children. He reported that intelligence arises as a product of the child's interaction with the environment and he used the terms assimilation and accommodation. Then John Dewey (1938) suggested that a pragmatic view of abstract academic work should be included into concrete realities for learners. Later, Kurt Lewin, with several colleagues, used action research, group dynamics, and T-groups to discern that learning is facilitated in an environment where there is dialogue and conflict between immediate concrete experience and analytic detachment (Marrow, 1969). They suggested that learning begins with a here-and-now experience, followed by a collection of data and observations about that experience. The data are analyzed and then through feedback, are shared with individuals who are experiencing this revelation, so that they can modify their behavior and choose new experiences. These three theorists provide the basic principles that combine experience,

perception, cognition, and behavior into a holistic and integrative experiential learning theory (Daly, 1996).

#### Discussion of Experiential Learning Theory (ELT)

Experiential learning theory (ELT) has its basis in the disciplines of social psychology, philosophy, and cognitive psychology (Sherbinski, 1994). ELT integrated behavioral and cognitive theories by combining experience, perception, cognition, and behavior (Arndt & Underwood, 1989). It is an eclectic approach that integrates learning theory, individual development, and personality types. ELT makes two basic assumptions (Sherbinski, 1994). These assumptions are that people learn from the immediate, here-and-now experience, as well as from concepts and books and that people learn differently according to their preferred learning styles (Smith, D. & Kolb, 1986). The characteristics of ELT are the following:

- Learning is best conceived as a process, rather than in terms of outcomes.
- Learning is a continuous process that is grounded in experience.
- The process of learning requires the resolution of conflicts between dialectically opposed modes of adaptation to the world.
- Learning is a holistic process in which one adapts to the environment.
- Learning involves transactions between individuals and the environment.
- Learning is a process of creative knowledge (Kolb, 1984; Smith, D. & Kolb, 1986).

### Kolb's Experiential Learning Theory

Kolb (1976) proposed a learning model consisting of a cycle of four phases based on the relationship of two dimensions of cognitive growth and learning: the concrete-abstract dimension and the active-reflective dimension. Learners perceive information from the environment either concretely or abstractly and they process that information either actively or reflectively. The four phases are: (1) Concrete Experience (CE) in which the learner is involved in a specific experience, (2) Reflective Observation (RO) in which the learner reflects on this concrete experience from different points of view to give it meaning, (3) Abstract Conceptualization (AC) in which the learner integrates the meanings from this experience with those from other personal experiences to develop personal explanations, concepts or theories, or with concepts and theories proposed by others, to draw conclusions, and (4) Active Experimentation (AE) in which these conclusions are used to guide decision-making and planning of related actions which are then implemented. Each phase of the cycle emphasizes different learning experiences and these four sets of learning abilities are referred to as learning modes. Individuals vary on the particular mode of learning that they rely on most heavily and this results in a certain style of learning. Based upon the two dimensions, Kolb developed the Learning Style Inventory (Kolb, 1976), which was revised in 1985 (Smith, D. & Kolb, 1986). Each of the learning styles is a combination of these two dimensions. The four different learning styles are the following: divergers (combining concrete experience and reflective observation), assimilators (combining reflective observation and abstract conceptualization), convergers (combining abstract conceptualization and active



experimentation), and accommodators (combining active experimentation and concrete experience). Although the Learning Style Inventory (LSI) has been frequently used in nursing research, its construct validity and reliability have been called into question (Atkinson, 1988, 1989; Bourguignon, 1994; Freedman & Stumpt, 1978; Merritt & Marshall, 1984; Nathan, 1997; Sims, Veres, Watson, & Buckner, 1986; West, 1982) and it is not recommended for nursing research (DeCoux, 1990). However, some authors have argued that the experiential learning model has merit and remains a useful framework for understanding professional learning (Allinson & Hayes, 1988; Cavanagh, Hogan, & Ramgopal, 1995; DeCoux, 1990).

#### The Concept of Learning Styles

According to the dictionary (Webster's, 1996), learning is "the act or process of acquiring knowledge or skill" (p. 1095) and style is "a particular, distinctive, or characteristic mode of action or manner of acting" (p. 1890). Learning styles have been conceived as the modus operandi that students use to master the content of a subject or task (Haislett, Hughes, Atkinson, & Williams, 1993). J. W. Keefe (1979) defined learning style as the "characteristic cognitive, affective, and physiological behaviors that serve as relatively stable indicators of how learners, perceive, interact with, and respond to the learning environment" (p. 4).

There has been a lack of clear definition and lack of consensus about learning styles (Dunn, 1981, 1984). For example, although they are not the same, cognitive styles, cognitive maps, learning modalities, learning strategies, and learning preferences have been used interchangeably with learning styles. However, researchers do seem to agree

that learning styles do not imply degree of intelligence and that they describe how an individual processes stimuli rather than how many and how well they are processed (Thompson & Crutchlow, 1993).

Nurse educators need to consider the learning styles of their students because they are a significant factor in how people learn (Kolb, 1984; Vittoe & Hooker, 1983).

Learning style theory postulates that students will be motivated to learn and will learn better if they are taught the way they prefer (Yoder, 1994). In addition, when students have a greater understanding of their own learning needs, they will be more actively involved in their learning (Kelly, E., 1997). Findings show that when students know their own learning styles and how they process information, they have more confidence in transferring their knowledge to clinical practice (Garcia-Otero & Teddlie, 1992). Honey and Mumford (1992) noted that the way in which people learn affects everything else and is the most important of life skills. However, interrelationships among empathy, self-awareness, and learning styles of individuals have not been clearly delineated.

### Models of Learning Styles

Based upon the assumptions and characteristics of ELT, learning style theories and instruments to measure them were developed. Over 20 different instruments have been discussed in the literature. Thus, learning style theories have been organized into primarily four models (Cleverly, 1994; Griggs, Griggs, Dunn, & Ingham, 1994; Partridge, 1983). These four models include the following:

- (1). Social interaction models include field independence-dependence developed by Witkin and others in the late 1940s (Witkin, Moore, Goodenough, & Cox,

- 1977). This model entails a global versus an analytic way of perceiving and is the ability to perceive items without being influenced by the background.
- (2). Personality dimensions models include the Myers-Briggs Model (1967) which includes relatively stable traits of basic personality. This model is based on Jung's theories of behavior. It entails two ways of perceiving, by sensing or by intuition, and two ways of judging, by thinking or by feeling.
  - (3). Information-processing models such as the Kolb Learning Model (1976) and the Honey and Mumford learning cycle (1992). These models are eclectic integrative approaches incorporating learning theory, individual development, and personality types. These models focus primarily on experiential learning.
  - (4). Multidimensional and instructional preference models (Dunn, Dunn, & Price, 1982). Instructional preference is related to the methods, resources, or approaches that students prefer. For example, the Productivity Environmental Preference Survey focuses on 21 variables of learning styles including environmental concerns, personality dimensions, social interactions, physiologic inclinations, and global versus analytic information processing preferences (Dunn et al., 1982).

The present study applied experiential learning theory to King's General Systems Framework because the assumptions underlying experiential learning theory are congruent with those of nursing and nursing education (Laschinger & Boss, 1984). In addition, both experiential learning theory and King's General Systems Framework emphasize the holistic view of man and the importance of the individual (Joyce-Nagata,

1996; Laschinger & Boss, 1984). Preferred learning styles integrate well with principles of education and with King's assumptions about individuals. These principles include the following: a learner's experiences are to be respected, a person's readiness to learn is related to his or her evolving social roles, and learners are problem oriented (Brazen & Roth, 1995). Furthermore, both experiential learning and a systems approach use an information processing model. Honey and Mumford (1992) and King (1986) view learning as a dynamic and lifelong process with active involvement.

#### Learning Styles Questionnaire

The Learning Styles Questionnaire (Honey & Mumford, 1992) was developed and used primarily in the United Kingdom to assess learning styles (Cavanagh, Hogan & Ramgopal, 1994). Although the stages in the learning cycle originated from the work of Kolb, the terminology for the stages and learning styles based on the cycle are different from that suggested by Kolb (McLeod et al., 1995). In addition, the Learning Styles Questionnaire (LSQ) was based on observable behavior rather than the psychological basis for that behavior (Allinson & Hayes, 1988).

The four stages of the learning cycle consists of experiencing, reviewing, concluding, and planning. To learn from an experience, an individual has to do four things: (1) review the experience by reflection, (2) reach conclusions about what went well and what could have gone better, (3) plan what to do differently or better, and (4) implement the plan, which is in itself an experience. These four stages are recycled. Many people are uncomfortable with all four stages of the learning cycle because they have developed different learning styles, or characteristic ways of doing things, which affects

their skills and willingness to do different parts of the process. Based on this learning cycle, an individual's learning was classified into four styles: activists, reflectors, theorists, and pragmatists. Activists are characterized as being open-minded to new ideas and ventures. On the other hand, reflectors are seen as careful and cautious in their approach to new ideas. Theorists adopt a rational and logical approach to problems or new situations while pragmatists tend to be practical and realistic in their thinking and are less interested in theory or basic principles. Therefore, activists tend to have lots of experience (Stage 1), reflectors do lots of reviewing (Stage 2), theorists reach conclusions (Stage 3), and pragmatists make plans (Stage 4).

Possessing all four styles equips you best for the process of learning from experience. Unfortunately, only 2% of people have strong preferences for all four styles while 35% have strong preference for one style, 24% have strong preference for two styles, 20% have strong preference for three styles, and 19% have no strong preferences at all (Honey, 1988).

Honey and Mumford's learning styles are congruent with King's discussion on learning. First, it is a systems approach based on an information processing model. King's approach to learning is also founded in a systems approach based on an information processing model. Information process models start with perception of concrete things in the environment (having an experience). A relationship of this perception with something already experienced is formed (reviewing the experience). Concepts are developed, rules are formed, and conclusions are drawn by making generalizations about things (concluding from the experience). The final step is problem

solving (planning the next steps). In addition, King and Honey and Mumford draw from Lewin's life space concept which states that individuals respond as a unified whole. King (1986) wrote that "each learner develops, grows, and learns as a whole person" (p. 24). Furthermore, development of Honey and Mumford's learning styles was based on observable behavior. King's (1986) definition of learning states that learning is evaluated in observable behaviors and is inferred from behavioral manifestations. An important characteristic of learning is that individuals must be involved in the process. Finally, these three theorists believe that learners bring to the learning situation their unique background of experiences with a different learning style and by matching the teacher's mode of presentation of information to the individual's learning style, learning will be enhanced.

#### Nursing Studies on Learning Styles

Before the late 1980s, nursing studies of learning styles were limited in quantity and scope (Wells & Higgs, 1990). In a review of the nursing literature, de Tornyay (1984) found only 37 articles that addressed the teaching/learning process in nursing education. None of these articles included a specific conceptual model to study nursing students' learning styles. Since that time, learning styles have been studied extensively, many of them have included a conceptual model. For example, field independence vs. field dependence (Blagg, 1985; Garity, 1985; Hodson, 1985; Norris, 1986; Ostrow, 1986), approaches to studying (Lapeyre, 1992), cognitive style mapping (Cranston & McCort, 1985; Nortridge, Mayeux, Anderson, & Bell, 1992), mediation abilities (Duncan, 1996; Wells & Higgs, 1990), receptive or discovery (Seidl & Sauter, 1990), experiential

learning (Brazen & Roth, 1995; Brudenell & Carpenter, 1990; Cavanagh et al., 1995; Chase, 1995; Daly, 1996; DeCoux, 1987, 1990; Fojtasek, 1988; Goldrick et al., 1993; Haislett et al., 1993; Highfield, 1988; Hodges, L. C., 1988; Hodges, S. A., 1988; Jambunathan, 1995; Johanson, 1987; Joyce-Nagata, 1996; Katz, N. & Heimann, 1991; Keane, 1993; Kelly, E., 1986, 1997; Kirchhoff & Holzemer, 1979; Koontz, 1998; Laschinger, 1986, 1992; Laschinger & Boss, 1984, 1989; Merritt, 1983; Nyamathi, Chang, Sherman, & Grech, 1989; Rakoczy & Money, 1995; Remington & Kroll, 1990; Ridley, Laschinger, & Goldenberg, 1995; Sherbinski, 1994; Stutsky & Laschinger, 1995; Sutcliffe, 1993; Zemaitis, 1987), deep and surface learning (Stiernborg, Guy, & Tinker, 1997), modes learning (Verhey, 1993), learning preferences (Linares, 1989; Ostmo, Van Hoozer, Scheffel, & Crowell, 1984), instructional preference (Cavanagh & Coffin, 1994), multidimensional and instructional preference (Billings, 1991; Garcia-Otero & Teddlie, 1992; Griggs et al., 1994; J. S. Morse Oberer, Dobbins, & Mitchell, 1998).

Many of these studies have been descriptive in nature and few experimental studies have been conducted. In addition, many of the results have been insignificant or contradictory with other findings. While studies have explored the psychosocial factors of age, gender, ethnicity, marital status, parental status, and family income in relation to learning styles, no studies were found which explored the relationships among learning styles, basic empathy, self-awareness or birth order. Birth order is a psychosocial factor which should be studied in relation to basic empathy because previous studies have indicated a relationship between birth order and empathy (Stotland & Dunn, 1963; Stotland & Walsh, 1963; Taylor, 1972).

### The Nature of King's Science

From King's conceptual model middle-range theories have been derived. For example, the Theory of Goal Attainment (King, 1981) and a middle-range theory of nursing administration were derived from the General Systems Framework (King, 1989). In addition, Sieloff (1995) developed a middle-range theory of nursing departmental system power, Frey (1989) developed a middle-range theory of social support and health, Wicks (1995) developed a theory of family health, and Doombos (1995) developed a theory of family health in the context of chronic mental illness. Carmon (1992) proposed a middle-range theory of perceptual empathy and self-awareness within King's interpersonal system. Finally, an implicit theory of nursing empathy, within the context of the personal, interpersonal, and social systems, has been made explicit (Alligood, et al., 1995, 1998; Fawcett & Whall, 1995).

Instrument development using King's framework have included King's (1988) own work to develop and determine the psychometric properties of the Criterion-Referenced Measure of Goal Attainment Tool and Sieloff's (1995) research, which focused on development and testing of a tool to measure nursing departmental power. Rawlins, Rawlins, and Horne (1990) based their Family Needs Assessment Tool, which was designed to evaluate the special needs of the families of chronically ill children, on the Theory of Goal Attainment.

Individuals, dyads, triads, and other groups, and families, social organizations, and health care systems can be studied within King's framework and both qualitative (Alligood et al, 1995; Alligood & May, in press; Kameoka, 1995; Rooke & Norberg,



1988; Rundell, 1991) and quantitative research studies can be conducted (Doornbos, 1995; Frey, 1995; Froman, 1995; Hanna, 1995; Hobdell, 1995; Houfek, 1992; Kneeshaw, 1990; McGirr, Rukholm, Salmoni, O'Sullivan, & Koren, 1990). A book with discussions of extensions or tests of King's work (Frey & Sieloff, 1995) has been published and several doctoral dissertations and master's theses have been guided by the General Systems Framework or the Theory of Goal Attainment.

This study will extend the work of King with the testing of a middle-range theory of basic empathy using personal system concepts. The concepts of perception, self, body image and learning, within the personal system are linked with the concepts of basic empathy, self-awareness, and learning styles.

#### Chapter Summary

Many different perspectives have contributed to an understanding of empathy. Based upon these perspectives, different conceptualizations of empathy have been postulated and varied approaches have been used to measure empathy. However, two common assumptions about empathy have emerged from these perspectives. First, empathy is a social and personal phenomenon and second, empathy develops over time and influences behavior.

Empathy became an important focus in nursing in the 1950s. Since that time, the concept of empathy has evolved and is now recognized as a multidimensional construct involving different dimensions. In addition, two types of empathy, basic and trained, have been delineated.

Most nursing studies have focused on trained empathy and further study needs to be conducted about basic empathy. Therefore, this study will extend the knowledge base about basic empathy and its importance in the personal knowing that individuals bring with them into their educational and clinical experiences as student nurses.

While self-awareness has been studied extensively in psychology, until recently, little attention had been devoted to this concept in nursing. The importance of the concept of self-awareness to nursing has been shown because it impacts both the nurse and the nurse's interaction with the client. Various perspectives have been used to study this concept. Empirical support for this concept has been demonstrated in the discipline of psychology, but few studies have been conducted with this concept in nursing, and most studies have been descriptive in nature. Further study of this important nursing concept is imperative. This study will extend the knowledge of what is known about self-awareness in pre-nursing students.

Learning styles have been studied extensively in nursing over the past ten years but many of the studies have been descriptive in nature focusing on age, education, and speciality. Few studies have been conducted concerning learning styles and its relationship to other personality traits such as empathy or self-awareness. In addition, by incorporating a systems theory of learning into King's General Systems Framework, knowledge about personal systems will be extended.

Although the nursing literature on basic empathy and self-awareness is recent, and few in number, it lends support to the proposal of a relationship between basic empathy and self-awareness. Theoretical support of the relationship between self-awareness to

basic empathy has been shown through this literature review, but additional empirical studies need to be conducted to support this relationship. Furthermore, no studies were found which studied empathy and self-awareness of students who had made a choice for a nursing career but had not yet taken any clinical or didactic courses in nursing.

Therefore, this study extends what is known about the relationship of basic empathy and self-awareness of baccalaureate pre-nursing students. Theoretical support has also been found for basic empathy, self-awareness, and learning styles, but no empirical studies have been conducted to support this relationship. A unique nursing perspective on basic empathy, self-awareness, and learning styles will result in a better understanding of students' personal systems and a more holistic teaching approach with student nurses.

## CHAPTER III

### METHOD

The purpose of this study was to test a middle-range theory of basic empathy derived from a nursing theory of personal system empathy based upon King's General Systems Framework. Relationships among basic empathy, self-awareness, and learning styles were examined. The research design, setting and sample, instruments used, data collection procedures, data analysis, and the protection of human subjects are described below.

#### Research Design

A descriptive cross-sectional correlational research design was used in this study to examine the relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. This design provided an approach to investigate all of the interrelationships in the research questions and to test the hypothesis: basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students are related. Students were asked to complete: (1) the Hogan Empathy Scale and the Questionnaire Measure of Emotional Empathy to measure their basic empathy levels, (2) the revised Private Self-Consciousness subscale and the Public Self-Consciousness subscale to measure their self-awareness, (3) the Learning Styles Questionnaire to determine their learning styles, and (4) the Personal Information Questionnaire to investigate psychosocial factors. Scores from these instruments were correlated using a canonical

correlation. One of the strengths of this design was that it permitted a large number of interrelationships to be examined.

### Sample and Setting

The target population consisted of those freshman, sophomore, and junior undergraduate students with a declared nursing major enrolled at public institutions in southeastern states. To be eligible for the study, students had to meet the following criteria: (1) be enrolled as an undergraduate pre-nursing student, (2) have just begun their didactic or clinical courses in nursing, (3) not be a registered nurse, and (4) be 18 years of age or older and willing to complete the research instruments.

The sample was a nonprobability convenience sample of full-time or part-time baccalaureate pre-nursing students. Nonprobability sampling has the advantage of the capability to access large numbers of subjects (LoBiondo-Wood and Haber, 1998). There were two dependent variables and 12 independent variables. A sample size of 20 subjects per variable was determined necessary for the analysis (Stevens, 1996). Thus, a minimum sample size of 280 was required.

A total number of 424 students chose to participate in this study from eight different sites. One-way analysis of variance was used to determine whether participants, defined by site, differed between sites on the instruments to measure basic empathy, self-awareness, or learning styles (See Table A-1, Appendix A). There were no significant differences for participants based upon site.

The sample size was adjusted to a total of 380 after data from 17 subjects who were associate or diploma nurses were removed. Additionally, data from 16 subjects were

removed because more than 15% of data were missing for one variable (George & Mallery, 1999) and two subjects did not report their age. Stevens (1996) suggested that scores over three or more standard deviations from the mean could be considered outliers. Nine outliers were removed from the sample. With a sample size of 380, a small effect size can be detected in the population with a power of .95 at the .05 level of significance (Kraemer & Theimann, 1987).

Data were collected at eight different nursing programs. Using more than one site allows for greater generalization of findings. Nursing programs included in this study were four-year baccalaureate programs in public institutions in the southeast that had been accredited by the National League for Nursing. Private institutions were not included in the study because many of the private nursing programs are affiliated with religious institutions and may require classes in religion or where students may have more experiential knowledge or required course work which could affect the student nurse's level of empathy or self-awareness. Subjects were recruited as intact groups attending nursing classes or orientation sessions.

#### Data Collection Instruments

In addition to the personal information questionnaire (See Appendix B), four self-report instruments were used in this study. These instruments were the following: the Hogan Empathy Scale, the Emotional Empathic Tendency Scale, the revised Private and Public Self-Consciousness subscales, and the Learning Styles Questionnaire. Each instrument is discussed below.

### Hogan Empathy Scale (HES)

Basic empathy is related to sensory perception and to thoughts in understanding another person. The Hogan Empathy Scale (See Appendix C) was a trait instrument selected to measure basic empathy in this study. This scale was originated in 1969 by Robert Hogan who developed this instrument to measure empathy within a framework of a theory on moral development. Empathy was described as an innate social sensitivity, or the ability to take on another's role (Hogan, 1975). This instrument was selected to measure basic empathy for this study because the central purpose of the instrument was to assess trait empathy by the degree to which individuals perceived the inner experience of others.

The HES is a dichotomous instrument with true/false response alternatives. The original scale had 64 items. Further development of the initial instrument, the number of items was reduced to 39 with a correlation of .90 to the original scale (Grief & Hogan, 1973). Twenty items are keyed true and 19 items are keyed false. An empathy score is based upon the number of answers that Hogan identified as being reflective of an empathic individual. Responses which match the keyed answer are valued at one point and those not matching the key are scored as zero. Subjects' responses are summed yielding a raw score which ranges from 0 to 39 with higher scores indicative of higher empathy.

Hogan used Q sort methodology to establish content, criterion-related, and construct validity in the original development of the instrument. Q sort methodology is an ordinal scaling technique based on small sampling theory with the primary concern being

the selection of items for the Q sort so that those selected will be representative of the universe to be measured. Sources for the items can include the literature, existing measures, and/or preliminary interviews with significant individuals (Waltz, Strickland, & Lenz, 1991).

Content validity was established with fourteen individuals who were asked to describe their concept of a highly empathic person using 50 items selected from the 100-item *California Q sort* (Block, 1961). These Q sort descriptions were intercorrelated and the estimated reliability using the Spearman-Brown formula for the total composite was .94. Criterion validity was established by correlating this criterion with a sample of 100 military officers and a second sample of 45 research scientists and 66 student engineers. Validity was reported to be .62 (Hogan, 1969). Construct validity was established through convergent validity. Correlations between .40 and .71 were reported when the Hogan Empathy Scale was compared with other personality assessment tools such as the Ego Strength Scale and the Edwards Scale for Social Desirability (Hogan, 1969). Furthermore, construct validity was established through factor analysis (Grief and Hogan, 1973). A factor analysis by Johnson, Cheek, and Smither (1983) yielded four factors, all of which were conceptual aspects of cognitive empathy.

A sample of 50 college undergraduates was used by Hogan to assess the reliability of the scale through a test-retest correlation. The correlation after a two month interval was .84. Using the KR-21 formula, the scores of 100 military officers yielded a coefficient of .71. Black and Phillips (1982) found a test-retest correlation of .92.



The HES has been used extensively with nursing populations (Alligood nee Raile, 1983, 1991; Brown & Hunter, 1987; Brunt, 1985; Bussa, 1993; Evans et al., 1997; Forsyth, 1979; Holt-Ashley, 1985; MacDonald, 1977; Reynolds & Presly, 1988; Sheer, 1989; Wilt et al., 1995). In one study comparing empathy instruments, the HES was rated as the most valid and most reliable instrument (Chlopan, McCain, Carbonnell, & Hagen, 1985).

#### Emotional Empathic Tendency Scale (EETS)

For the purposes of this study the Emotional Empathic Tendency Scale (Mehrabian & Epstein, 1972) was another instrument used to measure basic empathy. This scale was selected because it was developed specifically to measure the emotional response to the perceived emotional experiences of others and it is a trait instrument (See Appendix D). Each item on this 33-item instrument (16 positive items and 17 negative items) is rated on a scale ranging from minus four (very strong disagreement) to plus four (very strong agreement). To compute a total basic empathy score, the signs of a subject's responses on the negatively worded items are reversed and then all 33 responses are summed. Thus, the range of possible scores is minus 132 to plus 132. Higher positive scores indicate greater empathy. An example of items on the Emotional Empathic Tendency Scale (EETS) is the following: *I tend to get emotionally involved with a friend's problems.*

The items were selected from a larger set of items on the basis of insignificant correlations with the Crowne and Marlowe's (1960) social desirability scale, with significant ( $p = .01$ ) correlations with the total score on the scale, and with content

validity from factor analyses of a larger pool of items (Mehrabian & Epstein, 1972). The scale has seven subscales with intercorrelations significant at the .01 level and exceed 0.30 in all instances. The EETS was normed with males with a mean of 43 and standard deviation of 22. A split half reliability of  $r = .84$  was computed and validity was demonstrated by showing that scores on the measure predicted both aggression (low empathy subjects showed greater aggression than high empathy subjects) and helping behavior. In another study the reliability for the EETS was reported as .74 for a sample of 364 students and .77 for a sample of 279 students. The correlation of individual items revealed no weak items (Koch, 1991). As previously stated, in a review of empathy measures, Choplan et al., (1985) concluded that the EETS and the Hogan Empathy Scale were the two empathy instruments having the most extensive support in terms of reliability and validity.

A previous research study conducted by Koch (1991) with 190 medical students used both the HES and the EETS. She found a moderately low but positive correlation ( $r = .25$ ,  $p < .05$ ). Koch suggested that the two basic empathy measures shared some variance in common but tapped two different components of basic empathy. Furthermore, in another study (Marshall, W. L. & Maric, 1996) conducted with 29 child molesters and 29 community males findings revealed a strong relationship ( $r = .60$ ,  $p < .01$ ) between scores on the two measures of basic empathy.

#### Revised Private and Public Self-Consciousness Subscales

In this study self-awareness was defined as a developmental human trait of attending to one's own perceptions of feelings, attitudes, motives, or personality

characteristics and a trait of attending to think about self-aspects that form impressions in other people's eyes. The revised Private and Public Self-Consciousness subscales (See Appendix E) were used to operationalize self-awareness. The Private Self-Consciousness subscale was developed to assess "the tendency to think about and attend to the more covert, hidden aspects of the self, aspects that are personal in nature and not easily accessible to the scrutiny of other persons--for example, one's privately held beliefs, aspirations, values, and feelings" (Scheier & Carver, 1985, p. 687). The revised Public Self-Consciousness subscale was developed to assess "the tendency to think about those self-aspects that are matters of public display, qualities of the self from which impressions are formed in other people's eyes--for example, one's overt behavior, mannerisms, stylistic quirks, and expressive qualities (Scheier & Carver, 1985, p. 687). Furthermore, the trait (the tendency to direct attention inward or outward) of self-awareness rather than the state (self-directed attention as a result of either transient situational variables, chronic dispositions, or both) is measured with these subscales.

The revised Private and Public Self-Conscious subscales consist of 16 items in a likert-type format which asks the respondents to indicate the extent to which each statement is like them. The questionnaire requires subjects to provide responses on a 4-point scale, ranging from 0 (Not at all like me) to 3 (A lot like me). Fifteen of the items are positively worded; however, one item is negatively worded and will need to be reversed prior to scoring. Participants' scores are determined by summing the scores on the nine items on the private subscale and summing the scores on the seven public subscale items. Thus, scores can range from 0 to 27 on the private subscale and 0 to 21 on

the public subscale. Higher scores are indicative of higher levels of private or public self-awareness. An example of the items used on the revised Private Self-Consciousness subscale is the following: *I generally pay attention to my inner feelings*. An example of the items used on the revised Public Self-Consciousness subscale is the following: *I'm concerned about my style of doing things*.

Validity for the original scale was determined through factor analysis with all items loaded above .40 with their appropriate factor. Item analyses indicated that none of the items was endorsed in one direction by more than 85% of the sample (Feinstein, Scheier, & Buss, 1975). The original scale was administered to a second group of 152 college undergraduates and factor loadings and norms were essentially the same. Reliability was determined with a new sample of 84 subjects who completed the scale with a two week interval between administrations. Test-retest correlations for the original subscales were computed as .79 on both subscales. Cronbach alpha for the original scale was .69 for private self-consciousness and .79 for public self-consciousness.

The major changes in the revision consisted of replacing abstract wording of 15 items of the original scale with less confusing terminology and the deletion of one item which could not be made more understandable and still load on the appropriate factor. Validity for the revised subscales was determined with a sample of 298 undergraduates to compare the psychometric properties of the old scale to the revised scale. Factor analysis was performed (Scheier and Carver, 1985) and revealed that the factor structure of the original scale had remained stable over time. In addition, because the revised scale was very similar to that of the original scale, the authors observed that the revised scale

seemed to represent an appropriate substitute for the original scale. Further, subscale intercorrelations among and between the original and revised scales revealed a similar pattern. All of the correlations between each of the three subscales on the original scale and its counterpart on the revised scale were all in the low to mid .80s. Thus, the revised subscales provided data that were quite similar to the data provided by the original subscales.

Separate Cronbach alphas for each subscale were computed to determine the internal consistency of the revised scales. The revised Private Self-Consciousness subscale had a Cronbach alpha of .75 and the revised Public Self-Consciousness subscale had a Cronbach alpha of .84. These alphas were slightly higher than the subscale alphas computed for the original scale (Scheier & Carver, 1985).

Test-retest reliability of the revised subscales was assessed. A separate sample of 135 subjects completed the scale twice, with a 4-week interval between administrations. The test-retest correlation for the revised Private Self-Consciousness subscale was .76 and for the revised Public Self-Consciousness subscale the correlation was .71 (Scheier & Carver, 1985). In a study with 54 nursing students, Cronbach's alpha computed for the revised Private Self-Consciousness subscale was .57 (Carmon, 1992).

The revised scale was normed with a sample of 213 undergraduate men and 85 undergraduate women. There was a significant difference between the means for men and women on private self-consciousness ( $p < .01$ ) with women scoring higher than men (Scheier & Carver, 1985).

### Learning Styles Questionnaire

The Learning Styles Questionnaire (LSQ) developed by Honey and Mumford (1992) was first published in 1982 and revised in 1986 and again in 1992 (See Appendix F). It is an instrument that has primarily been used in the United Kingdom to measure learning styles and it has been used successfully with nursing students (Cavanagh, Hogan & Ramgopal, 1994; Dux, 1989). In developing the LSQ, the approach was to concentrate on observable behavior rather than the psychological basis for that behavior. This 80 items instrument contains four subscales of 20 randomly-ordered items which corresponds to one of the four learning styles of activists, reflectors, theorists, or pragmatists. Respondents are asked to circle an A or D to indicate broad agreement or disagreement respectively. The four styles are equivalent to the four stages of the experiential learning cycle. The LSQ is scored by summing one point for each item that is circled as agree and no points for items that are circled as disagree. Thus, an individual's score can range from 0 to 20 on each of the four subscales. A higher score is indicative of a stronger preference for that learning style. An important advantage of this instrument is that individual scores can be computed for comparison with other variables and group scores can also be compared to normed groups. Thus, the scores on the four subscales can be compared with a sample of 189 student nurses or with the general norms for 3,500 people that were published in the learning styles manual.

The instrument was normed by classifying the relative strengths of learning style preferences into the following categories:

A = very strong preference

B = strong preference

C = moderate preference

D = low preference

E = very low preference

The scores for over one thousand people were divided into these categories and a normal curve resulted. Data collected since 1982 based on populations totaling 3,500 have confirmed these general norms. For some individuals, no strongly preferred style emerges and these individuals are called *all rounders* because they adopt a variety of styles (Ramprogus, 1988).

Reliability of the LSQ was established by using a sample of 50 individuals in a test-retest with a two-week interval between administrations. The overall Pearson product-moment correlation was found to be .89. The subscale correlations for theorist, reflector, pragmatist, and activist were .95, .92, .87, and .81, respectively.

To establish validity, two small-scale studies compared the LSQ with the Kolb Learning Styles Inventory (1976) and found major differences in findings on apparently similar items. However, given the different approaches to the design of questions and theoretical underpinnings, it was not surprising (Cavanagh et al., 1994). Predictive validity was determined by administering the LSQ and having lecturers anticipate a series of behaviors such as who is prepared to participate in discussion and who will not, and who will experiment with different ways of behaving and those who keep to tried and trusted approaches. A study conducted with 192 nursing students reported that the most

prominent learning style was that of reflector and least favored was the activist style (Cavanagh et al, 1994). When the results from this study were compared with those of the normed nursing data, there was some degree of consistency. The researchers of the study recommended that further research was needed using this instrument.

An analysis conducted to compare Kolb's Learning Styles Inventory and the LSQ found that Kolb's four-stage learning cycle acceptable but criticized his instrument for its validity and reliability (Allinson & Hayes, 1988). Allinson and Hayes (1988) examined the LSQ through principal component analysis and found it to be preferable to the LSI as a measure of learning styles. These researchers reported that the LSQ was able to distinguish similar cognitive dimensions in two independent samples, it has better face validity, and it is more reliable.

#### Data Collection Procedure

Prior to collecting data, a pilot study with a comparable sample was conducted using 24 volunteers. Upon completion of the packet of research instruments and personal information questionnaire, volunteers were asked to give feedback regarding the readability of the questionnaire, instructions and instruments. Suggestions made by the subjects in the pilot study were incorporated into the data collection plan. For example, the principal investigator noted that two subjects had difficulty remembering the answer scale when the scale was only on the first page of the EETS; therefore, the answering scale was placed at the top of every page of that instrument.

For this study each dean or associate dean of the selected schools of nursing in southeastern United States was contacted. Explanation of the study were given with an



invitation to participate in the study (See Appendix G). Once permission was given to approach students and faculty, a request to do the study was made to the Institutional Review Board at the University of Tennessee, Knoxville (See Appendix H). Finally, a date and time was arranged with faculty members at each site to meet with the nursing students to explain the study and administer the research instruments.

Data collection was conducted by the principal investigator or by a research assistant. The research assistant was a doctorally prepared faculty member at that site. The instruments were administered during a class or orientation session. It took approximately 15-30 minutes for the participants to complete the instruments. The investigator explained the data collection process, the methods used to maintain student confidentiality, and the activities and time required if students chose to participate. Participants were told that the study was to investigate how baccalaureate pre-nursing students perceive themselves and to explore the relationships among those self perceptions, understanding of others, and learning. Confidentiality was assured and reiteration of the student's right to withdraw at any time during the study was given. Completion of the instruments was their consent to participate.

Each participant received a packet containing four numerically coded instruments, a numerically coded personal information questionnaire, two number-2 pencils, and a written general explanation of the study (see Appendix I). All packets were counterbalanced by sequentially rotating the order of the four instruments. Counterbalancing was utilized as a procedure to reduce biased response patterns and to control for possible correlations between measures that might result from

ordering effects. To maintain confidentiality, students were asked to return the completed instruments in the manila envelope and to place the envelope in a box left in the room.

#### Protection of Human Subjects

Human subjects approval was obtained from the Institutional Review Board (IRB) from the University of Tennessee, Knoxville (see Appendix J). Students were assured orally and in writing that there would be no penalty for refusal to participate in the study and were informed as to the purpose of the study, the approximate time involved to participate, name of the investigator, and telephone number and e-mail where the participants could contact the investigator.

Participants were informed of the risk to them, that none of their instructors would be told of their participation or see the raw data, and that the data would be managed and stored confidentially. Participants were also given written and verbal instructions that they had the right to refuse to participate or to withdraw from the study without any impact to themselves or to their educational status.

To insure confidentiality, no name was attached to any data. Only identification numbers were assigned to the instruments and personal information questionnaire. The completed forms will be maintained in a locked cabinet at the principal investigator's home for five years, and then will be shredded. Participants were assured that all data used in any presentations or publications would not contain any reference to their identity. Only the investigator and her major professor will have access to the completed instruments.

### Analysis of Data

Standard descriptive statistics, such as frequencies and means were used to describe the sample characteristics and demographic variables. Frequencies, means, standard deviations, and ranges were computed for the Emotional Empathic Tendency Scale, the Hogan Empathy Scale, the revised Private and Public Self-Consciousness subscales, and the Learning Styles Questionnaire. These scales were computer scored by the primary investigator to yield a single score for each scale or subscale.

Canonical correlation was used to address the research questions and to test the research hypothesis of relationships among baccalaureate pre-student nurses' basic empathy, self-awareness, and learning styles. Canonical correlation is used when there is more than one independent variable and more than one dependent variable because it gives a better understanding of all the relationships (Munro, 1997). Although canonical correlation analysis has not been used extensively in research studies, some nursing researchers have used this method of analysis (Boyle, 1990; Duffy, 1993; Fenence, 1979; Olson, 1995; Roberts, 1991).

In this study, the two measurements of basic empathy comprised the outcome, or dependent variables; whereas the independent variables were self-awareness and learning styles. Additionally, the personal variables of age, birth order, highest educational level, and previous training or previous education in communication skills, human relationships skills, or counseling skills were analyzed in the set of independent variables. A canonical correlation was used to answer the secondary research question to determine relationships among personal variables and that of basic empathy, self-awareness, and learning styles.

A significance level for the hypothesis and research questions for the study was set at 0.05.

Internal consistency for the reliability of the Hogan Empathy Scale and the Learning Styles Questionnaire was determined using the Kuder-Richardson 20 formula. Cronbach's alpha coefficients were used to assess reliability of the revised Private and Public Self-Consciousness subscales and the Emotional Empathic Tendency Scale.

Analysis was done on a IBM Pentium II personal computer. The Statistical Package for the Social Sciences, Version 9.0 for windows was used to analyze the data. The investigator of the study coded and entered the data into the statistical program.

#### Chapter Summary

This chapter outlined the method and procedures used for data collection and analysis to address the research questions and hypothesis. This was done to determine if there are relationships among baccalaureate pre-nursing students' basic empathy levels, self-awareness levels, and learning styles.

A correlational design provided an approach to examine the nature and direction of the relationships among baccalaureate pre-nursing students' basic empathy, self-awareness, and learning styles. This design was deemed the most appropriate approach to address the research questions and hypothesis because there is a set of dependent and a set of independent variables and a canonical correlation will best reveal the relationships among all the variables.

After review by and adherence to the guidelines of the IRB, 424 participants from eight different nursing programs in southeastern United States were asked to complete the

instruments. The participants were volunteer baccalaureate pre-nursing students enrolled in a nursing program at public educational institutions. Participants' scores on the Hogan Empathy Scale, the Emotional Empathic Tendency Scale, the revised Private and Public Self-Consciousness subscales, the Learning Styles Questionnaire, and selected items from the Personal Information Questionnaire were correlated to determine the relationships among basic empathy, self-awareness, learning styles, and selected psychosocial variables.

The reported statistical analyses included descriptive statistics such as means, ranges, and standard deviations. Inferential statistics such as canonical correlation were used to address the research questions and hypothesis.

## CHAPTER IV

## RESULTS

The purpose of this study was to explore relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. A middle-range theory of basic empathy, self-awareness, and learning styles derived from King's General Systems Framework was proposed and tested using canonical correlation. Two research questions and a hypothesis were analyzed using the SPSS package (Version 9.0).

In this chapter the findings of the study will be presented in four sections. The first section describes the sample. The second section identifies the psychosocial characteristics of the subjects. The third section discusses the performance of the sample on the scales and the reliability of the instruments. Finally, the fourth section reports the findings from the canonical correlation analysis used to determine relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students.

## Sample Demographics

The personal information questionnaire was designed by the investigator to collect personal characteristics of age, gender, ethnicity, marital status, parental status, and family income of the study participants to describe the sample. In addition, nursing educational level was assessed to determine eligibility to be in the study and other questions were asked for the analysis. The descriptive data for the sample are presented in Table 1. Although students from eight different sites from two southeastern states participated, over half of the sample ( $n = 217, 57.1\%$ ) was from three sites. Ages of

Table 1. Demographic Characteristics of the Sample.

Demographics	Frequency	Percentage of Sample
<b>Site</b>		
One	34	8.9
Two	44	11.6
Three	56	14.7
Four	18	4.7
Five	109	28.7
Six	52	13.7
Seven	46	12.1
Eight	21	5.5
<b>Age</b>		
18	8	2.1
19	27	7.1
20	95	25.0
21	78	20.5
22	32	8.4
23	21	5.5
24	14	3.7
25	17	4.5
26	13	3.4
27	9	2.4
28	14	3.7
29	6	1.6
30	4	1.1
31	8	2.1
32	2	.5
33	4	1.1
34	5	1.3
35	5	1.3
36	2	.5
38	1	.3
39	2	.5
40	2	.5
41	1	.3
42	2	.5
45	1	.3
47	5	1.3
50	2	.5

Table 1. (continued)

Demographics	Frequency	Percentage of Sample
<b>Gender</b>		
Females	331	87.1
Males	49	12.9
<b>Ethnic Background</b>		
African American	23	6.1
Caucasian	335	88.2
Asian American	9	2.4
Hispanic	5	1.3
Native American	2	.5
Other	6	1.6
<b>Marital Status</b>		
Married	100	26.3
Single	259	68.2
Divorced/Separated	21	5.3
Widowed	1	.3
<b>Parental Status</b>		
No children	299	78.7
One Child	35	9.2
2-3 Children	38	10.0
4 or more Children	5	1.3
No Response	3	.8
<b>Income</b>		
Below \$20,000	89	23.4
\$20,001 to \$40,000	83	21.8
\$40,001 to \$60,000	74	19.5
\$60,001 to \$80,000	52	13.7
\$80,001 to \$100,000	38	10.0
Over \$100,000	34	8.9
No Response	10	2.6



participants in the study ranged from 18 to 50 with over half of the sample (63.1%) between the ages of 18 and 22 years ( $M = 23.6$  years,  $SD = 5.79$ ). As expected, the sample was predominantly female, Caucasian, single, childless, and had an annual family income of less than \$60,000. Although 283 participants in the study had only a high school education, 97 participants had a college degree.

#### Psychosocial Factors

Frequencies for psychosocial factors analyzed by the canonical correlation, which included birth order, highest level of education, previous education and previous training in communication skills, human behavior skills, or counseling skills, were obtained and are presented in Table 2. Because these psychosocial factors were nominal level variables, they had to be recoded to describe the categories for the canonical correlation using the dummy coding method (Stevens, 1996).

The majority of the sample were first or last born children. Furthermore, the majority of the sample reported previous education or previous training in communication skills, human relationships skills, or counseling skills. Almost fifty percent of the sample had both education and training in these skills; whereas, only 72 participants had no education or training in these skills.

In addition to the original four learning styles, a fifth style, the *all rounder*, was computed and analyzed. The *all rounder* adopts a variety of learning styles with no strong preferences but rather has similar scores for three of the four, or for all four learning styles (McLeod, Lincoln, McAllister, Maloney, & Purcell, 1995). There were 74 participants (19.5%) in this study who were all rounders.

Table 2. Descriptive Statistics for Psychosocial Factors.

Psychosocial Factor	Frequency	Percentage of Sample
<b>Birth Order</b>		
Firstborn	128	33.7
Only Child	44	11.6
Middle Child	74	19.5
Last Born	134	35.3
<b>Highest Level of Education</b>		
High School	283	74.5
Associate Degree	39	10.3
BA or BS	54	14.2
MA or MS	4	1.0
<b>Previous Education</b>		
No	151	39.7
Yes	229	60.3
<b>Previous Training</b>		
No	115	30.3
Yes	265	69.7
<b>Both Previous Education and training</b>		
No	195	51.3
Yes	185	48.7
<b>Neither Previous Education or training</b>		
No	72	18.9
Yes	308	81.1
<b>All Rounders</b>		
No	306	80.5
Yes	74	19.5

### Performance of Sample on Scales and Reliability of Instruments

Means, standard deviations, and ranges were computed on all items and on all scales used to assess the concepts of basic empathy, self-awareness, and learning styles. The mean, standard deviation, possible range, and actual range for sample participants for each scale are presented in Table 3. In addition, reliability was computed for each scale. The Kuder-Richardson 20 formula was used to assess internal consistency for the HES and the LSQ. The assumptions for the use of the KR 20 formula are that data are dichotomous and the difficulty level of all items is not the same (Waltz et al., 1991). Both the HES and the LSQ met these assumptions. A Cronbach's alpha was obtained for the revised Private and Public Self-Consciousness subscales and the EETS.

#### Basic Empathy

The Hogan Empathy Scale, used in the current study, was one of the two measures of basic empathy. Student scores on this scale were in the moderate range with a mean score of 23.0789 ( $SD = 3.8786$ ). Data distribution was only slightly skewed to the right (positively), and there were no scores considered as outliers. The reliability coefficient was .48. While Hogan (1969) reported a reliability coefficient of .71 using the Kuder-Richardson 21 formula on the original 64-item version of the scale, rather than the 39-item version, the reliability in the present study was similar to that reported by other researchers (Allgood, nee Raile, 1983; Bussa, 1993; Forsyth, 1979; Koch, 1991; May & Allgood, 2000). The reliability coefficient of .48 is not satisfactory and it is a limitation of this study. However, the index of reliability was determined to be .69 which is

Table 3. Ranges, Means, and Standard Deviations for Basic Empathy, Self-Awareness, and Learning Styles Scales for Sample.

Variable	Instrument	Possible Range	Actual Range	Mean	SD
Basic Empathy	HES	0 to 39	14 to 34	23.0789	3.8786
	EETS	-132 to +132	-22 to 108	47.0026	23.6802
Self-Awareness	Revised Private	0 to 27	7 to 27	17.4132	4.2539
	Self-Consciousness				
Learning Styles	Revised Public	0 to 21	2 to 21	14.9237	4.1941
	Self-Consciousness				
Learning Styles	Learning Styles				
	Questionnaire				
	Activists	0 to 20	1 to 18	9.3632	3.5387
	Reflectors	0 to 20	6 to 20	14.8263	3.1264
	Theorists	0 to 20	4 to 19	12.4921	2.9557
Pragmatists	0 to 20	5 to 19	12.6132	2.7909	

satisfactory (Garrett, 1958, p. 348). The index of reliability “. . . measures the dependability of test scores by showing how well obtained scores agree with their theoretically true values. The index of reliability gives the maximum correlation which the given test is capable of yielding in its present form” (Garrett, 1958, p. 349).

The other measure of basic empathy administered in this study was the EETS. On this scale, scores again were in the moderate range with a mean of 47.0026 ( $SD = 23.6802$ ). Data distribution was slightly skewed to the left (negatively), and three scores were determined to be outliers and were removed. A Cronbach's alpha of .79 was computed in this study. This high reliability coefficient was similar to that found by Koch (1991) which indicated that the EETS had good reliability for this sample.

#### Self-Awareness

Self-awareness was measured by the revised Private Self-Consciousness subscale. Participants' scores were in the moderate range with a group mean of 17.4132 ( $SD = 4.2539$ ). Data distribution was slightly skewed to the right (positively), and one score was identified as an outlier and was removed. For this study, a Cronbach's alpha of .67 was computed.

In addition, self-awareness was measured by the revised Public Self-Consciousness subscale. Scores on this subscale were again in the moderate range with a group mean score of 14.9237 ( $SD = 4.194$ ). Data distribution was slightly skewed to the left (negatively), and one score was identified as an outlier and was removed. A Cronbach's alpha of .81 was computed in this study.

While Scheier and Carver (1985) reported higher reliability coefficients of .75 for the private subscale and .84 for the public subscale, the scores in the present study were compared favorably to those obtained for the original scale which were .69 for private self-consciousness and .79 for public self-consciousness (Fenigstein et al., 1975).

### Learning Styles

Learning styles were measured by the Learning Styles Questionnaire. There are four subscales each representing a different learning style: activists, reflectors, theorists, and pragmatists. The group mean score for the activist learning style was 9.3632 ( $SD = 3.5387$ ). This score was the lowest mean of the four learning styles. Data distribution was only slightly skewed to the right (positively), and there were no scores considered as outliers. It should be noted that the kurtosis for this measure was -.596. The reliability coefficient was .72 for the activist subscale. The index of reliability was computed at .85 (Garrett, 1958).

A mean of 14.8263 ( $SD = 3.1264$ ) was calculated for the reflector learning style. Data distribution was slightly skewed to the left (negatively). One outlier was identified on this subscale and was removed. The reliability coefficient was .70 and the index of reliability was .84 (Garrett, 1958).

The group score for the theorists learning style was 12.4921 ( $SD = 2.9557$ ). Data distribution was slightly skewed to the left (negatively), and there were no scores identified as outliers. The reliability coefficient was .61 and the index of reliability was computed at .78 (Garrett, 1958)

Pragmatists learning style scores had a group mean of 12.6132 ( $SD = 2.7909$ ). Again, data distribution was slightly skewed to the left (negatively). Three outliers were identified and removed. The reliability coefficient was .56. The index of reliability was computed at .75 (Garett, 1958).

### Research Questions and Hypothesis

The hypothesis in this study stated: There are relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. The first research question for this study was: What is the nature of the relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students? A secondary research question asked: What is the nature of the relationships among basic empathy, self-awareness, learning styles, and psychosocial personal characteristics of baccalaureate pre-nursing students? These research questions and hypothesis were tested together using one canonical correlation. Wikoff and Miller (1991) recommended the use of canonical analysis for examining relationships between two sets of continuously measured variables. A canonical correlation is used to explore many-to-many relationships because it accounts for all of the data, which gives a better understanding of all the relationships (Munro, 1997). Thus, a canonical correlation was computed to analyze the relationships between a set of scores of basic empathy and a set of scores of self-awareness, learning styles, and psychosocial factors. The basic empathy set included two measures of basic empathy. The set of self-awareness included two measures of private and public self-awareness and the learning styles included five learning styles. In

addition, there were five psychosocial factors in the canonical correlation. The overall relationships among basic empathy, self-awareness, and learning styles was significant beyond the .001 alpha level using Bartlett's test of Wilk's lambda. The canonical correlation analysis is reported in Table 4.

Because there cannot be more canonical correlation coefficients than there are variables in the smaller set (the two dependent measures of basic empathy), two canonical correlation coefficients were produced. The first canonical correlation squared equals 0.197, which explains 19.7% of the variance. The second canonical correlation squared equals 0.136, which explains 13.6% of the variance. Correlation coefficients greater than 0.30 are meaningful (Munro, 1997). Therefore, the first canonical variate indicated that students who reported higher levels of self-awareness (both private and public ) and who were less theoretical and less pragmatic in their learning styles had higher levels of basic empathy. The second canonical variate indicated that students who reported lower levels of public self-awareness, were more activist, less theoretical and reflective in their learning styles had higher levels of basic empathy as measured by the HES, but they had lower levels of basic empathy as measured by the EETS.

Additional support for the hypotheses was found in this study. According to Stevens (1996), to obtain more reliability for the second canonical variate, a smaller number of variables for the canonical correlation should be selected to increase the subjects to variables ratio. In the present study the psychosocial factors were removed; this deletion resulted in an increase of the subject to variable ratio to 47 to 1. A



Table 4. Canonical Correlational Analysis Among Basic Empathy Variables (Set 1)  
Self-Awareness, Learning Styles, and Psychosocial Factors (Set 2).

Variable Sets	Canonical Variate	
	1	2
Set 1		
Basic Empathy		
HES	.477*	.879*
EETS	.928*	-.371*
Set2		
Private Self-Awareness	.517*	.127
Public Self-Awareness	.413*	-.387*
Learning Styles		
Activist	.092	.671*
Reflector	-.128	-.724*
Theorist	-.474*	-.345*
Pragmatist	-.719*	.038
All Rounder (1=Yes, 0=No)	-.013	.121
Psychosocial Factors		
Age	-.168	.100
Birth Order (1=First born & Only child, 0=Middle child & Last born)	.075	.075
Educational Level (1=High School or GED, 0=College Degree)	-.101	.179
Previous Education (1=Yes, 0=No)	.089	.117
Previous Training (1=Yes, 0=No)	-.078	.170
Canonical Correlation	.444	.368
Variance Explained	19.7%	13.6%

\* = structure coefficients  $\geq .30$

canonical correlation was recomputed just for the variables in the theoretical model. The canonical variables loaded on the same factors and accounted for 18.6% of the variance on the first correlation variate and 12.2% on the second correlation variate (See Table A-2, Appendix K). Therefore, the psychosocial factors accounted for a small percentage of the total variance; whereas, the variables of the theoretical model accounted for almost the total amount of variance.

The findings supported the hypothesis that basic empathy, self-awareness, and learning styles are related. Psychosocial factors (age, birth order, highest educational level achieved, previous training, education, or both in communication skills, human relationships skills, or counseling skills) were not significantly related to basic empathy, self-awareness, and learning styles.

#### Summary of Findings

In this sample of 380 baccalaureate pre-nursing students, scores on the HES, EETS, revised Private Self-Consciousness subscale, revised Public Self-Consciousness subscale, and the LSQ were correlated. A canonical correlation coefficient was used to test the hypothesis: Basic empathy, self-awareness, and learning styles are related in baccalaureate pre-nursing students. The hypothesis was supported. Based on the findings, basic empathy and self-awareness were related to all four original learning styles. Psychosocial factors of age, birth order, highest education level achieved, previous training, education, or both training and education in communication skills, human relationships skills, or counseling skills were not significantly related to basic empathy, self-awareness, and learning styles.

## CHAPTER V

## DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

This study explored relationships among basic empathy, self-awareness, and learning styles. Basic empathy is a human developmental trait that was theorized to be related to self-awareness and learning styles. Previous research had suggested that basic (trait) empathy was preferable to trained (state) empathy as it was sustained over time and was authentic, rather than rote behaviorally based responses. In addition, while self-awareness has been related to empathy in the literature (Baillie, 1996; Carmon, 1992; Davis, C. M., 1990; Lammert, 1986; Raudonis, 1995; Seeger, 1977; Watson, 1979), and although empathy and learning styles have been related (Lange, 1979), and even though self-awareness and learning styles have been related (McCarthy & Schmeck, 1988) no studies have been conducted to support those relationships. Therefore, this study explored relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. The findings of this study add new understanding to the nature of these relationships.

This chapter presents a discussion of the findings and the implications for nursing education. Recommendations are proposed for nursing education and for future studies.

## Discussion

The advancement of nursing science is dependent on the extension and testing of nursing theories. In this regard, a middle-range theory of basic empathy, self-awareness,

and learning styles, derived from a nursing theory of personal system empathy conceptualized within King's General Systems Framework, was proposed and tested. According to King (1981), concepts in the personal system are related because individuals react holistically to their experiences. This study provides additional support for the relationships among personal system concepts of perception, self, body image, and learning. Also, King observed that knowledge about the concepts of the personal system helps one to understand individuals. The findings of this study add to the knowledge about personal systems and thus, greater knowledge about student nurses. Furthermore, King stated that individuals' perceptions of self and body image are reflected in their personal behavior. Thus, student nurses will be better able to facilitate empathic therapeutic relationships with their clients when they are aware of and use their own intrapersonal empathy and self-awareness. Knowledge gained from the findings about relationships among basic empathy, self-awareness, and learning styles can assist nurse educators to recognize and value basic empathic responses of student nurses.

While most previous studies have focused on the interpersonal system to explore the concept of empathy, little research has been devoted to the personal system. Thus, this study represented a beginning exploration of the concept of basic empathy within the intrapersonal system and extends Alligood's (1992, 1995) work. Findings from the present study provide initial support for the nursing theory of personal system empathy which was derived from King's General Systems Framework (1981). This theory proposed that empathy organizes perceptions; facilitates awareness of self and others;

increases sensitivity; promotes shared respect, mutual goals, and social awareness; cultivates understanding of individuals within a historical and social context; and affects learning (Alligood & May, in press). Results of the present study suggest that basic empathy is related to self-awareness and learning as proposed by the nursing theory of personal system empathy. Basic empathy was related to self-awareness (both private and public) and related to all four learning styles (theorist, pragmatist, reflector, and activist).

The findings of this study revealed that a diversity exists in basic empathic levels of baccalaureate pre-nursing students. As a group, basic empathy levels were in the moderate range. Similar findings were reported by other researchers (Alligood, 1991; Anderson, 1990; Barnett, Howard, King, & Dino, 1981; Brunt, 1985; Bussa, 1993; Forsyth, 1979; Gold & Rogers, 1995; Harsch, 1989; Koch, 1991; Mehrabian & Epstein, 1972; Reynolds & Presly, 1988; Van Ornum, Foley, Burns, DeWolfe, & Kennedy, 1981). Also, although both private and public self-awareness levels were higher than levels reported by other researchers (Carmon, 1992; Scheier & Carver, 1985), the levels in this sample reflected diversity in baccalaureate pre-nursing students. Therefore, nursing students do come into the education setting with existing different levels of basic empathy and self-awareness that must be taken into consideration by nurse educators.

Learning styles must also be taken into consideration by nurse educators as the findings of this study suggested that theorist and pragmatic learning styles were inversely correlated with basic empathy and self-awareness. As a group, the highest mean score for the four original learning styles was the reflector learning style and the lowest mean score was the activist learning style. This is similar to findings of other researchers (Cavanagh

et al., 1994; Dux, 1989; Honey & Mumford, 1992). However, some researchers (Lovie-Kitchin, Coonan, Sanderson, & Thompson, 1989; McLeod et al., 1995) have found a preference by students in health professions for activist and reflector learning styles; whereas, theorists and pragmatists were the least prevalent learning styles in their studies.

A possible explanation why theorists and pragmatic learning styles were inversely correlated with basic empathy and self-awareness is suggested in Honey and Mumford's (1992) analysis of each of the learning styles. According to Honey and Mumford, theorists think problems through in a step by step, logical way and tend to be detached, analytical, and dedicated to rational objectivity rather than anything subjective or ambiguous. Pragmatists like to try out new ideas to see if they work in practice and tend to act quickly on ideas that attract them, but they tend to be impatient with ruminating and open-ended discussions. These tendencies for the theorists and pragmatists could impact on their basic empathy level and self-awareness as conceptualized in the present study. Also, Baillie (1996) found that effective communication skills, particularly listening, and time to *hear the patient's story* were important in empathy. In addition, being empathic meant an individual was not detached, but rather a close relationship with a patient was found to be important. Benner and Wrubel (1989) observed that detachment is not possible if nurses care. The tendencies of pragmatists to be impatient with open-ended discussions and theorists to be detached would not be congruent with developing empathic relationships. Thus, it is important for nurse educators to be aware of the particular pre-existing learning styles that nursing students have.

Basic empathy was conceptualized as a multidimensional construct and measured with two instruments. Some differences in relationships among basic empathy, self-awareness, and learning styles were found in the two canonical variates. These differences provide additional support for the conceptualization of empathy as a multidimensional construct as has been suggested in the literature (Bennett, 1995; Davis, M. H., 1979; Gladstein, 1983; Koch, 1991; Williams, C. A., 1990). However, further significance of the findings is that the middle-range theory of basic empathy, self-awareness, and learning styles was supported with both measures of basic empathy.

Questions arise concerning other relationships as proposed in the nursing theory of personal system empathy. Sensitivity, shared respect, and mutual goals were not measured with the instruments used in this study. Clarification of those relationships with basic empathy may require that other dimensions of basic empathy be considered in the future.

Because it was thought that the middle-range theory of basic empathy, self-awareness, and learning styles might be affected by psychosocial personal characteristics of students, relationships among them were explored. The selected psychosocial personal variables were the following: (1) age, (2) birth order, (3) highest educational level achieved, (4) previous training in communication skills, human relationships skills, or counseling skills, (5) previous education in communication skills, human relationships skills, or counseling skills, and (6) both previous training and education in communication skills, human relationships skills, and counseling skills. The present

study's findings suggests that basic empathy, self-awareness, and learning styles are not related to those selected psychosocial factors.

The psychosocial factors of age and highest educational level were not related. This finding is similar to that found in previous studies (Brunt, 1985; Bussa, 1993; Eckler, 1994; Forsyth, 1979; Gold & Rogers, 1995; Stetler, 1977). Other psychosocial factors have also been studied. For example, the relationship between birth order and empathy has been investigated. Some researchers have found that later born children have higher levels of empathy (Murawski & Miederhoff, 1995; Stotland & Dunn, 1963; Stotland, Sherman, & Shaver, 1971; Stotland & Walsh, 1963) while others have suggested that different types of empathy may vary according to ordinal position and gender of sibling (Bossard & Boll, 1955; Sampson, 1962). The findings in the present study were similar to other studies which had not found a relationship between empathy and birth order (Altman & Rule, 1980; Ernst & Angst, 1983; Marshall, E. et al., 1994).

An interesting finding of this study was that the majority of participants reported that they had previous training, education, or both training and education in communication skills, human relationship skills, or counseling skills. However, previous training and education were not related to basic empathy, self-awareness, or learning styles. Thus, this finding provides additional support for the lack of sustained effects of training or education (Daniels, Denny, & Andrews, 1988; Evans, Wilt, Alligood, & O'Neil, 1998; Herbeck & Yammarino, 1990; LaMonica, 1983; Thomson, Hassenkamp, & Mansbridge, 1997). However, the importance of this finding is not that psychosocial factors were insignificant to relationships of basic empathy, self-awareness, and learning



styles but rather that the removal of them from the canonical correlation provided additional support for the middle-range theory.

These findings raise the following question: Are there other psychosocial factors such as gender and ethnicity which need to be explored? This is particularly important because some researchers (Altman & Rule; Bussa, 1993; Marshall, E. et al., 1994) have found significant relationships between empathy and ethnicity, and other researchers have found significant differences between males and females (Becker & Sands, 1988; Davis, M. H., 1983a; Forsyth, 1979; Hoffman, 1977; MacDonald, 1977; Mehrabian & Epstein, 1972; Williams, C. L., 1979).

### Conclusions

Based upon the findings of the present study, it can be concluded that implications for nursing education need to be considered. The findings of this study provide support for significant relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. Consequently, there is a need for more emphasis in the curriculum on students' personal development of basic empathy through facilitation of self-awareness. Developing a greater sense of awareness of who one is as a person and as a health professional, which includes feelings, thoughts, needs, and behavior, is important in gaining a clearer understanding of how individual behaviors affect nurse-client relationships. This means that students need to be aware of themselves as a necessary condition to being able to empathize with another person.

The findings in this study suggest that pre-nursing students use reflector and pragmatic learning styles more often than other learning styles. Thus, these learning

styles need to be recognized and facilitated and opportunities to use these learning styles must be incorporated into students' educational experiences. Furthermore, self-awareness is an essential component of reflection. Therefore, the benefits of integrating journaling, debriefing sessions, and collaboration, into nursing education experiences must be considered as learning tools to enhance reflection and self-awareness, which in turn can facilitate basic empathy (Davis, 1995; Dewing, 1990; Durgahee, 1998; Landeen et al., 1992; Nealon, 1993; Patton et al., 1997; Shields, 1994; Smith, C., 1995).

In this study the proposal that there is a need to shift the focus of educational efforts to facilitation of intrapersonal empathy is further supported (Evans et al., 1998). While the focus in nursing education has been trained empathy, a shift in emphasis to basic empathy raises questions concerning the selection process for future nurses. Much effort is put into teaching behavioral skills and techniques to increase levels of trained empathy and self-awareness; whereas, basic empathy suggests that selection of students may be a crucial factor. This calls for emphasis on career counseling. The argument could be made that nursing education should expend more energy counseling students who possess basic empathy and self-awareness into nursing rather than on teaching strategies to increase levels of trained empathy. In addition to recruitment of individuals with basic empathy, nurse educators must be cognizant of basic empathy levels that students possess upon entering a nursing program. New methods must be considered to enhance and facilitate the use of students' natural empathic responses. These methods could capitalize on the new understanding concerning basic empathy as proposed by this study.

Often psychomotor skills are emphasized more than affective skills in nursing education. Facilitating basic empathy leads to a greater commitment by nursing programs to strengthen the affective aspects in students' learning. To be an empathic health provider, development of affective skills that foster the therapeutic use of *self* is imperative.

### Recommendations

Because empathy has been recognized as an important area for research, nurse researchers must continue to explore the factors that promote or create barriers that influence the ability of students to use their own personal empathic responses in their nurse-client interactions. Based upon the review of the literature and the findings of the present study, the following recommendations are suggested for the continued investigation of basic empathy:

1. Design and conduct further studies of basic empathy in King's conceptual framework and the nursing theory of personal system empathy. Examination of basic empathy and self-awareness with other personal system concepts of time, space, and growth and development could further extend knowledge about these important concepts in nursing.
2. Study basic empathy, self-awareness, and learning styles in different levels and diverse groups of nursing. The current study should be extended to other groups such as new graduates and experienced nurses. In addition, the study could be replicated with a sample of students from diploma or associate degree programs. A study with older lifelong learners would provide knowledge

concerning life experiences and basic empathy, self-awareness, and learning styles. A longitudinal study would provide additional information on the impact that education has on self-awareness levels and learning styles of nursing students and how that influences the manifestation of students' personal system empathy.

3. Extend the sample to include more ethnic and gender diversity. It may be necessary to replicate the study in other states which have larger numbers of minority students. In addition, replication of the study with other professions, such as education or social work, that are predominantly female would demonstrate if the relationships among basic empathy, self-awareness, and learning styles are unique to nursing students. This would further support and clarify the conceptualization of basic empathy in King's General Systems Framework.
4. Develop an instrument to assess basic empathy as conceptualized within King. The difficulty of locating reliable instruments which would adequately measure basic empathy for nurses indicates an imperative need for developing tools that will accurately measure basic empathy. Instruments need to be developed and validated to measure basic empathy in nursing as conceptualized in King's framework.
5. Measure basic empathy as a multidimensional construct. Future studies could examine other proposed relationships in the nursing theory of personal system empathy such as basic empathy, sensitivity, shared respect, or mutual goals.

6. Consider testing counseling strategies for recruiting nursing students and curriculum methods that facilitate basic empathic development.

Questions still remain concerning the concepts of basic empathy, self-awareness, and learning styles in nursing students. However, the findings of this study provide initial support and the beginning groundwork for additional research in this area. King (1981) noted that individuals are open systems interacting with the environment and whose perceptions influence their interactions and their health. The significant relationships among basic empathy, self-awareness, and learning styles within a nursing framework has implications for the development of nurses and nursing research.

#### Summary

In summary, the purpose of the study was to explore the relationships among basic empathy, self-awareness, and learning styles of baccalaureate pre-nursing students. Findings of support for the middle-range theory of basic empathy, self-awareness, and learning styles and the nursing theory of personal system empathy were discussed. The development of King science has been considered and conclusions and recommendations for nursing education and for future studies have been set forth.

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APPENDICES

APPENDIX A

TABLE A-1. ONE-WAY ANALYSIS OF VARIANCE  
OF STUDY INSTRUMENTS BY SITE

Table A-1. One-Way Analysis of Variance of Study Instruments by Site

Instrument	Sum of Squares	df	Mean Square	F	Sig.
<b>HES</b>					
Between Groups	83.115	7	11.874	.786	.599
Within Groups	5618.517	372	15.104		
Total	5701.632	379			
<b>EETS</b>					
Between Groups	3549.121	7	507.016	.903	.504
Within Groups	208975.88	372	561.763		
Total	212525.00	379			
<b>Private</b>					
Between Groups	242.365	7	34.624	1.947	.061
Within Groups	6615.769	372	17.784		
Total	6858.134	379			
<b>Public</b>					
Between Groups	129.402	7	18.486	1.052	.394
Within Groups	6537.385	372	17.574		
Total	6666.787	379			
<b>Activist</b>					
Between Groups	119.389	7	17.056	1.371	.216
Within Groups	4626.495	372	12.437		
Total	4745.884	379			
<b>Reflector</b>					
Between Groups	70.722	7	10.103	1.034	.407
Within Groups	3633.815	372	9.768		
Total	3704.537	379			
<b>Theorist</b>					
Between Groups	69.189	7	9.884	1.134	.341
Within Groups	3241.788	372	8.714		
Total	3310.976	379			
<b>Pragmatist</b>					
Between Groups	39.907	7	5.701	.728	.648
Within Groups	2912.228	372	7.829		
Total	2952.134	379			

APPENDIX B

PERSONAL INFORMATION QUESTIONNAIRE

### PERSONAL INFORMATION QUESTIONNAIRE

All information on this questionnaire is to be kept confidential. Please do not write your name on this questionnaire.

1. Age: \_\_\_\_\_
2. Gender: Male \_\_\_\_\_ Female \_\_\_\_\_
3. Ethnicity (Please check one):
 

<input type="checkbox"/> African American	<input type="checkbox"/> Hispanic
<input type="checkbox"/> Caucasian	<input type="checkbox"/> Native American,
<input type="checkbox"/> Asian American	Eskimo
<input type="checkbox"/> Other (Specify): _____	
4. Average yearly family income:
  - Below \$20,000
  - Between \$20,001 and \$40,000
  - Between \$40,001 and \$60,000
  - Between \$60,001 and \$80,000
  - Between \$80,001 and \$100,000
  - Over \$100,000
5. The highest educational credential that you have obtained within nursing:
  - LPN or LVN
  - Diploma
  - Associate
6. The highest educational credential that you have obtained outside of nursing:
  - High school diploma or GED
  - Associate
  - BA or BS
  - MA or MS
  - PhD
7. Marital Status:  Married  Single  Divorced  Separated  Widowed
8. Parental Status:  No children  1 child  2-3 children  4+ children
9. What is your birth order in your family?
  - Firstborn
  - Only child
  - Middle child
  - Lastborn



10. Have you had any previous education (courses, workshops, etc.) in communication skills, human relations skills, or counseling skills?  Yes  No

11. Have you had any previous training (youth groups, church groups, volunteer work, etc.) in communication skills, human relations skills, or counseling skills?  
 Yes  No

APPENDIX C  
HOGAN EMPATHY SCALE

**DIRECTIONS:** Indicate a **T** for true if you believe the statement is true or an **F** for false if you believe the statement is false. **CIRCLE** the appropriate letter on the scale that follows each statement.

- |   |   |   |
|---|---|---|
| 1. A person needs to "show off" a little now and then.                            | T | F |
| 2. I liked <i>Alice in Wonderland</i> by Lewis Carroll.                           | T | F |
| 3. Clever, sarcastic people make me feel very uncomfortable.                      | T | F |
| 4. I usually take an active part in the entertainment at parties.                 | T | F |
| 5. I feel sure that there is only one true religion.                              | T | F |
| 6. I am afraid of deep water.   | T | F |
| 7. I must admit I often try to get my own way regardless of what others may want. | T | F |
| 8. I have at one time or another in my life tried my hand at writing poetry.      | T | F |
| 9. Most of the arguments or quarrels I get into are over matters of principle.    | T | F |
| 10. I would like the job of a foreign correspondent for a newspaper.              | T | F |
| 11. People today have forgotten how to feel properly ashamed of themselves        | T | F |
| 12. I prefer a shower to a bathtub.   | T | F |
| 13. I always try to consider the other fellow's feelings before I do something.   | T | F |
| 14. I usually don't like to talk much unless I am with people I know very well.   | T | F |
| 15. I can remember "playing sick" to get out of something.                        | T | F |
| 16. I like to keep people guessing what I'm going to do next.                     | T | F |

- |  |   |   |
|--|---|---|
| 17. Before I do something I try to consider how my friends will react to it.   | T | F |
| 18. I like to talk before groups of people.  | T | F |
| 19. When a man is with a woman he is usually thinking about things related to her sex.                                       | T | F |
| 20. Only a fool would try to change our American way of life.  | T | F |
| 21. My parents were always very strict and stern with me.  | T | F |
| 22. Sometimes I rather enjoy going against the rules and doing things I'm not supposed to do.                                | T | F |
| 23. I think I would like to belong to a singing club.  | T | F |
| 24. I think I am usually a leader in my group.   | T | F |
| 25. I like to have a place for everything and everything in its place.   | T | F |
| 26. I don't like to work on a problem unless there is the possibility of coming out with a clear-cut and unambiguous answer. | T | F |
| 27. It bothers me when something unexpected interrupts my daily routine.   | T | F |
| 28. I have a natural talent for influencing people.  | T | F |
| 29. I don't really care whether people like me or dislike me.  | T | F |
| 30. The trouble with many people is that they don't take things seriously enough.  | T | F |
| 31. It is hard for me to just sit still and relax.   | T | F |
| 32. As a rule I have little difficulty in "putting myself into other peoples' shoes."  | T | F |
| 33. I have seen some things so sad I almost felt like crying.  | T | F |

- |  |   |   |
|--|---|---|
| 34. Disobedience to the government is never justified.   | T | F |
| 35. It is the duty of a citizen to support his country, right or wrong.                                  | T | F |
| 36. I am usually rather short-tempered with people who come around and bother me with foolish questions. | T | F |
| 37. I have a pretty clear idea of what I would try to impart to my students if I were a teacher.         | T | F |
| 38. I enjoy the company of strong-willed people.   | T | F |
| 39. I frequently undertake more than I can accomplish.   | T | F |

APPENDIX D

EMOTIONAL EMPATHIC TENDENCY SCALE

**DIRECTIONS:** Please use the following scale to indicate the degree of your agreement or disagreement with each of the statements below. **Circle** your numerical answer on the scale that follows each statement.

ANSWER SCALE:

- +4 = very strong agreement
- +3 = strong agreement
- +2 = moderate agreement
- +1 = slight agreement
- 1 = slight disagreement
- 2 = moderate disagreement
- 3 = strong disagreement
- 4 = very strong disagreement

- |  |                         |
|--|-------------------------|
| 1. It makes me sad to see a lonely stranger in a group.              | -4 -3 -2 -1 +1 +2 +3 +4 |
| 2. People make too much of the feelings and sensitivity of animals.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 3. I often find public displays of affection annoying.               | -4 -3 -2 -1 +1 +2 +3 +4 |
| 4. I am annoyed by unhappy people who are just sorry for themselves. | -4 -3 -2 -1 +1 +2 +3 +4 |
| 5. I become nervous if others around me seem to be nervous.          | -4 -3 -2 -1 +1 +2 +3 +4 |
| 6. I find it silly for people to cry out of happiness.               | -4 -3 -2 -1 +1 +2 +3 +4 |
| 7. I tend to get emotionally involved with a friend's problems.      | -4 -3 -2 -1 +1 +2 +3 +4 |
| 8. Sometimes the words of a love song can move me deeply.            | -4 -3 -2 -1 +1 +2 +3 +4 |
| 9. I tend to lose control when I am bringing bad news to people.     | -4 -3 -2 -1 +1 +2 +3 +4 |
| 10. The people around me have a great influence on my moods.         | -4 -3 -2 -1 +1 +2 +3 +4 |

ANSWER SCALE:

- +4 = very strong agreement
- +3 = strong agreement
- +2 = moderate agreement
- +1 = slight agreement
- 1 = slight disagreement
- 2 = moderate disagreement
- 3 = strong disagreement
- 4 = very strong disagreement

- |   |                         |
|---|-------------------------|
| 11. Most foreigners I have met seemed cool and unemotional.   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 12. I would rather be a social worker than work in a job training center.                                   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 13. I don't get upset just because a friend is acting upset.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 14. I like to watch people open presents.   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 15. Lonely people are probably unfriendly.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 16. Seeing people cry upsets me.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 17. Some songs make me happy.   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 18. I really get involved with the feelings of the characters in a novel.                                   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 19. I get very angry when I see someone being ill-treated.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 20. I am able to remain calm even though those around me worry.   | -4 -3 -2 -1 +1 +2 +3 +4 |
| 21. When a friend starts to talk about his/her problems, I try to steer the conversation to something else. | -4 -3 -2 -1 +1 +2 +3 +4 |
| 22. Another's laughter is not catching for me.  | -4 -3 -2 -1 +1 +2 +3 +4 |



ANSWER SCALE:

- +4 = very strong agreement
- +3 = strong agreement
- +2 = moderate agreement
- +1 = slight agreement
- 1 = slight disagreement
- 2 = moderate disagreement
- 3 = strong disagreement
- 4 = very strong disagreement

- |   |                         |
|---|-------------------------|
| 23. Sometimes at the movies I am amused by the amount of crying and sniffing around me. | -4 -3 -2 -1 +1 +2 +3 +4 |
| 24. I am able to make decisions without being influenced by people's feelings.          | -4 -3 -2 -1 +1 +2 +3 +4 |
| 25. I cannot continue to feel OK if people around me are depressed.                     | -4 -3 -2 -1 +1 +2 +3 +4 |
| 26. It is hard for me to see how some things upset people so much.                      | -4 -3 -2 -1 +1 +2 +3 +4 |
| 27. I am very upset when I see an animal in pain.                                       | -4 -3 -2 -1 +1 +2 +3 +4 |
| 28. Becoming involved in books or movies is a little silly.                             | -4 -3 -2 -1 +1 +2 +3 +4 |
| 29. It upsets me to see helpless old people.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 30. I become more irritated than sympathetic when I see someone's tears.                | -4 -3 -2 -1 +1 +2 +3 +4 |
| 31. I become very involved when I watch a movie.  | -4 -3 -2 -1 +1 +2 +3 +4 |
| 32. I often find that I can remain cool in spite of the excitement around me.           | -4 -3 -2 -1 +1 +2 +3 +4 |
| 33. Little children sometimes cry for no apparent reason.                               | -4 -3 -2 -1 +1 +2 +3 +4 |

APPENDIX E

REVISED PRIVATE AND PUBLIC SELF-CONSCIOUSNESS SUBSCALES

**DIRECTIONS:** Please read each of the following statements and rate the extent to which each item is like you using the scale below. Please read each item carefully before responding. Be as accurate and honest as you can in responding to each item and try not to let your response to one item influence your responses to other items. There are no correct or incorrect answers.

**0 = Not at all like me**  
**1 = A little like me**  
**2 = Somewhat like me**  
**3 = A lot like me**

- \_\_\_\_\_ 1. I'm always trying to figure myself out.
- \_\_\_\_\_ 2. I'm concerned about my style of doing things.
- \_\_\_\_\_ 3. I think about myself a lot.
- \_\_\_\_\_ 4. I care a lot about how I present myself to others.
- \_\_\_\_\_ 5. I often daydream about myself.
- \_\_\_\_\_ 6. I'm self-conscious about the way I look.
- \_\_\_\_\_ 7. I never take a hard look at myself.
- \_\_\_\_\_ 8. I usually worry about making a good impression.
- \_\_\_\_\_ 9. I generally pay attention to my inner feelings.
- \_\_\_\_\_ 10. Before I leave my house, I check how I look.
- \_\_\_\_\_ 11. I'm constantly thinking about my reasons for doing things.
- \_\_\_\_\_ 12. I'm concerned about what other people think of me.
- \_\_\_\_\_ 13. I sometimes step back (in my mind) in order to examine myself from a distance.
- \_\_\_\_\_ 14. I'm usually aware of my appearance.
- \_\_\_\_\_ 15. I'm quick to notice changes in my mood.
- \_\_\_\_\_ 16. I know the way my mind works when I work through a problem.

APPENDIX F  
LEARNING STYLES QUESTIONNAIRE

**DIRECTIONS:** This questionnaire is designed to find out how you learn. There are no right or wrong answers. If you agree more than you disagree, Circle the A following each statement. If you disagree more than you agree, Circle the D following each statement. Be sure to Circle either an A or a D.

- |   |   |   |
|---|---|---|
| 1. I have strong beliefs about what is right and wrong, good and bad.   | A | D |
| 2. I often act without considering the possible consequences.   | A | D |
| 3. I tend to solve problems using a step-by-step approach.  | A | D |
| 4. I believe that formal procedures and policies restrict people.   | A | D |
| 5. I have a reputation for saying what I think, simply and directly.  | A | D |
| 6. I often find that actions based on feelings are as sound as those based on careful thought and analysis.           | A | D |
| 7. I like the sort of work where I have time for thorough preparation and implementation.                             | A | D |
| 8. I regularly question people about their basic assumptions.   | A | D |
| 9. What matters most is whether something works in practice.  | A | D |
| 10. I actively seek out new experiences.  | A | D |
| 11. When I hear about a new idea or approach I immediately start working out how to apply it in practice.             | A | D |
| 12. I am keen on self discipline such as watching my diet, taking regular exercise, sticking to a fixed routine, etc. | A | D |
| 13. I take pride in doing a thorough job.   | A | D |
| 14. I get on best with logical, analytical people and less well with spontaneous, 'irrational' people.                | A | D |
| 15. I take care over the interpretation of data available to me and avoid jumping to conclusions.                     | A | D |
| 16. I like to reach a decision carefully after weighing up many alternatives.   | A | D |

- |   |   |   |
|---|---|---|
| 17. I'm attracted more to novel, unusual ideas than to practical ones.  | A | D |
| 18. I don't like disorganized things and prefer to fit things into a coherent pattern.  | A | D |
| 19. I accept and stick to laid down procedures and policies so long as I regard them as an efficient way of getting the job done. | A | D |
| 20. I like to relate my actions to a general principle.   | A | D |
| 21. In discussions I like to get straight to the point.   | A | D |
| 22. I tend to have distant, rather formal relationships with people at work.  | A | D |
| 23. I thrive on the challenge of taking something new and different.  | A | D |
| 24. I enjoy fun-loving, spontaneous people.   | A | D |
| 25. I pay meticulous attention to detail before coming to a conclusion.   | A | D |
| 26. I find it difficult to produce ideas on impulse.  | A | D |
| 27. I believe in coming to the point immediately.   | A | D |
| 28. I am careful not to jump to conclusions too quickly.  | A | D |
| 29. I prefer to have as many sources of information as possible - the more data to think over the better.                         | A | D |
| 30. Flippant people who don't take things seriously enough usually irritate me.   | A | D |
| 31. I listen to other people's points of view before putting my own forward.  | A | D |
| 32. I tend to be open about how I'm feeling.  | A | D |
| 33. In discussions I enjoy watching the maneuverings of the other participants.   | A | D |

- |  |   |   |
|--|---|---|
| 34. I prefer to respond to events on a spontaneous, flexible basis rather than plan things out in advance.                     | A | D |
| 35. I tend to be attracted to techniques such as network analysis, flow charts, branching programs, contingency planning, etc. | A | D |
| 36. It worries me if I have to rush out a piece of work to meet a tight deadline.  | A | D |
| 37. I tend to judge people's ideas on their practical merits.  | A | D |
| 38. Quiet, thoughtful people tend to make me feel uneasy.  | A | D |
| 39. I often get irritated by people who want to rush things.   | A | D |
| 40. It is more important to enjoy the present moment than to think about the past or future.                                   | A | D |
| 41. I think that decisions based on a thorough analysis of all the information are sounder than those based on intuition.      | A | D |
| 42. I tend to be a perfectionist.  | A | D |
| 43. In discussions I usually produce lots of spontaneous ideas.  | A | D |
| 44. In meetings I put forward practical, realistic ideas.  | A | D |
| 45. More often than not, rules are there to be broken.   | A | D |
| 46. I prefer to stand back from a situation and consider all the perspectives.   | A | D |
| 47. I can often see inconsistencies and weaknesses in other people's arguments.  | A | D |
| 48. On balance I talk more than I listen.  | A | D |
| 49. I can often see better, more practical ways to get things done.  | A | D |
| 50. I think written reports should be short and to the point.  | A | D |

- |   |   |   |
|---|---|---|
| 51. I believe that rational, logical thinking should win the day.   | A | D |
| 52. I tend to discuss specific things with people, rather than engaging in social discussion.                 | A | D |
| 53. I like people who approach things realistically rather than theoretically.                                | A | D |
| 54. In discussions I get impatient with irrelevancies and digressions.  | A | D |
| 55. If I have a report to write I tend to produce lots of drafts before settling on the final version.        | A | D |
| 56. I am keen to try things out to see if they work in practice.  | A | D |
| 57. I am keen to reach answers via a logical approach.  | A | D |
| 58. I enjoy being the one that talks a lot.   | A | D |
| 59. In discussions I often find I am the realist, keeping people to the point and avoiding wild speculations. | A | D |
| 60. I like to ponder many alternatives before making up my mind.  | A | D |
| 61. In discussions with people I often find I am the most dispassionate and objective.                        | A | D |
| 62. In discussions I'm more likely to adopt 'low profile' than to take the lead and do most of the talking.   | A | D |
| 63. I like to be able to relate current actions to a longer term bigger picture                               | A | D |
| 64. When things go wrong I am happy to shrug it off and 'put it down to experience'.                          | A | D |
| 65. I tend to reject wild, spontaneous ideas as being impractical.  | A | D |
| 66. It's best to think carefully before taking action.  | A | D |
| 67. On balance I do the listening rather than the talking.  | A | D |



- |   |   |   |
|---|---|---|
| 68. I tend to be tough on people who find it difficult to adopt a logical approach.                       | A | D |
| 69. Most times I believe the end justifies the means.   | A | D |
| 70. I don't mind hurting people's feelings so long as the job gets done.                                  | A | D |
| 71. I find the formality of having specific objectives and plans stifling.                                | A | D |
| 72. I'm usually one of the people who puts life into a party.   | A | D |
| 73. I do whatever is expedient to get the job done.   | A | D |
| 74. I quickly get bored with methodical, detailed work.   | A | D |
| 75. I am keen on exploring the basic assumptions, principles and theories underpinning things and events. | A | D |
| 76. I'm always interested to find out what people think.  | A | D |
| 77. I like meetings to be run on methodical lines, sticking to laid down agenda, etc.                     | A | D |
| 78. I steer clear of subjective or ambiguous topics.  | A | D |
| 79. I enjoy the drama and excitement of a crisis situation.   | A | D |
| 80. People often find me insensitive to their feelings.   | A | D |

APPENDIX G

INVITATION TO PARTICIPATE IN STUDY

College of Nursing, University of Tennessee, Knoxville  
301 Woodlawn Pike, Apt. E-2  
Knoxville, TN 37920  
(423) 946-8194  
Fax: (423) 946-8194

April 6, 1999

Associate Dean  
College of Nursing

Dear Associate Dean

I am a doctoral candidate in the College of Nursing at the University of Tennessee, Knoxville. I would like your nursing program to participate in a research study designed to determine basic empathy and self-awareness levels as well as learning styles of lower division or prenursing students. The sample for this study will consist of prenursing students enrolled in an NLN accredited generic nursing program in the Southeastern United States. Therefore, I am requesting permission to survey the students of your nursing program.

The participation of your students will involve the completion of four instruments and a personal demographic form. Based upon the pilot study conducted in March, all four instruments and demographic form can be completed in about 20-30 minutes. I am asking for 30 minutes of time during the first week of school of the fall semester, 1999.

There will be no cost to your program or your students. No discomfort or risks are expected to result from students' participation in the study. Participants may provide information that would be of benefit in the future for the preparation of nurses and for the development of nursing education theories.

All data will be kept confidential and stored in a locked filing cabinet. Individual identities of nursing programs and students will be anonymous and information obtained will be reported only in aggregate form. Students are free to withdraw their consent to participate in the research at any time.

I would appreciate hearing from you as quickly as possible as the research study will be submitted to the Institutional Review Board by April 22, 1999. A letter giving me permission to include students in your nursing program in the research study will be needed. Thus, I have enclosed a permission form and a stamped self-addressed envelope for your convenience.

The principal investigator is available to discuss your concerns and questions. Please contact: Barbara A. May, College of Nursing, University of Tennessee, Knoxville, at (423) 946-8194 or by e-mail at [barbmay@utk.edu](mailto:barbmay@utk.edu).

Thank you very much for your time and consideration. Your program's participation in this study is greatly appreciated and I am looking forward to hearing from you.

Sincerely,

Barbara A. May, RN, MS, MSN

April 6, 1999

Dear Ms. May,

We would like to participate in your study. Here are some possible dates and times you may meet with our students.

We would like to participate in your study. Please call me to discuss possible dates and times to meet with our students.

Institution: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

APPENDIX H

IRB FORM

**FORM A**

**IRB #** \_\_\_\_\_

**THE UNIVERSITY OF TENNESSEE, KNOXVILLE**

**Application for Review of Research Involving Human Subjects**

**A. Principal Investigator**

Barbara A. May, MS, MSN, RN

**Faculty Advisor**

Martha Raile Alligood, PhD, RN

**B. Department/Unit: College of Nursing**

**C. Complete Mailing Address and Phone Number of PI:**

Barbara A. May  
301 Woodlawn Pike, Apt. E-3  
Knoxville, TN 37920  
Home: (423) 946-8194  
e-mail: barbmay@utk.edu

Martha Raile Alligood  
440 Sweetgum Drive  
Knoxville, TN 37922  
Work: (423) 974-6804  
Home: (423) 966-6496  
e-mail: MAlligood@utk.edu

**D. Title of Project:**

Relationships Among Basic Empathy, Self-Awareness, and Learning  
Styles of Pre-Nursing Students Within King's Personal System

**E. External Funding Agency: None**

**F. Grant Submission Deadline:** Not applicable

**G. Starting Date:** August, 1999

**H. Estimated Completion Date:** December, 1999

**I. Research Project:**

**1. Objective(s) of Project:**

In the past, nursing has borrowed theories from other disciplines rather than using a nursing theory to study empathy. Using borrowed theories has been inappropriate and detrimental to the nurse/patient relationship, and in research, has resulted in conceptual and methodological problems with contradictory findings. A nursing theoretical framework for the study of empathy is important in understanding empathy from a nursing perspective and for extending nursing knowledge. Therefore, the first objective of this research is to study empathy within a nursing conceptual model, King's General Systems Framework.

Secondly, while the importance of two types of empathy has been discussed in the literature (Alligood, 1992), most studies have focused on the interpersonal skilled type and little research has been conducted concerning the intrapersonal developmental type called basic empathy. Students bring with them into the learning environment a natural level of basic empathy. These basic empathic responses are important because studies have reported increases in empathy levels with training but no evidence exists that trained empathic responses are sustained over time. Thus, nurse educators need to identify, reinforce and help students to mature in their own natural empathic development. Therefore, an objective of this research is to study intrapersonal developmental or basic empathy levels of pre-nursing students.

Finally, the Empathy Research Team at the University of Tennessee, Knoxville have formalized theories of nursing empathy within King's personal, interpersonal, and social systems. Using hermeneutic interpretation of King's text, empathy was discovered to be related to all the concepts in these three interacting systems. This research will study the nature of the relationships among concepts in the personal system and basic empathy. Although students have a myriad of prior experiences which may have impacted on the development of their natural empathic responses. Theoretical support exists that support a relationship between basic empathy and self-awareness and learning styles; however, no empirical studies have been conducted to support these relationships.

Therefore, the purpose of this study is to gain an understanding of the relationships among basic empathy, self-awareness, learning styles and selected demographic factors of pre-nursing students. In this descriptive correlational study, pre-nursing students will be asked to complete a total of five self-report instruments (See Appendixes A through E). Knowledge gained as a result of this study will provide an

understanding the relationship among these personal system concepts through a nursing framework and will have implications for nursing education, practice, and administration.

## **2. Subjects:**

Study participants will be a volunteer sample of full-time or part-time baccalaureate pre-nursing students. Eligibility criteria for study participants are: (a) be enrolled as an undergraduate pre-nursing student, (b) have just begun their didactic or clinical courses in nursing, (c) not be a registered nurse, and (d) be 18 years of age or older and willing to complete the research instruments. The accessible population will consist of those freshman, sophomore, or junior undergraduate students with a declared nursing major enrolled at public institutions in southeastern states. Nursing programs included in this study will be four-year baccalaureate programs in public institutions in the southeast that have been accredited by the National League for Nursing. Private institutions will not be included in the study because many private nursing programs are affiliated with religious institutions and may require classes in religion which could affect the student nurse's level of empathy or self-awareness. Subjects will be recruited in intact groups attending nursing orientation sessions or classes during the first weeks of fall semester, 1999. Time required for students to complete all the instruments is approximately 30 minutes. Sample size will be a minimum of 200 participants because a large sample size is needed for a canonical correlation

## **3. Method or Procedures**

Each dean, associate dean, or director of selected schools of nursing in the southeast will be contacted by letter. Written explanation of the study will be given with an invitation to participate in the study (See Appendix F). A preliminary letter will be received from the nursing programs willing to participate in the study (See Appendix G). Copies of all letters received will be submitted to the Departmental Review Committee upon completion of the study. IRB approval from each participating institution will be obtained following the institution's guidelines. Dates and times for administration of the research instruments will be finalized by phone.

Data collection will be conducted by the principal investigator or by trained research assistants who have a master's or doctorate degree. Based upon the findings from the pilot study conducted in March, 1999, all five instruments will take approximately 20-30 minutes to complete. Each participant will receive a packet containing five numerically coded instruments and a number two pencil in a manilla envelope. After completion of the instruments, students will replace them in the manilla envelope and then place this envelope in a box as they leave.

Each student will receive written explanation of the study (See Appendix H), purpose of the study, the methods used to maintain student confidentiality, the activities and time required to complete the instruments, the risks and benefits of participation, and



the name of the investigator with telephone number where the students can contact the investigator. Students will be assured that there will be no penalty for refusal to participate in the study and that they have the right to refuse to participate or to withdraw from the study without any impact to themselves or to their educational status. None of their instructors will be told of their participation or nonparticipation, nor will they see the raw data. To assure student confidentiality, consent to participate is the completion of the instruments. No name will be attached to any data. Only identification numbers will be assigned to the instruments. To further insure confidentiality, the instruments will be stored in a locked file cabinet in the researcher's home and only the investigator and her major faculty professor will review and score the raw data. All data will be published only in aggregate form.

Risk from participating in this study is minimal. Participants may benefit from reflecting on and responding to the research instruments. In addition, students' participation would be of benefit in the future for the preparation of nurses and may contribute to curriculum development and to the development of nursing education theories.

Data will be analyzed by the principal investigator on an IBM-compatible 586 personal computer. The Statistical Package for the Social Sciences, Version 9.0 for windows will be used to tabulate and analyze the data. The principal investigator of the study will code and enter the data into the statistical program.

#### 4. Category for Exempt Research Per 45 CFR 46

The category for exempt research per 45 CFR 46 is category two. This category states that research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior is exempt unless information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability, or reputation.

This study meets this criteria as all participants' responses will be confidential with no names attached to any of the instruments and all data will be reported only in aggregate form.

**J. Certification:** The research described herein is in compliance with 45 CFR 46.101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

Principal Investigator \_\_\_\_\_  
 Name                                      Signature                                      Date

Student Advisor \_\_\_\_\_

Name

Signature

Date

Dept. Review

Comm. Chair

\_\_\_\_\_

Name

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

**APPROVED:**

Dept. Head

\_\_\_\_\_

\_\_\_\_\_

APPENDIX I

WRITTEN EXPLANATION OF STUDY FOR STUDENTS

Dear Student,

My name is Barbara May. I am a doctoral candidate at the College of Nursing at the University of Tennessee, Knoxville. I am asking you to be a volunteer in my research. The purpose of the research is to investigate how baccalaureate nursing students learn best. Your participation in this study is important to gain more information on how nursing students organize their experiences and learn.

If you decide to participate, you will be asked for background information about yourself and to complete four pencil and paper assessments. These four assessments will take about 20 to 30 minutes to complete.

Any information that is obtained will be confidential and your name will not be required on any of the paper assessments. Information obtained will be reported only in aggregate form. Your decision whether or not to participate will not influence any course grades or your future relations with your nursing program. Participation in this study is entirely voluntary. If you do participate, you are free to withdraw your consent and to discontinue participation at any time. Completion of the assessments will be your consent to participate.

There are no discomforts or risks associated with participation. There will be no cost to your program or yourself. Participation in the study may benefit from reflecting on and responding to the research assessments. In addition, participation may contribute to curriculum development and to the development of nursing education theories.

After completing the personal information questionnaire and the other four assessments, replace them in the manilla envelope and place the manilla envelope in the box as you leave the room. You may keep the pencils if you wish to do so.

The principle investigator is available to discuss your concerns and questions. Please contact: Barbara May, College of Nursing, University of Tennessee, Knoxville. My phone number is (423) 946-8194 and my e-mail address is [barbmay@utk.edu](mailto:barbmay@utk.edu).

Please consider participating in this important research. Thank you for your consideration on this invitation.

Sincerely,

Barbara A. May

APPENDIX J  
APPROVAL FROM IRB

THE UNIVERSITY OF TENNESSEE  
KNOXVILLE



August 3, 1999

College of Nursing  
1200 Volunteer Boulevard  
Knoxville, Tennessee 37996-4180  
(423) 974-4151  
FAX (423) 974-3569

Barbara May  
301 Woodlawn Pike, Apt. E-3  
Knoxville, TN 37920

Dear Barbara:

This letter is to inform you that your project, *Relationships Among Basic Empathy, Self-Awareness, and Learning Styles of Pre-Nursing Students Within King's Personal System*, was approved by the College of Nursing Human Subjects Committee.

Please let me know of any changes to your project, by completing a Form D. Best wishes on your work.

Sincerely,

A handwritten signature in cursive script that reads "Maureen Groer".

Maureen Groer, Ph.D., R.N., F.A.A.N.  
Chair, College of Nursing Human Subjects Committee

MG:jb

APPENDIX K.

TABLE A-2. CANONICAL CORRELATION WITHOUT PSYCHOSOCIAL FACTORS

Table A-2. Canonical Correlation Without Psychosocial Factors

Variable Sets	Canonical Variate	
	1	2
Set 1		
Basic Empathy		
HES	.425*	.913*
EETS	.857*	-.529*
Set 2		
Self Awareness - Revised Private	.538*	.096
Social Awareness - Revised Public	.398*	-.433*
Learning Styles		
Activist	.134	.697*
Reflector	-.171	-.750*
Theorist	-.502*	-.332*
Pragmatist	-.736*	.091
Canonical Correlation	.432	.349
Variance Explained	18.6%	12.2%

\* = structure coefficients  $\geq .30$



## VITA

Barbara A. May was born in Pittsburgh, Pennsylvania on May 16, 1945, the daughter of Andrew J. Bruce and Ida Bruce. After graduating from West Allegheny High School in June, 1963, she entered California State University, California, Pennsylvania where in May, 1967, she received the Bachelor of Science in Social Studies with a teaching certification in secondary education. She entered the Master's program in Human Behavior and Development at Drexel University, Philadelphia, Pennsylvania and received a Master's degree in June, 1978. She received the Bachelor of Science in Nursing from Murray State University, Murray, Kentucky in 1983. After working for 11 years as a staff nurse on oncology, hospice, and behavioral health units, she entered the Master's program in nursing at The University of Iowa, Iowa in 1993 receiving a Master's degree in 1996. In August, 1996, she entered the University of Tennessee, Knoxville to pursue the Doctorate of Philosophy in nursing. The doctoral degree was granted in May, 2000.

Barbara is presently working as a nurse educator at East Tennessee State University. She belongs to numerous professional organizations including the Southern Nursing Research Society, American Nurses' Association, American Psychiatric Nurses Association, and Sigma Theta Tau. In 1982 Barbara married Dr. Charles R. May, a Professor at the University of Northern Iowa where he currently resides with their three dogs.