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AN INVESTIGATION OF THE RELATIONSHIP OF  
POWER AND EMPATHY IN  
NURSE EXECUTIVES


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Patricia/J. Moulton

October 8, 1993

Date

**This dissertation is dedicated to**

**RLR**

**whose infinite faith, strength,  
wisdom, and humor  
enabled me to fulfill this dream**

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CHAPTER I  
THE RESEARCH PROBLEM

Introduction

Changes in the health care delivery system have presented new challenges for the nursing profession. Nurse executives, regardless of their practice settings, are faced with the responsibility for managing people and resources within a complex environment which demands quality and cost containment. To meet these challenges, nurse executives must become active players in the dynamic energy field of the health care environment, generating and shaping resources, vigorously pursuing interests, and creating new possibilities (Schultz, 1992).

In this study, factors which characterized the practice of nurse executives in acute care, long term care, and home health care settings were investigated using M. Rogers' (1990) nursing model and Barrett's (1983) conceptualization of power. Barrett (1983) defines power as the ability to participate knowingly in change. For nurse executives, knowing participation means dealing with change using a proactive and participatory approach, in contrast to the more

familiar reactive and controlling approach. Knowing participation implies that nurse executives understand the need for, and the significance of change as it occurs on institutional, individual, and professional practice levels.

As a natural concomitant of executive level positions, power can be viewed as a manifestation of executives' relationships with others and with the environment. For the nurse practicing in an executive level position, these relationships occur within the context of the health care system. Therefore, nurse executives must be extremely sensitive to the constant and often subtle nuances of change inherent in human-environment relationships. Empathy, which describes an individual's openness and receptiveness to the environment, may offer a way of explaining how executives become aware of and understand these nuances.

The importance of empathy as a source of understanding in human relationships is documented in the literature (Hogan, 1975; Olsen, 1991; C. Rogers, 1975). Although empathy provides nurse executives with a way of knowing and understanding others, it may also provide executives with a way of understanding the complexities of the changing health care system. Ultimately, this understanding can enhance

the executives' ability to participate knowingly in change, which is manifested as power. Therefore, this researcher proposes that empathy, as an indicator of nurse executives' sensitivity to, and understanding of, human-environment relationships, may contribute to the power of nurse executives.

### The Problem

What is the relationship between power and empathy in nurse executives?

### Subproblems

1. What is the relationship between the nurse executive's power and level of empathic concern?
2. What is the relationship between the nurse executive's power and level of fantasy?
3. What is the relationship between the nurse executive's power and perspective-taking ability?
4. What is the relationship between the nurse executive's power and feelings of personal distress?

### Definitions

Empathy is the multidimensional human experience characterized by thought, sensation, emotion, and responsivity to others, as measured by the Davis (1980) Interpersonal Reactivity Index (IRI). The IRI

evaluates the degree to which individuals display four dimensions of empathy: empathic concern, fantasy, personal distress, and perspective-taking. Empathic Concern is the individual's ability to experience feelings of warmth, compassion, and concern for others, as measured by the individual's score on the seven-item Empathic Concern subscale of the IRI.

Fantasy is the individual's tendency to transpose oneself imaginatively into the feelings and actions of fictitious characters in books, movies, and plays, as measured by the seven-item Fantasy subscale of the IRI.

Personal Distress is the individual's own feelings of fear, apprehension, and discomfort at witnessing the negative experiences of others, as measured by the seven-item Personal Distress subscale of the IRI.

Perspective-Taking is the ability of an individual to spontaneously adopt the psychological point of view of others, as measured by the individual's score on the seven-item Perspective-Taking subscale of the IRI.

Nurse Executive is a registered nurse who holds the top administrative position in the nursing hierarchy and is responsible for developing, planning, and administering the managerial, operational, fiscal,



and reporting elements for the delivery of nursing services in the identified practice setting (Sides, 1990).

Power is the ability to participate knowingly in the continuous changing patterning of the human and environmental fields (Barrett, 1983; Rizzo, 1990).

Power will be measured by the Power as Knowing Participation in Change Tool, version II (PKPCT, v.II) (Barrett, 1987).

#### Delimitations

The nurse executive in the acute care setting will practice in a hospital, the primary mission of which is to provide emergency, intensive, medical-surgical, pediatric, and/or psychiatric care for patients whose conditions require urgent, short-term intervention, as opposed to those agencies where the missions are rehabilitative in nature (Rakich, Longest, & Darr, 1985). The hospital will have a minimum capacity of 300 beds to minimize differences in practice related to the scope of organizational responsibilities (Schultz & Johnson, 1983).

The nurse executive in the home health setting will practice in a certified home health agency, the primary mission of which is to provide skilled

nursing care to clients in their homes for the treatment of acute and chronic health problems. A certified home health agency is eligible to receive Medicare and Medicaid funds under the guidelines administered by the Department of Health and Human Services. To minimize differences in practice related to the scope of services provided, the agency will provide a minimum of 100,000 visits yearly.

The nurse executive in a long term care setting will practice in a long term care facility, which is designated as a skilled nursing facility. This type of facility is certified as a provider of skilled nursing services and is eligible to receive medicare and medicaid funds under the guidelines administered by the Department of Health and Human Services. To minimize differences in practice, the facility will have a minimum capacity of 100 beds (Bagshaw, 1986).

Subjects will be able to read and write English to ensure that questions are understood and that participants are able to complete the questionnaires as directed (Muff, 1982).

Subjects will possess a minimum of a Master's degree in nursing or in a health related specialty, as education at the graduate level provides individuals with a broader conceptual base for understanding

the human and operational dynamics of an organization (Sides, 1990).

The sample will include male and female subjects as there are inconsistent patterns describing gender differences for empathy and power (Hoffman, 1977; Eisenberg & Lennon, 1983; Garner, Smith, & Piland, 1990; Yura, Ozimek, & Walsh, 1981).

### Theoretical Framework

The complex relationships of individuals and the environment, described by M. Rogers (1990) in the Science of Unitary Human Beings, provide a unique approach to examining the power of the nurse executive. According to M. Rogers' (1970, 1990) conceptual system, individuals are characterized by the capacity for thought, sensation, and emotion. They are wholes who manifest characteristics which derive from and reflect their wholeness. The life process evolves unidirectionally and is constantly changing toward greater diversity. Causality and linearity are replaced by an understanding of the unpredictable nature of change and the pandimensionality of reality. Individuals and their environments, as energy fields, are open systems in continuous mutual process.

Based on the Science of Unitary Human Beings (M. Rogers, 1990), nurse executives and their environments are irreducible, integral, and pandimensional energy fields. As human energy fields, nurse executives are in continuous mutual process with the environment, which includes the health care system (Guedner, 1989). Manifestations of patterning, such as power and empathy, emerge through the mutual process of the nurse executive's and the environmental energy fields.

According to Barrett's (1983) theory of power, which is derived from the Science of Unitary Human Beings (M. Rogers, 1990), power is the ability to participate knowingly in change. Barrett operationalizes power to include the following field behavior concepts: freedom to act intentionally, choices, involvement in creating change, and awareness. Barrett's theory represents a shift from the domination and control approach to power, which is characteristic of hierarchies, to an approach where power is viewed as a nonhierarchical and mutually participatory process. Individuals choose to actualize certain developmental potentials rather than others as they participate in the mutual process. These behavior concepts are descriptive of a person who is able to make choices through the

knowledgeable exercise of free will (Barrett, 1983; May, 1969).

According to Barrett, awareness plays a key role in making choices by focusing attention on perceptions and by reflecting the flow of the organism. Flow, in this context, refers to the nurse executive's mutual process with the health care environment. Awareness is described as the individual's perceptual alertness and sensitivity to the mutual process. This type of knowing occurs in the perception and comprehension of meaning in the lived experience of the moment (Carper, 1978; Chinn & Jacobs, 1987). Brown (1987) offers a similar approach in her description of power in relationships. According to Brown, power is a relational phenomenon which emerges through the processes of imaging, defining, allowing, and communicating. Each process can be viewed as integral to developing a way of knowing.

Empathy has been identified as a significant mode in the aesthetic pattern of knowing (Carper, 1978). It evolves from an individual's openness and responsiveness to the mutual process, provides the foundation for perceptions, and offers a way of discovering new knowledge (Carper, personal communication, Mar. 19, 1992). As a complex phenomenon

emerging through the mutual field process, empathy encompasses the totality of the individual (Raile, 1982; M. Rogers, 1970). Recognizing its complexity and multidimensionality, Davis (1980) identified four constructs that comprise a global concept of empathy. They involve the cognitive dimension of interpreting and understanding the experiences and feelings of others, as well as the affective dimension of recognizing the emotional impact of life experiences. The empathy constellations identified by Davis (1980) are congruent with M. Rogers' concept of wholeness, since Davis recognizes that the mutuality among the concepts affects the whole.

Empathy is related to the ability of one person to share the perceptual field of another (C. Rogers, 1975). By sharing perceptual fields, individuals are able to develop ways of knowing about the thoughts, feelings, and needs of others. For the nurse executive, empathy becomes a way of knowing about the mutual process of the health care environment. This knowing can enhance the executive's understanding of the continuously unfolding events and the constantly changing relationships in the health care system. Understanding, from this perspective, increases the quantity and quality of choices available to the

nurse executive, and it provides the basis for the executive to participate knowingly in change.

Through empathy, the nurse executive is able to intellectually and imaginatively perceive how changes in the organization have an impact on the nursing environment. The knowledge and understanding which emerge through empathy provide the basis for the executive to participate knowingly in change. Therefore, this researcher proposes that empathy, as a way of knowing, is associated with the nurse executive's power, which is manifested as the ability to participate knowingly in change.

### Hypotheses

1. There will be a positive correlation between the nurse executive's empathic concern score and power score.

2. There will be a positive correlation between the nurse executive's fantasy score and power score.

3. There will be a positive correlation between the nurse executive's perspective-taking score and power score.

4. There will be a negative correlation between the nurse executive's personal distress score and power score.

### Need for the Study

Nurse executives have assumed roles which demand the ability to promote individual and organizational growth in a health care environment characterized by constant change and diversity (Tappen, 1989). To meet the challenges of these roles, new theories of management are needed which will assist nurse executives in understanding the unique human-environment relationships which characterize the health care system and the impact of these relationships on the delivery of health care services (Barker, 1991). Because nurse executives are in positions that determine the parameters of nursing practice and patient care (Meleis & Jennings, 1989), it is essential that their practice be grounded in nursing theory. If nursing theoretical frameworks are to be the basis of the discipline, then they should be used to guide practice in all settings among all practitioners (Reed, 1993). By using concepts from the Science of Unitary Human Beings (Rogers, 1990) to unite nursing theory and administrative nursing practice, the researcher was able to examine the relationship between power and empathy in nurse executives.

Advances in nursing knowledge have demonstrated that old management systems, characterized by



domination and control, are no longer appropriate for nursing's evolving role in the health care system. New systems, which recognize that power emerges from the mutuality inherent in human relationships and that individuals are active and knowing participants in these relationships, will assist nursing in assuming a leadership role in the delivery of health care services. Since power emerges from the way in which nurse executives choose to participate in the health care system, more knowledge is needed that will explain how the executive's power is affected by relationships with others and the environment.

Empathy, a phenomenon which has been recognized as a source of understanding in human relationships (Gagan, 1983; Olsen, 1991; Travelbee, 1971), may provide insight into the emergence and use of power by nurse executives. By providing a way for nurse executives to understand the complex human-environment relationships in the health care system, and the change which evolves from these relationships, empathy can enhance executives' awareness of the choices and options available for dealing with change. This enhanced awareness has the potential for increasing executives' ability to participate knowingly in change, which is ultimately manifested as power. To date, there have been no investigations

of the potential relationship between power and empathy.

As nurse executives assume key leadership roles in the health care system, they will be faced with the challenges of confronting uncertainty, guiding change, and nurturing creativity (Caroselli-Dervan, 1991). Knowledge about power, and factors related to its use and its effects, will assist nurse executives in meeting these challenges. By using a nursing science perspective to examine power and empathy among nurse executives, the researcher sought to integrate nursing theory with executive nursing practice.

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### Power

For centuries, philosophers and social scientists have attempted to define the complex and ubiquitous nature of power. Historically, power has been associated with domination, control (Dahl, 1970; Clark, 1954), force, and causality (Lewin, 1951; Cartwright, 1959). In the newer views, power is described as a transformational phenomenon which fosters individual and group growth by encouraging mutuality, stimulating creative thinking, expanding knowledge, and enhancing awareness (Barrett, 1983; Jordan, 1991; Miller, 1982). Lewin's (1951) descriptions of field theory have provided a foundation for understanding power in terms of force, direction, magnitude, and interaction. Social exchange theorists have expanded upon this understanding by describing power as a manifestation of interdependence in relationships among people (Chadwick-Jones, 1976; McCausland, 1985). The dynamics and the context of the relationship provide the base for the emergence of power (Chadwick-Jones, 1976; Dahlstrom,

1966; Pollard & Mitchell, 1972; Thibault & Kelly, 1959).

Authority and influence are essential elements in this approach to power, as well as other factors such as level of dependence, types of rewards/costs, motivation for and effects of power, and struggle within the relationship (Etzioni, 1966; Hardin et al., 1985; Parsons, 1986; Shifflett & McFarland, 1978; Wilkinson, 1979). May (1972) describes patterns of power behavior, which emerge in human relationships, ranging from exploitative, the simplest and most destructive, to integrative, in which power is seen as a manifestation of human connectedness. Communication remains central to the emergence of power and includes techniques such as persuasion, inspiration, or empathy, which appeal to a person's beliefs or convictions (Nettl, 1969; Weber, 1986). Defining power as a communicative phenomenon, Arendt (1986) suggests that the sharing of experiences through communication provides the basis for the development of power. This sharing promotes an interdependence in which power emerges as a source for energizing, strengthening, and directing relationships (Jennings & Meleis, 1988; Miller, 1982).

The domination and control approach to power is found in the majority of writings on power in the nursing literature (Beck, 1982; Claus & Bailey, 1977; DelBueno, 1987; Heineken & Wozniak, 1988). Ashley (1973), in her classic description of power in nursing, suggested that nurses should develop and use power as a means for effecting change in the ways health care services are provided, rather than as a means for dominating other staff. The common theme found in the majority of the nursing and power literature is that of a hierarchical approach to power. However, Mason, Backer, and Georges (1991) caution that the administrative hierarchy of health care institutions presents nurse executives with the dilemma of trying to succeed without having to adopt the values of the larger system, submerging their own values in the process.

Maas (1988) demonstrated support for Ashley's views in her development of a model of organizational power based on coordination, cooperation, and consensus. Ray (1989), in her discussion of the emerging corporate culture of the health care system, described the role played by nurse executives in creating the organizational culture, either by facilitating the organization's growth or by contributing to its disintegration. Johnson (1989)

expressed a similar view in her comparison of the normative power of chief executive nurses to that of a group of non-nurse executives.

More recently, writers and theorists have progressed from the social exchange view of power to an examination of the dynamic interplay of human and environmental factors in the emergence of power as a non-hierarchical phenomenon. This approach represents a natural extension of social exchange theory, with its proponents seeking a deeper understanding of power by focusing on individuals and the environment as an integrally related whole. In this view, field interaction becomes the mutual process.

Barrett (1983) used this approach in the development of her theory of power. Based on the Science of Unitary Human Beings (M. Rogers, 1970), Barrett defines power as the capacity to participate knowingly in change, characterized by the field behavior concepts of awareness, choices, involvement in creating change, and freedom to act intentionally. As the individual participates in the field mutual process, these behavior concepts emerge as manifestations of field patterning. According to Barrett (1983), power exists as a latent or manifest capacity and is a natural potential of human development. The labeling of power as good or evil is subject to the

values and beliefs of those involved (Barrett, 1983). Taken by itself, power is a neutral phenomenon.

Barrett's conceptualization is based on a nursing science framework which takes an acausal approach to the mutual process. The domination and control view of power is replaced by a view in which power is seen as evolving from an individual's active and knowing participation in the mutual process. By participating knowingly in the mutual process, individuals are able to actualize some developmental potentials rather than others. Knowing participation is being aware of what one is choosing to do, feeling free to do it, and doing it intentionally. Barrett (1983) suggests that awareness and freedom to act intentionally guide the individual's choices and involvement in creating change. "Awareness plays a key role in making choices by focusing attention on perceptions and reflecting the flow of the organism. Through awareness, individuals are able to understand that their choices make a difference in their participation in life experiences" (Barrett, 1983, p. 104).

To measure the field behavior concepts, Barrett (1983) developed the Power as Knowing Participation in Change Test (PKPCT), a set of concept-context scales which measure power using semantic

differential technique. The tool was comprised of four concepts, three contexts, and 24 scales. The concepts were different field behaviors that characterized power, whereas the contexts represented the human and environmental fields. The tool was first tested in a pilot study, using a sample of 267 adults. Construct validity was established by factor analysis.

In a second study, Barrett (1983) tested the hypothesis that there was at least one significant relationship between a set of human field motion (HFM) measures (Ference, 1979) and the set of concept-context scales measuring power. The national sample included 625 women and men between the ages of 21 and 60 who could read and write English and had a minimum of a high school education. The participants represented diverse educational and occupational backgrounds.

Based on the findings, Barrett (1983) reported two variates with statistically significant canonical correlations of .61 ( $p < .001$ ) and .16 ( $p < .02$ ) between the human field motion and power measures, indicating support for the hypothesis. For the HFM measure, the dynamic rhythmicity and dynamic expansion factors contributed substantially to the first HFM canonical variate. All four power measures



loaded highly on this variate. For the second canonical variate, the imaginative vision and flow experience factors contributed substantially as HFM measures. All four power measures had low loadings. Barrett stated that the second canonical correlation was too low to be of substantive importance, but the high loadings of the power measures on the first canonical variate suggested that power was a "synergistic composite of different unitary, rather than particulate dimensions of power (Barrett, 1983, p. 93).

Barrett also obtained congruence coefficients of .99 among the field behaviors that characterize power in the second study and concluded that power generalized across contexts. Based on this finding, Barrett recommended the use of an alternate scoring method in which scales are summed across the concepts, yielding a total score instead of separate score for each concept-context combination.

Although Barrett's work provided the foundation for understanding power from a nursing science perspective, subsequent researchers provided support for the conceptualization by using more heterogeneous samples and examining methodological issues associated with the PKPCT (Caroselli-Dervan, 1991; Rizzo, 1990; Smith, 1992; Trangenstein, 1988).

Trangenstein (1988) used the alternate scoring method for the PKPCT in her investigation of the relationships of power and job diversity to job satisfaction and job involvement in a sample of female staff RN's who were members of the American Nurses' Association. She hypothesized that there was at least one significant ( $p < .05$ ) relationship among the predictor (power and job diversity) and criterion (job satisfaction and job involvement) variables. Using canonical correlation analysis, the hypothesis was supported at the .001 level ( $R = .53$ ) with one meaningful canonical correlation. The findings that the four variables contribute meaningfully to the structure of the canonical variates and all structure coefficients were positive, ranging from a low of .51 (job involvement) to .98 (job satisfaction), support Trangenstein's premise that power and job diversity are integrally related to job satisfaction and involvement.

Limitations of the findings are related to the homogeneity of the sample and to the possible effect of social desirability on the participants, resulting in high scores for power, job satisfaction, and job diversity. Although the reliability of the PKPCT was reported at .96 using Cronbach's alpha, Trangenstein found four viable factors in a factor analysis of the

PKPCT, in contrast to Barrett's (1983) findings of two factors in her pilot and one in her second study. Based on the difference in factors among the studies, Trangenstein suggests that the PKPCT is not invariant across populations and recommends further tool refinement.

Rizzo (1990) used Barrett's theory of power to test the hypothesis that there was a positive relationship between power and purpose in life and life satisfaction in individuals age 65 and older. Using a correlational design and a sample of 84 males and females, ranging in age from 65-88 years, Rizzo (1990) found a positive relationship between purpose in life and power ( $r = .513$ ,  $p < .001$ ) and between life satisfaction and power ( $r = .383$ ,  $p < .001$ ), indicating support for the hypothesis.

Rizzo then compared participants' power scores to questions asking whether they believed what happened to them in life was 1) caused by something outside their control, 2) able to be controlled by them, or 3) a product of their interaction with others and the environment. Using analysis of variance and the post hoc Tukey test, it was found that the power scores from the first response group (outside my control) were significantly lower ( $p < .05$ ) than those in the other two response groups.

Although the homogeneity of Rizzo's sample limits the generalizability of the findings, this researcher has raised important methodological questions about the use of the PKPCT and contributed new knowledge to Barrett's conceptualization of power. Rizzo concludes that the concept of choice in decision making plays a key role in the finding of a positive relationship between life satisfaction and power. Decision making provides individuals with a sense of control over themselves and their environment, and it is implicit in the concepts of choice and participation, which are central to Barrett's conceptualization. These factors are relevant to the practice of nurse executives. Decision making is intrinsic to the executive's ability to make choices and participate in the mutual process.

Caroselli-Dervan (1991) used Barrett's theory to investigate the relationship between power and feminism in nurse executives, hypothesizing that there would be a positive relationship between power and feminism, as perceived by nurse executives, in acute care hospitals. The nonrandom volunteer sample of 85 nurse executives completed the Index of Sex Role Orientation (ISRO) (Dreyer, Woods, & James, 1981) and the PKPCT, v.II (Barrett, 1983). Data analysis, using the Pearson Product Moment correlation test,

revealed a nonsignificant correlation between the variables ( $r = .10$ ,  $p = .166$ ), indicating that the hypothesis was not supported. However, a significant correlation was obtained between the score on the PKPCT subscale, freedom to act intentionally, and the ISRO ( $r = .24$ ,  $p < .01$ ), providing partial support for viewing power and feminism as related constructs.

In her discussion of the findings, Caroselli-Dervan acknowledges that her sample was derived from a relatively homogeneous group whom she describes as being among the elite of the profession. Therefore, high scores on perception of power could be considered predictable. Although the mean power score for this sample was 289.05 (S.D. = 25.98), Trangenstein (1988) reported a mean of 262 (S.D. = 34.70) in her sample of staff nurses, supporting Barrett's (1983) view that power may vary in potency and scope. That is, the range of situations in which one knowingly participates will vary, as will the individual's ability to participate knowingly. Knowledge about nurse executives can best be gained through contrasts and comparisons of this group with nurses at different levels of the organizational hierarchy and in different practice settings (Caroselli-Dervan, 1991).

Barrett's description of power as the ability to participate knowingly in change is supported in these studies. By participating knowingly, individuals actualize certain developmental potentials. In contrast to the domination and control view of power, power can be viewed as a phenomenon which facilitates human growth through awareness, choices, freedom to act intentionally, and involvement in creating change.

This approach to power is especially relevant in a changing health care delivery system, which requires that nurse executives make choices and decisions that have an impact on the health of clients and the practice of professionals. These choices and decisions emerge from the executive's ability to sense opportunity and create a vision that enables the organization to serve the needs of individuals, including its own members, groups, and the community (Murphy & Back, 1991). By participating knowingly in situations which occur in the context of the health care system, nurse executives create an environment which fosters knowing participation by all involved. However, there are no rules or formulas for making participation work, as it involves the skillful engagement of many talents in the mastery of change (M. Rogers, 1982).

Support for this view of participation is evident in Brown's (1987) phenomenological study of the meaning of power and images as experienced by nurse administrators. Based on interviews with 10 nurse administrators and six middle managers, Brown concluded that although nurse administrators practice in strikingly similar work situations, differences occurred in the way they created meaning out of the situations. Administrators chose different actions based on the way they defined the meaning of particular situations. Using the themes which emerged throughout the interviews, Brown generated a theory of how power comes to be in relationships. In brief, Brown states that power emerges through the processes of imaging, defining, allowing, and communicating. The question then becomes, how does this process occur?

The concept of empathy may provide an answer to this question. Although empathy has traditionally been viewed as a therapeutic process, it is also a tacit, nonverbal, and vicarious experiencing of another person's thoughts, feelings, and needs. It carries with it a strong feeling component which requires an openness and responsiveness to the mutual process. Stensrud (1979), in his discussion of the

Taoist view of power, suggests that empathy, along with receptivity and expression, are essential to the experience of power.

Central to the Taoist approach is the existential view that power is innate and emerges through our relationships with others. Individuals' actions emerge from their awareness of the world around them and understanding of the significance and meaning of events (Stensrud, 1979). As one of the field manifestations of power, Barrett (1983) describes awareness as "the focusing of attention on that which one is capable of perceiving and a reflection of something of the flow of the organism" (p. 28). Awareness emerges from the executives' ability to gather and interpret information as it flows throughout the mutual process. Empathy provides nurse executives with a way of accessing the mutual process. As this accessing occurs, nurse executives are able to experience and understand the needs, concerns, and issues of those in the health care environment. The knowledge which emerges from this understanding promotes individual, group, and organizational growth and provides the foundation for the executives' power.



### Empathy

The abstract and elusive nature of empathy challenges researchers to define the role which this phenomenon plays in human relationships. Empathy has been described as an intrapsychic phenomenon, a behavioral manifestation of understanding, and an imaginative process (Agosta, 1984; Oremland, 1984; Tyner, 1985). The suggestion that empathy is a cognitive and an affective phenomenon, characterized by openness, receptiveness, feelings, and mutuality, attests to its multidimensional nature.

Current ideas about empathy can be traced to the work of Lipps' (1903/1965) in the late nineteenth and early twentieth centuries. Lipps (1903/1965) suggested that empathy emerged from the process of motor mimicry, which involved a person's conscious or unconscious imitation of aspects of another person's posture, gestures, or expressions. This process was initially termed "einfuhlung," which was subsequently translated into English as empathy.

Support for the cognitive nature of empathy is evident in the psychoanalytic literature (Schwaber, 1981). Freud (1923/1957) believed that the therapist used empathy, a "value-neutral" phenomenon, as a means for understanding another person's psychological state. As such, empathy represented a special

form of communication which required commonality between subject and object (Post & Miller, 1984). Further support for the cognitive aspects of empathy can be found in the writings on role taking by Mead (1934), a social psychologist, and in the descriptions of empathy as the ability to understand others by imaginatively experiencing their thoughts, feelings, and needs (Dymond, 1949; Hogan, 1969; Speroff, 1953).

Although the cognitive nature of empathy has received extensive attention in the literature, examples of the affective nature of empathy can be found in the humanistic psychology movement (Olsen, 1991). Definitions of empathy in this movement have focused on the vicarious experiencing of another person's thoughts, feelings, and needs (Bachrach, 1976; Barrett-Lennard, 1962; Corcoran, 1981; Greenson, 1960). According to Carl Rogers (1975), empathy represents the individual's ability to sensitively and accurately perceive and understand the meaning of the other person's experiences and provides a source for understanding and healing, which enables individuals to change. Other affective approaches to empathy can be found in the works of Sullivan (1953) and Peplau (1952). Both theorists discuss empathy as a unique interpersonal process,

characterized by feelings, and they acknowledge the importance of the individual's environment in the development of these feelings.

Attempts to describe empathy as a developmental phenomenon are evident among the theorists who suggest that behavior which is basic to empathic skill, such as thinking, feeling, perceiving, and communicating, are learned throughout life (Feschbach, 1975; Keefe, 1976). Extensive studies investigating the relationship of age, life experiences, and maturity to individuals' empathy levels have been conducted by Smither (1977), Stotland, Matthews, Sherman, Hansson, and Richardson (1978), and Beres and Arlow (1974). Basch (1983), operating from the self-psychology perspective, pointed out that empathic understanding is the product of affective and cognitive development, not a special intuitive gift (Bennett, Legon, & Zilberfein, 1990).

The cognitive and affective dimensions of empathy are evident in Kohut's (1982) definition of empathy as the capacity to think and feel oneself into the inner life of another person. As an information gathering activity as well as a powerful emotional bond between people, Kohut believed that empathy was required for the therapist to accurately understand the world of another and be successfully

supportive and therapeutic. Both Kohut (1982) and Katz (1963) suggested that individuals possessed an innate capacity for empathy, with Katz describing empathy as an inner kind of radar which enables individuals to visualize, apprehend, and understand the feelings of others.

More recently, Davis (1980), another social psychologist, defined empathy as a reaction to the observed experiences of others and suggested that responsivity to others provided the basis for empathy. Using a multidimensional approach which recognized the cognitive and affective aspects of empathy, Davis (1980) developed the Interpersonal reactivity Index (IRI), a 28-item questionnaire consisting of four 7-item subscales, each of which measures a specific aspect of empathy. Psychometric properties of the IRI were reported by Davis (1980, 1983a, 1983b), with all four subscales having internal consistency reliabilities ranging from .71 to .77, and test-retest reliabilities ranging from .62 to .71.

The majority of nursing empathy researchers look at empathy as an interactional and multidimensional phenomenon (Bagshaw, 1986; Brunt, 1985; Clay, 1984; Hardin & Halaris, 1983; LaMonica, 1981, 1987; Travelbee, 1973; Williams, 1989; Zderad, 1969).

Stetler's (1977) description of empathy as a process whereby one individual understands another person's feelings and experiences is similar to that proposed by Kalisch (1973), Layton (1979), and Mynatt (1985). Although others have described empathy as a relational or connecting phenomenon (Robinson, 1972; Watson, 1979), Gagan (1983), in her review of the nursing literature, found the most common definition of empathy to be the ability to perceive the meanings and feelings of another person and to communicate that understanding to the other person. This definition incorporates aspects of phenomenology in its approach to empathy.

Olsen (1991) writes that the sine qua non of empathy is the experience of mutuality with another person. By enabling individuals to become aware of another's thoughts, feelings, and needs, empathy creates opportunities for understanding human behavior. As a form of communication, it transcends the physical boundaries of individuals to become a unique interactive process involving individuals' relationships with one another and the environment (C. Rogers, 1975; Surrey, Kaplan, & Jordan, 1990). Similarly, Munhall (1993) suggests that empathy emerges from shared perceptual fields and provides a means for understanding the actual essence of meaning

that individuals' experiences hold for them. The Science of Unitary Human Beings (M. Rogers, 1990; Wheeler, 1988) provides a mechanism for understanding empathy in the context of human-environment relationships.

An approach which views empathy as a manifestation of the human-environment mutual process opens new doors for understanding the scope of this phenomenon. Alligood (nee Raile)(1983) defined empathy as a human field pattern, characterized by feeling attributes, in her investigation of the relationship among empathy, creativity, and actualization in a sample of adults ranging in age from 18-60 years ( $n = 236$ ). Participants completed Hogan's (1969) ES, and measures of creativity and actualization. The hypotheses, which posited a positive relationship among these variables, were supported ( $p < .001$ ).

Building upon these findings, Alligood (1991) conducted a second study using a sample of elderly individuals ranging in age from 61 to 92 years ( $n = 47$ ). Data were collected using the same methods as in the first study. Pearson Product Moment correlation coefficients and multiple correlations were calculated to determine the relationships among the variables of empathy, actualization, and creativity.

The hypothesized positive relationships between actualization and empathy ( $r = .68$ ,  $p < .001$ ), and actualization, creativity, and empathy ( $r = .69$ ,  $p < .001$ ) were supported in the data analysis. However, the hypothesized positive relationship between empathy and creativity was not supported ( $r = -.32$ ,  $p < .01$ ). Although the generalizability of the findings is limited by the small sample size, the finding of a negative relationship between empathy and creativity is in opposition with the theory underlying the study. Further investigation about the nature of creativity and empathy, particularly in the elderly population, is needed before any conclusions can be drawn.

In another study based on the Rogerian framework, Sanchez (1986) investigated the relationship among diversity, empathy, and telepathy in a descriptive study of 180 volunteer mother-daughter dyads. Empathy was measured using Davis' (1983) IRI. Positive relationships were hypothesized between the mother's level of empathy, as measured on the fantasy, empathic concern, and perspective-taking subscales of the IRI, and the number of telepathic messages the mother received from her daughter as measured on the extrasensory perception telepathy test. A negative relationship was hypothesized

between the mother's score on the personal distress scale and the number of telepathic messages received from the daughter. Only one hypothesized relationship, the negative relationship between scores on the personal distress subscale and the telepathy measure, was supported in the data analysis ( $r = .1714$ ,  $p < .05$ ).

Maciorowski (1988) used the IRI (Davis, 1980) in her investigation of the relationship of empathy and critical thinking ability to the accuracy of nurses' perceptions of patients' acute pain experiences. Hypothesizing that nurses' empathy and critical thinking abilities were positively related to the accuracy of nurses' perceptions of acute pain experiences, the researcher administered the measurement tools to a sample of 101 nurse-patient dyads. Data were analyzed using multiple regression and correlation analysis. The hypotheses were not supported.

Both Sanchez (1986) and Maciorowski (1988) identify theoretical and methodological concerns with empathy as contributing to the lack of statistically significant findings in their studies. Because of its complexity, there is an inherent difficulty in measuring empathy with a tool that purports to measure dimensions of a holistic concept. Although empathy has been recognized as an important concept



in the Science of Unitary Human Beings (Raile, 1982; Wheeler, 1988), there are no tools in existence that measure empathy within a Rogerian framework. In spite of potential methodological and conceptual weaknesses, Davis' operationalization of empathy in the IRI is the most congruent with Rogerian science.

In their studies, Alligood (nee Raile)(1983, 1991), Sanchez (1986), and Maciorowski (1988) support the notion that empathy is a manifestation of some sort of exchange among human beings and the environment. Researchers have revealed that categorical descriptions of empathy as either a cognitive or affective phenomenon fail to capture the essence of empathy's unique multidimensional nature. As empathy evolves from the individual's openness and responsiveness to the mutual process, it transcends physical boundaries and flows as energy throughout the human and environmental fields. As a way of knowing (Carper, 1978), empathy plays a critical role in the nurse executive's ability to interpret and synthesize information inherent in the mutual process. The knowledge which emerges from this synthesis enhances the executive's ability to participate knowingly in change. This ability is the power of the nurse executive.

## CHAPTER III

## METHOD

Design

A descriptive correlational design was used to investigate the relationship of the variables, power and empathy, in the context of the human-environment mutual field process, as described by M. Rogers (1990) in the Science of Unitary Human Beings. Power was measured by the Power as Knowing Participation in Change Test (PKPCT, v. II) (Barrett, 1987), and empathy was measured by the Interpersonal Reactivity Index (IRI) (Davis, 1983).

Sample

The national sample was comprised of nurse executives employed in acute care hospitals, home health, and long term care settings. These settings represent the three major service providers within the health care system and the three major practice settings for nurse executives. The sample included nurse executives from each practice setting to ensure that the sample was representative of the population of nurse executives in the health care system.

The hospital-based executives were selected by stratified random sampling from the American Hospital Association Guide to the Health Care Field (1992). The same sampling technique was used to select home health agency nurse executives from the National Home Care and Hospice Directory (1992) and the long term care executives from the Directory of Nursing Homes (1991).

The sample included a total of 182 nurse executives from the three practice settings for a medium effect size of .30 and a power of .80, with a significance level of .05 (Cohen, 1988). The national sample was drawn from hospitals, home health agencies, and long term care facilities throughout the United States which met the delimitations of the study. Although an equal number of participants was selected from each practice setting, differences in response rates resulted in 71 acute care participants, 60 from home health care, and 51 from long term care.

#### Data Collection

Research instruments were distributed by mail using the Total Design Method (Dillman, 1978). Participants received booklets comprised of the PKPCT, v. II (Barrett, 1987), the IRI (Davis, 1980),

and a demographics questionnaire. Placement of the PKPCT and the IRI in the questionnaire booklet was alternated so that each tool appeared first in an equal number of questionnaires to allow for control for order effect (Borg & Gall, 1983). The demographic questionnaire was placed at the end of the booklet. A total of 516 packets, divided equally among the practice settings, were mailed to potential participants.

The cover letter (Appendix A) addressed the importance of each individual's response, the confidentiality of the responses, the professional usefulness of the study, and the opportunity for subjects to receive a summary of the findings. A statement of consent (Appendix B) was placed at the beginning of the booklet. Participants indicated their consent by responding to the items in the booklet and returning it to the researcher. The questionnaires were coded so that follow-up correspondence could be sent to nonrespondents, while eliminating identifying information from the respondents. Participants who were interested in a summary of the study's results were instructed to place their name and address on the return envelope.

To maximize the return of completed questionnaires, follow-up correspondence was sent to the

subjects in the form of a postcard one week after the initial mailing. A letter (Appendix H) and a replacement questionnaire booklet were sent two weeks after the postcard to the nonresponders. Based on the results of the first three mailings, an insufficient number of those responding from long term care met the delimiting criterion of a master's degree. An additional mailing (Appendix I) was sent to the long term care nurse executives in an attempt to increase the number of participants in that setting. Of the 516 packets mailed to potential participants, 270 were returned to the researcher for a 52% response rate. Of those returned, 182, or 35% of the original sample, were complete and met the criteria for entry into the study. The final sample of 182 nurse executives represented 35% of the original sample.

### Instruments

#### The Power as Knowing Participation in Change Test (PKPCT, v. II)

The PKPCT (Appendix C) was created by Barrett (1983) to operationalize her conceptualization of power, which describes power as the capacity to participate knowingly in change. This view of power was derived from the Science of Unitary Human Beings (M. Rogers, 1990). The development of the tool

centered around identifying and operationalizing selected behaviors which characterize power.

In the initial scale development, Barrett (1983) conducted two judges' studies using panels of experts comprised of individuals considered to be knowledgeable in the Rogerian conceptual system. Concepts that characterize power within M. Rogers' theoretical perspective were defined in the first study and face and content validity for the tool were established in the second study. The panel of experts was asked to rate words, phrases, and bipolar adjective pairs for their consistency with Rogerian Science and Barrett's description of power. The ratings were accomplished using semantic differential technique.

As a result of the judges' studies, 24 bipolar adjective pairs were selected as scales for the instrument. The completed instrument, which was constructed as a semantic differential scale, consisted of four concepts, three contexts, and 24 scales for each concept-context combination. Concepts differentiated the field behaviors which characterized power; awareness, freedom to act intentionally, choices, and involvement in creating change. Contexts described the human and environmental fields; occupation, self, and family.

To determine the validity, reliability, and general usefulness of the newly developed PKPCT, Barrett (1983) conducted a pilot study in which the tool was administered to a volunteer sample of 184 women and 84 men ( $N = 268$ ). Ranging in age from 19 to 60 years, the majority of subjects possessed bachelor's or master's degrees and represented occupations such as teaching, business, nursing, and other health professions. The responses to the scales were factor analyzed using principal factor analysis with varimax rotation. Similar factor structures were found when the contexts were held constant for the concepts and likewise when the concepts were held constant for the contexts. Based on these findings, Barrett (1983) suggested that power generalized across contexts, supporting Rogers' (1986) belief in the integral nature of human and environmental fields.

Based on these findings, Barrett (1983) revised the instrument into six concept-context combinations rated by 12 bipolar adjective scales. One retest scale was included with each combination. Scales were eliminated if they had loaded simultaneously on more than one factor or had failed to load on any factor.

To obtain reliability coefficients for the revised PKPCT, Barrett administered the tool in the main study to a sample of 625 individuals, ranging in age from 21 to 60 years, with a median age of 35. The bachelor's degree represented the mean educational level. Reliability coefficients were obtained by merging all data from the concept-context scale responses into a single factor analysis. Variances ranged from .63 for awareness in relation to occupation to .99 for involvement in creating change in relations with family (Barrett, 1983). The last scale of each concept-context combination functioned as a retest item. The retest reliability for these scales ranged from .70 to .78 (Barrett, 1983). The finding of a congruence coefficient of .99 among the contexts of self, occupation, and family supported the notion that an individual's feelings about power did not differ dramatically across contexts. Based on this finding, Barrett suggested that the contexts be deleted from the PKPCT. This suggestion led to the development of a modified version II of the PKPCT in which power is measured according to the concepts with the contexts removed.

Reliability coefficients for the PKPCT, v. II have been reported by Trangenstein (1988), Rizzo (1990), Caroselli-Dervan (1991), and Smith (1991).



Trangenstein reported an alpha of .96 in her investigation of the relationships of power and job diversity to job satisfaction and job involvement among female staff nurses, using a descriptive correlational design ( $N = 326$ ). The sample ranged in age from 21 to 65, with a median age of 35. Coefficients of stability, indicative of test-retest reliability, were reported at .75 for awareness, .80 for choices, .72 for freedom to act intentionally, and .68 for involvement in creating change. Cronbach's alpha for the 48 items was reported at .96 (Trangenstein, 1988).

In another descriptive correlational study, Rizzo (1990) obtained an alpha coefficient of .84 for the total 48-item power measure in her investigation of life satisfaction and power among the elderly ( $n = 84$ ). Alpha coefficients for the four subscales were .87 each for awareness, freedom to act intentionally, and involvement in creating change, and .81 for choices. Caroselli-Dervan's (1991) investigation of power and feminism in nurse executives ( $n = 89$ ) yielded an alpha coefficient of .95 for the total power measure. Smith (1991), in an investigation of the relationship between power and spirituality among polio survivors, reported reliability coefficients of .88 for awareness and

choices and .93 for freedom to act intentionally and involvement in creating change ( $n = 252$ ). Internal stability figures for test-retest reliability ranged from a low of .72 for involvement in creating change to a high of .90 for freedom to act intentionally.

Face validity was initially established through the judges' studies, whereas construct validity was established in the main study by examining the factor loadings of the scales in the strung out power concept combinations. The validity coefficients ranged from .56 to .70. According to Nunnally (1978), the factor loadings can be interpreted as validity coefficients and as such are an indication of the construct validity of the scales.

Participants are asked to rate a series of bipolar adjective pairs according to how the adjective pair reflects the participant's feelings in relation to the four power concepts. The rating is done by marking a space along a continuum: each space is a number from one to seven. Scoring is accomplished by summing the ratings. A total score is obtained for all four concepts, as well as individual scores for each concept. Scores can range from a low of 48, indicating low power, to a high of 336, indicating a greater sense of power.

### Interpersonal Reactivity Index

The Interpersonal Reactivity Index (IRI) (Davis, 1980) (Appendix D), a 28-item self-report measure comprised of four 7-item subscales, provides a multi-dimensional approach to the measurement of empathy. The scale was developed based on the rationale that empathy is a set of constructs, related but yet discriminable and distinct from one another (Davis, 1983a). Each subscale is designed to tap some aspect of the global concept of empathy. The empathic concern (EC) subscale measures the tendency of respondents to experience feelings of warmth, compassion, and concern for others. The perspective-taking (PT) subscale assesses respondents' tendencies to spontaneously develop the psychological point of view of others, whereas the fantasy subscale (FS) taps respondents' tendencies to transpose themselves imaginatively into the feelings and actions of fictitious characters in books, movies, and plays. The personal distress (PD) measures self-oriented feelings of personal anxiety and unease in tense interpersonal settings.

Support for the content domain of three of the four subscales, PT, EC, and PD, has been identified by previous theory and research. Hoffman (1977), in a theoretical account of the development of prosocial

motives, contended that a child's capacity for nonegocentric thought, which Davis considers analogous to perspective-taking capacity, mediates the gradual shift from a self-oriented emotional reaction to others' stress to a more other-oriented reaction of sympathy and concern. Coke et al. (1978) examined the constructs of perspective-taking, empathic emotion, and personal distress in their empirical investigation of emotional reactions and helping behavior among adults. Based on the findings, they concluded that perspective-taking tends to increase one's empathic emotional response. In turn, empathic emotion tends to increase the motivation to reduce another person's personal distress. For the fantasy subscale, the work by Stotland et al. (1978) and Sherman and Stotland (1978) established a link between fantasy and empathy. Stotland et al. (1978) reported that the tendency to fantasize about fictitious situations influences emotional reactions toward others and subsequent helping behavior.

Initial reliability of the scale, using test-retest methods, was established by Davis (1980) on a sample of 56 male and 53 female college students. Students completed the IRI twice, with a 60 to 75 day interval between testing sessions. Davis (1980) reported reliability coefficients ranging from .62 to

.71, indicating support for the temporal stability of the IRI. An analysis of the internal consistency of the IRI revealed reliability coefficients of .77 for the FS subscale, .77 for the PT subscale, .71 for the EC subscale, and .78 for the PD subscale. Similar alpha coefficients were obtained by Sanchez (1986) (FS,.76; PT,.71; EC,.62; PD,.79) and Maciorowski (1989) (FS,.73; EC,.68; PT,.76; PD,.55). Sanchez' sample included 180 mothers, ranging in age from 25-46 years, while Maciorowski's sample was comprised of 122 female registered nurses ranging in age from 21 to 55 years.

The low reliability coefficients for the EC and PD subscales in Sanchez' (1986) and Maciorowski's (1988) studies are indicative of measurement error and raise concerns regarding the internal consistency of these subscales. Nunnally (1978) states that an alpha coefficient of .70 is acceptable when measuring psychological constructs. One source of error may be the different types of participants used by Sanchez and Maciorowski, in contrast to the ones used by Davis (1980) in establishing the scale's reliability. Davis' sample was drawn from undergraduate college students, while the other studies used professional women and mothers drawn from mother-daughter dyads. It is reasonable to expect that these groups would

respond differently to the scale's items based on differences in age, employment, and life experiences. Another source of error may be related to the IRI item content. These items are attempts to define and quantify abstract psychological constructs. It is extremely difficult and problematic to obtain an objective measure of constructs which are intensely personal and variable, according to what the individual may be experiencing at that time.

Convergent and discriminant validity of the IRI subscales was established by examining the relationships among the subscales, between the subscales and extant empathy measures, and between the subscales and other psychological measures (Davis, 1983a). The analysis of the intercorrelations of the IRI subscales was conducted using a sample of 225 male and 235 female undergraduate college students ( $N = 460$ ). Scores for the PT and EC subscales were significantly and positively related for both males and females (mean  $r = .33$ ,  $p < .05$ ), while PT and PD scores were consistently and negatively related (mean  $r = -.26$ ,  $p < .05$ ). A positive correlation was found between scores on the FS and EC subscales (mean  $r = .36$ ,  $p < .05$ ). Based on the results, Davis found support for the hypothesized relationships among the scales.

Using the same sample, Davis found the relationships between scores on the IRI and extant empathy measures to be in the expected direction. Scores on the Hogan (1969) Empathy Scale, which is considered a cognitive measure of empathy, were most highly correlated with the cognitive PT subscale ( $\bar{r} = .40$ ,  $p < .05$ ). In contrast, of the four IRI scales, the PT subscale displayed the least association with Mehrabian and Epstein's (1972) measure of emotional empathy ( $\bar{r} = .20$ ,  $p < .05$ ). An examination of the relationships between scores on the emotional empathy measure and the FS, EC, and PD subscales revealed correlations of .52, .60, and .24, all significant at the .05 level. These results support the view of empathy as a multidimensional phenomenon.

In another study, Davis (1983a) examined the relationships among the IRI scales and other psychological measures using a sample of 677 male and 667 female undergraduate college students. Scores on the PT subscales were consistently associated with better social functioning and higher self-esteem, whereas higher fantasy scores were associated with emotional reactivity and sensitivity to others. EC scores were positively related to measures of emotionality and a nonselfish concern for others and negatively related to a boastful and egotistical interpersonal style.

Scores on the PD subscale were associated with lower self-esteem, poor interpersonal functioning, and characteristics such as vulnerability, uncertainty, and fearfulness (Davis, 1983a).

#### Scoring

Items on the IRI are scored on a scale from (A), does not describe me well, to (E), describes me well. The item scores on each subscale are summed, producing a total subscore ranging from zero (low) to 28 (high). Higher scores are indicative of greater levels of that subscale ability, while lower levels are indicative of lesser ability.

#### Demographic Questionnaire

A demographic questionnaire (Appendix E) was used to validate practice setting and educational preparation as well as to ascertain age, gender, ethnicity, marital status, years in nursing, and prior executive experience. Additional data were collected for reporting relationship, position title, time in current position, annual salary, and perceived power in the organization. Information gained from this questionnaire was used to provide a description of the participants and to enable



supplementary analysis of the relationship of these characteristics to power and empathy.

#### Analysis of Data

The Statistical Package for the Social Sciences (SPSS/PC, Version 4.0) was used to analyze the data. Descriptive statistics, including frequencies, range of scores, means, and standard deviations were calculated for the PKPCT, v. II, IRI, and demographics questionnaire.

The hypotheses were tested using Pearson product-moment correlation coefficients. As part of the supplementary analysis, power was regressed upon empathic concern, fantasy, perspective-taking, and personal distress. The level of significance was set at .05. Analysis of variance was used to examine differences among the subjects. Chi-square, t-test, and correlation analysis were used, when appropriate, to analyze the demographic variables with the PKPCT and the IRI. Reliability of all instruments was determined.

#### Pilot Study

A pilot study was conducted to obtain additional data on the internal consistency reliability of the empathy measurement scales. The pilot sample

consisted of 90 registered nurses who were actively working in nursing management positions. Analysis of the subjects' scores on the subscales of the IRI (Davis, 1980) revealed alpha coefficients of FS .77, EC .66, PT .66, PD .67. These findings were similar to those reported by Davis (1980) (1983a), Sanchez (1986), and Maciorowski (1988). Analysis of the subjects' scores on the PKPCT, v. II (Barrett, 1987) revealed an alpha coefficient of .96. Preliminary data analysis revealed a positive correlation between subjects' power scores and empathic concern scores ( $r = .28$ ,  $p < .01$ ), suggesting the presence of a positive relationship between the variables of power and empathy.

## CHAPTER IV

### ANALYSIS OF DATA

This study was designed to investigate the relationship of power and empathy in nurse executives using the Power as Knowing Participation in Change Test (PKPCT, v. II), the Interpersonal Reactivity Index (IRI), and information obtained from a demographics questionnaire. The national sample of 182 participants included respondents from the acute care setting ( $n = 71$ ), long term care ( $n = 51$ ), and home health care ( $n = 60$ ). Data were analyzed using the Statistical Package for the Social Sciences Release 4.0 (SPSS) (1990).

#### Description of the Sample

Participants represented the 10 geographical regions of the United States designated by the Health Care Financing Administration (HCFA), as shown in Table 1. The distribution of the participants among the regions is described in Table 2, with demographics presented in Tables 3 and 4.

Educational characteristics of the participants are summarized in Tables 5 through 7, with Tables 8

Table 1  
Geographical Regions of the United States

Region	States
1	CT, ME, MA, NH, RI, VT
2	NY, NJ, PR*, VI*
3	DE, DC, MD, PA, VA, WV
4	AL, FL, GA, KY, MS, NC, SC, TN
5	IL, IN, MI, MN, OH, WI
6	AR, LA, NM, OK, TX
7	IA, KS, MO, NE
8	CO, MT, ND, SD, UT, WY
9	AZ, CA, HI, NV, AMERICAN SAMOA*, GUAM*
10	AK, ID, OR, WA

\*Excluded from study

Table 2  
Geographical Distribution of the Participants  
(N = 182)

Region	Sample		Acute Care		Long Term		Home Care	
	<u>n</u>	%	<u>n</u> = 71	%	<u>n</u> = 51	%	<u>n</u> = 60	%
1	22	12.1	12	16.9	3	5.9	7	11.7
2	21	11.6	8	11.3	7	13.7	6	10.0
3	19	10.4	5	7.0	4	7.8	10	16.7
4	22	12.1	9	12.7	6	11.8	7	11.7
5	22	12.1	6	8.5	8	15.7	8	13.3
6	10	5.5	5	7.0	1	2.0	4	6.7
7	15	8.2	6	8.5	5	9.8	4	6.7
8	12	6.6	5	7.0	6	11.8	1	1.7
9	20	11.0	9	12.7	3	5.9	8	13.3
10	19	10.4	6	8.5	7	15.7	5	8.3

Table 3  
Demographic Characteristics of the Participants  
(N = 182)

Characteristic	Frequency	Percent
<b>Age</b>		
21-29	4	2.2
30-39	29	15.9
40-49	86	47.3
50-59	60	33.0
60-69	3	1.8
<b>Gender</b>		
Female	168	92.3
Male	14	7.7
<b>Racial/Ethnic Origin</b>		
African-American	4	2.2
White	177	97.3
Other	1	.5
<b>Marital Status</b>		
Never Married	21	11.5
Married	123	67.6
Divorced	35	19.2
Widowed	3	1.6

Table 4  
Demographic Characteristics by Practice Setting  
(N = 182)

Characteristic	Acute Care <u>n</u> = 71		Long Term <u>n</u> = 51		Home Care <u>n</u> = 60	
	Freq.	%	Freq.	%	Freq.	%
<b>Age</b>						
21-29			2	3.9	2	3.3
30-39	7	9.9	10	19.6	12	20.0
40-49	38	53.5	23	45.1	25	41.7
50-59	26	36.6	14	27.5	20	33.3
60-69			2	3.9	1	1.7
<b>Gender</b>						
Female	62	87.3	49	96.0	58	96.7
Male	9	12.7	2	4.0	2	3.3
<b>Racial/Ethnic Origin</b>						
African-American	1	1.4	1	2.0	2	3.3
White	70	98.6	49	96.1	58	96.7
Other			1	2.0		
<b>Marital Status</b>						
Never Married	14	19.7	1	2.0	6	10.0
Married	47	66.2	37	72.5	39	65.0
Divorced	10	14.1	12	23.5	13	21.7
Widowed			1	2.0	2	2.3

Table 5  
Educational Characteristics of the Participants  
(N = 182)

Characteristic	Frequency	Percent
Basic Nursing Prep.		
Diploma	68	37.4
Associate Degree	17	9.3
Bachelor's Degree	83	45.6
Generic Master's Degree	14	7.7
Highest Degree		
Doctorate in Nursing	7	3.9
Doctorate in Other Field	10	5.5
Master's in Nursing	93	51.1
Master's in Business Admin.	18	9.9
Master's in Other Field	54	29.7

Table 6  
Educational Characteristics by Practice Setting  
(N = 182)

Characteristic	Acute Care <u>n</u> = 71		Long Term <u>n</u> = 51		Home Care <u>n</u> = 60	
	Freq.	%	Freq.	%	Freq.	%
Basic Nursing Prep.						
Diploma	30	42.3	21	41.2	17	28.3
Associate's Degree	7	9.9	5	9.8	5	8.3
Bachelor's Degree	30	42.3	19	37.3	34	56.7
Generic Master's	4	5.6	6	11.8	4	6.7
Highest Degree						
Doctorate in Nursing	6	8.5			1	1.7
Doctorate in Other Field	8	11.3			2	3.3
Master's in Nursing	33	46.5	29	56.9	31	51.7
Master's in Business Admin.	9	12.7	2	3.9	7	11.7
Master's in Other Field	15	21.1	20	39.2	19	31.7



Table 7

Highest Degree by Basic Nursing Preparation  
(N = 182)

Highest Degree	Diploma <u>n</u> = 68		Associate <u>n</u> = 17		BSN <u>n</u> = 83	
	Freq.	%	Freq.	%	Freq.	%
Doctorate in Nursing	4	5.9			3	3.6
Doctorate in Other Field	5	7.4	2	11.8	2	2.4
Master's in Nursing	30	44.1	11	67.7	48	57.8
Master's in Business Admin.	5	7.4	2	11.8	8	9.6
Master's in Other Field	24	35.3	2	11.8	22	26.5

Table 8

Practice Characteristics of the Participants  
(N = 182)

Characteristic	Frequency	Percent
<b>Years in Nursing</b>		
6 - 10	8	4.4
11 - 15	20	11.0
16 - 20	36	19.8
21 - 30	76	41.8
Over 30	41	23.1
<b>Time in Current Position</b>		
Less than 1 year	25	13.7
1 - 3 years	64	35.2
4 - 6 years	49	26.9
7 - 9 years	20	11.0
10 - 12 years	7	3.8
13 - 15 years	7	3.8
More than 15 years	10	5.5
<b>Prior Experience as Executive</b>		
None	27	14.8
1 - 3 years	30	16.5
4 - 6 years	41	22.5
7 - 9 years	29	15.9
10 years or more	55	30.2
<b>Annual Gross Salary</b>		
\$25,000 - 49,999	43	23.6
\$50,000 - 74,999	55	30.2
\$75,000 - 99,999	53	29.1
\$100,000 - 150,000	31	17.0

and 9 providing an overview of selected practice characteristics. The majority of participants reported the Bachelor's Degree as their basic nursing preparation. In terms of graduate education, 52% of the participants identified the Master's Degree in Nursing as their highest degree. Of the 17 who had completed doctoral education, less than half had obtained their doctorates in nursing. Fourteen of these participants were practicing in the acute care setting and three were in home health care. Table 7 presents a description of the types of highest degree obtained by participants by three major types of basic nursing preparation. One participant, whose basic preparation was at the generic Master's level, reported a doctoral degree. This degree was in a field other than nursing.

An examination of the practice characteristics of the participants revealed that while almost 75% of the acute care executives had been in nursing for over 21 years, only 65% of those from long term care and 53% from home health care had similar years of nursing experience. For time in current position, over 75% of the total sample had been in the position six years or less. The same pattern was evident when participants responded according to practice setting. For prior experience as executives, more than 75% of

Table 9

## Practice Characteristics by Setting

(N = 182)

Characteristic	Acute Care <u>n</u> = 71		Long Term <u>n</u> = 51		Home Care <u>n</u> = 60	
	Freq.	%	Freq.	%	Freq.	%
Years in Nursing						
6 - 10	2	2.8	4	7.8	2	3.3
11 - 15	2	2.8	7	13.7	11	18.3
16 - 20	14	19.7	7	13.7	15	25.0
21 - 30	39	54.9	18	35.3	19	31.7
Over 30	14	19.7	15	29.4	13	21.7
Time in Position						
< than 1 year	8	11.3	7	13.7	10	16.7
1 - 3 years	21	29.6	20	39.2	23	38.3
4 - 6 years	23	32.4	13	25.5	13	21.7
7 - 9 years	9	12.7	5	9.8	6	10.0
10 - 12 years	4	5.6	1	2.0	2	3.3
13 - 15 years	3	4.2	2	3.9	2	3.3
> than 15 years	3	4.2	3	5.9	4	6.7
Prior Experience						
None	12	16.9	7	13.7	8	13.3
1 - 3 years	5	7.0	10	19.6	15	25.0
4 - 6 years	16	22.5	17	33.3	8	13.3
7 - 9 years	14	19.7	6	11.8	9	15.0
> than 10 years	24	33.8	11	21.6	20	33.3
Annual Salary						
\$25,000 - 49,999			30	58.8	13	21.7
\$50,000 - 74,999	10	14.1	20	39.2	25	41.7
\$75,000 - 99,999	37	52.1	1	2.0	15	25.0
\$100,000 - 150,000	24	33.8			7	11.7

the acute care executives had over four years of prior experience, compared to 65% for long term care and 62% for home health care. The long term care executives reported salaries which were considerably lower than those in other settings.

Participants were asked to answer yes or no to an item that asked whether they perceived their positions as powerful in their organizations. For the total sample, over 92% answered affirmatively. Table 10 provides a description of these power responses. Affirmative responses were obtained from over 94% of the acute care executives, 88% of the long term care, and 95% of the home health care executives.

Additional data analysis according to practice setting revealed a tendency for long term care participants to report less perceived organizational power than those in the other settings. Data were then analyzed as a total group to determine if participants' mean total power score on the PKPCT differed significantly based on their perceived perceptions of power in the organization. The findings from the t-test, as presented in Table 11, revealed that there were significant differences in total power scores according to perceived organizational power. This indicates that those with higher total

power scores were more likely to perceive their positions as powerful in the organization than those with lower scores.

Table 10

## Participants' Perception of Power

(N = 182)

Perception of Power	Sample <u>n</u> = 182		Acute Care <u>n</u> = 71		Long Term <u>n</u> = 51		Home Care <u>n</u> = 60	
	Freq.	%	Freq.	%	Freq.	%	Freq.	%
Yes	169	92.9	67	94.4	45	88.2	57	95.0
No	13	7.1	4	5.6	6	11.8	3	5.0

Table 11

## Comparison of Means of Perceived Organizational Power to Total Power Using 2-tailed t-tests

(N = 182)

Variable	<u>n</u>	M	SD	<u>t</u>	<u>df</u>	<u>p</u>
Perceived Organizational Power						
Yes	169	291.77	23.19	2.43	180	.016
No	13	274.92	24.25			

### Descriptive Statistics of the Variables

Descriptive statistics were computed for the dependent and independent variables. Initial results for the IRI subscales revealed unrestricted ranges for the empathic concern, fantasy, and perspective-taking subscales, with scores from 0-28 for empathic concern and perspective-taking and 0-26 for fantasy. However, scores from 0-15 on the personal distress subscale were indicative of a restricted range. Examination of skewness and kurtosis for the fantasy, perspective-taking, and empathic concern subscales revealed a nearly normal distribution of scores for these subscales. However, examination of personal distress subscale scores revealed skewness of 1.59 and kurtosis of 5.12, suggesting that the scores for this subscale were not normally distributed.

Using a histogram to examine the distribution of the scores, outlier scores were noted for four respondents on the personal distress subscales. Two of these respondents also had outlier scores on the empathic concern subscale. Inspection of the data from these cases failed to reveal any error associated with data entry. Because the scores for these four respondents were at the higher end of the ranges obtained for the remaining respondents, the four cases were deleted from the sample (Tabachnick &

Fidell, 1983). Results obtained from the Mahalanobis distance test ( $p < .001$ ) indicated that there were no outliers among the remaining cases.

The PKPCT scores for the original sample were then examined for the presence of outliers, revealing three cases, one of which had been identified as an outlier in the IRI analysis. Since scores from these cases were at the lower end of the reported ranges, the cases were deleted from the sample (Tabachnik & Fidell, 1983). Therefore a total of six cases were deleted from the original sample, resulting in a final sample of 182 participants.

Measures of central tendency and dispersion were obtained for the IRI subscale and PKPCT scores for the final sample ( $N = 182$ ). Table 12 presents a description of these findings. Skewness was reduced for the PKPCT scores, as well as the empathic concern and personal distress scores. Data were additionally examined using the Mahalanobis distance test. The results indicated that there were no outliers among the 10 most extreme cases identified, with  $p < .001$  and four degrees of freedom.

#### Reliability of the Instruments

The internal consistency of the Interpersonal Reactivity Index (IRI) was assessed by examining each



Table 12

Measures of Central Tendency and  
Dispersion for Instruments

(N = 182)

Scale/ Subscale	Possible Range	Actual Range	Mean	Standard Dev.	Median	Skewness
PKPCT	48 - 336	224 - 336	290.01	23.44	291.5	-.46
Awareness	12 - 84	53 - 84	72.54	5.89	73.00	-.69
Choice	12 - 84	49 - 84	71.53	7.37	72.00	-.69
Freedom	12 - 84	44 - 84	72.58	7.29	73.00	-.86
Change	12 - 84	54 - 84	74.09	6.99	75.00	-.64
IRI						
Fantasy	0 - 28	0 - 26	11.69	4.87	11.00	.22
Perspec. Taking	0 - 28	10 - 28	19.97	3.95	20.00	-.15
Empathic Concern	0 - 28	7 - 28	20.65	4.04	21.00	-.66
Personal Distress	0 - 28	0 - 15	4.77	3.34	4.5	.49

of the four subscales. Alpha coefficients for the subscales were fantasy = .72, perspective-taking = .72, empathic concern = .70, and personal distress = .65. For the Power as Knowing Participation in Change Test (PKPCT), internal consistency was assessed for the total measure and for each of the subscales. Alpha coefficients for the four subscales were awareness = .84, choices = .90, freedom to act intentionally = .91, and involvement in creating

change = .91. Coefficient alpha for the total power measure was .96.

The last scale in each of the PKPCT subscales is a duplicate, with the direction reversed, of one of the previous 12 scales. Examination of the amount of correlation between these two scales provides an additional means of evaluating the reliability of the PKPCT. The resulting correlation coefficients, which Barrett (1983) described as coefficients of stability, represent one indicator of the stability of the participants' responses to the scales. Low correlations, indicative of inconsistent responses to the same scale, would suggest the presence of measurement error.

For this investigation, the coefficients of stability ranged from .58 to .80, with  $\underline{r}$  = .58 for the superficial scale on the involvement in creating change subscale,  $\underline{r}$  = .68 for the pleasant-unpleasant scale on the awareness subscale,  $\underline{r}$  = .75 for the orderly chaotic scale on the freedom to act intentionally subscale, and  $\underline{r}$  = .80 for the timid-assertive scale on the choices subscale. To further analyze the stability of the participants' responses and the consistency with which the subscales measure power, the responses to these duplicate scales were examined for acquiescence. In his discussion of

response styles, Nunnally (1978) describes acquiescence as the tendency for subjects to agree rather than disagree with item content. Therefore, an examination of participants' responses on the duplicate scales, and the amount of difference between the responses, would provide additional information regarding the scale's measurement properties.

According to the PKPCT's design, a difference of six units represents the maximum possible difference between two responses, while a difference of zero indicates the same response. Based on the recommendation of a statistics consultant (personal communication, R. Malgady, Feb. 10, 1993), the frequencies of the acquiesor scales were examined to evaluate the consistency of participants' responses. Although there are no specific standards for determining levels of acquiescence, it is reasonable to expect that the majority of responses on the duplicate scales should differ by one point or less. The results revealed that responses differed by one point or less for 91% of the respondents on the awareness subscale, 99% on the choices subscale, 96% on the freedom subscale, and 94% for the change subscale, demonstrating an acceptable consistency in participants' responses.

### Tests of Hypotheses

The first hypothesis stated that there was a positive correlation between the nurse executive's empathic concern score and power score. Alpha was set at .05 using a two-tailed test of significance. Using the Pearson product moment correlation test, the resulting correlation of .1113 was not significant at the .05 level ( $N = 182$ ). Therefore, hypothesis one was not supported.

Hypothesis two stated that there was a positive correlation between the nurse executive's fantasy score and power score. The resulting Pearson product moment correlation of .0035 was not significant at the .05 level ( $N = 182$ ). Therefore, hypothesis two was not supported.

Hypothesis three stated that there was a positive correlation between the nurse executive's perspective-taking score and power score. The Pearson product moment correlation for the perspective-taking score and power score of .1817 was significant at the .05 level ( $N = 182$ ), indicating that hypothesis three is supported.

The final hypothesis stated that there was a negative correlation between the nurse executive's personal distress and power scores. The resulting Pearson product moment correlation coefficient of

-.1467, is significant at the .05 level ( $N = 182$ ), supporting the hypothesis. Table 13 provides a summary of the correlation analysis.

Table 13

Intercorrelations and Two-Tailed Tests of  
Significance of the Predictor and  
Criterion Variables

( $N = 182$ )

	Fantasy	Perspec. Taking	Personal Distress	Power
Empathic Concern	.3238**	.3406**	.1216	.1113
Fantasy		.2121**	.2277**	.0035
Perspec. Taking			-.1136	.1817*
Personal Distress				-.1467*

\*p < .05      \*\*p < .01

Supplementary Findings

The following material, which describes the supplementary data analysis, is divided into three sections. The first section is comprised of findings for relationships among demographic variables. The second section includes findings describing multivariate relationships among the main variables. Findings for the relationships of PKPCT subscales to IRI subscales are also included. In the final section, findings describing the relationship of

selected demographic variables to the main variables are presented.

#### Demographic Variables

Relationships among demographic variables were explored using cross-tabulations and Chi-square analysis. Table 14 describes the findings which revealed significant differences across practice settings for the variables, years in nursing, highest degree, annual salary, and prior executive experience. Relationships among the demographic variables were explored using correlation analysis. Because of the ordinal nature of the data, the Spearman correlation coefficient was used to describe the relationships. According to the findings, as presented in Table 15, age was significantly and positively related to years in nursing, prior experience as an executive, annual salary, and time in current position. Annual salary was positively related to years in nursing, prior experience, time in position, and highest degree. Analysis of salary data according to practice setting, revealed similar findings for acute care and home health care participants. However, the data in Table 16 indicate that no significant correlations were obtained for

Table 14

Relationships of Practice Setting and  
Selected Demographic Variables

(N = 182)

Variable	Chi Square	df	p
Years in Nursing	17.52	8	.02
Highest Degree	20.85	8	.007
Annual Salary	101.28	6	.001
Prior Executive Experience	15.00	8	.05

Table 15

Spearman Correlation Coefficients for  
Selected Demographic Variables

(N = 182)

Variable	Age	Annual Salary	Time in Position
Years in Nursing	.7628**	.1564*	.3699**
Prior Experience	.3512**	.2476**	
Annual Salary	.1938*		
Time in Position	.3368**	.2472**	
Degree		.1940**	
Perception of Power		-.1486*	

\* p &lt; .05

\*\*p &lt; .01

Table 16

Spearman Correlation Coefficients for Annual Salary  
With Selected Demographic Variables  
by Practice Setting

(N = 182)

Variable	Acute Care $\underline{n} = 71$ Annual Salary	Long Term Care $\underline{n} = 51$ Annual Salary	Home Care $\underline{n} = 60$ Annual Salary
Age	.2456*	-.1553	.3461*
Years in Nursing	.3200*	.1540	.2890*
Prior Executive Experience	.1103	.0077	.4404**
Time in Position	.3154**	-.0743	.3543**
Perception of Power	-.2372*	-.1812	-.0532

\*  $p < .05$ \*\* $p < .01$ 

those variables among the long term care participants.

Main Variables

Participants' total power scores were regressed on the IRI scores to determine the ability of the IRI subscales to predict power. Because perspective-taking had the highest bivariate correlation with the dependent variable, power, it was entered into the regression equation first. Table 17 displays a summary of the stepwise regression analysis. The analysis revealed that the obtained F ratio of 6.148



Table 17

Stepwise Multiple Regression of Power Scores  
on IRI Subscale Scores

(N = 182)

Variable	R	R <sup>2</sup>	R <sup>2</sup> Change	<u>F</u>
Perspective-Taking	.1817	.033	.033	6.148*

\*p < .05

with 1 and 180 degrees of freedom was significant at  $p < .05$ . The coefficient of multiple determination ( $R^2 = .033$ ) indicated that 3% of the variance in total power may be explained by the presence of perspective-taking. The remaining independent variables, fantasy, empathic concern, and personal distress, failed to contribute significantly to the prediction of power and were not entered into the regression equation.

Relationships between IRI subscale scores and total power scores were examined for each practice setting using correlation analysis. The results, as presented in Table 18, revealed only one significant relationship, that of power and empathic concern among participants from the home health care setting. The data were further examined using dummy variables

Table 18

Correlations of Two-Tailed Tests of Significance  
of the Predictor and Criterion Variables  
Across Practice Settings

(N = 182)

	Acute Care <u>n</u> = 71 Power	Long Term Care <u>n</u> = 51 Power	Home Care <u>n</u> = 60 Power
Fantasy	-.1014	.0969	.0653
Perspective- Taking	.1736	.2113	.1769
Empathic Concern	.0684	.0713	.2663*
Personal Distress	-.2229	-.0379	-.1041

\*p < .05

and multiple regression analysis to evaluate whether there was an interaction effect for group membership on the relationship between empathic concern and power. The home health care setting was coded as a dummy variable and entered into the regression equation as a covariate, along with another variable representing the interaction of empathic concern and the covariate. Based on the results of the analysis, the interaction effect for practice setting on empathic concern and power was not significant.

Finally, the relationships between IRI subscale scores and PKPCT subscale scores were examined using

correlation analysis. Significant findings are displayed in Table 19. Awareness, choices, and freedom were found to be positively and significantly related to perspective-taking and empathic concern. To evaluate whether there were any differences in the main variables across practice settings, the data were subjected to analysis of variance. The findings, which are presented in Table 20, revealed no significant differences in any of the main variables across practice settings.

#### Relationships of Selected Demographic Variables to Main Variables

Data were then analyzed to determine if there were any significant differences in the main variables based on selected demographic variables. PKPCT subscale scores were included in this analysis. No significant differences were found for participants' total power scores according to the demographic variables. However, significant differences were obtained for scores on the change subscale of the PKPCT and the empathic concern and perspective-taking subscales of the IRI.

According to the results, power as change differed significantly according to annual salary and to prior experience as executive. Tables 21 and 22 present a summary of these findings. Executives in

Table 19

Pearson Correlation Coefficients Between  
IRI Subscales and PKPCT Subscales

(N = 182)

IRI Subscales	Awareness	Freedom	Choices
Perspective-Taking	.2564**	.1554*	.2239**
Empathic Concern	.1683*		.1962**

\*p &lt; .05

\*\*p &lt; .01

Table 20

Comparison of Means for PKPCT and IRI Subscales  
Across Practice Settings

(N = 182)

Variable	Acute Care n = 71		Long Term n = 51		Home Care n = 60		F	df	p
	M	SD	M	SD	M	SD			
PKPCT	291.63	25.81	286.74	24.50	290.87	19.73	1.19	2	.305
Awareness	73.17	6.16	71.88	5.90	72.35	5.60	1.06	2	.349
Choice	71.72	7.87	70.16	7.72	72.48	6.32	1.93	2	.149
Freedom	73.04	8.02	71.45	7.99	73.00	5.58	1.39	2	.251
Change	75.17	6.82	73.84	7.53	73.03	6.65	1.71	2	.184
IRI									
Empathic Concern	20.24	3.89	20.90	4.78	20.92	3.56	.56	2	.570
Fantasy	10.99	4.78	11.63	5.34	12.58	4.47	1.77	2	.172
Perspective-Taking	19.97	3.57	20.19	4.72	19.78	3.71	.06	2	.944
Personal Distress	4.38	3.39	5.5	3.45	4.57	3.12	1.62	2	.201

Table 21

Relationship of Annual Salary to Change  
Using a One-Way ANOVA

(N = 182)

Variables	<u>n</u>	M	F	<u>p</u>
Change				
\$25,000 - 49,999	43	72.79	4.030	.02
\$50,000 - 74,999	55	72.80		
\$75,000 - 99,999	53	76.11		
\$100,000 - 125,000	53	74.74		

Table 22

Relationship of Prior Experience to Change  
Using a One-Way ANOVA

(N = 182)

Variables	<u>n</u>	M	F	<u>p</u>
Change				
None	27	73.70	2.896	.02
1 - 3 years	30	70.90		
4 - 6 years	41	73.76		
7 - 9 years	29	76.66		
10 years	55	74.93		

the \$75,000 to \$99,000 group had the highest mean change scores, while the lowest were in the \$25,000 to \$49,000 group. For prior experience as executive, the highest mean change score was obtained by participants with seven to nine years of prior executive experience, and the lowest mean score was obtained by those with only one to three years of experience.

For the IRI subscales, significant differences were found in empathic concern scores based on basic nursing preparation, with the highest scores in the associate degree category and the lowest in the bachelor's degree group. These findings are presented in Table 23. Significant differences in perspective-taking scores, as displayed in Table 24, were obtained based on the category of highest degree, with the highest mean score found among participants with a non-nursing master's degree and the lowest score among those with a doctorate in nursing.

Data were then examined to determine if the interaction of selected demographic variables resulted in significant differences among the main variables. Significant findings, as displayed in Tables 25 through 27, were obtained for the interaction effect of basic nursing preparation and

Table 23

Relationship of Basic Nursing Preparation to  
Empathic Concern Using a One-Way ANOVA

(N = 182)

Variables	<u>n</u>	M	F	<u>p</u>
Empathic Concern				
Diploma	68	21.68	4.010	.009
Associate	17	21.94		
B.S.N.	83	19.70		
Generic Master's	14	19.71		

Table 24

Relationship of Highest Degree to  
Perspective-Taking Using a  
One-Way ANOVA

(N = 182)

Variables	<u>n</u>	M	F	<u>p</u>
Perspective-Taking				
Doctorate in Nursing	7	18.71	2.590	.04
Doctorate in Other Field	10	19.80		
M.S.N.	93	19.34		
M.B.A.	18	19.61		
Other Master's	54	21.37		

Table 25

Interaction of Basic Nursing Preparation  
and Highest Degree on Total Power  
Using a One-Way ANOVA

(N = 182)

Source of Variance	Adjusted SS	df	MS	F
Main Effects	3550.355	7	507.194	.952
Basic Nursing	1241.552	3	413.851	.777
Highest Degree	2308.803	4	577.201	1.084
2-Way Interaction	10183.727	10	1018.373	1.912*
Residual	86814.558	163	532.605	

\*p = .04

Table 26

Interaction of Basic Nursing Preparation  
and Highest Degree on Choice  
Using a One-Way ANOVA

(N = 182)

Source of Variance	Adjusted SS	df	MS	F
Main Effects	631.681	7	90.240	1.803
Basic Nursing	370.691	3	123.564	2.469
Highest Degree	260.991	4	65.248	1.304
2-Way Interaction	1019.664	10	101.966	2.038*
Residual	8157.195	163	50.044	

\*p = .03



Table 27

Interaction of Basic Nursing Preparation  
and Highest Degree on Freedom  
Using a One-Way ANOVA

(N = 182)

Source of Variance	Adjusted SS	df	MS	F
Main Effects	536.410	7	76.630	1.531
Basic Nursing	258.175	3	86.058	1.720
Highest Degree	278.235	4	69.559	1.390
2-Way Interaction	932.239	10	93.224	1.863*
Residual	8157.172	163	50.044	

\*p = .05

highest degree on scores for total power, power as choice, and power as freedom. Based on these findings, educational preparation of nurse executives may play a role in their ability to participate knowingly in change. There was no evidence of a significant interaction effect on IRI subscale scores.

CHAPTER V  
DISCUSSION OF THE FINDINGS

The relationship of power and empathy in nurse executives was investigated using M. Rogers' (1990) conceptual framework and Barrett's (1983) conceptualization of power. In addition, factors were explored which describe the ability of nurse executives to participate knowingly and actively in change. Based on the Rogerian framework (M. Rogers, 1992), change is continuous, relative, and innovative in the health care environment. Since nurse executives are integral with the health care environment, they are continuously participating in change. According to Barrett's theory of power, it is the nurse executive's ability to participate knowingly in change that is ultimately manifested as power. Knowing participation requires that nurse executives be sensitive and responsive to the diversity in the health care environment. Since power is knowing participation in change, and empathy embodies sensitivity and responsiveness to change, power and empathy can be viewed as co-related constructs.

### Hypotheses

The first hypothesis, which predicted a positive correlation between the nurse executive's empathic concern score and power score, was not supported. The empathic concern subscale examines the affective nature of empathy and measures an individual's ability to experience feelings of warmth, compassion, and concern for others. Typical items from the subscale include: "I often have tender and concerned feelings for people less fortunate than I" and "I am often quite touched by things I see happen." The finding that the empathic concern and power scores were not significantly related was unexpected in consideration of the theoretical framework and investigations of the emotional dimensions of empathy.

The empathic concern subscale has been strongly correlated with a measure of general emotional responsivity, the Mehrabian and Epstein Emotional Empathy Scale (1972), and has received support as a measure of individual differences in emotionality. In an investigation of the effect of empathy on emotional reactions, Davis, Hull, Young, and Warren (1987) found that negative emotional reactions were most heavily influenced by emotional empathy among a sample of 144 male undergraduate students. The students were enrolled in a university's psychology

course. Subjects completed the IRI and then viewed videotape recordings of two different kinds of interactions; one designed to elicit hostile/angry responses and one designed to elicit sympathetic/sad responses. Following the videotapes, the subjects' moods were assessed using the Mood Adjective Check List. Three positive moods, friendliness, tranquility, and happiness, and three negative moods, hostility, anger, and depression, were measured. Subjects reported feeling more hostile after viewing segments characterized by anger and hostility and more depressed after the segments characterized by sadness. Empathic concern had a significant main effect on all three negative moods. Subjects high in empathic concern reported feeling more depressed, more hostile, and more anxious than did subjects low in empathic concern. Davis concluded that individuals high in empathic concern experienced more intense negative reactions to films than the subjects who were low in empathic concern. From a Rogerian perspective, emotionality evolves through the individual's participation in the continuous mutual human and environmental field process. As individuals participate in the mutual process, they may experience negatively oriented feelings, such as anger, hostility, or depression, or positively

oriented feelings, such as warmth, compassion, and concern for others.

Through feelings, individuals are able to develop ways of knowing and understanding that enable them to share in the experiences of others. By sharing experiences, individuals develop a mutual understanding which facilitates communication. When considered within the context of the practice of nurse executives, mutual understanding provides nurse executives with a basis for evaluating options for change (Koerner & Bunkers, 1992). This involves being able to recognize the relative impact and significance of changes, which may be planned or unplanned, on the nursing division within the context of the organization. The process of evaluating options can enhance the executive's ability to participate knowingly in change.

Empathic concern did not play a significant role in the ability of this study's participants to participate knowingly in change. Factors contributing to this finding include the construct and content of the empathic concern subscale, in addition to factors associated with the participants' levels of empathic concern. For this investigation, the mean empathic concern score of 20.65 was lower than the means reported in other studies using the IRI. In an

investigation of the relationship of empathy, diversity, and telepathy among mothers and daughters, Sanchez (1986) measured the empathy of mothers in 180 mother-daughter dyads. The mean empathic concern score for that study's participants was 23.3. Maciorowski (1988) investigated the relationship of critical thinking ability to the accuracy of nurses' perceptions of patients' pain experiences. The staff nurses in her sample of 122 nurse-patient dyads completed the IRI, with a resulting mean empathic concern score of 22.8. It is interesting to note the higher levels of empathic concern among the staff nurses in contrast to the nurse executives. The nurses in Maciorowski's study were actively involved in assessing their clients' levels of pain. Pain assessment is primarily an affective experience which requires direct contact with clients and the use of interpersonal skills to elicit patients' responses.

In his classification of skills required by effective administrators, Katz (1990) identified three basic areas: technical, human, and conceptual. According to Katz, all managers use these skills in varying degrees according to their positions within the organization. "Technical skills involve specialized knowledge, analytical ability within the specialty, and facility in the use of the tools and

techniques of the specific discipline" (Katz, 1990, p. 46). Human skills focus on interpersonal relationships and human interaction. Katz (1990) describes human skill as the ability to work effectively as a group member and to build cooperative effort within the organization. Human skill is primarily concerned with working with people.

Conceptual skills reflect the ability to think of the "relative emphasis and priorities among conflicting objectives and criteria; relative tendencies and probabilities rather than certainties; and rough correlations and patterns among elements, rather than clear-cut relationships" (Katz, 1990, p. 56). Although nurse executives use all three levels of skill, executive nursing practice demands a higher level of conceptual skill.

Higher levels of conceptual skills enable nurse executives to assess the larger whole of the organization rather than individual relationships or unit climates. Ultimately, nurse executives are responsible for linking the nursing department to the total organization (Fralic, 1992). Using conceptual skills, nurse executives are able to see beyond the needs of individuals and individual work units to the needs of the whole organization. This vision enables

nurse executives to place issues and problems in the organizational context. Conceptual skills are more cognitively than affectively oriented, since they involve organizing and interpreting information. These skills enable nurse executives to quickly ascertain needs based on the availability of relative resources. Since the empathic concern subscale measures an affective dimension of empathy, one would expect a lower mean score for nurse executives.

Another factor which may result in a reliance on cognitive processes is the hierarchical power model. Nurse executives often practice in hierarchical models that place more emphasis on the executives's cognitive than affective skills (Garner, Smith, & Piland, 1990). Affective phenomena, such as feelings and emotions, are viewed as detracting from the executive's objectivity and decision making abilities. Therefore, nurse executives practicing in these models may be less likely to exhibit emotional reactions or feelings of warmth, compassion, and concern. Davis (1987) reported that higher levels of empathic concern were associated with stronger emotional reactions. Perhaps the converse of this finding, that lower levels of empathic concern are associated with less intense emotional reactions, contributes to explaining the participants' lower



levels of empathic concern. For the nurse executives in this study, the tendency toward a more cognitive style may have been a reflection of an administrative environment that discouraged emotionality and the use of affective skills.

This raises additional questions on the cognitive and affective dimensions of the administrative environment. Do nurse executives develop their cognitive skills in response to the administrative environment, or do they enter the environment because of a preference for cognitive as opposed to affective processes? Are affective processes compatible with a hierarchical environment? Could affective skills promote mutuality and enhance the sharing of power? The answers to these questions are critical to building a knowledge base for executive nursing practice that assists nurse executives in creating environments which promote individual, group, and organizational growth within the health care system.

The empathic concern subscale is designed to measure the qualitative nature of relationships by focusing on the measurement of feelings of warmth, compassion, and concern for others. The abstract and subjective nature of these feelings make them difficult to quantify. Items on the empathic concern subscale, therefore, may not accurately measure an

individual's feelings. This suggests measurement error and may result in spurious findings. A more sensitive tool, combined with quantitative and qualitative research methods, could be more accurate in capturing the feelings associated with empathic concern.

The second hypothesis, which predicted a positive correlation between the nurse executive's fantasy score and power score, was not supported. The fantasy subscale examines the affective nature of empathy by measuring an individual's tendency to transpose oneself imaginatively into the feelings and actions of fictitious characters in books, movies, and plays. Examples of items from this subscale include: "I daydream and fantasize with some regularity about things that might happen to me" and "I really get involved with the feelings of a character in a novel."

The fantasy subscale is derived from Sherman and Stotland's (1978) research on empathy in which they described empathy as a human process and an emotional contagion that can occur whenever two or more people meet and communicate. They proposed that fantasy was an important dimension of empathy as it enabled one person to creatively imagine another person's experiences and the feelings associated with those

experiences. After conducting validation studies of various empathy scales, Sherman and Stotland (1978) reported that subjects with high fantasy levels were more prone to imagining themselves in another's position. In addition, they reported that subjects empathized more when they imagined how another person felt or when they imagined themselves in that person's position, provided that person was in a painful situation. Based on these findings, they concluded that individuals with high levels of fantasy would tend to avoid other forms of empathy, as the feelings associated with fantasy could lead them to experience strong emotional states. Building upon Stotland's work, Davis (1983a) designed the fantasy subscale of the IRI as a means for measuring an individual's imaginative capabilities and tendencies to daydream and fantasize. Based on the theoretical framework, Stotland's work, and the studies cited, the finding that fantasy and power scores were not significantly related was unexpected.

As with empathic concern, fantasy did not contribute significantly to the participants' ability to participate knowingly in change. Factors contributing to this finding include the responsibilities inherent in executive-level positions, characteristics of the administrative

environment, and methodological issues associated with the IRI.

The mean fantasy score of 11.59 in this study fell just below the midpoint of the possible range of scores, indicating that fantasy was not a dominant dimension for this group of nurse executives.

Fantasy means reported by Sanchez (1986) ( $\bar{X} = 17.04$ ), Maciorowski (1988) ( $\bar{X} = 17.04$ ), and Davis (1983a) ( $\bar{X} = 18.75$ ), were noticeably higher. Participants in this study differed from those in the other studies in terms of their employment. None of the participants in the other studies had responsibilities associated with executive-level positions. In these positions, nurse executives are accountable for the performance of the nursing division within the context of the larger organization (Cooner, Decker, & Hanley, 1992). Considering the complexities of the health care environment, these responsibilities could have contributed to the difference in mean fantasy scores.

Nurse executives are responsible for establishing an organizational environment which facilitates the delivery of nursing services in an organization of highly interdependent units. To fulfill these responsibilities, they must be able to interpret large amounts of information and use this information as a basis for decision-making, prioritizing, and

goal setting (Richardson, 1993). The strategic, fiduciary, and operational responsibilities faced by nurse executives (Fralic, 1992) require that they be highly focused in carrying out their activities. These activities require skills such as perception, memory, and judgment, which are more cognitively than affectively oriented. Through their participation in these activities, executives may develop a pattern of using more cognitive than affective skills in their relationships with others. This would partially explain the lower scores on an affectively oriented scale for this study's participants.

The administrative environment may offer another possible explanation for the participants' lower fantasy scores. Nurse executives work within administrative environments that have established values of tradition and conformity (Simons, 1993). Although these values may be essential to the identity of the organization, they may also inhibit the organization's ability to respond to a changing environment (Drucker, 1978; Wilson, 1981). Fantasy encourages individuals to think imaginatively and creatively about opportunities and potential for change. Perhaps this kind of thinking can threaten the perceived stability of an organization by challenging the organization's values and traditions.

If imaginative thinking and creativity are perceived as threatening to the stability of the organization, then it is likely that the use of fantasy will be discouraged at all levels of the organization. This would be more likely to occur in an hierarchical environment, as this environment builds separateness by dividing people according to levels of control (Katz, 1990; Murphy & Back, 1991). Because of its predominance in the health care system, one would expect that a majority of this study's participants were practicing in hierarchical environments. This may explain why fantasy was not a dominant dimension among the executives in this study.

From a methodological perspective, the participants' neutral fantasy scores may be the result of the IRI's lack of sensitivity in exploring an affective dimension such as fantasy. The fantasy subscale attempts to measure an individual's ability to transpose oneself into the feelings and actions of fictitious characters. This raises the question of whether the individual is always aware of this process. It is doubtful that this characteristic can be accurately assessed by asking direct questions which produce a quantitative score. The focus on transposing oneself into fictitious characters does

not explore the creativity and imaginative thinking that are inherent in fantasy. These factors point to a need to develop a tool that more accurately explores the nature of fantasy and at the same time limits the risk of measurement error.

The third hypothesis, which predicted a positive relationship between the nurse executive's perspective-taking score and power score, was supported ( $r = .1817$ ,  $p < .05$ ) The perspective-taking subscale, which examines the cognitive nature of empathy, measures the ability of an individual to spontaneously adopt the psychological point of view of others. Sample items from the PT subscale include "I try to look at everybody's side of a disagreement before I make a decision" and "I sometimes try to understand my friends better by imagining how things look from their perspectives."

The ability to spontaneously adopt the psychological point of view of others can be seen as the foundation for knowing others. Knowing emerges through the mutual process of the integrally related human and environmental energy fields. Brown (1991) proposes that knowing involves perception, appreciation, and value. Perception involves sensing or experiencing a phenomenon and serves as the foundation for appreciation, which involves attaching

a value to the phenomenon. By studying the valuing process, nurse executives are able to understand the meaning of phenomena within the organizational context.

Barrett acknowledges the importance of knowing in her statement that "awareness and freedom to act intentionally may be the knowing which guides participation in choices and involvement in creating change" (Barrett, 1983, p. 28). Therefore, factors associated with knowing are critical to the nurse executive's ability to participate knowingly in change. For nurse executives, knowing involves understanding the needs of the nursing units and related services within the context of the larger organization. Knowing can ultimately enable nurse executives to influence the design, effectiveness, and quality of nursing practice systems.

Perspective-taking provides a mechanism through which executives can carry out these functions. Davis et al. (1987) proposes that an individual's capacity for perspective-taking may be most likely to influence behaviors under specific conditions, particularly in situations that contain implicit or explicit cues to engage in psychological role taking. Perhaps nurse executives encounter these situations as they promote collaboration, cooperation, and self-



direction throughout the nursing unit and negotiate for needed resources at the highest levels of their organizations.

The fourth hypothesis predicted a negative relationship between a nurse executive's level of personal distress and power. This hypothesis was supported ( $r = -.1467$ ,  $p = .048$ ). As with the empathic concern and fantasy subscales, personal distress attempts to measure an affective dimension of empathy. Davis (1983a) defines personal distress as the individual's feelings of fear, apprehension, and discomfort at witnessing the negative experiences of others. Sample items from the subscale include "I sometimes feel helpless when I am in the middle of a very emotional situation;" "Being in a strange situation scares me;" and "I tend to lose control during emergencies."

In Roger's model personal distress alters the individual's awareness of events in the mutual process and may interfere with the individual's ability to participate knowingly in change. According to Davis (1983a), individuals with high levels of personal distress tend to focus on how things affect them personally. This egocentric approach limits an individual's openness, receptivity, and responsiveness to the thoughts and feelings of others.

Individuals who experience high levels of personal distress may distance themselves from distressing situations. This does not mean that individuals restrict their participation in the mutual process, as mutuality and active participation are assumed in the Rogerian framework. However, Barrett (1983) states that to manifest power, individuals must participate knowingly as well as actively in the mutual process. Personal distress may interfere with knowing participation by altering the individual's awareness of events in the mutual process and the ability to develop a shared understanding of other's experiences.

The personal distress scores for participants in this study were markedly lower than those reported by Davis et al. (1987), Maciorowski (1988), and Sanchez (1986). This finding may be partially explained by the role functions of the nurse executive, particularly in reference to managing crises. In general, individuals in executive level positions are expected to demonstrate control and objectivity, activities which tend to be more cognitively oriented, when handling crises (Tumulty, 1992). The low personal distress scores, and the significant negative relationship between PKPCT scores and personal distress scores, provide further support for the

tendency of this study's participants to avoid affective processes in their executive practice.

Items on the personal distress subscale describe feelings such as helplessness, fear, and loss of control. These feelings are antithetical to the role characteristics of autonomy, control, and mastery reported by Brown (1987) in her qualitative study of the lived world of nurse executives. Although one would expect nurse executives to have lower levels of personal distress, do the exceptionally low personal distress scores indicate that participants in this study were denying their own vulnerability and ability to experience emotions? Is there so much pressure on nurse executives to succeed that they devalue their own fears and emotions? What is the ultimate effect of this devaluing on the nurse executive and on the organization? Additional research is needed to explore factors associated with nurse executives' levels of personal distress and the relationship of these factors to their ability to participate knowingly in change.

It was postulated that empathy would be related to power as both phenomena are expressions of wholeness that encompass the totality of the individual (Barrett, 1983; M. Rogers, 1970). This aspect of the theoretical framework was weakly supported by the

current research. Although theoretically, attributes manifesting a comparable process should be related (Sanchez, 1986), only two of the four dimensions of empathy were significantly related to power.

A possible explanation for these findings is that the IRI does not adequately address the areas of feeling and sharing identified by M. Rogers (1970) and C. Rogers (1980). The multidimensional nature of empathy is well documented in the literature (Coke, 1978; Davis, 1980, 1983a; Iannotti, 1975; Sherman & Stotland, 1978), as is the need to recognize its multidimensionality in the development of valid measures of empathy (Deutsch & Madle, 1975).

Although the empathy scale used in this study did attempt to measure identified dimensions of empathy, the low to moderate intercorrelations of the IRI subscales indicate that the tool failed to capture its multidimensionality (see Table 13). The only IRI subscales that were not significantly correlated were the personal distress and empathic concern and the personal distress and the perspective taking subscales. The highest correlations were obtained for the empathic concern and fantasy and empathic concern and perspective taking subscales. Based on these findings, the items on the four IRI subscales did not completely explore the possible dimensions of

empathy. This raises questions about the conceptualization of empathy as a process with multiple components that are not additive.

### Sample Characteristics

The sample consisted of 182 nurse executives from the three major practice settings: acute care ( $n = 71$ ), long term care ( $n = 51$ ), and home health care ( $n = 60$ ), selected by stratified random sampling from national directories in their respective areas. Selection of organizations was based on size, to minimize differences in practice related to administrative responsibilities, and location, to ensure a nationally representative sample.

Participants were recruited using a mail survey sent to nurse executives throughout the United States. Using the Dillman Total Design Method (1978 ), 516 packets were mailed to potential participants. A total of 270 questionnaires were returned for a 52% response rate. Of the 270 returned, 182 were selected for the final sample based on the delimiting criteria and completion of all items on the questionnaires. The final sample of 182 nurse executives represented 35% of the original pool of participants.

Not all the participants were female, which is consistent with findings reported by Dunham and Klefahn (1990) and Borman and Biordi (1992). While other studies of nurse executives had samples representing 30 states (Dunham & Klafehn, 1990), and 12 states (Johnson, 1989), participants in this study represented all 50 states. Participants were evenly distributed throughout the United States with the exception of the midwest and south, where there was a lower response rate among the subjects.

#### Age, Education, and Years in Nursing

An examination of the findings for age and nursing experience reveals a possible trend toward younger and less experienced participants in the long term care and home health care settings. Although the majority of participants in the total sample were over the age of 40, there was a noticeably larger number of younger participants in the long term and home health care settings than in the acute care setting. Over 23% of the long term and home health care participants were under the age of 40, in contrast to 10% of the acute care participants. As expected, there were comparable differences in years of nursing experience. Over 60% of the entire sample reported more than 20 years of nursing experience.

When examined according to practice setting, over 75% of the acute care participants reported more than 20 years of experience in contrast to 53% for long term care and 64% for home health care.

These findings for age and experience may be related to changes occurring in the health care delivery system. There has been a dramatic growth in long term and home health care services over the past decade due to the need to reduce hospital costs by reducing patients' length of stay, the availability of health care technology outside the acute care facility, and the changing population demographics (Peters, 1993). This has led to the expansion of services by existing health care organizations and the creation of new organizations. Because nursing is the major service provider in the long term and home health care settings, this expansion has resulted in more positions for nurse executives, thereby creating more opportunities for younger and less experienced nurses to assume executive level positions.

For basic nursing preparation, over 45% of the total sample reported the bachelor's degree in nursing as their basic preparation. When examined according to practice setting, the majority of acute care participants were equally divided between the

bachelor's degree and diploma for basic preparation. Similar findings were obtained for the long term care participants. In contrast, the majority of home health care participants reported preparation through the bachelor's degree.

Basic nursing preparation was also found to be significantly and negatively correlated with age and with time in position. Based on the correlation obtained for age, older participants were more likely to have attended diploma programs. This finding is to be expected if one considers that diploma programs provided the majority of nursing education when these participants began their basic preparation. As for the negative correlation for basic preparation with time in position, participants with lower levels of basic preparation were more likely to have been in their positions for longer periods of time. Over 67% of the diploma prepared participants had been in their positions for more than four years compared to 41% of the baccalaureate prepared and 41% of the associate prepared participants. Caroselli-Dervan (1991) obtained similar findings in her investigation of the relationship between power and feminism in nurse executives. Based on those findings, Caroselli-Dervan concluded that nurses prepared at the diploma level tended to be less mobile, more



loyal to the institution, or less comfortable with change. This finding must be interpreted with caution as the diploma prepared participants were older than those prepared at the baccalaureate and associate levels. By virtue of their age, diploma prepared participants would be more likely to have more years of experience and more time in a particular position.

An additional explanation for the findings for time in position may be attributed to factors associated with practice setting. When compared to the other two practice settings, a markedly greater percentage of home health care participants reported their basic preparation as the baccalaureate degree. Because of the rapid growth in the demand for home health care services and the resulting opportunities for nurse executives, one might expect these participants to have spent less time in their positions. Therefore, the impact of practice related factors on time in position should be considered in future research.

For highest degree, over 50% of the sample reported the master's degree in nursing as their highest degree, indicating that this was the degree of choice. However, almost 30% reported a master's degree in another field as their highest degree.

Less than 10% of the total sample were prepared at the doctoral level. When examined according to practice setting, the master's in nursing was the most frequently reported degree for each setting. Approximately 20% of the acute care participants were doctorally prepared, compared to 5% in the home care setting. There were no doctorally prepared participants in the long term care setting.

Examination of data to determine if any pattern existed regarding the type of basic nursing preparation and the highest degree obtained by the participants revealed some interesting findings. Participants with basic nursing preparation at the associate level reported the highest frequency of master's degrees in nursing. However, the small sample size of 17 limits the generalizability of these findings. The next highest frequency for master's in nursing was reported by participants with basic preparation at the bachelor's level. Of the four basic types of basic preparation, diploma prepared participants reported the highest frequency of non-nursing master's degrees. The small number of participants, only 10%, who reported the master's in business administration as their highest degree, were most likely to have had their basic preparation at the bachelor's level. At the same time, the majority

of doctorally prepared participants reported that they obtained their basic preparation at the diploma level.

Although there is no conclusive trend regarding basic preparation and advanced degree, participants with basic preparation at the diploma level were most likely to have pursued graduate study outside of nursing. An explanation for this finding may be found by examining the age distribution of the participants. For this study, the acute care setting had the highest percentage of executives in the 50-59 age group. It is possible that these individuals pursued graduate study when only a limited number of master's in nursing programs were available (Kelly, 1991).

This finding has implications for the nursing profession, since the majority of nursing practice still occurs within the acute care setting. Advanced nursing practice requires that nurse executives possess the knowledge and skills necessary to base their practice on nursing science and nursing theory. A non-nursing master's degree does not provide the necessary content in the scientific and theoretical bases of nursing, which is essential for advanced nursing practice. Lack of advanced preparation in nursing places nurse executives at a disadvantage in

providing the leadership necessary to advance the science of nursing and delays recognition of nursing as a professional discipline.

#### Prior Executive Experience and Time in Position

The majority of participants in this investigation were at least moderately experienced as executives, with approximately 70% of the sample reporting four or more years of prior executive experience. When data were examined according to practice setting, a similar trend emerged among the acute care executives, with 76% reporting four or more years of prior experience. However, participants reporting this level of experience decreased to 67% for the long term care and 62% for the home health care participants.

As for time in position, slightly more than half the participants had been in their current positions for four years or more, with the remainder reporting less than four years. Only 13% of the total sample reported that they had been in their positions for more than 10 years. These findings are consistent with data reported by Caroselli-Dervan (1991), Vestal (1990), and Wake (1990). Similar findings emerged when the data were examined according to practice setting. However, it is interesting to note that

almost 60% of acute care executives reported over four years in their positions, compared to 46% for long term care and 45% for home health care.

The differences in prior executive experience and time in position between acute care and non acute care participants may be associated with the creation of new health care organizations and the expansion of services in existing organizations. The expansion of services creates opportunities and positions for nurse executives. But with this expansion, there is an increased likelihood that positions will be filled by nurses with less executive experience. How will this affect the organization, the delivery of services, and the role of nursing within the organization?

Taken together, the findings which describe the work related characteristics of this study's participants, create a profile of long term and home health care participants who are chronologically younger than those in acute care, have fewer years of nursing experience and prior executive experience, and have spent less time in their current positions. This changing profile may have a significant impact on the role of nursing and the delivery of nursing services within health care organizations. Although the younger less experienced executives may need to develop the conceptual skills required in executive

nursing practice, their relative inexperience may have a positive effect on the organization. Perhaps these nurse executives will create new perspectives for nursing in the highly competitive corporate environment that is now common to health care organizations.

### Salary

For annual salary, marked differences were noted among the practice settings, with the acute care executives reporting significantly higher salaries than those in the other settings. The majority of home health and acute care executives reported salaries in the \$50,000-\$74,999 and \$75,000-\$99,999 ranges. Over 33% of acute care and 11% of home health care executives were in the \$100,000-\$150,000 range. None of the long term care participants were in this category. The majority of long term care executives had salaries in the \$25,000-\$49,999 range, and 2%, or one participant, reported a salary in the \$50,000-\$74,999 range. These findings are consistent with the salary data reported by Brider (1992) and the Home Health Agency Compensation Survey (1993) and are indicative of traditional differences in financial reward among practice settings.

These findings were expected based on the premise that years of experience lead to increased expertise. Knowledge and experience are seen as essential to the executive's ability to bridge potential gaps between clinicians and administrators (Biordi, 1986; Borman & Biordi, 1992). Nurse executive salaries have increased significantly over the past five years (Brider, 1992) and reflect the value accorded to nursing in the organization. However, higher salaries are associated with greater responsibility and full accountability for the delivery of nursing services.

If services are associated with expertise and accountability, what is the meaning of the lower salaries reported by the long term care participants? Are expertise and accountability less important in the long term care setting? The lower salaries may reflect a devaluing of nursing practice which has been documented in the long term care setting (Bahr & McConnell, 1989). What is the impact of this devaluing on nursing practice and the delivery of nursing services in this setting? Nursing services are critical to managing the complex chronic health conditions of individuals in long term care facilities. The need for these services will increase as the elderly population increases. Research is needed

to identify factors which impede or facilitate nursing practice in long term care settings in order to improve service delivery and enhance the status of nursing in this setting.

#### Position Title

Based on responses to the item on position title, a great deal of diversity remains in the titles used by organizations for nurse executive positions. The usual titles associated with executive nursing practice include vice-president, executive director, and director of nursing. The majority of those who reported "other" were from the home health care setting, indicating that the list of choices on the demographic questionnaire did not adequately reflect the positions of home care executives. Since the title of director/administrator of professional services is commonly used in the home health arena, it is reasonable to assume that many of the home health participants might have selected this title. Therefore, future research should incorporate a broader list of position titles to obtain a more representative profile of home health care executives.

For the acute care setting, 50% of the participants reported the titles of vice-president for



nursing or vice-president for patient care services. This finding is consistent with previous research which had revealed a shift in nursing management titles to titles more closely associated with power and status within an organization (Andrica, 1988). As for the other practice settings, 16% of home care participants reported the title of vice-president while none of the long term care participants reported a similar title. With the increasing importance of long term and home health care services in the health care system, titles of nurse executives may shift from traditional titles, such as director of nursing, to titles that are more reflective of the power and status of nursing within these settings.

The diversity in titles demonstrated by participants in this study can lead to confusion among colleagues in other departments, nursing professionals, and consumers regarding the nurse executive's role and responsibilities. In her discussion of middle management positions, Wilhite (1988) urges that nursing management titles be standardized to produce a more unified image. The relevance of this recommendation increases when one considers the diversity in titles which exist across practice settings. As nurses assume a leadership role in the

health care system, consistency among titles will facilitate communication and engender respect.

### Reporting Relationship

Data were collected regarding reporting relationship to provide information and insight into the nurse executive's position within the organization. For the entire sample, 88% revealed that they reported directly to individuals in top management positions. In contrast, approximately 70% of Caroselli-Dervan's (1991) sample reported to top management. The increase in number of participants reporting to top management in this investigation may be due to the inclusion of additional practice settings. Caroselli-Dervan confined her sample to the acute care setting where by virtue of its size, there may be additional layers in reporting relationships. Because long term and home health care organizations tend to be smaller in size, participants in those settings may be more likely to report to top management.

From a hierarchical perspective, the reporting relationship connotes power within the organization, with more power associated with positions that report directly to top management. This supports Fralic's (1992) view that increased importance has been

accorded to the role of the nurse executive as a member of the senior management team in health care organizations. Salary and title reflect this importance as does the nurse executive's key interface with the chief executive or chief operating officers, the director of the medical staff, and other senior level colleagues.

Although long term care participants were accorded less status as far as salary and title, they did report to individuals in top management positions. This type of reporting relationship could facilitate the long term care participants' ability to effect changes within their organizations that will improve the quality of services and enhance the status of nursing.

#### Perception of Power

Responses to the perception of power item revealed that the overwhelming majority of participants perceived their positions as powerful within the organization. Approximately 93% of the entire sample responded affirmatively to this item. When the findings were examined according to practice setting, similar responses were obtained from acute care and home health care participants, with each reporting a 95% affirmative response. However, only

88% of the long term care participants reported that they perceived their positions as powerful. This finding deserves further investigation as there has been a tendency to view long term care nursing practice as less important and less intellectually demanding than practice in other settings (Bahr & McConnell, 1989). This view exists among consumers and among many in the nursing profession. Its effect may be to perpetuate a sense of powerlessness among those in the long term care setting (personal communication, E. Barrett, Aug. 7, 1993).

Because the conceptualization and measurement of power were central to this investigation, data were examined to determine if participants' total power scores on the PKPCT differed significantly according to whether they perceived their positions as powerful. Based on the data analysis, there was a significant difference in PKPCT scores between the groups ( $t$  value = 2.43,  $p < .05$ ), with higher PKPCT scores associated with affirmative responses to the perception of power item. This finding should be viewed with caution because of the marked difference in group size. Although the finding contributes to the validity of the PKPCT, additional research, with more evenly divided group membership, is needed before any conclusions can be drawn regarding the

relationship of perceived position power to the ability to participate knowingly in change.

### Supplementary Findings

#### Main Variables

##### PKPCT Subscales

Scores on each of the four PKPCT subscales can be totaled to provide individual measurements of each of the four PKPCT concepts; awareness, choices, freedom to act intentionally, and involvement in creating change. Since the available data provided an opportunity to further test the PKPCT, the PKPCT subscale scores were totaled and then correlated with scores from the IRI. Empathic concern and perspective-taking were found to be significantly and positively correlated with awareness and choices. A possible explanation for this finding can be found in the fact that empathic concern and perspective-taking emerge from the individual's openness and receptivity to the mutual process. Empathic concern and perspective-taking reflect the participant's sensitivity and ability to know what others are experiencing as they participate in the mutual process. Awareness reflects the participant's ability to synthesize meaning from information, events, and stimuli inherent in the mutual process. Therefore, empathic

concern and perspective-taking have the potential for enhancing a person's awareness. As for the positive relationships for both empathic concern and choices and perspective taking and choices, individuals make choices based on what they know. Since empathic concern and perspective-taking reflect ways of knowing, they have the capacity to enhance people's choices.

Additional analyses of differences in PKPCT subscale scores according to demographic variables revealed some interesting findings. Scores on the involvement in creating change subscale differed significantly according to salary and prior executive experience. Highest mean change scores were obtained by those participants who had more than seven years of prior executive experience and were earning over \$75,000 per year. Data analysis had already revealed a significant positive relationship between prior executive experience and salary. These factors are usually associated with greater organizational responsibilities (Bridger, 1992; Ketefian & Redman, 1992) which place nurse executives in positions for creating and initiating change. Therefore, one would expect higher scores for this study's participants on the involvement in creating change subscale.

Although the PKPCT is based on a non-hierarchical approach to power, the findings regarding salary and prior experience indicate that this tool may be somewhat sensitive to manifestations of hierarchical power. However, salary and prior experience can be considered as manifestations of developmental potentials (Barrett, personal communication, Aug. 7, 1993). In her original investigation, Barrett (1983) states that individuals will actualize some developmental potentials rather than others. Therefore, the finding that change scores are positively and significantly associated with higher levels of experience and salary is consistent with Barrett's conceptualization of power.

The significant interaction effects for basic nursing preparation and highest degree on total power scores and choice and freedom subscale scores suggest that educational experience may have a significant impact on the nurse executive's ability to participate knowingly in change. Interestingly, there were no significant differences in PKPCT subscale scores based on basic nursing preparation alone or highest degree alone, nor were there any significant interaction effects for age, years in nursing, prior executive experience, or practice setting. Diploma prepared participants obtained the highest mean

scores for all three PKPCT measures. The master's in business administration was associated with the highest mean choice score, and the doctorate in nursing was associated with the highest mean freedom and total power scores. Although there may be some issues associated with the content of the graduate programs, a more important issue is that of the participants' basic nursing preparation.

Baccalaureate preparation has been identified as the standard for entry into professional nursing practice. As the number of baccalaureate prepared nurses increases, there will be a corresponding increase in nurse executives prepared at the baccalaureate level. Whereas diploma education provided an apprentice-type learning experience, baccalaureate education was designed to assist students in developing critical thinking abilities and a broad perspective on human behavior. Theoretically, baccalaureate education should enhance the students' ability to participate knowingly in change. The findings from this investigation would suggest otherwise. Could the emphasis on analytical problem solving processes have the reverse effect of limiting participation in change? Additional research is needed to explore these issues as the number of



nurses entering graduate study with basic preparation at the baccalaureate level increases.

#### IRI Subscales

The ability of the IRI subscales to predict total power scores was investigated using standard and stepwise regression analysis. Standard regression analysis revealed that none of the subscales were significant predictors of power. This finding raises questions about the multidimensionality of the IRI. Davis (1980) conceptualized empathy as a multidimensional phenomenon that could be measured by four independent subscales, each measuring a discrete dimension of empathy. The finding that the IRI subscale scores did not contribute significantly to the variance in power scores may be partially explained by the presence of significant intercorrelations among the subscales. Moderate and significant correlations were found among all subscales, with the exception of personal distress and perspective-taking and personal distress and empathic concern, indicating that the correlated subscales contained redundant information.

Stepwise regression analysis revealed that of the four IRI subscales, only scores on the perspective-taking subscale contributed significantly to the

prediction of total power. Although the F-ratio was significant at the .05 level, perspective-taking accounted for 3% of the variance in power, leaving .97% of the variance in power scores unexplained. This finding must be interpreted with caution as significance was obtained for a proportionately small amount of variance. The significance may be related to the large sample size ( $N = 182$ ), since as sample size increases, there is a corresponding increase in the likelihood of obtaining significant relationships due to chance (Kerlinger, 1973). The small amount of variance in power attributed to perspective-taking would indicate that empathy, as conceptualized in this study, is not related to the ability to participate knowingly in change. Could the IRI be measuring other factors that contribute to the manifestations of empathy? Additional research is needed to explore the multidimensionality of empathy and develop tools that are sensitive measures of this complex phenomenon.

Further analysis of the IRI subscale scores and total power scores revealed no significant differences in the main variables across practice settings. For this sample, power and empathy can be viewed as traits, which are relatively constant, in contrast to transient state-like phenomena. However, a seemingly

paradoxical finding was obtained when the main variables were subjected to correlation analysis within each practice setting. Empathic concern was found to be significantly and positively related to power among home health care participants ( $r = .2662$ ,  $p < .05$ ), suggesting that the home health setting might have a moderating effect on the relationship between these variables. However, the results of multiple regression analysis using dummy variables were that there was no interaction effect for practice setting on the relationship between empathic concern and power, indicating that setting was not a moderating factor.

This finding supports the view that home health care participants may be more affectively oriented than those in the other settings. Are there factors in home health care nursing practice that encourage the use of affective processes? What is the impact of these factors on the nurse executive? Executive nursing practice in the acute care, and to a lesser extent the long term care settings, is characterized by intense group interaction under crisis conditions. In addition, physicians still control many aspects of the nurses' professional practice in those settings. In contrast, professional practice in the home health care setting provides nurses with higher levels of

autonomy and a greater sense of control over their practice. Perhaps the independence associated with autonomy enhances the nurse executive's ability to participate knowingly in change. Could autonomy provide the home health care executive with more opportunities to experience feelings of warmth, compassion, and concern for others, and in doing so, contribute to the executive's ability to participate knowingly in change? Additional research is needed to explore the impact of cognitive and affective processes on executive nursing practice and identify related factors which may promote excellence in practice.

Although there were no significant differences in the main variables across practice settings, some interesting findings emerged when the data were subjected to analysis of variance using other demographic variables. Significant differences were obtained in empathic concern scores based on basic nursing preparation, with the highest mean empathic concern score obtained by participants with basic preparation at the associate degree level. The mean for the diploma prepared participants was just below that of the associate degree participants. The lowest mean scores were obtained by participants with the baccalaureate degree as their basic preparation.

The finding that baccalaureate prepared participants had the lowest mean empathic concern score has serious implications for nursing education and the nursing profession. Kelly (1991) states that one of the most notable differences between baccalaureate education and the other basic preparation programs is the development of the students' intellectual skills in the baccalaureate programs. Baccalaureate students are taught to use an analytical approach as the basis for decision making in practice and to reason logically "using verifiable information and past experience to select or create solutions to problems" (Kelly, 1991, p.261). These skills place a strong emphasis on cognitive processes, perhaps to the point of limiting the expression of the students' affective processes. Could baccalaureate education be preparing nurses who are less skilled in affective processes? What is the implication of this for professional nursing practice? Additional research is needed to explore these issues since baccalaureate education is essential for professional practice.

Significant differences were also obtained in perspective-taking scores according to highest degree, with the highest mean perspective taking score obtained by participants reporting a master's degree

in another field. The lowest mean score was obtained by those reporting a doctorate in nursing, with the next lowest mean obtained by participants with a master's in nursing. The small number of doctorally prepared participants ( $n = 7$ ) limits the generalizability of the findings for that group.

However, the finding that participants reporting a master's in another field obtained the highest mean perspective-taking score suggests that this group has a preference for cognitive processes. Perhaps there is a greater emphasis placed on cognitive processes in non-nursing master's programs. Approximately 30% of this study's participants reported master's degrees in other fields, a finding which is similar to those of Andrica (1988) and Krugman (1989). What is the impact of this type of education on executive nursing practice?

The American Colleges of Nursing and the American Organization of Nurse Executives asserted in their 1983 position statement that educational preparation for nursing administration should take place in collegiate schools of nursing that offer programs in nursing administration (Kelly, 1991). They also stated that this preparation should integrate concepts from the disciplines of nursing, business, and management (Kelly, 1991). In spite of

these recommendations, many nurses choose to obtain a health administration or business administration degree. Although one would question why so many nurses are still pursuing master's degrees in other fields, the more important issue for this discussion is the impact of this type of education on executive nursing practice.

Whereas cognitive processes are essential to executive nursing practice, affective processes, which involve feelings and emotions, are equally as essential as they enable the nurse executive to understand the totality of the individual in mutual process with the health care environment. Nurse executives who use more cognitive processes may be limiting their ability to participate knowingly in change and limiting their effectiveness as executives. Additional research is needed to explore whether there are differences in executive effectiveness associated with different types of graduate education programs.

Additional analysis of IRI subscale scores revealed significant low to moderate correlations among the subscales with two exceptions. The correlations obtained for personal distress with empathic concern and with perspective-taking were not significant. The findings, as displayed in Table 13,

suggest the presence of multicollinearity among the subscales and indicate that the subscales are not measuring separate dimensions of empathy.

The behaviors described in the empathic concern and perspective-taking subscales represent the essential nature of empathy. Together, empathic concern and perspective-taking provide the foundation for knowing. This researcher proposes that empathy, as a way of knowing, is an irreducible combination of cognitive and affective processes which include the intellectual and imaginative dimensions of emotions, perceptions, feelings, and memory. Ultimately, empathy enables an experiential appreciation of the mutual process and provides a basis for understanding. When considered within the Rogerian framework, this understanding encompasses a sensitivity to and awareness of the mutual process.

#### Methodological Issues

This investigation has raised several methodological issues relevant to the IRI and the PKPCT. The first, tool development and the related issue of item content, are of special concern to the IRI. Davis (1980) developed the IRI using a sample of college students in an introductory psychology course. While this provided him with a large number



of subjects ( $N = 1161$ ) with approximately equal representation of males and females, it raises the concern of whether the tool is appropriate for different and less homogeneous samples. The IRI attempts to measure the global concept of empathy through items that describe an individual's interactions with others. Although Davis does not report the age of his subjects, it can be assumed that the majority of students in an introductory psychology course are late adolescents or young adults. Item responses for this age group would then be derived from potentially limited life experiences.

In contrast, nurse executives, by virtue of their age, education, life experiences, and professional responsibilities have a much greater depth of knowledge upon which to base their responses. Nurse executives are also members of a profession which values caring and helping others. Although the mean empathic concern and perspective-taking scores were similar to those reported in other studies (Davis, 1983a; Sanchez, 1986; Maciorowski, 1988), the personal distress and fantasy scores were markedly lower in this investigation. Further refinement of the IRI subscales is needed to provide a more valid means for measuring empathy as a multidimensional

phenomenon. These issues limit the generalizability of the findings.

The second methodological issue is that of measurement reliability. Examination of the alpha coefficients of the IRI subscales reveals coefficients of .72 for fantasy, .72 for perspective-taking, .70 for empathic concern, and .65 for personal distress. According to Nunnally (1978), a reliability of .70 is adequate for scales measuring psychological constructs. Other researchers (Davis, 1980, 1983a; Maciorowski, 1988; Sanchez, 1986) have reported satisfactory reliabilities for the subscales, supporting the use of this tool as a consistent and reliable measure of empathy. However, the low alpha coefficient for the personal distress subscale raises concerns about the reliability of the subscale and limits the generalizability of the findings. While previous research using the IRI had revealed an acceptable alpha coefficient of .79 (Sanchez, 1986) on the personal distress subscale, Maciorowski (1988) reported an alpha coefficient of .55 on this subscale using a sample of staff nurses. One needs to consider whether the conceptualization and operationalization of personal distress are appropriate for samples of nurses, based on the nature of the nursing profession, the educational

background, role expectations, and the demands of the workplace.

Although the reliability coefficients for the remaining subscales were adequate, the finding that they were in the low .70's is indicative once again of the difficulties inherent in measuring empathy. These difficulties emerge from the elusive and abstract nature of the concept and are compounded by the diversity in definitions of empathy. In support of this, Layton and Wykle (1990) identify the problem of instrument validity as a serious difficulty in the measurement of empathy. Further research is needed in the conceptualization and operationalization of empathy to provide a basis for explicating empathy as a construct and for developing reliable and valid measures of this phenomenon.

While the alpha coefficient for the total PKPCT was .96, alpha coefficients for the subscales were as follows: awareness, .84; choices, .90; freedom, .92, and change, .92. These findings are similar to those reported by Caroselli-Dervin (1991) and Smith (1992). Although alpha coefficients of .80 and above are indicative of moderate to strong reliability, high coefficients, such as the .96 for the PKPCT reported in this study and the .97 and .95 reported by Smith and Caroselli-Dervan, must be viewed with

caution. Excessively high alpha coefficients are indicative of homogeneity of correlation. Nunnally (1978) states that the precision of a reliability estimate is a direct function of the precision with which the average correlation of test items estimates the average correlation of all items in the domain. Therefore, a correlation of one could indicate that the test items correlate perfectly with all items in the sampling domain pertaining to that construct. Given the vagaries and nuances of constructs, this would be highly improbable. An alpha of one, or an excessively high alpha, may mean that the items are measuring only one aspect of a construct and therefore are not precise measures of a construct. This researcher suggests that because of the consistently high alpha coefficients reported for the PKPCT, the tool may lack precision in its measurement of power.

Additional findings, which supported the contention that the PKPCT lacked precision in measurement, were obtained after examining the item means from various studies. Table 28 provides a description of those item means. For this study, the mean item score of 6.0 is the same as that reported by Caroselli-Dervan (1991). However, the standard deviation for the items in this study is .91, in contrast to Caroselli-Dervan's .54. Because each

item is scored using a seven point scale, a mean of four would represent a neutral position on the items. The mean of 5.9 exceeds the neutral position by greater than two standard deviations, indicating that item scores tend to cluster at the higher end of the scale. This finding is consistent with those reported by Smith (1992) and Trangenstein (1988) and indicates the need to strengthen the discrimination and variability of the PKPCT as a measurement tool (Rapacz, 1991).

Table 28

Comparison of Means and Standard Deviations  
in Selected Studies Using the PKPCT

N = 182

Researcher	Population	Mean	SD
Caroselli-Dervan, 1991	Female nurse executives	6.0	.54
Rapacz, 1991	People with chronic pain	5.1	.99
Rapacz, 1991	Comparison group	5.6	.78
Rizzo, 1990	People over age 65	5.7	.75
Trangenstein, 1988	Staff registered nurses	5.5	.76
Smith, 1992	Polio survivors	5.5	.88
Smith, 1992	Comparison group	5.4	.76
Present study	Nurse executives	6.0	.91

In a related finding, the highest mean total power scores have been obtained for samples of nurse executives. The mean score for this investigation ( $\bar{X} = 290.01$ ) was similar to that reported by Caroselli-Dervan (1991) ( $\bar{X} = 289.05$ ). However, markedly lower mean scores were reported by Smith (1992) for a group of polio survivors ( $\bar{X} = 263.84$ ) and a non-polio group ( $\bar{X} = 261.44$ ). Since power is a capacity of unlimited potential (personal communication, E. Barrett, Aug. 7, 1993), future research should address how diverse groups manifest power. This would provide further support for the validity of the PKPCT and contribute to an understanding of power as a non-hierarchical phenomenon.

Other methodological issues raised in this study relate to the wording of items on the IRI and to the use of self-report tools for measuring psychological constructs. Three of the IRI items, numbers 4, 14, and 18, were constructed using negative wording. Interestingly, all three items are part of the empathic concern subscale. Several participants indicated that the wording created difficulties in understanding the intent of the items and in selecting responses. Although negligible change occurred in the alpha coefficients for the empathic concern subscale when these items were deleted, items which

create confusion or difficulty for the respondents can decrease the accuracy of the responses and reduce the effectiveness of the measure.

As for issues pertaining to self report measures, two concerns are present in this study. First is the issue of response set. Kerlinger (1986) defines response set as the tendency to agree or disagree with items regardless of their content. This researcher noted that subjects tended to select responses on the PKPCT which represented the extreme positive ends of the scales. One questions whether the subjects actually considered the content of the scales in their responses.

A related issue, pertaining to both the PKPCT and the IRI is the social desirability factor inherent in self report measures (Nunnally, 1978). For the PKPCT, one of the adjectives in each scale's adjective pair has a more positive connotation than the other. Higher ratings are associated with the positive adjective. As leaders and achievers with positive self perceptions, nurse executives may tend to rate themselves higher than other populations. The social desirability factor may also account for the nurse executives' low mean scores on the PD subscale of the IRI. While the subscale is designed to measure whether respondents experience personal

distress during crises, the actual wording of the items focuses on whether respondents lose control or feel stress during crises. The behaviors described in the items may be perceived as negative by nurse executives whose practice is based on helping others in times of crises. Therefore, executives' responses on this subscale may not truly reflect their levels of personal distress.



## CHAPTER VI

## SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

This researcher investigated the relationship of power and empathy in nurse executives using the Science of Unitary Human Beings (M. Rogers, 1990) and Barrett's (1983) theory of power. Additionally, the researcher investigated relationships of power and empathy to selected demographic variables for this national sample of nurse executives. Volunteers were drawn from the three major practice settings; acute care, home health care, and long term care.

The sample consisted of 182 nurse executives selected through stratified random sampling from national directories of organizations in their respective practice settings. Selection of organizations was based on size criteria to minimize differences in practice related to administrative responsibilities. The criteria were as follows: acute care hospitals, minimum capacity of 300 beds; home health care agencies, minimum of 100,000 yearly visits for all services; long term care facilities, minimum capacity of 100 beds. Participants were nurse

executives who held the top administrative positions for nursing in their organizations.

Packets including the PKPCT, v. II, the IRI, the demographics questionnaire, and a letter explaining the research project were mailed to the participants using the Dillman (1978) Total Design Method. Those who wished to participate indicated their consent by completing the questionnaires and returning them to the researcher. A total of 516 packets, divided equally among the practice settings, were mailed to potential participants. Two hundred seventy questionnaires were returned to the researcher, a 52% response rate. Of those returned, 182, or 35% of the original sample, were complete and met the criteria for entry in to the study.

The majority of participants in the total sample were females, between the ages of 40 and 59. They had been in nursing practice over 16 years and had four years or more of prior executive experience. Their annual salaries were in the \$50,000 to \$100,000 range, and they perceived their positions as powerful in their organizations. However, some exceptions to these characteristics were noted when the participants were grouped according to practice setting. Long term care and home health care executives tended to have less prior executive experience than their

acute care colleagues. Over half of the long term care executives were in the lowest salary category of \$25,000 to \$49,999, in contrast to less than one-fourth of the home health and none of the acute care executives. In addition, almost half of those executives who reported that they did not perceive their positions as powerful in their organizations were from the long term care setting.

### Hypotheses

The first hypothesis stated that empathic concern would be positively related to power. This hypothesis was tested using scores from the empathic concern subscale of the IRI and the PKPCT, v. II. A Pearson product moment correlation was calculated, resulting in a coefficient of .1113. Because this coefficient was not significant, the hypothesis was not supported.

The second hypothesis stated that fantasy would be positively related to power. This hypothesis was tested using scores from the fantasy subscale of the IRI and the PKPCT, v. II. A Pearson product moment correlation was calculated, resulting in a coefficient of .004. This finding was not significant, therefore the hypothesis was not supported.

The third hypothesis stated that perspective-taking would be positively related to power. This hypothesis was tested using data from the perspective taking subscale of the IRI and the PKPCT, v. II. A Pearson product moment correlation was calculated, resulting in a coefficient of .1817 ( $p < .05$ ). The hypothesis was supported.

The final hypothesis stated that personal distress would be negatively related to power. This hypothesis was tested using scores from the personal distress subscale of the IRI and the PKPCT, v. II. A Pearson product moment correlation was calculated, resulting in a coefficient of  $-.1467$  ( $p < .05$ ). The hypothesis was supported.

#### Supplementary Analysis

Based on stepwise regression analysis of the total power scores on the IRI scores, perspective-taking accounted for only 3% of the variance in power. The remaining independent variables, empathic concern, fantasy, and personal distress, failed to contribute significantly to the prediction of power. Analysis of variance of the IRI and PKPCT subscale scores according to practice setting revealed no significant differences in the main variables across practice settings. However, one significant finding

was obtained upon examination of the relationships between IRI subscale scores and PKPCT scores within each practice setting, that of a positive relationship between empathic concern and power for home health care participants. Based on additional analysis using multiple regression with dummy variables, there was no interaction effect for practice setting on the relationship between empathic concern and power.

Levels of empathic concern were found to vary significantly according to basic nursing preparation, with the highest mean score found among those with an associate degree as their basic preparation, and the lowest found among those with the bachelor's degree as their basic preparation. Additional significant differences were obtained for perspective-taking according to highest degree, with the lowest mean scores found among those reporting a doctorate or master's degree in nursing and the highest among those reporting a non-nursing master's degree. Examination of the interaction of basic nursing preparation and highest degree on the main variables revealed significant 2-way interactions on total power, power as choice, and power as freedom.

### Conclusions

On the basis of the findings for the main variables, the results are that among the 182 nurse executives in this study:

Perspective-taking is positively and significantly related to power.

Personal distress is negatively and significantly related to power.

There are no significant differences in manifestations of power among participants in the acute care, home health care, and long term care settings.

There are no significant differences in manifestations of empathy among nurse executives in the acute care, home health care, and long term care settings.

On the basis of the supplementary findings, the results are that among the 182 nurse executives participating in this study:

Home health care and long term care participants are younger with fewer years of experience and less time in position than acute care participants.

Higher scores on the PKPCT are associated with greater perceptions of perceived power within the organization.

The majority of participants opted for master's degrees in nursing. However, approximately 40% of

the participants secured degrees in fields other than nursing.

The level of empathic concern is lowest among participants with the bachelor's degree in nursing as their basic preparation.

Higher total power, power as choice, and power as freedom scores are present among those participants with basic preparation at the diploma level who have obtained a doctorate in nursing or a master's in business administration.

The level of perspective-taking is highest among participants with master's degrees in fields other than nursing.

#### Recommendations for Future Study

The following domains are proposed for further study:

Replicate this study with nurse executives from the three practice areas who are employed by organizations that are smaller in size than the organizations in the current investigation. This would identify the generalizability beyond nurse executives from moderate to large size organizations who were studied as an exemplar population.

Investigate the relationship of education and empathy in nurse executives. This would identify

factors in the content and process of education that are related to nurse executives' empathy.

Design and conduct further studies of empathy in Rogers' nursing model. This would clarify the conceptualization of empathy in the Science of Unitary Human Beings.

Conduct further tests of the IRI to evaluate whether a summative score of the items, instead of individual subscale scores, would be a more valid predictor of empathy.

Design a tool that uses quantitative and qualitative research methods to measure empathy as conceptualized in the Science of Unitary Human Beings. This would provide a more accurate measure of the feelings inherent in empathy.

Conduct construct validity tests on the PKPCT, using the known groups method (Kerlinger, 1973), evaluating whether PKPCT scores of people judged by a panel of experts to have certain levels of power were in the expected direction. This would further define the ability of the PKPCT to differentiate manifestations of power among individuals and groups.

Investigate the relationship of power, as measured by the PKPCT, to measures of hierarchical power. This would help to clarify the validity of the PKPCT as a measure of non-hierarchical power.



Compare PKPCT scores among nurse executives, middle managers, and staff nurses within health care organizations. This would provide further information on the validity of the PKPCT as a measure of non-hierarchical power.

Conduct further tests of nurse executives' power using the PKPCT to identify factors related to nurse executives' ability to participate knowingly in change.

Design and conduct studies on the perceptions of power of nurse executives in the long term care setting. This would help to identify factors that have an impact on the practice of professional nursing in this setting.

Collect more extensive data about education in future studies using the PKPCT. This would help to determine if there is a meaningful relationship between power and education.

Replicate the study using executives from non-health care settings. This would provide data validating the universality of Barrett's conceptualization of power and the Science of Unitary Human Beings.

Implications of the Study

Executive nursing practice is a synthesis of concepts from nursing theory and nursing administration (Jennings & Meleis, 1988). This investigator has added knowledge about executive nursing practice to the Science of Unitary Human Beings (1990) by uniting concepts from Rogerian science and nursing administration. A definition of empathy as a multidimensional human experience characterized by thought, sensation, emotion, and responsivity to others has been evaluated within Rogers' (1990) nursing model. The IRI, as a measure of empathy, has been tested providing information for other nurse researchers about its validity and reliability, its usefulness as a measurement instrument in assessing empathy, and the congruence of Davis' conceptualization of empathy within Rogers' nursing model (1990). The PKPCT, v. II has been used to compare manifestations of power among individual nurse executives and groups of nurse executives. Empirical support was obtained for the relationship of affective and cognitive processes with power. Additional data have also been provided about the PKPCT subscales that should help future researchers in selecting the most appropriate version of the PKPCT for their studies.

According to Rogers' model, the role of nursing is to encourage participation in the process of change and to facilitate the actualization of potentials. This is especially relevant to the role of the nurse executive. Nurse executives occupy an extremely advantageous position in the change process. These executives are the only administrators in today's health care environment that have expertise in understanding the impact of health on human behavior and expertise in leadership and management skills that enable the actualization of potentials (Haddon, 1989).

By participating knowingly in change, the nurse executive can create a vision of the health care organization that incorporates the diversity of its members with the broad perspective of the organization's mission. In doing so, the nurse executive becomes the catalyst for change and assumes a leadership role in the health care delivery system.

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APPENDIX A  
COVER LETTER TO PARTICIPANTS  
NYU Letterhead

Dear Nurse Executive:

Changes in the delivery of health care services have presented new challenges for the nursing profession. As a nurse executive, you are faced with the responsibility for managing people, resources, and change within an environment which demands quality and cost containment. To meet these challenges, nurses in executive level positions are engaging in new models of practice which recognize the need to flexibly respond to a changing environment while considering the values and needs of others.

As a doctoral candidate at New York University, I am most interested in learning how your perceptions about power and empathy relate to your practice as an executive. You have been selected as one of a small number of nurses to take part in this national study. Because your participation is essential, would you take a few minutes to respond to the questions in the enclosed booklet? In order that the findings be truly representative, it is important that all the questions be answered and the booklet returned.

You may be assured of complete confidentiality in your responses. The booklet has an identification number for mailing purposes only. This number will be used to check your name off the mailing list when the booklet is returned. Your name will never be placed on the booklet and no identifying information will be reported.

I know that your time is valuable, and I appreciate your willingness to contribute to an understanding of issues related to executive nursing practice. It should take approximately 20 minutes to complete the questions. You may receive a summary of the results of this study by writing "copy" on the back of the return envelope and printing your name below it. Please do not put this information on the booklet.

I am asking that you return the completed booklet to me in the enclosed envelope by October 1, 1992. If you have any questions, please call me at [REDACTED] or write to me at the above address.

Thank you for your assistance.

Sincerely,

Patricia J. Moulton, MSN, RN,CS

APPENDIX B  
STATEMENT OF CONSENT

\* I willingly agree to participate in the research being conducted by Patricia J. Moulton, a doctoral candidate at New York University.

\* I understand that the purpose of this study is to increase knowledge of factors associated with executive nursing practice.

\* I understand that I am being asked to complete this booklet of questions, which should take approximately 20 minutes.

\* I am aware that my responses will be held in strict confidence.

\* I understand that my consent to participate is indicated by completing the questions in the booklet and returning it to the researcher.

PLEASE NOTE

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171-175,  
Appendix C

176-178,  
Appendix D

University Microfilms International

## APPENDIX E

### DEMOGRAPHICS QUESTIONNAIRE

**Directions:**

For each of the following items, please circle the number of the response which most closely describes you or your work situation.

- |                               |  |   |
|-------------------------------|--|---|
| 1. Practice Setting:          | 1: Acute Care<br>2: Long Term Care<br>3: Home Health Care  | 1a: _____ bed capacity<br>2a: _____ bed capacity<br>3a: _____ total yearly visits (includes all services) |
| 2. Age:                       | 1: 21 - 29<br>2: 30 - 39<br>3: 40 - 49<br>4: 50 - 59<br>5: 60 - 69<br>6: 70 or older   |   |
| 3. Gender:                    | 1: Female<br>2: Male   |   |
| 4. Country of Birth:          | 1: USA and possessions<br>2: Other _____   |   |
| 5. First Language:            | 1: English<br>2: Other _____   |   |
| 6. Racial/Ethnic Origin:      | 1: African-American<br>2: Asian/Pacific Islander<br>3: Hispanic (Puerto Rican)<br>4: Hispanic (all others)<br>5: White<br>6: Other _____ |   |
| 7. Marital Status:            | 1: Never Married<br>2: Married<br>3: Divorced<br>4: Separated<br>5: Widowed  |   |
| 8. Basic Nursing Preparation: | 1: Diploma<br>2: Associate Degree<br>3: Bachelor's Degree<br>4: Generic Master's Degree  |   |
| 9. Years in Nursing:          | 1: 0 - 2<br>2: 3 - 5<br>3: 6 - 10<br>4: 11 - 15<br>5: 16 - 20<br>6: 21 - 30<br>7: Over 30  |   |



10. Highest Degree Held:
- 1: Doctorate in Nursing (PhD, DNS, EdD, DNSci)
  - 2: Doctorate in other field
  - 3: Master's Degree in Nursing
  - 4: Master's Degree in Business Admin (MBA)
  - 5: Master's Degree in other fields (MA, MS, MPA)
  - 6: Bachelor's Degree in Nursing
  - 7: Bachelor's Degree in other field
  - 8: Diploma in Nursing
  - 9: Other \_\_\_\_\_
11. To whom do you report?
- 1: Board of Directors
  - 2: Chief Executive Officer
  - 3: Chief Operating Officer
  - 4: Executive Director
  - 5: Hospital Director/Administrator
  - 6: Nursing Home Director/Administrator
  - 7: Other \_\_\_\_\_
12. What is your position title?
- 1: V-P for Nursing
  - 2: V-P for Patient Care Services
  - 3: Executive Director of Nursing
  - 4: Director of Nursing
  - 5: Associate Director/Administrator
  - 6: Assistant Director/Administrator
  - 7: Chief Nursing Executive
  - 8: Other \_\_\_\_\_
13. How long have you been in your current position?
- 1: Less than 1 year
  - 2: 1 - 3 years
  - 3: 4 - 6 years
  - 4: 7 - 9 years
  - 5: 10 - 12 years
  - 6: 13 - 15 years
  - 7: More than 15 years
14. How many years of prior experience have you had as a nurse executive?
- 1: None
  - 2: 1 - 3 years
  - 3: 4 - 6 years
  - 4: 7 - 9 years
  - 5: 10 years or more
15. What is your annual gross salary?
- 1: Less than \$25,000
  - 2: \$25,000 - \$49,999
  - 3: \$50,000 - \$74,999
  - 4: \$75,000 - \$99,999
  - 5: \$100,000 - \$150,000
16. Do you perceive your position as powerful in your organization?
- 1: Yes
  - 2: No

APPENDIX F  
CONSENT TO USE PKPCT

August 6, 1991

Patricia J. Moulton  
[REDACTED]

Dear Pat:

You have my permission to use the Power as Knowing Participation in Change Test, VII (PKPCT, VII) in your pilot and main study for your dissertation. There will be no fee since you are a student. However, I do request a copy of your completed dissertation.

Best wishes for your work which promises to extend the research base for Rogers' Science on Unitary Human Beings.

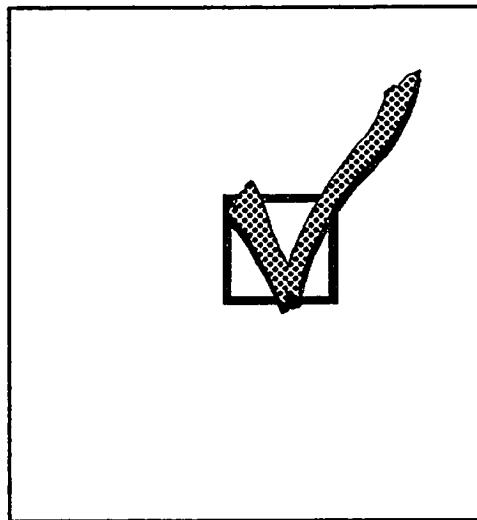
Sincerely,  
[REDACTED]

Elizabeth Ann Manhart Barrett, Ph.D., R.N.  
Associate Professor and  
Director, Graduate Program

EAMB/mb

APPENDIX G  
FOLLOW-UP POSTCARD

Date (1 week after initial mailing)



DEAR COLLEAGUE,

I recently sent you a questionnaire on nurse executives' perceptions of their practice. Your responses are very important to expanding knowledge about executive nursing practice and to the success of this study.

If you have not done so, would you please take time from your busy schedule to complete and return the questionnaire?

Thank you in advance for your cooperation.

Patricia J. Moulton, MSN, RN,CS  
New York University

APPENDIX H  
INITIAL FOLLOW-UP LETTER  
NYU Letterhead

Date (3 weeks after initial mailing)

Dear Nurse Executive:

About six weeks ago I wrote to you seeking your perceptions regarding your practice as a nurse executive. As of today, I have not received your completed questionnaire.

This study is being conducted to better understand how nurse executives deal with the complexities of balancing the needs of clients, institutions, and organizations, while at the same time ensuring the professional practice of nursing. As nursing practice becomes more critical and visible in the health care system, more knowledge is needed about how nurse executives guide this practice.

I am writing to you because of the significance each questionnaire has to the usefulness of this study. In order for the results to be truly representative, your participation is essential. You can be assured that your responses will remain confidential and anonymous.

In the event that your questionnaire has been misplaced, a replacement is enclosed.

Your cooperation is greatly appreciated.

Cordially,

Patricia J. Moulton, MSN, RN,CS  
Researcher

APPENDIX I  
FINAL FOLLOW-UP LETTER  
NYU Letterhead

Date (7 weeks after initial mailing)

Dear Nurse Executive:

Recently I wrote to you asking for your participation in a study of nurse executives. This study involves a national sample of nurse executives from selected long term care, home health care, and acute care settings. While the overall response from participants has been greater than projected, responses from executives in long term care have been significantly less than those from the home health and acute care settings.

Because it is essential that nurse executives in long term care receive recognition for the critical and difficult nature of their work, I am urging you to take a few minutes from your busy schedule to respond to the enclosed questionnaire. A return envelope is provided for your convenience. Your responses will remain anonymous and confidential. You may receive a summary of the results of the study by writing "copy" on the back of the envelope.

If you have any questions, please call me at [REDACTED] or write to me at the above address. I would appreciate it if you would return the questionnaire to me by Dec. 15, 1992. Thank you for your cooperation, and allow me to wish you and your staff the best for the holiday season.

Sincerely,

Patricia J. Moulton, MSN, RN,CS  
Researcher