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**AUTONOMY IN PRACTICE:
CONCEPTUALIZATION, CONSTRUCTION,
AND PSYCHOMETRIC EVALUATION OF AN EMPIRICAL INSTRUMENT**

by

Judith Smith Dempster, MSN, RNC, FNP

**A dissertation presented to the
FACULTY OF THE PHILIP Y. HAHN SCHOOL OF NURSING
UNIVERSITY OF SAN DIEGO**

**In partial fulfillment of the
requirement for the degree
DOCTOR OF NURSING SCIENCE**

May 1990

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ABSTRACT

AUTONOMY IN PRACTICE: CONCEPTUALIZATION, CONSTRUCTION, AND PSYCHOMETRIC EVALUATION OF AN EMPIRICAL INSTRUMENT

The purpose of this research was to conceptualize, construct and establish psychometric properties of an instrument to examine unmeasured dimensions of autonomy in practice through a process of retroduction and triangulation. In the context of ongoing rapid change and increasing competition in the health care delivery arena there is valid reason for nursing and other health professions to be concerned with their autonomous practice status. However, research and instrumentation activities have been hindered by the abstract nature of autonomy with only limited theoretical dimensions empirically measured. There is need to develop new, original, useful, and generalizable tools with a wide range of variables that have relevance for understanding, prediction, and control related to autonomy in practice in the present and future health care arena.

Theoretical literature and empirical studies of autonomy were critically reviewed for conceptual analysis and identification of dimensions. This deductive pursuit was supplemented by an inductive study with in-depth interviews of 28 key informants. The resultant conceptual

schema presented four theoretical unmeasured dimensions of readiness, empowerment, actualization, and valuation of autonomy in practice. Item formulation emerged through content analysis of authentic verbalizations from the qualitative study and the theoretical and empirical literature. The instrument was developed with a Likert-type format and a five point scaling and summated scoring basis related to the extent of autonomous behaviors in practice.

The Content Validity Index of the Dempster Practice Behaviors Scale (DPBS) was 1.00. Based on a sample of 569 practicing registered nurses, psychometric evaluation including exploratory and confirmatory factor analysis reduced the DPBS to 30 items. Cronbach's alpha for the instrument was .95 with an inter-item correlation mean of .39. Moderate to high subscale correlations evidenced empirical unidimensionality. Using a multitrait-multimethod matrix, construct validity was established through application of convergent and discriminant procedures.

Therefore, the theoretically multidimensional DPBS was determined to have strong initial psychometric properties. It is felt the Dempster Practice Behaviors Scale has potential to expand measurement parameters of autonomy in practice to the benefit of nursing and other professions.

DEDICATION

To my father

Clifford B. Smith, Ph.D.

1918 - 1989

It All Depends On How You Think *

If you think you are beaten -- you are
If you dare not -- you don't
If you'd like to win but you can't
Its most certain you won't
If you think you will lose -- you have lost
For out in the world you will find
Success begins with a fellows will
Its all in the state of your mind
You've got to think high to rise
You've got to be sure to yourself before
You can ever win a prize
Life's battles don't always go
To the stronger or faster
Sooner or later the one who wins
Is the one who thinks he can

Unknown

* found in my father's handwriting among his personal papers after his untimely passing in August 1989

ACKNOWLEDGMENTS

No research is the endeavor of any one person, but the consolidated efforts of many individuals. While I extend my sincere appreciation and thanks to all who helped to make the completion of this dissertation a reality, I would like to specifically acknowledge those whose unique contributions and extra efforts encouraged and sustained me throughout the dissertation process.

Dr. Mary Quayhagen, who I am proud to have had as chair of my committee, originally developed the innovative process around which I designed my dissertation. Her support, encouragement, wisdom, and continuing challenge to produce a quality product, along with her perceptive theoretical and methodological insights, were invaluable to me.

To Dr. Janet Harrison I extend my sincere gratitude for the time and effort spent on my behalf, valuable guidance, and continuous support through the many trials and tribulations of my early dissertation ideas through the completion of this study.

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My sincere thanks to the very special support of several of my fellow students, Willa Fields, Mary Sarnecky, Donna Fosbinder, and Marjorie Dobratz for their unceasing caring, concern, friendship, ideas, and scholarly contributions which helped to make my dissertation a reality.

Last, but definitely not least, to my family I owe a lifetime of gratitude. My husband, Joe, with endearing patience and fortitude guided me through my encounters with the computer and was always willing to help in any way he could. He creatively produced the excellent graphics in the dissertation.

Kimberly, my daughter, was my research assistant. As a college student herself, her assistance in areas such as literature searches, xeroxing, coding, data entry, and wordprocessing were invaluable to me. Her unfailing support enabled "Dr. Mom" to become a reality.

My mother, Julia Smith, and my sister, Pamela Hadfield, would visit and help. They spent many hours of their time coding and tabulating questionnaire returns instead of enjoying San Diego. As with my husband and daughter, their ongoing encouragement, support, and love enabled me to move successfully through the dissertation process.

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CHAPTER 1

INTRODUCTION

Autonomy in practice has become an issue of concern in the profession of nursing. The concept of autonomy, simply defined, is freedom to make choices, decisions, or to select a course of action without external control. Autonomy can be viewed as the essential experience of freedom to control one's external and internal environment (Chabot, 1975). Autonomy in practice, to carry this initial definition one step further, is autonomy in the context of the practice of one's profession (Alexander, Weisman, & Chase, 1982).

However, nursing as a practice and as a profession has become synonymous with limited, or even a lack of, autonomy (Mercandante, 1983). Today barriers to professional nursing practice stemming from deep social, economic, and role oppression have begun to break down. Consequently, societal changes such as the women's movement, technological advances, economic constraints, and the restructuring of health care delivery systems are serving as catalysts and nurses are increasingly examining their professional status; their practice; and their autonomy (Lynaugh & Fagin, 1988; Porter-O'Grady, 1990; Schlotfeldt, 1987).

Autonomy in Practice

As interest in advancing nursing knowledge and furthering the professional maturity of nursing has increased, so has the pursuit of autonomy in practice. This pursuit is because autonomy is considered an essential element for full recognition of an occupation as a profession (Aydelotte, 1987; Schlotfeldt, 1985; Stuart, 1981). Professionalism is measured in terms of nurses' autonomy and autonomy plays a pivotal role in nursing practice (Lee, 1988).

Correspondingly, autonomy is needed to implement knowledge and skills for the continued professionalization of nursing (Dempster, 1988; Lancaster, 1986; Schlotfeldt, 1988). There is a positive correlation between increased autonomy and increased knowledge in the performance of nursing. Professionals practicing their skills must have knowledge specific to their practice and must be allowed autonomy to implement such knowledge in the practice setting (Tiffany, Cruise, & Cruise, 1988).

Performance in practice best expresses the autonomous status of a profession and professions are very aware of the increase in professional status that accompanies autonomy (Dachelet & Sullivan, 1979; Kritek, 1985; LaBarr & McKibbin, 1986). However, the historically related limited, or lack of autonomy, has hindered the progress of nursing as a profession. Limited autonomy has been

felt to be why many nurses leave nursing (Kerfoot, 1988; Mercandante, 1983; Wandelt, Pierce, & Widdowson, 1981). It is also considered to be a contributing factor in the current nursing shortage (Aydolette, Hardy, & Hope, 1988; Fagin, 1989). Schutzenhofer (1987, 1988) asserts nursing has a problem with the development and the exercise of autonomy which has negatively influenced the knowledge base, professional status, and practice of nursing.

In the context of increasing competition and rapid change in the arena of health care delivery there is valid reason for nursing to be concerned with its autonomous practice status. Allowing nurses greater autonomy will remove structural constraints on abilities of nurses to contribute their specialized and unique skills in health care delivery (Aydolette, Hardy, & Hope, 1988; Baker, 1983). Looking at the future of nursing in a competitive health care environment and at nursing's future roles in the delivery of health care may well depend on the autonomy of the practice of professional nursing (Beyers, 1987; McNerny, 1988; Schlotfeldt, 1988; Sullivan, et al, 1987).

Instrumentation Issues

Research and instrumentation related to autonomy, due to autonomy's abstract nature, has been hindered by the way it has been conceptualized and operationalized. Only limited dimensions of the concept of autonomy have been

empirically measured or evaluated (Breaugh, 1985, 1987; Katz, 1968; Kiggundu, 1983). Often, tools used in research studies have not met established criteria for validity and reliability, have been poorly conceived and/or designed, or are "old" tools that need to be updated due to changes in society and status of the practice of the profession (Atwood, 1980; Duffy, 1987; Thibodeau & Hawkins, 1988).

Lawler, Nadler, and Cammann (1980) assert that there is a need for the development of new, innovative, and useful tools which consider a wide range of variables for generalizability and that have relevance for understanding, prediction, and control of occurrences in today's practice arena. A key challenge to research and practice is finding a way to measure a problem. This requires a clear identification and definition of a conceptual base. Also it depends on a wide range of methods and tools to measure the area of concern (Breaugh, 1985; Corcoran & Fischer, 1987; Jacobson, 1988; Pfieffer, Heslin & Jones, 1976). The development of a valid and reliable tool, then, enables the objective systematic collection of data to provide feedback. This leads to enhanced understanding of the concept under study and indicates when changes may be needed. Such is the case with the concept of autonomy.

Statement of the Problem

While the importance of autonomy in general is well documented and extensively discussed in the theoretical literature related to a wide variety of domains, there is a lack of literature relating to autonomy in the practice of nursing. In addition, because autonomy is contextually complex, multidimensional, and frequently closely aligned to and/or interrelated with a multitude of other concepts, few valid and reliable empirical tools have been developed to measure autonomy, let alone autonomy in practice (Breagh, 1987; Price & Mueller, 1986; Schutzenhofer, 1987).

Consequently, the problem is that there is a dearth of valid and reliable empirical instruments designed to measure autonomy in the practice of nursing and other professions. Therefore, there is a need to develop valid and reliable empirical tools to measure autonomy in nursing practice and the practice of other professions (Cassidy & Oddi, 1988; Schutzenhofer, 1987; Tiffany, Cruise, & Cruise, 1988).

Purpose Statement

The purpose of this study is to construct and to psychometrically evaluate an empirical instrument, through the process of retroductive triangulation (Quayhagen & Quayhagen, 1988), to examine unmeasured dimensions of autonomy in practice. It is proposed that,

for nursing, a more accurate assessment of autonomy in practice has potential to benefit the overall professionalization and practice of nursing and to add to the continued viability and future expanded potential for nursing in the arena of health care delivery.

Significance to Nursing

Extensive methodological research must be done to generate instruments that are reliable and valid and can measure concepts relevant to nursing (Brown & Grove, 1987). According to Ventura, Hinshaw, and Atwood (1981) the availability of well designed and empirically sound tools will advance the measurement of conceptual and theoretical foundations which underlie the practice of nursing. These authors stress that instrument development will heighten nursing's capability to add to the existing body of nursing knowledge; extends the capacity to assess current practice; and intensifies nursing's qualifications in the formulation of nursing interventions and programs that have potential to positively influence health care and client behaviors.

More specifically, the significance of this study includes the potential to expand the measurement parameters of the contextually complex and multifaceted concept of autonomy in practice and to add to the pool of valid and reliable tools needed for nursing research. Also, this study will enable movement towards a theory of

autonomy in practice through development of a conceptual model that can be utilized in research, practice, and educational preparation of nurses. Furthermore, this study can benefit the practice of nursing through the augmentation of knowledge related to autonomy in practice; enhanced validity of the practice of nursing; progress towards ownership of the profession; and can add to the continued viability and future expanded possibilities for nursing in the delivery of health care services through more accurate measurement of autonomy in practice.

Theoretical Orientations of Autonomy

Although there is no one theory of autonomy, as a concept it has extensive theoretical orientations. For example, Chabot (1975) posits that autonomy has occupied a prominent place in theories of human behavior. This is echoed by Katz (1968) related to theoretical underpinnings of autonomy as an essential ingredient in theories of social organization, social structure, and social control. McKay (1983) asserts that autonomy orientations come from three major bodies of theory. While not specific, she refers to the general areas as theory related to sociology of professions, organizational theory, and theory related to job design.

Etymological origins of the concept of autonomy are from the Greek words "autos" (self) and "nomos" (rule).

Consequently, a rough translation of autonomy is self-rule (Klein, 1966). Original use of the concept was political in nature denoting independence of cities and states. Haworth (1986) comments that Aristotle began to use the word "autarchia" (self-sufficiency) with persons in addition to political situations. Gradually autarchia and autonomy became synonymous. From its initial usage autonomy has implied control over one's self and destiny (Katz, 1968).

Early theoretical foundations of autonomy involved free will versus determinism by others as the essential image of man (Chabot, 1975). Historically, autonomy has been felt to be integral to the functioning of self, be it individual or collective in nature (Hershey, 1989). Today, as will be noted in the theoretical literature review of Chapter 2, theoretical orientations and applications of the concept of autonomy have expanded and cross boundaries of multiple domains and arenas of knowledge.

Retroductive Triangulation Process

While retroductive triangulation is the overall design for this study, it is introduced at this point because it provides the organizational pattern and structure for the research procedure. Consequently, familiarity with the retroductive triangulation process

is necessary for optimal comprehension of the instrumentation framework utilized for this research.

Retroductive triangulation, a method for instrument development proposed by Quayhagen and Quayhagen (1988), incorporates elements of retroduction and triangulation of information into the conceptualization of a framework for empirical instrument formulation. Quayhagen and Quayhagen note the conceptual basis for this method is derived from sociological theory and is integrated for application in nursing.

Retroduction is a strategy that combines deductive and inductive methods in a sequential and logical manner for the development of theory (Fawcett & Downs, 1986; Hanson, 1958; Schrag, 1967). Schrag notes that the distinctive approaches of induction, deduction, and retroduction have been advocated for the generation of explanatory theory. He postulates that retroduction, as introduced by Hanson (1958), could minimize defects of inductive and deductive methods by the use of successive approximations to bring assumptions and concepts of theories into closer alignment with relevant evidence while maintaining logical deductive consistency.

Triangulation is a process of converging information or evidence from many sources. Through triangulation complimentary, yet independent, approaches are employed to enhance the description of the process being studied.

Also, it serves to validate or corroborate findings. In essence, through use of triangulation of multiple perspectives for data collection and convergence, it is anticipated that evidence which is real can be sorted out from erroneous information (Denzin, 1978a, 1978b; Duffy, 1989; Jick, 1983; Polit & Hungler, 1989). In the retroductive triangulation approach, data to be converged are deductive theoretical and empirical evidence and inductive triangulation of findings from a qualitative study.

Quayhagen and Quayhagen (1988) propose seven phases for the retroductive triangulation method of instrument development. Phase 1 is the deductive theoretical and empirical triangulation phase. In this phase theory from multiple sources and disciplines is reviewed to identify unmeasured dimensions of the concept under consideration and empirical literature is reviewed to reveal already measured dimensions of the concept. Both the unmeasured dimensions from the theoretical triangulation and the measured dimensions from the empirical triangulation are synthesized into a preliminary conceptual schema.

Phase 2 is the inductive data triangulation component of the process. A qualitative study is conducted to obtain ecologically valid meanings of the concept through content analysis of a series of interviews using a thematic interview guide with a professional and/or

demographic mix of key informants to maximize the variability of potential dimensions to further expand and clarify the concept. Phase 3, then, is the emergence of a conceptual schema from the synthesis of the deductive theoretical and empirical triangulation and the inductive data triangulation from the qualitative study. This conceptual schema gives focus to the unmeasured dimensions of the concept.

Phase 4 is the development of an assessment protocol of the identified measured and unmeasured dimensions of the concept. The unmeasured dimensions provide the focus for the instrument to be developed. Already measured dimensions are retained as variables that can be used in establishing the psychometric properties of the new instrument being developed. Instrument formulation and formatting is Phase 5 of the process. This is the phase where the new instrument is formulated through item identification, item construction, and scaling and scoring formatting. Content validity of the new tool is established during this phase.

Phase 6 is the testing of psychometric properties of the new measure. During this phase reliability and validity of the new instrument are established through a variety of methods. Included in the psychometric testing are determination of internal consistency reliability (Cronbach's alpha); factorial validity such as principal

components factor analysis; calculation of Pearson product moment correlations to assess multidimensionality or unidimensionality of the tool; and additional construct validity through the construction of a multitrait-multimethod matrix demonstrating convergent validity and discriminant validity.

The last phase, Phase 7, of the retroductive triangulation process involves subsequent reformulation and retesting of the developed measure, if needed, based on results of the psychometric testing. When retesting and reformulation of the newly constructed tool are completed the process concludes and the instrument is ready to be applied in the research setting. Figure 1.1 presents a process model, developed by the investigator, based on the seven phases of Quayhagen and Quayhagen's retroductive triangulation procedure. The instrumentation process, for purposes of the dissertation, will conclude after the completion of Phase 6. Phase 7, then, will be carried out as a part of the investigator's long range research goals.

According to Quayhagen and Quayhagen (1988), the retroductive triangulation method of instrument development has relevance in its potential to expand the measurement parameters of concepts of interest to nursing. Additionally, it offers an alternative method

Figure 1.1. Retroductive Triangulation Process Model (developed based on Quayhagen & Quayhagen, 1988).

for the design and formulation of valid and reliable empirical measures in the realm of instrumentation.

Summary

This chapter has presented the importance of autonomy in the practice of nursing and other professions and the significance of assessing the status of autonomy in the professional practice of nursing. Coupled with this is the need for development of valid and reliable empirical instruments to more adequately measure the concept of autonomy in the practice. Consequently, the technique of retroductive triangulation for instrument development has been presented as the methodology to be utilized in the development and testing of a new empirical tool. It is anticipated that this new tool will have significance in enabling a more adequate measurement of the concept of autonomy, as well as development of a new tool to add to the much needed pool of valid and reliable instruments for research in nursing and other professions.

CHAPTER 2

DEDUCTIVE THEORETICAL AND EMPIRICAL TRIANGULATION

Deductive theoretical and empirical triangulation is Phase 1 of the retroductive triangulation process. This phase incorporates (a) deductive theoretical triangulation involving a critical analysis of theoretical literature for identification of unmeasured dimensions of autonomy in practice and (b) deductive empirical triangulation involving a critical analysis of the empirical literature for measured dimensions of autonomy in practice. The last portion of this first phase encompasses a synthesis of the emerged dimensions from the theoretical and empirical triangulations into a preliminary conceptual schema.

Theoretical triangulation:

Critical Analysis of Theoretical Literature

To expand on the theoretical orientations of autonomy presented previously, theoretical literature from multiple disciplines and sources including political science, philosophy, ethics, social sciences of psychology and sociology, nursing, developmental perspectives, organizations, and areas of job design and work were examined to emerge elements and unmeasured dimensions of autonomy. It must be noted that there is

considerable overlap in the literature which leads to a blurring of domains and disciplines with lack of clarity regarding theoretical triangulation for the concept of autonomy.

A generalized definition of autonomy is that of a quality or state of being independent, free, and self-directing. Synonyms include independence, freedom, free will, self-rule, self-sufficiency, self-direction, self-governance, self-control, self-determinism, liberation, and sovereignty. On the other hand, antonyms of autonomy include heteronomy, dependence, succorance, governed, subservient, compliant, and controlled (Flexner & Stein, 1988; Gove, 1976). Reference to autonomy in the professional literature ranges from listing synonyms, stating what autonomy is not, to more detailed attempts to describe the concept depending on the philosophical and/or professional orientation of the discipline.

Literature of Non-nursing Disciplines

Political. Raz (1986) discusses autonomy from a political perspective. He states the ideal of autonomy is the ability to control, to some degree, one's own destiny. Raz's focus is power as a facilitator of autonomy. He regards power as the ability to choose and the opportunity to make those choices politically occur. The result of power, according to Raz, is an increased perceived and/or actual sense of freedom. Raz also

comments that the political value of autonomy is different for individuals at different times.

Along a similar line, autonomy is approached from the perspective of the governmental political system (Lindley, 1986). Lindley's basic premise related to autonomy is self-mastery. By self-mastery Lindley means mastery over one's self and not being subservient to others. Additionally, he feels autonomy is a matter of degree and is viewed by individuals as a desired goal.

Philosophical. Flathman (1987) approaches autonomy from the viewpoint of philosophical political sociology and defines autonomy as being free. He states autonomy involves awareness; competence; must be valued and legitimized; and must provide satisfaction without shame or stigma. Flathman notes society subjects its members to an encompassing array of controls which causes conflict between the reality and the appearance of autonomy. Related to professions and their practice, Flathman feels autonomy cannot be fully or permanently achieved, but is a matter of degree.

Also in the area of political philosophy, Christman (1989) comments that the paradoxes of the concept of autonomy are substantial. This author asserts that autonomy is closely aligned to notions of individualism and independence, yet is additionally valued as the end result of collective action. Consequently, autonomy must

be viewed from an individual perspective and from a collective social perspective in relation to rational choice.

In the area of systematic philosophy, autonomy is theoretically defined as self activated movement taken to satisfy (Neville, 1974). Related to autonomy, Neville notes that people are viewed in terms of individuality and participation in society. He identifies dimensions of autonomy as freedom, independence, satisfaction, legitimization, sense of value, and power. Haworth (1984), on the other hand, presents a philosophical position of utility related to autonomy. While he states that autonomy is essentially being in charge of one's own life, he posits that the utility of autonomy relates to different developmental levels with the first level being the process of developing ability to be autonomous and the second level the competence, knowledge, and self-control utilized in autonomy.

In the area of philosophy and ethics autonomy is defined as a form of personal liberty of action where the individual determines his own course (Abramson, 1985). Abramson comments autonomy must be viewed as being a free action or a voluntary, intentional action; autonomy must have authenticity or be consistent with the behavior of the individual; autonomy requires weighting of

alternatives through effective deliberation; and autonomy involves moral reflection before taking action.

Ethical. From the perspective of ethics and morality (Beauchamp & Childress, 1983; Beauchamp & Walters, 1983) autonomy is considered to be a very broad concept referring to the person, the will, or action in a societal situation which may be limited by internal and external constraints. Viewed as a moral principle, these authors note that an autonomous person has the capability to decide a course of action and takes action on the chosen plan as long as it does not infringe on the rights of others. Terms Beauchamp and Childress and Beauchamp and Walters relate to autonomy include self-reliance, self-determination, control, free, liberty, equality, having authority, self-governance, and self-legislation.

Collopy (1988), also from an ethical viewpoint, with yet another perspective, presents autonomy as a cluster of notions including freedom, self-determination, liberty of choice, and action and control over decision making. He includes dimensions of competence, liberty, free choice, self-governance, self-regulation, moral independence, decision-making, control, and freedom in his writing.

Autonomy is approached from the perspective of ethics and philosophical psychology by Haworth (1986). Haworth theoretically views autonomy as a personal achievement

requiring competence as a foundation. According to Haworth, autonomy does not just happen; there must be a personal awareness that precipitates a demand for autonomy. In addition, he asserts autonomy is an ongoing decision-making process which includes the ability of an individual to confront difficulties and to seize opportunities for progress.

Psychological. In the psychological literature of the social sciences autonomy has been closely linked to theories of personality development (Lifton, 1983). Lifton notes autonomous individuals possess qualities of independence, freedom, self-direction, and self-determination. Autonomy emerges as a major component underlying ego development. On the other hand, Kurtines (1978) conceptualizes autonomy as a capacity, stemming from moral psychological development, to make decisions without being influenced by others in authority or others in a peer group. Kurtines views autonomy as a dimension of moral conduct and rule compliance.

Sociological. Sociological perspectives of autonomy look at the social interaction as well as individual interaction or happenings within oneself. Discussing paternalism and autonomy, Brock (1988) posits that autonomy in the social sense is the right of individuals to direct their own lives within the sphere of acts that do no wrong to others. Brock aligns self-determinism,

competence, and personal sovereignty with autonomy. Deci and Ryan (1987), also from a sociological outlook, but with a different focus, describe autonomy as involving intentional behaviors, intrinsic motivation, cognitive flexibility, control, self-esteem, and self-determinism.

Katz (1968) wrote extensively on autonomy and its sociological implications related to society and organizations within society. He asserts that autonomy is essential and considerations must be given to the spheres, configuration, schema, functions, goals, structure, and amounts of autonomy that can be found in societal organizations. Katz defined autonomy as the absence of constraint and group or individual behavior not controlled by external behavior of others. Conversely, autonomy related to group behavior is felt to require making choices (Carpender & Hollander, 1981). These authors cite that independence requires a choice of conforming or not conforming to group behaviors.

Developmental. As a part of human development, autonomy is generally viewed from the perspective of the individual. Erikson (1963), well known for his description of developmental stages, labeled his Stage II as Autonomy versus Shame and Doubt. Crain (1985) notes that, during Erikson's Stage II, a developing child begins to exercise a choice which leads to a sense of

autonomy. Crain interprets Erikson's Stage II as a biological and psychological maturation that comes from within and shame and doubt as an awareness of social pressures and expectations that come from without. Likewise, Gilligan (1982) comments that qualities considered necessary for adulthood include autonomous thinking and behaviors.

Organizational/Work/Job. Autonomy is a frequent topic in the professional literature related to organizations, organizational functioning, work, jobs, and implications for management and management approaches. Depending on the situation, autonomy is referred to in terms of an individual within an organization or management structure, or, in terms of the organization or management structure as a whole. For example, Price and Mueller (1986) define autonomy as the degree to which an organization has power with respect to its environment while Breaugh (1985) examines autonomy of an individual within an organization. To Price and Mueller organizational power, along with a legitimate basis that has boundaries, is central to autonomy.

Additionally, Feldman (1987) contrasts professionally trained workers with other workers in organizations and notes that professionals demand more autonomy. He comments professional workers demand a higher degree of autonomy because they have developed standards to guide

and protect their autonomy. Benveniste (1987) discusses professionalizing organizations and states autonomy is a major concern and desire of professional workers. He defines autonomy as increased discretion, self-organization, and opportunity.

Work or job related autonomy tends to focus on individuals within an organization or management structure. Autonomy is defined as the degree to which a job provides substantial freedom, independence, and discretion to an employee in scheduling work and in determining procedures for carrying out work (Hackman & Oldham, 1975). Likewise, Sims, Szilagyi, and Keller (1976) delineate autonomy as the extent to which a employee has a major say in scheduling his work. On the other hand, Kiggundu (1983) adds the element of task interdependence to the previously proffered definitions of autonomy in work situations.

Schwartz (1982) asserts that autonomy gives meaning to work. He states that when jobs provide no autonomy there is no opportunity and work has no meaning. Schwartz, however, comments that autonomy in a job cannot simply be given to a worker, but that it is a process of integration during which a worker must take the responsibility for decisions; must rationally choose actions; must plan effectively to achieve aims; must have

an awareness of alternatives; and must actively participate in the carrying out of a plan.

Job satisfaction and occupational mobility is also linked to autonomy (Hout, 1984). This author comments that high levels of training are needed for autonomy and recognition of status of an occupation. Other authors (Rao, Thornbury, & Weintraub, 1987) concur and add that autonomy can be equated to leadership ability, quality performance, satisfaction, and productivity. In addition, Sarata (1984), examined staff satisfaction and autonomy and concludes that autonomy must be defined as latitude to decide how and when to undertake tasks. He considers participation and satisfaction essential for autonomy in a work environment. He also states work environments vary considerably and affect autonomy in many different ways.

Nursing Literature

Autonomy has become a frequent topic in nursing literature. In nursing in the early 1970's autonomy is described in a very narrow sense. Dugan (1971) comments that autonomy has been task oriented and that most autonomy for nurses has been related to making clinical judgements about patient care within the context of the doctor's orders. However, more recently, Lancaster (1986) defines autonomy as the freedom and authority to make judgements about nursing practice. Lancaster

cites the need for collaboration, cooperation, image enhancement, influence, and knowledge related to autonomy for nurses.

Brown (1976) and Christman (1976) note autonomy results when competence is demonstrated and professional privileges are extended resulting in professional parity with physicians. Brown relates responsibility, capability, independent decision making, and thorough command of practice skills to autonomy while, additionally, Christman stresses power and influence are required for autonomy. Potter and Perry (1986) also relate competence to autonomy. They assert that for nurses to take on more independent roles greater competence is needed. According to Potter and Perry, increased competence leads to increased responsibility which, in turn, leads to increased autonomy and results in more accountability.

Individual practice and status of nursing as a profession is associated with autonomy (Mundinger, 1980). To Mundinger autonomy means identity, independence or the ability to stand alone, and authority that is recognized by others. In contrast to Mundinger's stand, Zander (1980) asserts autonomy was never meant to stand alone, but is a self-directedness within the context of expectations of the profession.

Autonomy is related to expectations of a group (Batey & Lewis, 1982). These authors conceptually define autonomy as having discretionary and binding dimensions of work related boundaries for a scope of practice. Batey and Lewis feel autonomy exists in relation to the nature of the responsibility and authority which nursing has and uses. Further, they state the level of autonomy held by nurses is a function of degree of congruence between assumed and assigned activities.

In two separate articles, Singleton and Nail (1984a; 1984b) note that understanding of the nature of the discipline and the nature of the system is necessary for autonomy. Singleton and Nail posit that nurses must have role clarification before autonomy can become a reality. These authors view autonomy in terms of self-governance and accountability for decisions made.

The key to autonomy is that no other profession or administrative force can control nursing and nursing practice (Kelley, 1987). Kelley states individuals in practice must have the freedom of action to make judgments for care within the scope of nursing practice as defined by the profession. On the other hand, McClure (1984) asserts that autonomy is a matter of degree rather than a fixed characteristic and that there is no magical moment when one becomes autonomous. McClure notes that even those who appear to have full autonomy, in fact do

not because there are always constraints and limits set by others. Along the same line, Conway (1978) posits that the actual practice of autonomy is relative rather than absolute. This author continues that the amount of autonomy one has is constrained by both the professional and the social milieu.

Dachelet and Sullivan (1979), Marks (1987), Moore (1986), and Murphy (1987) stress that autonomy must be granted. These authors feel that for autonomy to be granted nurses must answer to society through the legal and governmental controlled processes which require certain standards of responsibility and competence. For example, Marks proffers that as nursing practice has expanded and nurses have become more autonomous, they have increasingly become malpractice suit targets. He includes knowledge, standards, quality of care, legitimacy, and accountability as critical components of practice autonomy in nursing.

Legitimatization of autonomy is of critical importance and indicates sanctioning, self-control, and power (Murphy, 1987). She states autonomy can be measured by recognition in the courts related to how liable a nurse is for her autonomous practice. Similarly, Moore (1986) extends her view of autonomy and posits that autonomy is a valued and knowledge based process of assertively confronting and controlling choice

situations. These authors, in addition, comment that a practicing group is most likely to be self-sufficient when it has a legal and political position of power.

McKay (1983) also advances the notion of power, commenting that nurses have the least and doctors have the most power. McKay defines autonomy as a scope of socially granted and legally defined freedom of a practice profession to make overall macro decisions and of a person to make individual micro decisions. This author asserts that autonomy should no longer mean independence but interdependence. McKay states the term interdependent autonomy refocuses the emphasis away from establishing total independence and towards ways that separate professions can interact and become interdependent.

Legal, social, and economic power will be necessary for nursing to increase its level of autonomy (Young, 1985). Young advocates expanding nursing autonomy through competition for a monopoly in marketing nursing health care services. She views nursing and other health professions as competing for autonomy and notes resistance and restrictions on nursing autonomy can be expected because nursing has never had much competitive influence and power. Also, power is equated with autonomy and control over conditions of practice (Stuart, 1981). Stuart presents control, authority, prestige,

status, equality, leadership, refocused roles for identity, public regard, and change in sex-role stereotypes as essential for nursing to become more professionally autonomous.

Responsibility and accountability are often related to autonomy. Clifford (1981) notes autonomy results in accountability for decisions while Curtin (1982;1987) asserts autonomy is the freedom to practice in a responsible and accountable manner. Curtin cites other elements of autonomy including, cooperation, interdependence, self-determination, decision making, knowledge, being sanctioned or granted, mature participation, and ethical/moral action.

Other authors comment on the ethical/moral aspect of autonomy asserting that autonomy is a necessary condition for acting morally and ethically (Pinch, 1985). Pinch looks at decision making in ethical dilemmas and concludes moral development is needed for autonomy and that autonomy is needed for advocacy. With contrasting views autonomy associated with morality and care versus cure is presented by Yarling and McElmurry (1986) and Bishop and Scudder (1987). Yarling and McElmurry define autonomy as moral agency and cite that autonomy is not possible without intervention of outside forces fostering greater involvement and accountability for nurses. From the other viewpoint, Bishop and Scudder assert moral

autonomy grows from within the individual nurse and must be fostered to promote maximum development.

Discretion is also equated with autonomy. Wandeldt, Pierce, and Widdowson (1981) state that autonomy is the ability to exercise discretion for choice and control over clinical judgments. In addition, they specify collaboration as an important part of autonomy. Tiffany, Cruise, and Cruise (1988) advance the notion that autonomy is equated with discretion and knowledge. These authors state levels of discretion, knowledge, ability/skills, and efficacy are part of autonomy and professionalization.

Autonomy is also characterized as a complex developmental characteristic (Klein & Klein, 1984; Schutzenhofer, 1983). Klein and Klein forward the view that autonomy is a value learned during a professional developmental process. To these authors autonomy means control over planning and implementing nursing care. According to Schutzenhofer, diverse factors related to the developmental aspects of autonomy include identity formation, socialization processes, decision making, stereotyping, self-concept, and perceptions of roles and status.

Education is felt to be a factor in the development of autonomy (Nolan, Breauan, & Sullivan, 1988). Nolan, Breauan, and Sullivan posit that nurses with advanced

educational degrees have usually had the opportunity for more independent action to develop more autonomous behaviors in their practice. With a similar perspective, Van Ort (1985) comments nursing is maturing towards autonomy through more education, development of standards, and increasing scope of practice, but still does not have ownership of the practice of nursing which requires autonomy.

Carrying Van Ort's concerns further, Boughn (1988) states there must be both the desire for autonomy and the ability to be autonomous. Boughn asserts that autonomy and personality characteristics are closely related. She cites characteristics needed for autonomy include assertiveness, achievement needs, dominance and control needs, and desire for power and status. Also, Boughn notes that the professional socialization process throughout nursing education must be better harnessed to promote more autonomous behaviors in students.

Correspondingly, Kritek (1985) comments that nursing faculty must play a central role in modeling autonomy for students during the role socialization process of the student. She posits that autonomy is necessary for the advancement of nursing as a profession by requiring control, influence, power, self-direction, and self-governance related to job and work situations and effective relations with organizational settings.

In the nursing literature focusing on organizations, jobs and work, satisfaction, and management approaches, autonomy is felt to be a critical variable. Lack of autonomy imposed by work settings, job structure, organizational factors, and management procedures has been repeatedly documented (Carmel, et al, 1988; Roedel & Nystrom, 1988). For example, to name a few areas, it is strongly felt that autonomy is a tenacious contributor to staff retention, morale, job satisfaction, and productivity.

Carmel, Yakubovich, Zwanger, and Zaltzman (1988) define autonomy as freedom from close supervisory control in a job. They assert that autonomy is related to job satisfaction when nurses have opportunity, self-regulation of time, self-regulation of efforts, and legality to carry out their jobs. Definition of autonomy by Roedel and Nystrom (1988) coincides with that of classic job related autonomy. They state autonomy is the degree a job provides freedom, independence, and discretion in scheduling work and in determining procedures for carrying out work. To these authors, the importance of autonomy in work is acknowledgment of professional status with identification of nursing's own jurisdiction and turf.

Nurses who are felt to be autonomous are characterized as seeking autonomy, desiring control over

practice, being self-managing, desiring challenge, taking responsibility, functioning as an advocate for patients, and being self-starters (Kerfoot, 1988). Lee (1988) holds similar views about autonomy and states nurses must want control over practice, take responsibility, and accept accountability for practice actions. Stamps and Piedmonte (1986) note that autonomy in the organizational setting is work related freedom, independence, and initiative. They assert that there is a need for autonomy in the work setting and nurses must be permitted to develop autonomy.

Autonomy is also seen as having structural and attitudinal dimensions (Batey & Holland, 1983). The structural dimension is the objective component or external reality of freedom that is accorded to an individual or organization by law. The attitudinal dimension is the more subjective component dealing with perceptions of autonomy. Nurses in organizations are often felt to lack the structural component needed to exercise autonomy in their work.

Models of practice and governance such as shared governance, participatory decision making, and decentralization are felt to be advances in organizational settings that can enhance autonomy by enabling nurses to actively participate in decisions, assume responsibility and accountability for decisions,

enable goal attainment, provide recognition, and enhance status and prestige (Allen, Calkin, & Peterson, 1988). These authors define autonomy as freedom and control to define projects or tasks; the procedures to accomplish tasks; how problems will be handled, and the criteria to evaluate performance. Furthermore, Przestrzelski (1987) notes that autonomy is critical to decentralization for job satisfaction. He asserts autonomy is a higher level need and is required for self-esteem and self-actualization in job performance.

Finally, in a related theme, Kramer and Schmalenberg (1988) speak to practice models including autonomy as a critical component. Autonomy is defined as the freedom to act; it has a fostering environment; and conveys a sense of being empowered and recognized to be autonomous. They state autonomy in practice enables a product of quality, accessible, and cost-effective care which is increasingly critical in today's health care delivery and will be of utmost importance to the survival of the profession in the future.

This extensive analytical review of the theoretical literature has identified and emerged multiple components and dimensions of autonomy from the domains and disciplines of political science, philosophy, social sciences of psychology and sociology, development, organization, work, job design, and nursing. The theoretical

triangulation has demonstrated diverse definitions, components, and facets of the concept of autonomy. Table 2.1 presents a synopsis of definitions and identified dimensions. It must be noted that the theoretical triangulation has not been exhaustive, that is, there remains much to explore related to emerging further dimensions of autonomy.

The next step in this phase of the retroductive triangulation process is to examine the empirical literature for measured dimensions of autonomy. Then, a preliminary conceptual schema will be formulated.

Empirical Triangulation:

Critical Analysis of Empirical Literature

The focus of the critique of the empirical literature is to identify existing instruments and measured dimensions of the concept of autonomy. Empirical instruments developed in nursing and in other disciplines were reviewed. For purposes of clarity instruments have been separated into three categories. These categories are (a) autonomy instruments: nursing, (b) autonomy subscale of an instrument: nursing, (c) autonomy instruments: non-nursing, and (d) autonomy subscale of an instrument: non-nursing.

Autonomy Instruments: Nursing

Nursing Activity Scale. The Nursing Activity Scale (Schutzenhofer, 1987) is a recently developed instrument

Table 2.1

Synopsis of Theoretical Literature: Autonomy

Reference and Definition	Identified Dimensions
Raz, 1986 controlling one's destiny	* capacity for, power, freedom, opportunity control, choice
Lindley, 1985 self-mastery and independence towards a goal	* matter of degree, self-mastery, desired goal, independence
Flathman, 1987 to be free	* free, awareness, competence, value legitimacy, satisfaction, degree of, not permanent
Christman, 1989 aligned with notion of independence and collective action	* independence, valued, rational choice, individualism
Neville, 1974 self-activated movement taken to satisfy	* independence, freedom, power, satisfaction, legitimization, value, self-activation
Haworth, 1984 being in charge of one's own life	* utility, developmental levels, competence, knowledge, self-control
Abramson, 1985 personal liberty of action	* free action, authenticity, liberty, moral reflection, voluntary action
Beauchamp and Childress, 1983 & Beauchamp and Walters, 1983 is a moral principle	* external & internal constraints, moral principle, control self-reliance, freedom, liberty, equality, authority, self-governance

Table 2.1 Continued

Reference and Definition	Identified Dimensions
Haworth, 1986 personal achievement requiring competence as a foundation	* capacity for, demand for, decision making, opportunity, competence, achievement,
Lifton, 1983 a personality trait	* independence, self-direction
Kurtines, 1978 capacity to make moral decisions by self	* moral conduct, rule compliance, capacity
Collopy, 1988 a cluster of notions... free from control	* liberty, free choice, control, decision making, self- governance
Brock, 1988 right of individuals to direct own lives	* self-determinism, competence, personal sovereignty
Deci and Ryan, 1987 involves intrinsic motivation and intentional behaviors	* intrinsic motivation, control, cognitive flexibility, self- esteem, self- determinism, intentional behaviors
Katz, 1968 behavior not controlled	* spheres, diversity, schemes, power, goals, configuration
Carpender and Hollander, 1981 independence and choice	* choice, not conforming
Crain, 1985 biological and psychological development and maturation	* developmental, maturational
Gilligan, 1983 a developmental process	* developmental

Table 2.1 Continued

Reference and Definition	Identified Dimensions
Price and Mueller, 1986 degree to which an organization has power over its environment	* has degrees, power, boundaries, legitimate basis
Feldman, 1987 developed standards to guide and protect	* demand for, developed standards
Benveniste, 1987 is increased discretion and opportunity	* discretion, self- organization, opportunity
Hackman and Oldham, 1975 degree of freedom, independence, discretion	* discretion, degree of freedom, independence
Sims, Szilagyi, and Keller, 1976 extent employee has say in scheduling work	* has the say
Kiggundu, 1983 has element of task interdependence	* has the say, task interdependence
Schwartz, 1982 gives meaning to work	* meaning, opportunity, taking responsibility, choose actions, awareness of alternatives, active participation
Hout, 1984 high levels of training are needed	* need for training, recognition of status
Rao, Thornbury, and Weintraub, 1987 quality and performance	* leadership ability, quality performance, productivity, satisfaction
Sarata, 1983 latitude to decide how and when to do tasks	* latitude, participation, satisfaction

Table 2.1 Continued

Reference and Definition	Identified Dimensions
Dugan, 1971 clinical judgments within context of doctor's orders	* clinical judgments within boards
Lancaster, 1986 freedom and authority to make judgements	* collaboration, cooperation, freedom, authority
Brown, 1976 through competence an extension of privileges	* responsibility, capability, competence, command of skills, privileges
Christman, 1976 parity resulting from competence	* professional parity, equality, power, influence, competence
Potter and Perry, 1986 taking on more independent roles	* educational preparation, competence, responsibility, accountability
Mundinger, 1980 identity, independence, authority to stand alone	* independence, identity, authority
Zander, 1980 self-directedness	* self-directedness
Batey and Lewis, 1982 discretionary and binding dimensions of a scope of practice	* boundaries, scope, authority, responsibility
Singleton and Nail, 1984 a;b requires role clarification and understanding	* role clarification, opportunity, self-governance, accountability, understanding
Kelley, 1987 no other force can control	* freedom of action, judgments, control, scope of practice

Table 2.1 Continued

Reference and Definition	Identified Dimensions
McClure, 1984 is a matter of degree	* matter of degree, constraints, limits set by other forces
Dachelet and Sullivan, 1979 interdependence	* interdependence
Moore, 1987 ability to control own situation	* choice, assertiveness, value, control, knowledge
Marks, 1987 must be legitimate	* standards, knowledge, quality, legitimacy, accountability
Murphy, 1987 legally defined and sanctioned	* recognition, legally defined, power, sanctioned
McKay, 1983 socially granted and legally defined freedom	* freedom, scope, socially granted, legal, decision making
Young, 1985 acquisition involving expansion and control	* power, boundaries, control
Stuart, 1981 attainment of control over profession and practice through refocused roles	* control, authority, prestige, status, status, leadership, power, public regard, refocused roles
Clifford, 1981 results in accountability	* accountability, decision-making
Curtin, 1982; 1987 freedom to practice in a responsible, accountable way with equal consideration	* parity, cooperation, accountable, responsibility, interdependence, equal consideration.

Table 2.1 Continued

Reference and Definition	Identified Dimensions
Pinch, 1985 needed for patient advocacy	* advocacy, moral action, promotion of rights
Yarling and McElmurray, 1986 needed for moral and ethical actions	* moral actions, ethical actions
Bishop & Scudder, 1987 moral growth and development	* internal moral growth, fostering
Wandelt, Pierce, and Widdowson, 1981 exercise of discretion and control over judgments	* discretion, choice, control, collaboration, image, making judgments
Tiffany, Cruise, and Cruise, 1988 equated with discretion	* knowledge, ability, skills, efficacy, advocacy, discretion
Klein and Klein, 1984 complex and developmental	* developmental identity formation, decision making
Schutzenhofer, 1983 developmental process	* socialization process, status, stereotyping, role perceptions
Nolan, Breauaman, and Sullivan, 1988 development through education for independent action	* advanced education, developmental process, opportunity, independent action
Van Ort, 1985 a maturing and a developmental process	* maturing process, development, scope of practice, ownership
Boughn, 1988 harnessing of socialization process	* desire, ability, assertiveness, achievement needs, control needs, professional socialization

Table 2.1 Continued

Reference and Definition	Identified Dimensions
Kritek, 1985 needed for advancement of profession	* control, influence, power, self-direction, self-governance
Carmel, et al, 1988 freedom from close supervision on job	* satisfaction, opportunity, legality, self-regulation
Roedel and Nystrom, 1988 degree a job provides freedom, independence, and discretion	* degree of freedom, independence, discretion, status,
Kerfoot, 1988 control over practice	* control over practice, authority
Lee, 1988 self-managing	* self-managing, advocacy, self-starter
Stamps and Piedmonte, 1986 work related freedom, independence, initiative	* freedom, independence, taking initiative
Batey and Holland, 1983 has structural and attitudinal dimensions	* structure, attitudes
Allen, Calkin, and Peterson, 1988 is shared governance and participatory decision making	* shared governance, recognition, participatory decision making, accountability, goal attainment, status, prestige
Przestrzelski, 1987 is a higher order need	* satisfaction, need, self-esteem, self-actualization
Kramer and Schmalenberg, 1988 freedom to act, fostering environment, empowerment	* freedom to act, environment, empowered

to measure professional autonomy in registered nurses. Schutzenhofer comments the tool is intended for research in various educational and developmental programs for nurses. Apparently unidimensional in design, the 30 item tool is meant to examine the exercise of professional judgment by responding to situations where a nurse must act with some degree of autonomy. The tool has a 4-point Likert-type format scaled from very unlikely to very likely with a weighted scoring format of 1 to 4.

Schutzenhofer states content validity of the instrument is addressed through generation of items from current literature and use of nursing experts. Based on a sample of 119 respondents, internal consistency reliability using Cronbach's alpha was determined to be .92. Additional testing of the instrument with two convenience samples yielded test-retest reliability coefficients of .68 and .79.

Autonomy -- Quality of Employment (QE) Instrument.

The stated purpose of this tool is to measure employees perceptions of autonomy while performing their job (Hinshaw, Atwood, Gerber, & Erickson, 1985). According to these researchers, autonomy is defined as how employees perceive control over work. The focus of the six item tool is individual decision-making in the performance of one's job. A Likert-type design with a

scaling format of strongly agree to strongly disagree and scoring format of 1 to 4 was utilized in the development of the tool. Testing of the scale was done using 1,597 nursing staff including registered nurses, licensed practical nurses, and nursing assistants employed in several hospitals in one state. Internal consistency reliability was estimated at $\alpha = .74$ with item-total correlations ranging from .42 to .57. Construct validity was established through principal components factor analysis. Specifics about factor analysis procedures and results were not presented. Content validity was not addressed.

Autonomy -- Job Characteristics (JC) Instrument.

Hinshaw, Atwood, Gerber, and Erickson (1985) also developed this short six item tool to assess perceptions of independence and freedom in job performance. For this tool, derived from Sims, Szilagyi and Keller's (1976) Job Characteristics Inventory, autonomy is defined as how much say employees have in deciding procedures to be followed, selecting equipment to use, and scheduling their work. The six item instrument has a Likert-type design with scaling format of very little, moderate amount, and very much. The scoring format is 1 to 3.

The tool was tested on the same population as presented in the Autonomy -- Quality of Employment

Instrument. Construct validity was estimated through principal components factor analysis. No additional details related to factor analysis were presented. Internal consistency reliability was estimated at alpha - .73 for a revised five item scale with item-total correlations ranging from .38 to .57. Content validity was not addressed.

Nursing Autonomy and Patient's Rights Questionnaire.

While this instrument by Pankratz and Pankratz (1974) has been a frequently used tool to measure autonomy in nursing (Cassidy & Oddi, 1988; Perry, 1986; Pinch, 1985), nursing autonomy is only one of three different subscales. Nursing autonomy and advocacy is the subscale designed to examine independence or dependence perceived by nurses in the hospital setting. The instrument is included here because autonomy is specified in the name of the tool. The three dimensions assessed by the instrument are nursing autonomy and advocacy, patients rights, and rejection of traditional role limitations for nurses. Pankratz and Pankratz define autonomy as the extent that nurses feel comfortable in taking initiative and responsibility in the hospital.

The 47 item tool is designed to elicit information about nurses' attitudes toward their professional role and towards patients rights. Nursing autonomy and advocacy is one subscale of 26 items. A 5-point

scoring and scaling format of 1 = strongly agree to 5 = strongly disagree is utilized. While content validity was not addressed, items on nurse autonomy were obtained from nursing leaders and from comments made by nurses about how much they were willing to assert themselves in the environment of the hospital. The tool was tested on 702 subjects. Results of cluster analysis revealed a reliability coefficient for the nursing autonomy subscale of .93.

Dempster Practice Sentiments Scale (DPSS).

Preliminary work on this self-report tool assessing attitudes towards autonomy in nursing practice was done by Dempster (1989). The instrument was conceptualized to be multidimensional and is developed around three previously unmeasured dimensions of autonomy that emerged from a triangulation of theoretical, empirical and qualitative data. The theoretically identified dimensions are legitimacy, parity, and utility. Consequently, autonomy in practice is defined as autonomy that has legitimacy, parity, and utility in the practice of one's profession.

The DPSS was developed on a Likert-type basis. It has a 5-point scoring and scaling format of 1 = strongly disagree to 5 = strongly agree. Content validity of the reduced 30 item tool was .98 for the overall instrument. Further psychometric testing of the DPSS was performed

using a sample of 187 RNs. Internal consistency reliability, determined by use of Cronbach's alpha, was .91 for a reduced 30 item tool.

Exploratory factor analysis revealed a three factor solution similar to the original conceptualization of the three subscales. However, multidimensionality of the instrument was not supported due to moderately high Pearson Product Moment Correlations, in the .51 to .74 range, between conceptualized subscales and factored solutions. Consequently, the tool was determined to be empirically unidimensional. Additional construct validity demonstrated a lack of convergent validity with another autonomy tool with the same scaling format. Discriminant validity was demonstrated.

Autonomy Subscale of an Instrument: Nursing

Index of Work Satisfaction. The Index of Work Satisfaction was developed by Stamps and Piedmonte (1986) over several years of diverse testing applications and extensive revisions. The total instrument is designed to measure work satisfaction in nursing. Autonomy is one of six subscales or dimensions the researchers have combined to examine work satisfaction. The subscales are autonomy, pay, task requirements, organizational requirements, job satisfaction, and interaction. Autonomy is defined as the amount of work related independence, initiative, and freedom permitted in routine work.

The instrument has a Likert-type scaling and a scoring format of 1 = disagree to 7 = agree. Final testing of the overall 44 item tool demonstrated a Kendall's Tau of .92 and a Cronbach's alpha of .82. The authors note that face validity for the tool was established through examination of each item and evaluation of the range of responses for each item. A varimax rotation factor analysis was also performed with loadings above the .4 level retained.

Determination of reliability and validity for the final eight item autonomy subscale was not clear. While face validity of the total tool was discussed and stated to be present, face validity of each individual subscale was not formally presented. For reliability coefficients, Stamps and Piedmonte comment that the autonomy component, although usually rated as most important by respondents, had one of the lowest Kendall's Tau with an average of .68 (range of .54 to .80) in various testing situations.

Measure of Nursing Subunit Environment. This instrument developed by Leatt and Schneck (1982) is designed to assess nurses' subunit work environments in the hospital setting. Out of a total of six subscales, two relate to autonomy. The subscales are autonomy from administration and autonomy from physicians. These two subscales are based on subunit autonomy which the

researchers conceptualized as the nature and extent of independence from physicians and administration.

Respondents to this tool were 157 head nurses on hospital subunits in hospitals in Canada. Head nurses were to complete the measure for the unit as a whole and were not to look at specific individual functioning related to autonomy. The instrument is reported to have a 5-point ordinal response scale which has different response formats depending on the items. Ten items measure autonomy from administration and five items assess autonomy from physicians. The alpha reliability coefficient was .82 for the autonomy from administration subscale and for the autonomy from physician subscale the alpha coefficient was .73. The tool was determined to be multidimensional with autonomy correlations not exceeding .25 with each other and with other subscales. Evidence of content validity was not presented.

Autonomy Instruments: Non-nursing

Work Autonomy Scale. The Work Autonomy Scale was developed by Breugh (1985) to measure self-reported perceptions of autonomy in work. Breugh noted that most developed instruments measure autonomy as a global variable. However, he felt autonomy had more than one component and, based on an extensive literature review, developed a nine item multidimensional scale measuring three facets of work autonomy. The facets (dimensions)

are work method autonomy, work scheduling autonomy, and work criteria autonomy.

According to Breugh, work method autonomy is the degree of discretion or choice an individual has about the procedures he utilizes in going about his work. Work scheduling autonomy is the control over scheduling, timing, or sequencing of work activities. Work criteria autonomy is the degree to which a worker has the ability to choose or modify the criteria used for evaluating performance.

The instrument is based on a Likert-type scaling and a scoring format of 1 = strongly disagree to 7 = strongly agree. Psychometric testing of the nine item instrument and the three subscales of three items each included internal consistency reliability by coefficient alpha and test-retest methods; an item inter-correlation matrix; and factor analysis. Coefficient alphas ranged from .77 to .92 for the subscales and test-retest reliability ranged from .65 to .76. Factor loadings for three factors had loadings of .40 or above and showed patterns identical to the a priori dimensions. Construct validity (convergent) was demonstrated through moderate correlations with other scales of similar theoretical constructs. Other validity was not presented.

Personal Autonomy Scale (PAS). This 60 item dichotomous instrument, developed by Chabot (1975), was

theoretically oriented to measure five components of personal autonomy. The components are self-determination, self-control, self-assertion, self-competence, and self-responsibility. Chabot's working definition of autonomy includes actively confronting and controlling choice situations. Furthermore, he notes that autonomy is relative to limitations presented in the environment and in the ability of the individual.

The PAS is based on dichotomous true-false responses to items. The tool was tested multiple times on a total sample of 1,119 subjects including college students, professional groups, and women's groups. Kuder-Richardson 20 (KR20) was reported at .85. Short term reliability was .81. Long range stability was reported at .81. Content validity, behavioral validity, and group differences validity were reported. In addition, multitrait-multimethod matrix construction including discriminant measures of anxiety and aggression demonstrated construct validity. Multiple factor analyses were performed. However, Chabot made the decision to not use factored scales, but to delete subscale distinctions and report the scale as unidimensional because of extensive theoretical overlap between the five theorized subscales.

Kurtines Autonomy Scale. This instrument by Kurtines (1978) was designed to measure individual differences in autonomous rule compliance and not autonomy per se. The 25 item tool attempts to assess the extent to which an individual follows rules or complies to rules. In this context autonomy is viewed as a dimension of moral conduct. Kurtines utilized some items from the California Psychological Inventory (Gough, 1969) as a basis for item formation for the autonomy tool. Content validity was based on visual inspection of the final set of true-false items. Reliability estimates of the instrument varied from .59 to .62. The tool was stated to have construct validity, however, what was assessed for the determination of the construct validity was not clearly presented.

Autonomy. Bacharach and Aiken (1981) designed this four item instrument to measure the degree to which organizational member's freedom of action is constrained. The tool is intended for comparisons between organizations or groups. The organization is the unit of analysis. It is based on a Likert-type scaling and a scoring format of 4 = definitely true to 1 = definitely false. An alpha coefficient of .66 was reported. No other reliability or validity methods were mentioned related to the psychometric properties of this short instrument.

Autonomy Subscale of an Instrument: Non-nursing

Job Diagnostic Survey. Hackman and Oldham (1975) developed this tool to assess perceptions of job characteristics. Autonomy is one of seven core components (subscales) of the instrument. Each of the seven subscales contains three items. The tool has been widely used in studies related to job characteristics. Hackman and Oldham define autonomy as the degree to which a job provides substantial freedom, independence, and discretion for an employee in scheduling work and in determining the procedures to use.

The instrument has two sections with a response format of 1 = very inaccurate to 7 = very accurate utilized for the second section. Varying validity and reliability results were reported. Internal reliability coefficients (alpha) of .66 and .64 were described in two different testing situations. Correlations with internal work motivation, job satisfaction, and growth satisfaction were .33, .43, and .58 respectively. The authors noted that convergent and discriminant validity were weak and must require continued application.

Job Characteristic Inventory. Sims, Szilagyi and Keller (1976) based the development of this measure on an earlier measurement of perceived job characteristics. The tool examines six core dimensions of job characteristics. Autonomy is one of the core dimensions

and subscales. For this tool autonomy is described as the extent to which employees have a say in scheduling their work, selecting equipment and deciding on procedures to use. Development of this instrument was separate from, yet parallel to, the development of the Hackman and Oldham instrument.

The autonomy component of the instrument contains six items which are mixed with other items and presented as a unified measure. Various psychometric tests established validity and reliability. For example, autonomy had an alpha coefficient of .84.

Summary

Although autonomy is a frequent topic in nursing literature and literature of other disciplines, in essence there have been few valid and reliable tools constructed to measure the abstract concept of autonomy. All tools reviewed examined only limited and specific components of the concept of autonomy. For many of the instruments, the focus or dimensions of autonomy to be measured were not adequately specified. Additionally, types and/or results of psychometric testing were not adequately presented or documented.

Table 2.2 presents a summary of the reviewed empirical instruments and the measured dimensions of autonomy. Seven of the instruments critiqued related to autonomy in work or in one's job. Of these tools, the

Table 2.2

Summary of Empirical Triangulation
for Measured Dimensions of Autonomy

Instrument and Reference	Measured Dimensions
Nursing Activity Scale Schutzenhofer, 1987	* exercise of autonomy through professional judgments
Autonomy -- Quality Employment Hinshaw, Atwood, Gerber, Erickson, 1985	* perception of autonomous decision making in job performance
Autonomy -- Job Characteristics Hinshaw, Atwood, Gerber, Erickson, 1985	* independence in job performance
Nursing Autonomy and Patient's Rights Questionnaire Pankratz and Pankratz, 1974	* extent nurses feel comfortable taking initiative in hospital
Dempster Professional Sentiments Scale -- DPSS Dempster, 1989	* legitimacy * parity * utility
Index of Work Satisfaction Stamps and Piedmonts, 1986	* work related independence, initiative, freedom in work activities
Measure of Nursing Subunit Environment Leatt and Schneck, 1982	* subunit independence from.... administration physician

Table 2.2 Continued

Instrument and Reference	Measured Dimensions
Work Autonomy Scale Breaugh, 1985	<ul style="list-style-type: none"> * work method-procedure choice * work scheduling-control * work criteria-evaluation choice
Personal Autonomy Scale Chabot, 1975	<ul style="list-style-type: none"> * personal autonomy: <ul style="list-style-type: none"> self-determination self-control self-assertion self-competence self-responsibility
Kurtines Autonomy Scale Kurtines, 1978	<ul style="list-style-type: none"> * rule compliance in moral development
Autonomy Bacharach and Aiken, 1981	<ul style="list-style-type: none"> * freedom of action constraints
Job Diagnostic Survey Hackman and Oldham, 1975	<ul style="list-style-type: none"> * freedom in scheduling work * determine work procedures
Job Characteristic Inventory Sims, Szilagyi, Keller, 1976	<ul style="list-style-type: none"> * freedom in scheduling work * freedom in selecting equipment * freedom in procedures to use

dimensions of autonomy examined centered primarily on independence in job procedure performance, control over scheduling, and job or work satisfaction. Schutzenhofer (1987) explored exercise of professional judgement. Pankratz and Pankratz (1974) sought to examine nurses' ability to take initiative and responsibility related to patient care and advocacy.

Leatt and Schneck (1982) looked at independence from physicians and administrators in the subunit work environment. Dempster (1989) began an initial examination of legitimacy, parity, and utility of autonomy. Kurtines (1978) attempted to assess autonomous rule compliance and Chabot (1975) explored personal autonomy through self-determination, self-control, self-assertion, self-competence, and self-responsibility.

As can be noted from the diversity of unmeasured dimensions derived from the theoretical literature, the developed empirical instruments measure only a small number of dimensions, in few applications, of the multifaceted concept of autonomy. Based on the findings of the review of the empirical literature, that is, the empirical triangulation, identified measured dimensions of autonomy are synthesized with the identified unmeasured dimensions from the review of the theoretical literature into a preliminary conceptual schema for instrument development.

Preliminary Conceptual Schema

Since the ultimate aim of instrument development in this research is examination of expanded measurement of autonomy, identification of salient dimensions is of utmost importance. A system similar to that of cognitive mapping (Waltz & Bausell, 1981) was employed to maximize a preliminary formulation of mutually exclusive categories of the concept of autonomy from the extensive and varied unmeasured components derived from the conceptual analysis of the theoretical triangulation and measured components from the empirical triangulation. Initial efforts to categorize unmeasured aspects of autonomy in practice from the theoretical literature and measured facets from the empirical literature facilitated reduction of data to enable more parsimony related to the instrumentation process.

Initial cognitive mapping and categorization of unmeasured dimensions from the theoretical triangulation revealed over eighty components of the concept. Since this was an unwieldy number of dimensions lacking in parsimony, continuous mapping was done to reduce and combine the the numerous categories into fewer groups of similar elements. Cognitive mapping, following this same procedure, continued until identification and categorization was felt to have reached a beginning level of parsimony.

This resulted in the preliminary identification of twelve major unmeasured theoretical dimensions to assess behaviors related to autonomy in practice. These early, initial categories have been labeled sanction, parameters, development, competence, control, status, identity, self-direction, choice, power, accountability, and utility. Table 2.3 presents the twelve identified preliminary unmeasured theoretical dimensions. Table 2.4 presents verification from the reviewed theoretical literature for the twelve dimensions which support the categorization of preliminary dimensions from the theoretical triangulation process.

Next, attention was directed to the results of the empirical triangulation. Compared to the theoretical literature, there were few measured dimensions which emerged from the empirical triangulation. Of the thirteen empirical studies reviewed, similarities in measurement focus were apparent. In addition, as discussed previously, measurement parameters for most empirical instruments were specific to limited aspects of the concept of autonomy. Autonomy or independence in particular work or job situations was a common orientation for instrument development. A few tools sought to examine autonomy related to decisions and/or professional judgements. Personal autonomy such as

Table 2.3

Emerged Preliminary Dimensions and
Subdimensions from Theoretical Triangulation

<u>Sanction</u>	<u>Parameters</u>	<u>Development</u>
legitimacy granted legally defined sanctioned	boundaries limits scope of practice constraints	maturation awareness motivation cognition
<u>Competence</u>	<u>Control</u>	<u>Status</u>
knowledge skill training capacity for	authority in control demand for	equality privileges recognition prestige
<u>Identity</u>	<u>Self-Determination</u>	<u>Choice</u>
image self-esteem role clarification socialization	independence freedom self-governance self-direction	decision- making judgments participation
<u>Power</u>	<u>Accountability</u>	<u>Utility</u>
assertiveness leadership mastery goal attainment	responsibility answer for intentionality	advocacy satisfaction collaboration productivity.

Table 2.4

Selected Verification of Preliminary
Dimensions from Theoretical Triangulation

<u>Sanction</u>	<u>Parameters</u>	<u>Development</u>
McKay, 1984 Neville, 1974 Flathman, 1987 Singleton & Nail, 1984	Flathman, 1987 Young, 1985 Batey & Lewis, 1982 Price & Mueller, 1986	Haworth, 1984 Schutzenhofer, 1983 Crain, 1985 Gilligan, 1982
<u>Competence</u>	<u>Control</u>	<u>Status</u>
Flathman, 1987 Moore, 1987 Potter & Perry, 1986 Tiffany, et al, 1988	Raz, 1986 Collopy, 1988 Moore, 1987 Kerfoot, 1988	Hout, 1984 Kelley, 1987 Stuart, 1981 Curtin, 1987
<u>Identity</u>	<u>Self-Determination</u>	<u>Choice</u>
Schutzenhofer, 1987 Curtin, 1984 Wandelt, et al, 1981 Mundinger 1980	Lindley, 1986 Hackman & Oldham, 1975 Abramson, 1985 Lancaster, 1984	Raz, 1986 Collopy, 1988 Moore, 1987 Christman, 1989
<u>Power</u>	<u>Accountability</u>	<u>Utility</u>
Price & Mueller, 1986 Murphy, 1987 Collopy, 1988 Raz, 1986	Schwartz, 1982 Singleton & Nail, 1984 Marks, 1987 Curtin, 1987	Haworth, 1984 Rao, et al, 1987 Pinch, 1985 Tiffany, et al, 1988

self-competence, self-control, and self-assertion was a major focus of other tools.

As with the theoretical triangulation, cognitive mapping of the empirical triangulation was done. Successive cognitive mapping enabled preliminary identification of three predominant previously measured dimensions of autonomy in practice. These preliminary measured dimensions were autonomy in decision-making, amount of autonomy, and consequences of autonomy in practice. Most of the identified components of autonomy have a limited application to work or job. Table 2.5 presents the preliminary emerged measured dimensions with validation from the empirical instrument review.

The last step in the first phase of the retroductive triangulation process involved a synthesis of the array of preliminary unmeasured theoretical dimensions and measured empirical dimensions into a rudimentary conceptual schema which provides initial elemental form to the concept of autonomy in practice. A representation of the emerged preliminary conceptual schema is presented in Figure 2.1.

The qualitative study, or the data triangulation Phase 2 of the retroductive triangulation process, supplies the last segment of the triangulation procedure that further defines and conceptualizes the concept of autonomy in practice.

Table 2.5

Emerged Categories of
Autonomy from Empirical Triangulation

Autonomy in Decision Making	Amount of Autonomy (Independence)	Consequence of Autonomy
professional judgements	in job performance	satisfaction
	from administration	advocacy
	from physician	rule compliance
	in scheduling work	
	in work method	legitimacy
	in work criteria	parity
	in work procedures	utility
	freedom of action	
	self-determination	
	self-control	
	self-assertion	
	self-competence	
	self-responsibility	

PRELIMINARY CONCEPTUAL SCHEMA

AUTONOMY IN PRACTICE

Figure 2.1. Preliminary conceptual schema from identification of theoretical and empirical triangulation dimensions.

CHAPTER 3

INDUCTIVE DATA TRIANGULATION:

QUALITATIVE STUDY

The qualitative study was Phase 2 of the retroduction process and involved inductive data triangulation. As the inductive phase of the retroductive triangulation process for instrument development, the qualitative study utilized a grounded theory approach (Glaser & Strauss, 1967; Munhall & Oiler, 1986; Polit & Hungler, 1989; Stern, 1980). The study was conducted to further elicit new and/or emergent dimensions for the concept of autonomy in practice.

More specifically, the purpose of the qualitative study was to obtain ecologically valid meanings of the concept; to maximize the variability of potential dimensions of the concept; and to further clarify the concept being examined (Quayhagen & Quayhagen, 1988). Inductive data triangulation focused on dimensions that emerged through application of the grounded theory approach with incorporation of selective sampling. This approach included content analysis of informal interviews with practicing registered nurses integrating use of a broad thematic interview guide.

Methodology

Grounded Theory Approach

The grounded theory approach is a legitimate, orderly form of field research that takes into account (a) individuals, their experiences, and their perceptions; (b) sampling techniques with the aim of saturation of data findings; and (c) interpersonal interaction such as interviews (Chenitz & Swanson, 1986; Munhall & Oiler, 1986; Schatzman & Strauss, 1973).

Following the grounded theory approach, the qualitative study for data triangulation was designed to include informal interviews with a recruited sample of key informants who were practicing registered nurses. It should be noted that sampling in grounded theory research is often called selective sampling and is based on representativeness and not specific numbers (Chenitz & Swanson, 1986; Schatzman & Strauss, 1973). The goal of sampling in this context is data saturation, or completeness of data, and not quantitative statistical sampling (Chenitz, 1986; Munhall & Oiler, 1986; Polit & Hungler, 1989).

Data saturation, for further clarification, means that no additional categories emerge from the literature and sampling can stop. The focus related to the recruited sample was expected to provide a sample with representation from diverse nursing practice settings.

However, while it was hoped that saturation would be approached, complete saturation of the data was not anticipated at the initiation of the study.

Sample and Procedure

To enhance generalizability of data triangulation, the decision was made to recruit a professional mix of practicing registered nurses for the sample. Subjects represented a wide range of positions, roles, clinical specialties, educational preparation, and age. Consequently, while there was no set nor specific number of subjects to take part in the study, it was felt that at least 20 interviews should be conducted.

A subject selection grid was constructed to help guide the selection of the sample population (refer to Figure 3.1). The grid demonstrates how subjects would be grounded in levels of practice, practice focus, and practice setting. Community (non-hospital) and hospital based practice locations were delineated as major practice settings. Within these two major settings, then, five levels of practice provided the focal point for recruitment of study participants.

Level I was depicted as entry, beginning, or basic general staff positions. Individuals in these positions, for example, were new graduates, new to the practice setting, or had educational preparation at the associate degree or hospital diploma level. Level II was intended

	LEVELS				
	I STAFF 1	II STAFF 2	III ADVANCED PRACTICE	IV MANAGER/ SUPERVISOR	V ADMINISTRATOR
HOSPITAL BASE	2	2	2	2	2
COMMUNITY BASE	2	2	2	2	2

Figure 3.1. Subject selection grid for data triangulation (qualitative study).

to be a more specialized and/or experienced practice level. Examples of this level of practice are specialty areas such as intensive care, school nursing, or positions requiring experience in practice. Level III was advanced practice which includes practice categories such as clinical specialists and nurse practitioners.

Qualifications for these types of positions generally included experience and advanced education preparation.

Level IV was management, or those positions considered to be traditionally middle and mid range management or supervisors. Examples of practice in this category included unit supervisors, district supervisors, and many teaching positions. In essence, the practice focus was supervision and management and not a primary or direct clinical practice orientation. These individuals supervise and work with or through others such as those in Level I and Level II positions.

Level V was the last level to be specified. This level focused on administrative practice. For purposes of the study these positions included high level standings such as organizational nursing service administrators, community agency administrators or executive directors, and educational administrators.

Subjects

After securing approval from the University of San Diego Committee on Protection of Human Subjects (refer to

Appendix 3.A), the sample of practicing registered nurses was recruited. Following the guidelines for sample selection and composition, the final recruited sample for the qualitative pilot study was a demographic mix of 28 practicing registered nurses. Potential subjects responded to verbal requests or to a recruitment letter (see Appendix 3.B). Subjects agreed to take part in informal interviews at a time and place of their choosing. In addition, a consent form was signed and a demographic profile was completed by all subjects (refer to Appendix 3.C; Appendix 3.D).

The subject sample grid directed recruitment and selection of the sample population for the study. Continuous placement of subjects into the grid helped to ensure a demographic mix of key informants. Figure 3.2 presents a synopsis of the completed subject sample grid. All categories and levels met the minimum preset requirement of two respondents for each category and level. Additional subjects were recruited to further enhance the professional and practice mix of participants in the qualitative study.

As previously stated, 28 practicing registered nurses participated in the inductive qualitative study. Table 3.1 presents the subjects responses on the demographic profile. The demographic profile included 26 females and two males. Ages ranged from the 20 through 59 years of

		LEVELS				
		I	II	III	IV	V
		STAFF 1	STAFF 2	ADVANCED PRACTICE	MANAGER/ SUPERVISOR	ADMINISTRATOR
HOSPITAL BASE	ADN EDUCATION	CORONARY STEPDOWN UNIT	CLINICAL SPECIALIST OPERATING ROOM	SUPERVISOR EMERGENCY DEPARTMENT	NURSING ADMINISTRATOR PHD EDUCATION	
	ONE YEAR EXPERIENCE NEW TO EMERGENCY	ONCOLOGY	CLINICAL SPECIALIST RESPIRATORY	SUPERVISOR PEDIATRICS	DIRECTOR OF RESEARCH/ NURSING EDUCATION	
	NEW BACCALAUREATE DEGREE	NEONATAL INTENSIVE CARE	CLINICAL SPECIALIST SUBSTANCE ABUSE	SPECIAL PROJECTS COORDINATOR	EDUCATIONAL ADMINISTRATOR ACUTE CARE	
COMMUNITY BASE	NEW TO SCHOOL HEALTH	HOME HEALTH/ HOSPICE	FAMILY NURSE PRACTITIONER & FACULTY	CLINIC MANAGER HEALTH DEPARTMENT	PRIMARY CARE CLINIC DIRECTOR	
	NEW TO HOME HEALTH	SCHOOL HEALTH	NURSE PRACTITIONER OCCUPATIONAL HEALTH	SUPERVISOR HOME HEALTH AGENCY	SCHOOL HEALTH DISTRICT ADMINISTRATOR	
	NO SAMPLE	NO SAMPLE	NURSE PRACTITIONER OBSTETRICS/ GYNECOLOGY	SUPERVISOR SCHOOL, HEALTH	REGIONAL DIRECTOR/PHD COMMUNITY HEALTH	

Figure 3.2. Synopsis of completed subject selection grid.

Table 3.1

Demographic Profile of Subjects

Category	# Subjects	Category	# Subjects
<u>AGE</u>		<u>HIGHEST LEVEL EDUCATION COMPLETED</u>	
20-24	1	RN Diploma	2
25-29	3	Associate Degree	7
30-34	4	Baccalaureate Nursing	7
35-39	4	Baccalaureate non Nursing	1
40-44	8	Masters Nursing	9
45-49	4	Doctorate	2
50-54	2		
55-59	2		
<u>YEARS OF PRACTICE</u>		<u>TYPE OF POSITION</u>	
Under 1	1	Staff	8
1-4	2	Supervisor/Manager	3
5-9	6	Administrator	4
10-14	2	Head Nurse	1
15-19	6	Instructor/Faculty	2
20-24	6	Clinical Specialist	3
25-29	2	Nurse Practitioner	7
30-34	3		
<u>MAJOR CLINICAL PRACTICE</u>		<u>PRACTICE STATUS</u>	
Adult Health	1	Part time	9
Community Health	2	Full time	19
Family Health	3		
Home Health	2	<u>SITE OF PRACTICE</u>	
Medical/Surgical	3	Clinic	3
Obstetrics/Gynecology	3	Health Department	3
Occupational Health	1	Home Health Agency	3
Operating Room	1	Hospital	10
Pediatrics	1	Nursing Home	1
Psych/Mental Health	2	Occupational Health	2
School Health	3	Physician Office	1
Other	6	Schools	3
		Nursing Education	2

age categories. Years of professional experience ranged from under one through 34 years. Nine subjects had less than a baccalaureate degree, seven had a baccalaureate degree, nine had master's degrees, and two had doctoral degrees.

Major clinical practice area responses were diverse. Several subjects specified practice areas other than those listed on the demographic profile. These areas were critical care, intensive care units (ICU), trauma, emergency department/room (ER), hospice, and intravenous (IV) therapist. Respondents also indicated a wide range of practice locations. Hospital, hospital clinic, and nursing home accounted for 13 responses while the other 15 responses were community based. Finally, eight subjects indicated they held staff positions, eight specified administrative type positions, ten reported clinical specialist or nurse practitioner positions, and two subjects indicated they held instructor/faculty positions.

Interview Process for Data Collection

Since interviews assist the researcher in understanding the topic under study from the perspective of the participant, interviews were utilized in the qualitative study as the method of data collection. Data gathered from interviews enabled preservation of each participant's thoughts. This is a feature important in the development of a new tool (Larson, 1981). In addition, informal

interviews are supported by the grounded theory approach (Chenitz, 1986). Therefore, an informal interview format was incorporated into the study.

The informal interview format utilized in this phase of the retroductive triangulation process included minimal structure through the use of open-ended questions based on a thematic interview guide. The thematic interview guide allowed free flowing information to arise, yet facilitated standardization of responses without forced replies and/or direction of the interview process (Waltz & Bausell, 1981). Furthermore, while the interviews were entered with the guide, themes also emerged and were followed up in accordance with qualitative methodology.

Advantages of the open-ended interview format included richness of data; ability to make distinctions not possible with a pre-coded format; and enabled deeper exploration of an area of interest or concern (Lofland & Lofland, 1984; Sudman & Bradburn, 1987). Appendix 3.E contains the thematic interview guide utilized in this phase of the instrumentation process.

Data Analysis

Data from the interviews were subjected to content analysis via field notes compiled as a part of the informal interview procedure. Subjects gave verbal permission for the researcher to take notes during the

interview. Full transcription of notes to field note format was done after completion of each interview.

Field notes are more inclusive than regular notes. They often include rudimentary analysis or interpretations of data collected (Schatzman & Strauss, 1973; Waltz, Strickland, & Lenz, 1984). The format for organization of field notes in this study followed the approach forwarded by Schatzman and Strauss (1973). With this approach notes were organized into groupings of information. Three elemental groupings (or categories) were included. These categories were observational notes (ON), theoretical notes (TN), and methodological notes (MN). Observational notes, for example, relayed the flow of the interview, that is to say, the content of the verbal exchange. Theoretical notes were memos made by the researcher about theoretical ponderings--they could be called "uh ha"s or "I wonder". In essence, these theoretical notes were beginning revelations. Methodological notes were the researcher's notations to self about the methodological process. For example, a methodological note might be a reminder to do something differently in the next interview. Appendix 3.F contains a sample from field notes of one interview session.

Content analysis was then applied to the field notes. An adaptation of the content analysis process advocated by Waltz, Strickland, and Lenz (1984) was utilized to

examine the field notes from the interviews. This process is similar to the cognitive mapping that was performed during the theoretical and empirical triangulation. Content analysis, according to Waltz, Strickland, and Lenz, involves a multi-step objective procedure to systematically inspect the content of recorded data.

These authors posit that the value of content analysis lies in the identification, description, measurement, and ability to make inferences about specific characteristics gleaned from spoken or written subject matter. According to this approach, two interrelated processes are involved. The processes are (a) stipulating attributes of the content being measured and (b) using the same criteria for recognition and recording of findings.

Waltz, Strickland, and Lenz's (1984) approach to the process of content analysis is guided by the purpose of the investigation. The process involves a series of steps for reduction or simplification of recorded speech and/or subject matter to categories which become the essence of the research study. Categories that emerge are similar in nature and cluster together as with cognitive mapping. To reach this point, however, often repetitive processing of all or part of the data is required as with cognitive mapping.

Development of categories can proceed inductively (from the data) or deductively (from the framework guiding

the study) or through a combination of inductive and deductive processes. A primary aim is to attempt to emerge categories of data that are mutually exclusive. This means that data in one category should not overlap into another category. A fundamental maneuver is to determine which data with similar meanings cluster together into a specific grouping.

Waltz, Strickland, and Lenz's (1984) procedure for content analysis was modified for this qualitative study for data triangulation in the overall design of the retroductive triangulation process. Table 3.2 presents the modification of the process for content analysis and it's relationship to the accomplishment of this study.

The first step of identification of the universe of content -- or the entirety of recorded data -- was predetermined to be data gathered about autonomy in practice through the in-depth interviews conducted during the qualitative portion of the data triangulation phase of the retroductive triangulation process. The second step, which involved identification of characteristics of the concept of autonomy in practice to be measured, had also been determined as a part of the total research effort. Results of theoretical and empirical triangulation provided some preliminary dimensions of autonomy in practice. In addition, use of the thematic interview guide for the qualitative interviews helped to direct

Table 3.2

Modified Content Analysis Process**Applied to Data Triangulation (Qualitative Study)**

Steps *	Application to Data Triangulation
1. Define universe of content	1. All data gathered about autonomy in practice through interviews
2. Identify characteristics to be measured	2. Autonomy in practice-- facilitated by preliminary dimensions from theoretical and empirical triangulation
3. Determine unit(s) of analysis	3. Words, word combinations as authentic verbalizations, and themes that arose
4. Sampling plan for universe of content	4. Systematic sampling and constant comparison of data emerged from field notes
5. Plan for categorization of content	5. Inductive approach from data--augmented by thematic interview guide, themes that arose from interviews
6. Perform coding and content analysis	6. Frequency counting, successive constant comparative clustering

* Adapted from Waltz, Strickland, and Lenz (1984)

identification of potential categories such as characteristics of autonomy in practice, meanings of autonomy in practice, and behaviors exhibited with autonomy in practice.

The content analysis process step three, that of choosing the unit of analysis to be utilized, was established to be words, word combinations as authentic verbalizations, or themes that arose from the interviews. The sampling plan for the universe of content, or how to choose the content to be analyzed from the overall universe of data, was the fourth step in the process. For this study a form of systematic sampling of the field notes of the interviews was utilized. In a sequential order the first page of each set of field notes was examined, then the second page, and each page thereafter.

A plan for categorization of data, the next step in Waltz, Strickland, and Lenz's (1984) content analysis approach, was determined. Categorization of data combines the conceptual basis for the investigation with the information gathered and furnishes the underpinnings for generating inferences or conclusions. Strategies used to accomplish categorization of data were inductive in nature related to the focus of the qualitative study. However, the thematic interview guide deductively derived from the overall concentration on autonomy in practice was also considered. Consequently, a combination of inductive and

deductive approaches were incorporated as strategies to emerge components of autonomy in practice.

Finally, steps including coding and content analysis were merged and were carried out simultaneously. Waltz, Strickland, and Lenz's (1984) steps relating to outside coders for inter-rater reliability were not included. This is because, according to Glaser (1978) grounded theory methodology calls for the investigator to do initial coding. Consequently, strategies employed by the researcher included frequency counting of repetitive authentic verbalizations utilizing successive constant comparison. The content analysis process facilitated categorization into clusters of similar data that appeared to be internally consistent yet mutually exclusive.

Emergence of Unmeasured Dimensions

Initially, in the content analysis process, an inductive approach directed by the thematic interview guide was applied to the field notes of the informal interviews. The field notes were examined for emergent categories without reference to the previously identified preliminary dimensions of autonomy in practice. Major content groupings used in the thematic interview guide were employed as an overall structure for, at first, placement of authentic verbalizations from the interviews. This was reviewed periodically and changes were made as new categories emerged from the data.

The originally derived authentic verbalizations were narrative in nature. For example, responses of subjects when asked how they would describe their autonomy in practice included comments such as "I feel opportunity is needed...as a per-diem M/S (medical-surgical) nurse in a traditional hospital setting I have very little autonomy." This subject further stated "my role and my practice have been defined by someone else...I don't have much say in what I can do". Another subject stated "I have expertise...I am empowered...this gives me credibility...and authority." In addition, she commented "I have a scope of practice...I have met all of the qualifications needed to identify myself as a nurse practitioner and to practice with autonomy within those parameters". One other subject commented "...virtually absent at present" Yet another noted "Not much...nurses still follow orders...we shouldn't need to always ask permission". Appendix 3.G provides a more extensive sample of authentic verbalizations based on the thematic interview guide.

Next, using these narrative type authentic verbalizations as a reference, the analysis process was done repeatedly to identify words or more succinct word groups and themes from the data that related to autonomy in practice. These words and word groups as simplified authentic verbalizations were placed on small cards. As

the units of analysis emerged from the data they were placed in rudimentary groupings. Use of cards enabled repetitive sorting, revision, and assembling or clustering of similar indicators.

There were over 50 early clusters of authentic verbalizations. Therefore, frequency counting of clustered words and word groupings as authentic verbalizations utilizing successive constant comparisons was done repetitively. This enabled continuous reduction of the number of potential categories--or emergent dimensions--to enhance parsimony and internal consistency yet to attempt to distinguish mutually exclusive groups. Consequently, nine preliminary major unmeasured dimensions of autonomy in practice were emerged. The dimensions were limits, climate for, directing, image, mastery, control, responsibility, equality, and recognition for. Table 3.3 presents the nine preliminary emergent dimensions and examples of authentic verbalizations from the informal interviews that support each dimension. It should be noted that the dimensions are bi-polar in nature with negative as well as positive quotes or authentic verbalizations providing examples of the focus of the dimension.

Data triangulation from the informal interviews with 28 practicing registered nurses emerged unmeasured dimensions of autonomy in practice. Clustering into

Table 3.3

Preliminary Emerged Dimensions from Data Triangulation
with Examples of Authentic Verbalizations

<p><u>Limits</u></p> <p>"performing within limits"</p> <p>"has parameters that change"</p> <p>"self set standards"</p> <p>"scope of practice"</p> <p>"don't have permission"</p> <p>"too much structure"</p> <p>"within legal limits"</p>	<p><u>Climate</u></p> <p>"there is opportunity"</p> <p>"must be openness"</p> <p>"motivation"</p> <p>"no constraints"</p> <p>"have to have awareness for"</p> <p>"developmental in nature"</p> <p>"no readiness"</p>	<p><u>Image</u></p> <p>"a sense of self"</p> <p>"having an identity"</p> <p>"know I am valued"</p> <p>"socialized to be independent"</p> <p>"confidence to rely on myself"</p> <p>"can work as a colleague"</p> <p>"self assured so can be an advocate"</p>
<p><u>Directing</u></p> <p>"direct own actions"</p> <p>"allowed no input"</p> <p>"set own goals"</p> <p>"make own decisions"</p> <p>"determine direction"</p> <p>"have no authority"</p> <p>"can't choose what to do"</p>	<p><u>Mastery</u></p> <p>"skilled knowledge"</p> <p>"provide quality care"</p> <p>"ability for critical thinking"</p> <p>"no competence"</p> <p>"excellent skills"</p> <p>"no expertise"</p> <p>"no credentials to perform"</p>	<p><u>Equality</u></p> <p>"treated like a servant"</p> <p>"equal status"</p> <p>"not being a subordinate"</p> <p>"being a peer"</p> <p>"talked down to"</p> <p>"equality"</p> <p>"viewed as an equal"</p>
<p><u>Recognition</u></p> <p>"having credibility"</p> <p>"having trust of others"</p> <p>"privileges I deserve"</p> <p>"others listen"</p> <p>"acknowledged by others"</p> <p>"others value what I do"</p> <p>"held in high esteem"</p>	<p><u>Control</u></p> <p>"control over choices"</p> <p>"have a legal basis"</p> <p>"self-governing"</p> <p>"need to ask"</p> <p>"not empowered"</p> <p>"make own decisions"</p> <p>"having power"</p> <p>"no bureaucratic constraints"</p>	<p><u>Responsibility</u></p> <p>"being responsible"</p> <p>"taking consequences for actions"</p> <p>"not allowed to function"</p> <p>"given authority"</p> <p>"accountable"</p> <p>"not following thru"</p> <p>"using authority"</p>

categories, or dimensions, was facilitated by the frequencies of repetitive authentic verbalizations of the pilot study subjects. These repetitive authentic verbalizations and themes led to the conclusion that, while it was not fully anticipated, saturation of data was approached related to autonomy in practice through the overall representativeness of the sample population.

In keeping with the overall retroductive triangulation process, the next phase of the process encompassed further conceptualization and final revision of a schema to guide the instrument development. Unmeasured dimensions emerged from the inductive data triangulation of the qualitative pilot study were reexamined in light of the previous theoretical and empirical triangulation outcomes for the formulation of the comprehensive conceptual schema related to autonomy in practice.

CHAPTER 4

CONCEPTUAL SCHEMA;

ASSESSMENT PROTOCOL; INSTRUMENT DEVELOPMENT

Emergent Conceptual Schema from

Deductive and Inductive Retroductive Triangulation

The overall conceptual schema to guide the instrument development was generated as the emerged preliminary dimensions from deductive theoretical and empirical triangulation were blended with emerged preliminary dimensions of the inductive data triangulation of the qualitative study. Theoretical definitions for autonomy in practice and for the emergent dimensions were derived from the components of the newly formulated conceptual schema. An assessment protocol was then consolidated to assist with operationalization of the concept. Last, the development of the new instrument was initiated.

Conceptual Schema

A conceptual schema, framework, or model can be simply defined as a set of concepts integrated into a meaningful configuration (Fawcett, 1984). Such a framework focuses attention on the concepts and their relationships. In addition, a conceptual framework or schema guides research by supplying a profile of phenomena to be investigated and furnishes a focal point that helps to direct questions to

be asked (Fawcett & Downs, 1986; Waltz, Strickland, & Lenz, 1984). In the synthesis of the overall conceptual schema for autonomy in practice, all data from the theoretical, empirical, and data triangulations were re-examined. This was done to assess similarities, differences, and potential overlap in the originally identified groupings of data and preliminary dimensions.

Because the conceptual schema provides the focus for instrument development to expand the measurement of autonomy in practice, it is a critical ingredient in the retroductive triangulation process. Consequently, all elements previously identified were reviewed as the blending of theoretical, empirical, and data triangulation results was initiated. Techniques utilized in earlier phases of the investigation were applied. Data reduction was, again, addressed through a cognitive mapping process (Waltz & Bausell, 1981) to decrease the scope of identified unmeasured preliminary dimensions.

Twelve preliminary unmeasured dimensions of autonomy in practice had been identified as a result of theoretical triangulation. Nine preliminary unmeasured dimensions had been identified through data triangulation. Comparison of the sets of preliminary dimensions revealed similarities and considerable overlap (refer to Table 4.1). For example, a dimension labeled control had emerged from both the theoretical and data triangulation analyses.

Table 4.1

Comparison of Emerged Unmeasured Dimensions
from Theoretical Triangulation and Data Triangulation

9 Dimensions from Data Triangulation		12 Dimensions from Theoretical Triangulation	
Control		Control Power	
Climate		Development	
Directing		Self-direction Choice	
Mastery		Competence	
Image		Identity	
Limits		Parameters Sanction	
Equality		Status	
Responsibility		Accountability	
Recognition		Utility	

Authentic verbalizations supporting the preliminary dimension of mastery from the qualitative pilot study were very similar to those of the dimension competence from theoretical triangulation. Likewise, dimensions of image and identity, directing and self-direction, and limits and parameters had parsimonious elements.

For enhanced validation and reliability, two external content experts were asked to examine and to categorize elements of the emerged preliminary dimensions from the theoretical, empirical, and data triangulations. Their independent categorizations were similar to the those identified by the researcher. Consequently, the outside content experts comments were incorporated into the continuous repetitive comparisons of information from both the theoretical and data triangulations. More parsimonious, yet mutually exclusive categorizations, began to unfold for an enhanced conceptual fit of unmeasured components of autonomy in practice.

The continuous categorical reduction resulted in the emergence of four encompassing unmeasured dimensions on which to base the instrument development related to the measurement of autonomy in practice. Three additional external content experts individually substantiated the conceptual orientations of the four proposed major emergent dimensions. Labels were sought for the new dimensions which could subsume their component parts.

After several revisions the four primary emergent dimensions were designated (a) readiness required for autonomy in practice; (b) empowerment for autonomy in practice; (c) application of autonomy in practice; and (d) valuation of autonomy in practice.

Readiness required for autonomy in practice is felt to be an evolutionary process incorporating elements such as competence; mastery; establishment of limits or scope or parameters; transitioning which involves developmental readiness; desire for autonomy; and the climate, environment, or opportunity for autonomy in practice. Empowerment for autonomy in practice are actions which consider the sanctioning or legitimization of autonomy; having power; decision making; professional judgments; having choices; the authority needed to be autonomous; equality and parity; and privileges associated with increased independent functioning.

Application of autonomy in practice encompasses unmeasured aspects of the concept such as determining or self-determination; control; directing, self-directing, or governing; responsibility and accountability; participation or taking an active autonomous role; and disciplining or self-evaluation. Valuation is the overall value, utility, or usefulness of autonomy in practice including such elements as identity; image; having equivalency or equal status with others; satisfaction

derived from autonomous practice; and trust from others and/or in one's own actions. Figure 4.1 displays relationships of the four emerged dimensions and key elements or components.

From the theoretical, empirical, and data triangulation approaches additional factors emerged which aided in furthering the overall conceptual schematization of autonomy in practice. Autonomy appears to be both a state of being and a process. This means that one (in the singular or plural sense) can have a particular level, degree, or state of autonomy in practice at a particular point in time. However, autonomy in practice is not static, it is a process involving ongoing change and/or alteration. That is to say, it is dynamic and occurs in varying amounts, degrees, and levels. In addition, autonomy in practice is not permanent, nor is it ever fully achieved because of external and/or internal constraints.

Furthermore, autonomy in practice appears to have a self or internal locus, an external or other locus, or a mixed or joint locus of orientation. For example, authentic verbalizations such as "...I make my own decisions"...."I am in control"...."I am responsible for my actions"....support the self or internal orientation to autonomy in practice. Support from theoretical literature is exemplified by assertions that autonomy is inherent in

Figure 4.1. Relationships of the four emerged dimensions and their key elements or components.

the practice of a professional (Kelly, 1987; Yura & Walsh, 1986). An external or other locus for autonomy in practice is illustrated by authentic verbalizations such as "being given the legitimate base to practice"... "limits imposed by others"... "if the climate is right for autonomy in practice". In this respect, for example, the theoretical literature posits that nurses are not ready to be granted legal autonomy or to be given the sanction to practice independently (Inouye, 1984; Young, 1985).

A joint, or mixed, locus of autonomy in practice is demonstrated through statements such as "...my autonomy is recognized by others"... "it is the autonomy to work as a colleague...and to be accepted and listened to by those colleagues"... "others have trust in my autonomous actions"... "it is collaboration". With this locus, too, support can be found in the theoretical literature. For example, autonomy in practice can be considered as independent functioning within an inter-determined designated scope of practice (Batey & Lewis, 1982; McKay, 1983).

Autonomy in practice mirrored as behaviors and as sentiments was yet another ideational aspect felt to be relevant to the conceptualization of autonomy in practice. Operationally, behaviors are responses such as actions, conduct, or performance. However, due to the abstract nature of the concept of autonomy in practice,

Corcoran and Fischer's (1987) broader definition of behavior is applied. In their definition behaviors can be overt such as walking or talking, or covert, which includes aspects such as feeling or thinking. On the other hand, sentiments are considered to be attitudes, opinions, beliefs, preferences, interests, or views about something. From the review of the empirical literature of existing instruments for measurement of autonomy, it was noted that tools appeared to examine the realm of sentiments. No tools focused specifically on autonomy in practice and, also, no tools were located that assessed actions or behaviors related to autonomy in practice.

Consequently, as the multiple facets and dimensions of the conceptual schema began to assume a shape, the decision was made to incorporate not only emergent unmeasured dimensions of autonomy in practice, but aspects of the locus of autonomy in practice and aspects of behaviors and sentiments. A three dimensional cuboidal representation was selected to demonstrate the unique synthesis of interrelationships, integration, and structure of the identified components of the emergent unmeasured dimensions, locus, and instrumentation focus of the conceptual schema for autonomy in practice.

Therefore, the conceptual schema is grounded in relevant elements of the concept of autonomy in practice

through the retroductive triangulation process. Figure 4.2 presents the emerged conceptual schema, that is, the unique synthesis of elements giving form and substance to the proposed conceptual schema for autonomy in practice. One additional note related to the development of the conceptual schema is that the conceptual schema was not formulated specific to nursing, but with the hope that it could be generalized to multiple disciplines concerned about autonomy in practice.

Theoretical Definitions

Theoretical definitions which provide meaning to a concept through definition in terms of other concepts (Waltz, Strickland, & Lenz, 1984) were developed for elements of the newly emerged conceptual schema. Autonomy is an elusive concept that is contextually complex and has multiple levels of abstractions. Based on the extensive review and analysis of the theoretical and empirical literature, autonomy, for this study, is defined from a self, other, or joint locus as a dynamic process demonstrating varying amounts of independent, self-governed, not controlled, or not subordinate behaviors, actions, or conduct.

Practice is defined as the performance and exercise of one's profession (Flexner & Stein, 1989). In contrast, a term such as job refers to tasks, chores, or a piece of work. Words such as work indicate toil, labor, or a job.

AUTONOMY IN PRACTICE

Figure 4.2. Emerged conceptual schema.

Position implies, also, a job, work, or employment (Flexner & Stein, 1989). Therefore, the term practice, with its more cosmopolitan orientation, was selected over words such as job, work, or position because, after reviewing numerous definitions, it appeared most semantically appropriate for the contextual examination of autonomy in this instrumentation research.

Definitions were also developed for the emergent unmeasured dimensions of autonomy in practice. The theoretical definitions of the emerged unmeasured dimensions were grounded in knowledge gained through the theoretical, empirical, and data triangulations of the retroductive triangulation process. Table 4.2 presents the definitions of the emergent dimensions and the theoretical definition of autonomy in practice developed for this study.

King (1988) states one's ability to understand a concept is demonstrated through application of knowledge about that concept in a new situation. The synthesis of the theoretical, empirical, and data triangulation into the emerged conceptual schema is such an integration of knowledge about the concept of autonomy through a unique and unexamined format.

Assessment Protocol for Focus of Instrument Development

Development of the assessment protocol from measured dimensions identified through the empirical triangulation

Table 4.2

Theoretical Definitions**for Conceptualization of Autonomy in Practice**

Definitions

AUTONOMY IN PRACTICE

Autonomy in practice is theoretically defined from a self, other, or joint locus as a dynamic process that demonstrates varying amounts of independent, self-governed, not controlled, or not subordinate behaviors, actions, or conduct related to the readiness for, empowerment for, application of, and valuation of autonomous performance and exercise of one's profession.

EMERGENT THEORETICAL DIMENSIONS

READINESS (including components such as transitioning, establishing limits or scope, competence, mastery) is behavior and action involving opportunity, evolution, growth, development, movement, and/or progression from one level to another related to autonomy in practice.

EMPOWERMENT (including components such as legitimacy, having rights, having power, authority) is action and conduct involving being entitled and having legitimate status and rights, given permission or sanction, not having constraints, being acknowledged, and having power to practice autonomously.

APPLICATION (including components such as determination, decision making, directing, taking action, controlling, accountability, responsibility) is the act of putting to use, using, putting into operation, the exercise of, the application of autonomy in practice that involves action to accomplish.

VALUATION (including components such as equal status, respect, value, satisfaction, worth, ownership self-achievement) is the act of setting the value, worth, merit, equivalence, quality, identity, trust, respect, and satisfaction related to autonomy in practice.

and the emerged unmeasured dimensions from the theoretical and data triangulation comprised the next phase of the retroductive triangulation process (Quayhagen & Quayhagen, 1988). It was the emerged unmeasured dimensions of the concept of autonomy in practice that provided the focus for the instrument development. Table 4.3 presents the assessment protocol formulated for this study.

The assessment protocol pinpoints key characteristics of already established empirical tools. It identifies the name of each instrument, author, number of items and subscales, measured dimensions, and the reliability and validity estimates. In addition, unmeasured dimensions are delineated on the assessment protocol.

Unmeasured dimensions were the focus of the instrument development. This was to attempt to further expand the realm of measurement of the concept of autonomy. However, already measured dimensions were retained as variables that could be used in establishing or validating the psychometric properties of the new tool being developed. According to Waltz, Strickland, and Lenz (1984) operationalization of a concept portrays how a concept will be measured. Operationalization of autonomy in practice was facilitated through the comprehensive analysis of instruments already developed to evaluate autonomy, as displayed in the assessment protocol, and the emergence of unmeasured dimensions the concept.

Table 4.3

**Assessment Protocol of Measured and Emergent Dimensions
for Operationalization of Autonomy in Practice**

Dimensions	Instrument/Reference	Psychometrics	
		Reliability	Validity
I. <u>Measured</u>			
A. Exercise of autonomy through professional judgements	Nursing Activity Scale Schutzenhofer, 1987	.92 ^a	Content
B. Perception of autonomous decision making in job	Autonomy--Quality of Employment Scale Hinshaw, Atwood, Gerber, Erickson, 1985	.74 ^a	Construct
C. Independence in job performance	Autonomy--Job Characteristics Hinshaw, Atwood, Gerber, Erickson, 1985	.73 ^a	Construct
D. Extent nurses feel comfortable taking initiative in hospital	Nursing Autonomy & Patients' Rights Questionnaire--Autonomy Subscale Pankratz & Pankratz, 1974	.93 ^a	Content
E. Sentiments about autonomy in practice	Dempster Practice Sentiments Scale Dempster, 1989	.91 ^a	Content (CVI)=.98 Discriminant
F. Freedom in specific work tasks	Index of Work Satisfaction Autonomy Subscale Stamps & Piedmonte, 1986	.54, .80 ^b	Face
G. Subunit independence from administration, physicians	Measure of Nursing Subunit Environment Leatt & Schneck, 1982	.82, .73 ^a	

Table 4.3 Continued

Dimensions	Instrument/Reference	<u>Psychometrics</u>	
		Reliability	Validity
H. Work method, scheduling, criteria	Work Autonomy Scale Breaugh, 1985	.77, .92 ^a .65, .76 ^c	Construct
I. Personal autonomy self-control self-assertion self-competence self-determination self-responsibility	Personal Autonomy Scale Chabot, 1975	.85 ^d	Construct Behavioral
J. Rule compliance in moral development	Kurtines Autonomy Scale Kurtines, 1978	.59, .62 ^a	-----
K. Organizational constraints on job actions	Autonomy Scale Bacarach & Aiken 1981	.66 ^a	-----
L. Freedom in scheduling work procedures	Job Diagnostic Survey--Autonomy Subscale Hackman & Oldman, 1975	.62, .64 ^a	Construct
M. Extent of autonomy in selecting equipment, procedures	Job Characteristics Inventory--Autonomy Subscale Sims, Szilagyi, & Keller, 1976	.84 ^a	-----
II. <u>Unmeasured Emergent</u>			
A. Readiness for			
B. Empowerment for			
C. Application of			
D. Valuation of			

^a - internal consistency reliability coefficient (Cronbach's alpha)

^b - Kendall's Tau

^c - Test-retest

^d - Kuder-Richardson 20 (KR 20)

Instrument Development from Unmeasured Dimensions

The approach for development of the new instrument from unmeasured emerged dimensions of autonomy in practice involved the components of item identification, item development, scaling format, and scoring procedures. Directing this process was the purpose for the instrumentation efforts. The overall intent was enhanced through the conceptual schema, theoretical definitions, and assessment protocol that were evolved from the theoretical, empirical, and data triangulation of the retroductive triangulation process.

A guiding premise was that the tool would make every effort to focus on measurable aspects of actions, behaviors, conduct, and performance related to the abstract concept of autonomy in practice. Following current trends in measurement, the aim was to generate a tool that was comprehensive yet short; objective; easily administered; easy to respond to; had an interpretable scaling format and simple scoring procedures; was valid and reliable; and could be meaningfully utilized (Corcoran & Fischer, 1987; Grinnell, 1985; Frank-Stromberg, 1988; Murphy & Davidshofer, 1988).

Item Identification and Development

Parameters for item identification were established through the theoretical definitions from the developed conceptual schema. According to Golden, Sawicki, and

Franzen (1984) an initial item pool is identified to maximize potential measurement possibilities. These authors assert that many items need to be originally identified so that there will be enough items left to comprise a valid and reliable tool after the psychometric testing is completed. The item pool, then, is more of a universe of possible measurement indicators.

Potential items for the instrument being developed were identified through authentic verbalizations from the theoretical literature and from the interviews of the qualitative study. Previously, during the theoretical triangulation and data triangulation phases of the study, as categories of autonomy in practice were being formulated, authentic verbalizations were placed on the cards that were incorporated into the procedures employed to emerge the unmeasured dimensions.

Those cards, containing a vast array of authentic verbalizations grounded in autonomy in practice, became the basis for item identification in this component of the instrument development. Following the theoretical definitions from the developed conceptual schema, and keeping the operational focus of behaviors in mind, an initial pool of 137 potential items was identified. There were 38 items for the dimension of readiness; 29 for the dimension of empowerment; 43 related to application; and 27 items focusing on valuation of autonomy in practice.

Appendix 4.A presents a sample of items identified for the original item pool.

To enhance item homogeneity the pool of items, grounded in the theoretical definitions, was critiqued by three doctorally prepared faculty for content, composition, format, redundancy, and relevancy. Based on their assessment, items were deleted or revised. This reduced the total number of items to 70. The 70 items, then, were reviewed by two practicing nurses following the guidelines used by the previous reviewers. Through this continuous process of refinement, 15 initial items were identified for each of the four subscales, or 60 items for the overall tool.

Since the purpose of an item is to elicit information that can be measured, item development is another critical aspect of the instrumentation process (Ghiselli, Campbell, & Zedak, 1981). Item identification and development were carried out simultaneously through the series of item reviews and revisions. Attempts were made to word items to demonstrate behaviors, actions, or performance as per the broad definition encompassing overt and covert behaviors advanced by Corcoran and Fischer (1984). Negatively worded items were included to control for response set bias (Hudson, 1982; Sudman & Bradman, 1987). In addition, a single stem was utilized for all items. The stem, or introductory phrase, was "In my practice

I.....". This eliminated repetitive wording in the items and provided a reinforcement for focus on the extent, or how much, each of the items was true for respondents related to autonomy in their practice.

Scaling Format and Scoring Procedures

There are multiple types, configurations, and structures for instrument formatting. A summated self report Likert-type format, or structure, was selected for this instrument development. Self report and Likert-type formats are commonly used today since subject response is good to these types of tools and the instruments tend to be more objective. These instruments also tend to have higher reliability. They are easier to construct and they are quick and easy to administer and to take (Corcoran & Fischer, 1987; Grinnell, 1985; Nunnally, 1978). In addition, such tools have increased utility through an intensity measurement for each item and easy scoring due to the summated scoring procedure (Anastasi, 1988; Nunnally, 1978).

To reiterate, the framework for the new tool encompassed a self administered and self report basis. This means that a subject makes his or her own response to items of the instrument. Then, the Likert-type format scaling is correlated with a numerical intensity rating. Intensity ratings of 1 = not at all true to 5 = extremely true, related to the extent of autonomy in practice, were

incorporated into the development of the new scale. Scores can be easily determined by summing responses to items. With this approach an overall score can be established as well as scores on individual subscales of the tool. Also, Nunnally (1978) posits that a summative scoring approach helps to average out measurement error often associated with items in a scale.

Other issues considered in the scale formatting and construction were scale anchors, the number of response categories, odd versus even response categories, and length or total number of items to be included in the scale. Scale anchors relay the orientation and focus of the items. For this scale, anchors of "not at all true", "slightly true", "moderately true", "very true", and "extremely true" related to the extent of self reported autonomy in practice were established.

The number of response categories and whether they are an odd or an even number is commonly seen as a personal choice of the researcher (Grinnell, 1985). Grinnell asserts that there is always a minimum of two responses, but no agreement on the number of maximum response categories. Nunnally (1978) comments that there is little to be gained using any number of categories over seven. He notes that Likert used five response categories and that five categories is a convenient number to complete and to score. Odd numbers of categories allow for neutral

or middle of the road responses. On the other hand, even numbers force respondents to make choices with which they might not agree. Five categories were chosen for the developing tool because it was felt by the investigator to provide an optimum number of response options.

Length of a scale, or total number of items is another area of concern in tool development. The trend is for instruments to be of a length that potential respondents will take the time to complete them. Conversely, a tool must have enough items for good reliability. Grinnell (1985) states that a longer tool will have better reliability, but he does not specify what longer is. He does posit that a scale with subscales should have at least five items, 10 items are better, per subscale. Hudson (1982) asserts that around 20 to 25 items is an adequate length for a total tool as this is long enough for good reliability and short enough to be used in repeated testing. While the tool being developed had 60 items in the preliminary stages, a final number of 20 to 30 total items was projected after completion of the psychometric testing.

The Preliminary Instrument

The preliminary draft of the new tool, with a tentative title of the Dempster Practice Behaviors Scale (DPBS), was the outcome of the instrument development phase of the retroductive triangulation process. The DPBS

was designed around a self report Likert-type scaling format with summated scoring basis. While the developing instrument was to be normed on nurses for this study, the words nurse or nursing were not included in the item formulation. This was to enhance the tool's future generalizability to any professional group concerned about autonomy in practice. In preparation for the psychometric testing the DPBS had 60 items evenly divided among the four emerged unmeasured dimensions of autonomy in practice. Negatively oriented items were included to reduce response bias. Higher summed score values were planned to indicate a greater extent of autonomy in practice. Initial psychometric evaluation through the content validity index procedure was the next step to help refine the number of items in this original draft of the new instrument that would also be subjected to multiple analytic techniques.

CHAPTER 5

PSYCHOMETRIC EVALUATION: ANALYSIS AND RESULTS

Principles and testing methods underlying the field of psychometrics related to instrument construction include analysis in areas such as reliability, validity, and factor analysis (Nunnally, 1978). Application of these various principles and methods are essential for establishing psychometric properties of instruments being developed for use in research (Waltz, Strickland, & Lenz, 1984; Zeller & Carmines, 1980). Content validity, through calculation of the Content Validity Index (CVI), was the initial psychometric evaluation performed. Estimation of further psychometric properties of the instrument were then determined. In addition to the CVI, this instrumentation study included psychometric analytic techniques, through use of SPSSX³, for determination of internal consistency reliability (Cronbach's alpha), factorial validity, tool multidimensionality versus unidimensionality through calculation of Pearson product moment correlation coefficients, construction of a multitrait-multimethod matrix for construct validity including convergent and discriminant validity, and preliminary assessment of skewness of items of the new instrument under construction.

Content Validity Determination

Content validity of the initial instrument was established through use of the Content Validity Index (CVI). Content validity through calculation of the CVI is the determination of the relevance and representativeness of the content of the instrument being developed (Lynn, 1986; Polit & Hungler, 1989; Waltz & Bausell, 1981). The process for content validity determination outlined by Waltz, Strickland, and Lenz (1984) was utilized in this instrument development process.

A panel of expert judges, or content specialists, was selected by the investigator. Seven judges were utilized for this content validity process. Lynn (1986) notes that a minimum of five judges provides an acceptable level of control for chance agreement. The seven judges were chosen based on their knowledge related to autonomy in practice in different practice settings and content areas of the practice of nursing. Educational preparation was a minimum of a masters degree. The judges represented content and practice areas of primary care, community health, obstetrics/maternity, pediatrics, general medical-surgical, management and administration, and psych/mental health. In addition to varying content specialties, the judges were from different geographic locations of the country.

Each expert judge was asked to rate on a content validity form each item of the initial proposed tool and for the overall tool as to how valid they felt proposed items measured a specified dimension or subscale. Judges were provided with the theoretical definitions formulated for the tool development and instructions for completing the form. For this procedure a four point rating scale of 1 (not valid) to 4 (very valid) was used to avoid midpoint bias. Appendix 5.A contains the instruction sheet and a sample of the content validity form.

The CVI is the coefficient derived from calculation of items given a three or four rating by the judges divided by the total number of items of the specific subscale (dimension) and, also, for the overall tool. Since the CVI is the quantification of the degree of agreement between the judges, a Content Validity Index for each of the subscales of at least .8 (Waltz, Strickland, & Lenz, 1984) was predetermined to be an acceptable value to establish the content validity of each specific subscale and for the proposed instrument as a whole.

The initial CVI for each subscale (items = 15) of the emerged unmeasured dimensions was .87 for readiness, 1.00 for empowerment, .80 for application, and .87 for valuation. The initial CVI for the total tool was .89. This meant that, for the dimension of readiness, 13 of the 15 items were rated a three or a four. For empowerment,

15 of 15 items met the criteria. Application had 12 of 15 items rated a three or a four and for valuation 13 of 15 items met the minimal criteria. The initial CVI for the overall tool demonstrated that 53 of 60 items were rated a three or four by the seven judges.

Furthermore, it was determined that based on the item ratings of the judges, items with item means of less than 3.5 out a total of 4 could be withdrawn from the tool because their content was not viewed by the judges to be as strong as other items (Waltz, Strickland, and Lenz, 1984). Therefore, after the initial CVI was determined, the researcher examined item means for all items of the tool. Several items that did not meet the 3.5 level were removed from the developing tool. Table 5.1 presents the item means for the items retained in the revised scale.

In addition to rating the items for content validity, the judges were asked to review and to comment on item structure, clarity, and redundancy in the subscales and throughout the overall instrument. Based on their comments and a subsequent reevaluation by the researcher, several items that had met the minimal criteria for the content validity index were removed from the instrument.

The removed items were determined to be either redundant, repetitive, or had been assessed by content validity judges to have unclear wording. Consequently, the content validity index was calculated for the revised

Table 5.1

Items and Item Means for Reduced and Revised Instrument

IN MY PRACTICE I.....	QUITE VALID(3)	VERY VALID(4)	ITEM MEAN
<u>READINESS:</u> (10 items)			
1. Am ready to take risks when I think something is wrong.	2	5	3.7
2. Have been professionally socialized into an independent thinking role.	2	5	3.7
3. Have developed the image of myself as a independent professional.	0	7	4.0
4. Base my actions on the full scope of my knowledge and ability.	1	6	3.9
5. Establish the parameters of my practice activities.	1	6	3.9
6. Am restricted to limits set (R) by others.	3	4	3.6
7. Am confident in my abilities to perform my role independently.	0	7	4.0
8. Demonstrate mastery of skills essential for freedom of action.	1	6	3.9
9. Have the professional experience required for independent action.	1	6	3.9
10. See myself progressing towards increasing freedom of action.	3	4	3.6
<u>EMPOWERMENT:</u> (10 items)			
11. Am provided with a legitimate basis for independent practice.	0	7	4.0
12. Take action without fear of censure of reprisal.	1	6	3.9
13. Am constrained by bureaucratic (R) legalities.	3	4	3.6

Table 5.1 Continued

IN MY PRACTICE I.....	QUITE VALID(3)	VERY VALID(4)	ITEM MEAN
14. Cannot adequately perform my role (R) because I do not have legal status.	0	7	4.0
15. Have the authority to do what I know should be done.	0	7	4.0
16. Must ask permission and have things (R) approved before taking action.	1	6	3.9
17. Have the rights and privileges I deserve.	1	6	3.9
18. Am restrained in what I can do (R) because I am powerless.	1	6	3.9
19. Feel that I am not heard or seen, (R) that is, I am not acknowledged.	1	6	3.9
20. Have the power to influence decisions and actions of others.	0	7	4.0
<u>APPLICATION:</u> (10 items)			
21. Self-determine my role and actions.	2	5	3.7
22. Make my own decisions related to what I do.	0	7	4.0
23. Wait for others to tell me what (R) to do.	0	7	4.0
24. Have too many routine tasks to (R) exercise independent action.	3	4	3.6
25. Have my activities and actions (R) programmed by others.	1	6	3.9
26. Take control over my environment and situations I confront.	0	7	4.0
27. Take responsibility and am accountable for my actions.	1	6	3.9

Table 5.1 Continued

IN MY PRACTICE I.....	QUITE VALID(3)	VERY VALID(4)	ITEM MEAN
28. Accept the consequences for the choices I make.	0	7	4.0
29. Act as an advocate by standing up for the rights of others.	3	4	3.6
30. Collaborate with others outside my field when I feel the need.	3	4	3.6
<u>VALUATION:</u> (10 items)			
31. Am talked down to by others. (R)	1	6	3.9
32. Am valued for my independent actions.	2	5	3.7
33. Have respect from those in other disciplines.	1	6	3.9
34. Derive satisfaction from what I do.	1	6	3.9
35. Have a sense of professionalism.	0	7	4.0
36. Provide quality service through my role.	2	5	3.7
37. Derive feelings of self-respect and esteem from what I do.	0	7	4.0
38. Have a sense of self-achievement.	1	6	3.9
39. Possess ownership of my role, that is, my role belongs to me.	2	5	3.7
40. Have the trust of others in what I do.	2	5	3.7

(R) - Reverse Score the item

instrument based on the deletion of items. A total of 40 items were retained in the reduced tool. The revised CVI for the overall instrument was 1.00. Each of the subscales was revised to 10 items. Also, each of the subscales had CVIs of 1.00 by deletion. Table 5.2 presents the revised by deletion Content Validity Index rating for 40 item tool along with the original CVI calculations.

Estimation of Further Psychometric Properties

Sample

With instrumentation, generalizability of the tool being developed is desirable. A wide range and mix of subjects can heighten the future use of the the new tool (Chabot, 1975; Grinnell, 1985). Therefore, for this instrument development, a sample of a professional mix of practicing registered nurses (RNs) was utilized. Subjects were recruited to represent a wide range of positions, roles, clinical specialties, education, and age.

The total number of subjects needed for the psychometric evaluation of the newly developed tool was based on the aggregate number of items in the instrument. In order to assess factorial validity in psychometric testing, a ratio of at least 10 subjects for each item is advanced by Nunnally (1978). For the psychometric evaluation of the new tool a minimum of 400 (40 items x 10) subjects was determined to be the minimal number of

Table 5.2

Content Validity Index (CVI) *

<u>CVI:</u>		Initial (60 items)	Revised by Deletion (40 items)	
<u>SUBSCALE:</u>				
Readiness	.87	13/15	1.00	10/10
Empowerment	1.00	15/15	1.00	10/10
Application	.80	12/15	1.00	10/10
Valuation	.87	13/15	1.00	10/10
<hr/>				
<u>TOTAL INSTRUMENT</u>	.89	53/60	1.00	40/40

* Based on seven (7) judges

respondents needed for factorial validity and the other analytic techniques to be applied through the psychometric testing.

There was no specific criteria for inclusion in the study except for the registered nurse (RN) to be actively practicing or to have practiced the profession of nursing. The sample population was recruited through the mail and by hand distribution of questionnaire packets at meetings and professional nursing conferences in several states.

One thousand (1,000) questionnaire packets were distributed with 569 (57%) usable responses out of a total of 577 returns. Eight returned questionnaire packets were not included in the sample population because respondents failed to complete large sections of one or more of the tools. Of the total 1,000 packets distributed, 500 were mailed to members of a national nurse practitioner organization, 300 were mailed to members of a regional professional nursing organization, and 200 were hand distributed at meetings and conferences in several states.

The mail questionnaire packet response from the national nurse practitioner organization was 63% (n = 313). The regional professional nursing organization mail return rate was 37% (n = 111). Hand distribution of the questionnaire packet produced a 72% (n = 145) return rate. The 57% overall response to the questionnaire distribution .

was above the 50% return rate felt to be needed for a representative sample (Baker, 1986; Miller, 1983).

Therefore, it was determined that the 57% return rate provided an appropriate representation of the sample population for this instrument development research.

Five hundred nine (89.5%) of the respondents were female and 59 (10.4%) were male. Responses were received from individuals practicing in 48 states and in Washington D.C. Table 5.3 presents the frequency and percent of geographic returns. Delaware, Idaho, Wyoming, and North Dakota were the only states with no respondents. California had the largest return, 232 (40.8%) replies, with the remaining 59.2% ($n = 337$) of the responses coming from a wide spread geographically mixed population.

The age range was 23 to 70 years with a mean age of 43 years ($SD = 8.6$). Table 5.4 presents the age distribution in age groupings of five years. Years of professional experience ranged from one to 47 with a mean of 17.6 ($SD = 8.5$) years. Table 5.5 presents the years of professional experience in five year groupings. Related to practice status, 433 respondents were in full time practice, 121 were practicing part-time, and 15 indicated current inactive practice status. Eleven of the inactive practice status group indicated they were students in nursing programs and two noted they had retired within the last few months.

Table 5.3

Frequency and Percent of Geographic Responses by State

State	Frequency	Percent		State	Frequency	Percent
AL	4	.7		NE	2	.4
AK	9	1.6		NV	5	.9
AZ	19	3.3		NH	7	1.2
AR	2	.4		NJ	6	1.1
CA	232	40.8		NM	4	.7
CO	4	.7		NY	12	2.1
CT	5	.9		NC	12	2.1
FL	17	3.0		OH	10	1.8
GA	8	1.4		OK	9	1.6
HI	1	.2		OR	8	1.4
IL	8	1.4		PA	29	5.1
IN	8	1.4		RI	5	.9
IA	2	.4		SC	6	1.1
KS	6	1.1		SD	2	.4
KY	7	1.2		TN	3	.5
LA	4	.7		TX	18	3.2
ME	3	.5		UT	1	.2
MD	7	1.2		VT	3	.5
MA	17	3.0		VA	12	2.1
MI	6	1.1		WA	13	2.3
MN	4	.7		WDC	6	1.1
MS	1	.2		WV	4	.7
MO	11	1.9		WI	5	.9
MT	2	.4				

Table 5.4

Frequency and Percent of
Age Distribution of Sample

Age Range	Frequency	Percent
20 - 24	2	0.4
25 - 29	19	3.4
30 - 34	75	13.3
35 - 39	135	23.7
40 - 44	125	23.0
45 - 49	100	17.5
50 - 54	51	9.0
55 - 59	40	7.0
60 - 64	14	2.6
65 - 69	7	1.3
70 +	1	.2

Table 5.5

Frequency and Percent of
Years of Professional Experience

Years Experience	Frequency	Percent
0 - 04	17	3.0
05 - 09	69	12.1
10 - 14	139	24.3
15 - 19	127	22.3
20 - 24	94	16.5
25 - 29	59	10.4
30 - 34	37	6.5
35 - 39	18	3.7
40 - 44	8	1.5
45 +	1	0.2

Table 5.6 presents frequencies and percent of responses related to major clinical practice area. There were respondents in all of the 18 practice areas listed. In addition, 61 respondents indicated practice areas other than the ones offered on the demographic profile. Additional clinical practice areas listed included areas such as anesthesia, chemical dependency, correctional health, AIDS, rehabilitation, oncology, counseling, research (AIDS, diabetes), developmental disabilities, information systems, recruitment, special education, quality assurance/utilization review, and various categories of intensive care (neonatal, coronary care, respiratory, neurology, surgical). In addition, many respondents noted that they had multiple clinical practice areas and found it difficult to indicate only one area on the demographic profile. Several respondents circled their multiple practice areas and listed percentages of time for each or how many hours a week they practiced in each area.

Responses to practice site included all those indicated on the demographic profile (see Table 5.7). The largest category for practice site was that of the hospital with a response of 161 (28.3%). Thirty respondents marked the "other" category. These individuals listed practice sites such as homeless shelters, prison/jail, medical school, insurance company,

Table 5.6

Frequency and Percent of Clinical Practice Areas

Clinical Practice Area	Frequency	Percent
Adult Health	60	10.5
Community/Public Health	32	5.6
Emergency	21	3.7
Family Health	51	9.0
Family Planning	15	2.6
Geriatrics	20	3.5
Home Health/Hospice	13	2.3
ICU (intensive care unit)	21	3.7
Maternal/Child	19	3.3
Medical/Surgical	36	6.3
Obstetrics/Gynecology	51	9.0
Occupational Health	14	2.5
Operating Room/Recovery Room	11	1.9
Pediatrics	36	6.3
Primary Care/Ambulatory	57	10.0
Psychiatric/Mental Health	25	4.4
School Health/College Health	26	4.6
Other	61	10.7

Table 5.7

Frequency and Percent of Practice Site

Practice Site	Frequency	Percent
Clinic, community/ free standing	60	10.6
Clinic, hospital	66	11.6
Clinic, nurse managed	11	1.9
Health department	23	4.0
Home Health agency	14	2.5
Hospice agency	1	.2
Hospital/Medical Center	161	28.3
Independent Practice	17	3.0
Industry/Business	9	1.6
Nursing education program	45	7.9
Nursing Home	8	1.4
Office/Health Maintenance Organization	74	13.0
Schools/College	38	6.7
Self-employed	12	2.1
Other	30	5.3

pharmaceutical company, corporate level of an organization, or multiple sites for practice. As with the practice area, many respondents gave numbers of hours of practice or percentage of practice at multiple sites.

Direct care provider was listed as usual position by 248 (43.6%) of the respondents. Table 5.8 presents the responses to usual position related to practice. Seven respondents indicated they had multiple positions specifying combinations such as administration/direct care provider, charge nurse/staff, research/faculty, and manager/consultant.

Responses to levels of education are presented in Table 5.9. Three hundred twelve respondents had masters degree or above education and 160 had baccalaureate level education. The remaining 97 had either associate degree level or hospital diploma school education. Advanced practice status of respondents was also requested on the demographic data sheet. Specifically, respondents were asked to indicate if they were a nurse practitioner, clinical specialist, or nurse midwife. Nurse practitioner was the largest group of advanced practice respondents at 345 (60.6%). Table 5.10 presents the advanced practice status of respondents. Responses from clinical specialists numbered 44 (7.7%). Of this group, though, several specialties were listed. These clinical specialty areas included areas such as psych/mental health,

Table 5.8

Frequency and Percent of Usual Position

Usual Position	Frequency	Percent
Administrator	52	9.1
Head nurse/charge nurse	27	4.7
Instructor/Faculty	70	12.3
Inservice/ Staff Development	23	4.0
Research	5	.9
Staff/General Duty	82	14.4
Supervisor/Manager	49	8.6
Direct Care Provider	248	43.6
Consultant	6	1.1
Other	7	1.2

Table 5.9

Frequency and Percent of
Highest Level Education Completed

Education Level Completed	Frequency	Percent
Registered Nurse Diploma	60	10.6
Associate Degree in Nursing	37	6.5
Baccalaureate in Nursing	123	21.6
Baccalaureate in other field	37	6.5
Master's in Nursing	224	39.4
Master's in other field	62	10.9
Doctorate in Nursing	11	1.9
Doctorate in other field	15	2.6

Table 5.10

Frequency and Percent of Advanced Practice Status

Advanced Practice Status	Frequency	Percent
<u>Nurse Practitioner</u>		
Family	155	27.2
Adult	69	12.1
Pediatric	31	5.4
Obstetrics/Gynecology	49	8.6
Gerontology	13	2.3
Primary Care	9	1.6
Emergency	3	.5
Dermatology	1	.2
Ears/Nose/Throat (ENT)	1	.2
Psych/Mental Health	5	.9
School Health	6	1.1
Not specified	3	.5
<u>Nurse Midwife</u>	1	.2
<u>Clinical Specialist</u>	44	7.7
None of the above	179	31.5

oncology, orthopedics, emergency/trauma, burn, micro-surgery, school health, discharge planning, and home care.

Procedure

Human subjects consent was obtained from the University of San Diego Committee on Protection for Human Subjects to conduct the instrument development and psychometric testing research. The proposal for the study and approval for the research are found in Appendices 5.B and 5.C. Informed consent required of the participants was incorporated into an introductory letter that was a part of the questionnaire booklet. The informed consent/introductory letter is found in Appendix 5.D. All potential subjects were informed of the purpose of the study; the voluntary nature of their participation; the confidentiality of responses; anonymity of response; use of only grouped data for publication; risks and/or benefits of participation in the study; and of their freedom to withdraw from the study at any time.

The data collection procedure involved requesting subjects to sign and return the informed consent and to respond to (a) a brief demographic profile (Appendix 5.E); (b) the instrument being developed (Appendix 5.F); and (c) three additional research tools to assess convergent and discriminant validity of the instrument under construction (Appendices 5.G; 5.H; 5.I). Responses to the

demographic profile and the instruments included in the questionnaire booklet involved simple response formats.

Because the appearance of the instrument is an important factor in maximizing response rates (Grinnell, 1985; Baker, 1986), all materials used in the data collection were assembled in the form of a self contained booklet. The questionnaire booklet was formatted to facilitate ease of handling and response. It was professionally printed on folded and stapled sheets of buff colored paper. The consent/introductory letter was on the cover with a cut off consent signature form at the bottom of the page. All tools were contained on the inner pages. The booklet was designed to fit in a standard legal size envelope. All mailed and hand distributed questionnaire packets included addressed and stamped return envelopes to eliminate any cost for the subject. Time for completion of the questionnaire booklet was estimated to be approximately 30 minutes per participant.

Of the 1,000 questionnaire packets distributed, a one time recruitment mailing was made to 800 potential subjects using member lists of two professional organizations. The national nurse practitioner organization endorsed the research. Consequently, a small slip of brightly colored paper, stating the questionnaire was being sent with the endorsement of the organization, was enclosed in the questionnaire materials mailed to

members of this group. Out of the 500 questionnaire packets mailed to the national nurse practitioner group there was a response of 313 (63%). For the regional organization, which did not contain an endorsement enclosure, of the 300 recruited subjects, there was a return of 111 (37%) to the one-time mailing.

The other 200 questionnaire packets were distributed at professional meetings and conferences in different geographic areas of the country. Permission was given by the participating organizations for volunteer potential subjects to be recruited. The direct distribution of research materials in this manner produced a response of 145 (72%) out of 200. These subjects, also, returned the questionnaire materials through the mail utilizing the addressed and stamped envelopes provided with the study packets.

Potential subjects were asked to return the completed materials by mail within two weeks after receipt. Dates for return of the packet were hand written on each of the questionnaire booklets. This was done because the research materials were distributed over a three week period of time. Therefore, return date requests corresponded to the time the potential subject received the materials. No follow-up questionnaire mailings were done by the researcher for this initial psychometric evaluation of the new instrument.

Instruments

Instruments utilized in the questionnaire booklet as the tools for this study were (a) the demographic profile, (b) the Dempster Practice Behaviors Scale (DPBS) which was the new instrument being tested, (c) Chabot's Personal Autonomy Scale (PAS) (Chabot, 1975) for convergent validity with the DPBS, (d) Leary's Brief Fear of Negative Evaluation Scale (BFNE) (Leary, 1984), and (e) Watson and Friend's Social Anxiety and Distress Scale (SAD) (Watson & Friend, 1969). The BFNE and the SAD were for estimation of discriminant validity and the PAS for convergent validity with the DPBS through construction of a multitrait-multimethod matrix for construct validity of the DPBS. Table 5.11 presents the assessment protocol which includes psychometric properties of the instruments used in the research.

Demographic profile. The brief demographic profile, developed by the investigator, assessed demographics related to major practice area, practice site, practice status, usual position, advanced practice status, education, sex, age, years of professional practice, and state where practices. These categories were felt by the investigator to provide information that would be useful for examining differences in responses for the instrument being tested. Subjects were instructed to circle one

Table 5.11

**Assessment Protocol of Instruments Used in Psychometric
Evaluation of the Dempster Practice Behaviors Scale (DPBS)**

Purpose for inclusion	Measure/Reference	<u>Psychometrics</u>	
		Reliability	Validity
Demographics	Demographic Profile		
Tool being tested	Dempster Practice Behaviors Scale (DPBS) (40 items, Likert) Dempster, 1990		CVI 1.00
MTMM * Convergent Validity with DPBS	Personal Autonomy Scale (PAS) (60 items, T-F) Chabot, 1975	.85 ^a .81, .81 ^b	Content Construct Behavioral
MTMM Discriminant Validity with DPBS	Brief Fear of Negative Evaluation Scale (BFNE) (12 items, Likert) Leary, 1984	.90 ^c .75 ^b	Construct Criterion
MTMM Discriminant with DPBS	Social Anxiety and Distress Scale (SAD) (28 items, T-F) Watson & Friend, 1969	.94 ^a .68, .79 ^b	Known Groups Differ- ence

* MTMM = Multitrait-multimethod Matrix

^a = Kuder-Richardson 20 (KR20)

^b = Test-retest

^c = Cronbach's alpha

response in each of the categories on the demographic profile. Appendix 5.E contains the demographic profile.

Dempster Practice Behaviors Scale (DPBS). This was the newly developed tool being tested. The DPBS is a 40 item theoretically multidimensional instrument designed to measure autonomy in practice. Autonomy in practice is conceptualized to be autonomy in the practice of a profession. In the development of the tool through the process of retroductive triangulation (Quayhagen & Quayhagen, 1988), four unmeasured dimensions of autonomy in practice emerged. These unmeasured dimensions of readiness, empowerment, application, and valuation became the theorized subscales for the new tool. Each of the four subscales contains 10 items. Ten negatively worded items are dispersed throughout the 40 item instrument to reduce response bias.

The DPBS has a Likert-type scoring and scaling format of 1 (not at all true) to 5 (extremely true). This scoring and scaling format is designed to tap the extent of autonomous practice behaviors or actions. The DPBS has a scoring range of 40 to 200 with a higher summed score of for the total instrument reflecting a greater extent of autonomous behaviors or actions in practice. The 10 negatively worded items require reverse scoring when summing the total score. Content validity for the new tool was calculated through the Content Validity Index

(CVI) to be a CVI = 1.00, revised by deletion, for the overall instrument and 1.0 for each of the four subscales. The DPBS, items comprising the four subscales, and items to be reversed for scoring are located in Appendix 5.F.

Personal Autonomy Scale (PAS). Chabot's (1975) PAS was previously discussed in the empirical triangulation section of this study. Briefly, the PAS is a 60 item instrument designed to measure personal autonomy through a dichotomous true-false response format. The PAS was tested multiple times on a total sample of 1,119 subjects. Kuder-Richardson 20 (KR20) was reported at .85 for the overall tool. Both short term reliability through test-retest and long range test-retest stability was reported at .81. Chabot related content validity, behavioral validity, factorial validity, and construct validity through multitrait-multimethod matrix construction. Presented as a unidimensional instrument, the PAS has a scoring range of 0 to 60 with higher scores indicating more personal autonomy. Appendix 5.G is the PAS and scoring information.

The PAS was the tool selected for determination of convergent validity with the DPBS through multitrait-multimethod matrix construction. This is because, even though the PAS approaches autonomy from a personal orientation, it was the only instrument found, after a

comprehensive review of the empirical literature, that met the criteria for assessment of autonomy through a method of measurement other than the Likert-type format. That is to say, the PAS utilizes a true-false dichotomous response format while the DPBS has a Likert-type response format and, thus, satisfies the multimethod requirement for construction of the multitrait-multimethod matrix.

Fear of Negative Evaluation Scale, brief version (BFNE). This tool was used as one of the instruments employed for the multitrait determination in the construction of the multitrait-multimethod matrix for this study. The Brief FNE was adapted by Leary (1984) to be a short form of Watson and Friend's (1969) the Fear of Negative Evaluation Scale (FNE). Leary posits that the FNE, while having widespread application, had limited utility due to its length and dichotomous response format. Consequently, he changed the response format to a Likert-type basis with a five point scoring basis of 1 (not at all characteristic of me) to 5 (extremely characteristic of me). Items 2, 4, 7, and 10 are reverse scored. Responses to each item are then summed with a resulting range of values from 12 to 60. Higher scores indicate a higher level of fear of negative evaluation.

For the development of the BFNE, Leary selected 12 items from the FNE that correlated at a level of at least .50 with the total FNE scale. Several testing situations

involving various size groups of college students (40 to 150) were presented. The reliability estimate reported for the Brief FNE was a Cronbach's alpha of .90. A four week test-retest reliability of .75 was also reported. Leary's 12 item version (BFNE) correlated at the .96 level with the FNE. Further, the author stated that the BFNE demonstrated nearly identical psychometric properties with those of the complete Watson and Friend (1969) FNE scale. Construct validity of the BFNE was established through the group differences method while criterion related validity was reported with anxiety and social avoidance. Appendix 5.H includes the Leary BFNE and scoring procedures.

Social Avoidance and Distress Scale (SAD). The SAD was the second instrument used for assessment of discriminant validity for the DPBS. This 28 item tool was developed by Watson and Friend (1969) to examine aspects of anxiety related to fear and distress and avoidance in social situations. The SAD is a unidimensional 28 item instrument formatted on a dichotomous true-false response basis. Answers matching the keyed response are given a value of one and answers not matching the key are given a value of zero. A total score is indicated by summing the responses. The range of scores is from zero to 28 with a higher score indicating more anxiety. The SAD was developed on a sample of 297 college students. Reliability through Kuder-Richardson 20 was .94.

Test-retest reliability for a one month period was .68 and .79 for two separate groups. Validity was established through known-groups differences. Appendix 5.H contains the SAD and its scoring procedures.

Results

Internal Consistency Reliability

For the newly developed 40 item Dempster Practice Behaviors Scale (DPBS) initial internal consistency reliability estimates were derived for the total instrument and for each of the four subscales (theoretical dimensions). Internal consistency reliability, or the index of homogeneity or accuracy of an instrument, reflects the extent to which different subparts of the tool are equal in terms of measuring the same characteristics (Knapp, 1985; Polit & Hungler, 1989). In essence, internal consistency reliability is the extent to which performance of any one item or portion of a tool is an indicator of the performance on any other item or portion of the same instrument and will vary depending on the use of the tool (Bostwick & Kyte, 1985; Jacobson, 1988; Waltz, Strickland, & Lenz, 1984). Reliability coefficients have values between 0.00 and +1.00 with values at the higher end indicating more internal consistency reliability of the instrument and subscales. However, because measurement errors are an inborn part of

tool development, instrument reliability is always below the maximum or ideal value of 1.00 (Lynn, 1989).

SPSSX³ was employed to perform the reliability and the other analyses of the new tool. For the initial reliability estimates, the standardized item alpha, or Cronbach's alpha, for the overall tool was .95. Standardized item alphas for the subscales were readiness .87, empowerment, .82, application .83, and valuation .87. All of these initial alphas were above the guidelines advanced by Nunnally (1978) of .70 for a new developing instrument or .80 for a maturing instrument.

Since the newly developed tool (DPBS) had a scaling and scoring format of five responses, internal consistency reliability through use of Cronbach's alpha (standardized item alpha or coefficient alpha) was the analytic technique utilized because it provides a single value for the specified set of data and is the preferred standard of internal consistency in the area of measurement (Jacobson, 1988; Lynn, 1986; Zeller & Carmines, 1980). Furthermore, Cronbach's alpha is considered to be a useful indicator of internal consistency when scale development is in progress (Anastasi, 1988; Nunnally, 1978).

Other reliability estimates calculated were inter-item correlations means and corrected item-total correlations for the new instrument. As can be noted in Table 5.12, the initial inter-item correlation mean was .34 for

Table 5.12

Reliability Analysis of the Original
40 Item Dempster Practice Behaviors Scale (DPBS)

Subscale	# Items	Inter-Item Correlation Mean	Standardized Item Alpha	Corrected Item-Total Correlation Range
Readiness	10	.40	.87	.40 - .71
Empowerment	10	.32	.82	.30 - .65
Application	10	.33	.83	.38 - .70
Valuation	10	.41	.87	.34 - .74
TOTAL TOOL	40	.34	.95	.37 - .73

the total 40 item DPBS while the subscales were .40, .32, .33, and .41 respectively. These values were above the minimum level of .20 to .25 for inter-item means as forwarded by Nunnally (1978).

Corrected item-total correlations are also presented in Table 5.12. For the total instrument the range of corrected item-total correlations was .37 to .73. There were no items from any of the four subscales, nor from the total tool, that warranted removal for failing to meet the criteria of a minimum of .30 for corrected item-total correlations as advanced by Nunnally (1978).

Related to tool development, reliability is critical at the item level. Item analysis done through calculation of inter-item correlation means and corrected item-total correlations is essential for identification of poorly functioning items. Deletion of items with low correlations usually results in higher subscale internal consistency (Grinnell, 1985; Zeller & Carmines, 1980). When items with lower correlations are deleted, it should be in a sequential manner, that is, one item at a time is removed and reliability estimates should be recalculated with the removal of each item (Frank-Stromberg, 1989). In addition, Walker, Sechrist, and Pender (1986) state that items should also be removed, even if they have met the pre-set criteria for correlations, if they are found not to be conceptually consistent or interpretable.

Repeated reliability estimate analyses were performed in conjunction with factor analyses during the psychometric evaluation of the new instrument. Reliability estimates done as a sequel to the findings of the first exploratory principal components factor analysis demonstrated standardized alphas for the 39 item, six factored scales of .88, .89, .85, .77, .76, and .64 respectively. Factor six did not meet the pre-set minimum criteria of .70. All inter-item correlations means were above the minimum of .20. In addition, all items had corrected inter-item correlations of above .37. Table 5.13 presents the complete results of this reliability analysis.

Continuing the comparison of reliability and factorial analyses, it was noted that the corrected inter-item correlations of factors five and six were lower than the other four factors. Eight items were identified that appeared to be weaker and conceptually inconsistent on both the reliability analysis and in the six factor solution of the new tool. Therefore, sequential reliability estimates were done to remove these items one at a time, starting with the weakest in terms of corrected item-total correlations, from the original conceptualized subscales. This reduced the instrument from the originally conceptualized 40 items to 32 items.

Table 5.13

Reliability Analysis of
the 6 Factor Solution for 39 Item DPBS

Subscale	# Items	Inter-Item Correlation Mean	Standardized Item Alpha	Corrected Item-Total Correlation Range
Factor 1	11	.39	.88	.47 - .67
Factor 2	8	.50	.89	.55 - .73
Factor 3	5	.53	.85	.54 - .73
Factor 4	5	.40	.77	.42 - .60
Factor 5	6	.35	.76	.39 - .45
Factor 6	4	.30	.64	.37 - .45
TOTAL	39	.34	.95	.37 - .73

For the readiness subscale eight items were retained, empowerment retained seven items, application retained eight items, and valuation retained nine items. Subscale standardized alphas improved to .87, .81, .82, and .88 respectively. Table 5.14 presents the reliability analysis of the reduced 32 item DPBS. This reliability analysis removed all items that comprised factor six, two items from factor five, one from factor four, and one from factor one of the original six factor solution of the new tool.

Reverting to factorial analysis, a four factor solution based on 30 items was then demonstrated. The subsequent reliability analysis performed on this 30 item four factor solution evidenced standardized item alphas of .91, .89, .80, and .86 respectively. Inter-item correlation means were .47, .46, .44, and .66 respectively. The range of corrected inter-item totals was from .47 to .77 with all items well above the minimum .30 level. Table 5.15 contains a more complete presentation of the reliability estimates of the 30 item four factor solution of the developing instrument.

Factorial Validity

Since the sample size ($n = 569$) for this psychometric evaluation of the developing Dempster Practice Behaviors Scale (DPBS) exceeded the minimum ratio of 10 subjects for each item of the tool, as is needed to reduce sampling

Table 5.14

Reliability Analysis of Reduced 32 Item DPBS

Subscale	# Items	Inter-Item Correlation Mean	Standardized Item Alpha	Corrected Item-Total Correlation Range
Readiness	8	.46	.87	.50 - .71
Empowerment	7	.39	.81	.44 - .64
Application	8	.37	.82	.47 - .71
Valuation	9	.45	.88	.53 - .74
TOTAL	32	.39	.95	.41 - .73

Table 5.15

Reliability Analysis of the4 Factor Solution with Reduced 30 Item DPBS

Subscale	# Items	Inter-Item Correlation Mean	Standardized Item Alpha	Corrected Item-Total Correlation Range
Factor 1	11	.47	.91	.45 - .73
Factor 2	9	.46	.89	.50 - .69
Factor 3	5	.44	.80	.55 - .62
Factor 4	3	.66	.86	.70 - .77
TOTAL	30	.39	.95	.45 - .73

error, factor analysis for factorial composition and validity was a legitimate analytical technique to use (Nunnally, 1978). Factor analysis is a powerful multivariate procedure that is widely applied as a data reduction technique; for identification of underlying dimensions of a set of data; for validating the structure (construct validity) of a developing measure; and as an item selection device in instrument development (Anastasi, 1988; Carmines & Zeller, 1978; Ferketich & Muller, 1990; Munro, Visitainer, & Page, 1986; Nunnally, 1978; Waltz & Bausell, 1981).

Essentially, factor analysis is a statistical method to identify underlying relationships or descriptive categories that explain correlations between a set of variables by clustering individual items into linear combinations called factors. This clustering (factor) process greatly reduces the complexity of relationships among items and aids in determination of the different constructs underlying parsimonious conceptualization of the instrument (Gorsuch, 1983; Kim & Mueller, 1978b; Norusis, 1988).

While several factorial approaches were applied during the psychometric evaluation of the new DPBS, principal components factor analysis with orthogonal varimax rotation was selected for the initial exploratory--also called primary or first order factoring--factorial

analysis performed with this instrument development. Exploratory factor analysis is best when initially exploring data and is most often the first factorial procedure to be applied in data analysis (Kim & Mueller, 1978a). Principal components (PC) factor analysis with orthogonal varimax rotation used for exploratory purposes is applied extensively today because it easily obtainable and facilitates interpretation of results (Norusis, 1988; Zeller & Carmines, 1980). PC factoring is also good for situations with 20 or more variables and for testing of multiple response format instruments (Kim & Mueller, 1978a; Nunnally, 1978).

In principal components factor analysis with orthogonal varimax rotation, the process of orthogonal rotation assumes the factors are uncorrelated and repositions factors for the best fit of data to enhance interpretability. The varimax (variance maximized) method simplifies and enables increased variance on fewer factors (Munro, Visitainer, & Page, 1986; Polit & Hungler, 1989; Waltz & Bausell, 1981).

The initial PC factor analysis with orthogonal varimax rotation demonstrated six eigenvalues of 1.0 or above explaining 55.1% of the variance. A skree plot also demonstrated factorial litter beyond six eigenvalues, but lack of clarity for the number of factors to extract between the four to six eigenvalue range. Therefore,

factor solutions of four, five, and six were obtained using the principal components approach.

Extraction of factors is a key element in the overall factorial validity process. Criteria for extraction of factors for this study involved attention to eigenvalues of 1.00 or above as eigenvalues provide the total variance explained by each factor (factors with a variance less than 1.00 are generally no better than a single value); corresponding evaluation of a skree plot or test; salient loadings; simple structure instead of factorial complexity; conceptual consistency and interpretability; parsimony; and substantive importance (Ferketich & Muller, 1990; Kim & Mueller, 1978b; Norusis, 1988; Zeller & Carmines, 1980).

Closely related to extraction of factors is determination of an acceptable minimum level of factor loadings, or correlations of variables on the factors. Gorsuch (1983) comments that there are no set values for minimal factor loadings, only guidelines that a loading must be high enough to assume a relationship exists between the variables and the factor. For this psychometric evaluation, Nunnally's (1978) minimum criteria of .40 was used to determine salient loading of a variable. Since the factor loading is a correlation, a salient loading means that the variable is a strong definer of the factor (Zeller & Carmines, 1980).

In the initial PC factoring of the 40 item DPBS only one variable failed to meet the minimum .40 criteria established to identify a salient loading. This variable was item three "professionally socialized into an independent thinking role". Item three loaded highest on factor five with a loading of .37 and on three other factors with loadings between .34 to .35. In this six factor solution, item three clearly lacked in conceptual clarity as evidenced by its multiple loadings.

The four and five factor solutions demonstrated considerable factorial complexity, or loadings of several variables on more than one factor. The six factor solution exhibited the simplest structure with only one variable loading on two factors. The variable was item 24 "provide quality services through my role" which loaded both on the second and the fourth factor. With simple structure there should be few, if any, salient loadings on more than one factor (Gorsuch, 1983; Norusis, 1988).

With the six factor 39 item solution, the factors contained 11, 8, 5, 5, 6, and 4 items respectively. Salient loadings ranged from .42 to .74 for the six factors. For this instrument development factor structure had been pre-determined to require a minimum of three salient loadings to be considered a factor (Nunnally, 1978). Table 5.16 presents the six factor solution of the original DPBS.

Table 5.16

Six Factor Solution of the Original 40 Item DPBS(PC with Orthogonal Varimax Rotation)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
D1				.43		
D2					.52	
D3					.54	
D4						.45
D5					.64	
D6					.49	
D7					.42	
D8	.48					
D9	.59					
D10					.49	
D11				.66		
D12				.53		
D13					.41	
D14	.62					
D15		.41				
D16	.45					
D17			.68			
D18	.55					
D19			.70			
D20			.51			
D21		.54				
D22						.62
D23				.70		
D24		(.45)		.54		
D25	.42					
D26						.63
D27	.58					
D28						.58
D29		.46				
D30		.60				
D31		.74				
D32	.49					
D33	.54					
D34			.45			
D35			.64			
D36		.65				
D37	.65					
D38		.40				
D39	.43					
D40		.54				

The six factor solution was also examined for conceptual clarity and consistency, parsimony, and interpretability. A justified factor was determined to need salient loadings; to approach simple structure; to have meaningful interpretability; and to be conceptually appropriate. It was noted that the first four factors conceptually corresponded to the original four theoretical emerged unmeasured dimensions of autonomy in practice. Factors five and six, however, emerged additional perspectives. Factor five appeared to focus on responsibility, but with much overlap and similarity with factor two. Factor six had a strong negative orientation which lacked in interpretability and consistency with the other factors. An independent review by two content experts supported this conclusion.

As previously discussed, reliability estimates for the six factor solution resulted in factor six failing to meet the pre-set standardized alpha level for retention. In addition, through a comparison of factorial and reliability analyses eight items were removed from the instrument reducing the new tool to 32 items. The reduced 32 item scale was again submitted for factor analysis. The second series of PC analysis with orthogonal varimax rotation was performed using four, five, and six factor approaches based on six eigenvalues over 1.00 explaining 55.1% of the variance and skree plot agreement. The six

factor solution was discarded due to only two variables loading on factor six. The five factor solution was discarded due to factorial complexity with several variables loading on more than one factor.

Of the 32 item four factor solution, one variable did not meet the .40 or above criteria for salient loading. This variable was item 20 "see myself progressing towards increasing freedom of action". With this solution three variables had double loadings (items 15, 29, 40) and one variable, item 36, had three loadings. The number of variables on each of the factors were 11, 10, 7, and 3 respectively. Table 5.17 presents the four factor solution of the reduced 32 item DPBS.

Interpretability and clarity of the factors was further enhanced for each of the four factors by increasing the salient loading value to .45. Waltz and Bausell (1981) posit that the investigator chooses the minimum loading to use and suggests that up to a .50 is appropriate. All double loadings, with the exception of item 36, were eliminated. Item 36 "demonstrate mastery of skills" was retained on factor two. However, item 13, "have the trust of others in what I do", on factor two was removed as it loaded below a .45. Variables on each of the four factors were 11, 9, 7, and 3 respectively. The remaining 30 item four factor solution demonstrating the salient loadings, the items on each factor, and the

Table 5.17

Four Factor Solution of Reduced 32 Item DPBS
(PC with Orthogonal Varimax Rotation)

	Factor 1	Factor 2	Factor 3	Factor 4
D3	.58			
D15	.45	(.43)		
D16	.66			
D20				
D21		.56		
D30		.60		
D31		.56		
D36	(.43)	.49		(.45)
D10	.52			
D14			.70	
D25			.47	
D27			.55	
D33			.55	
D37			.75	
D39	.53			
D2	.72			
D11		.71		
D12		.52		
D18			.60	
D23		.77		
D32			.49	
D34	.54			
D38	.56			
D4	.62			
D8	.55			
D13		.43		
D17				.68
D19				.76
D24		.68		
D29		.58		(.42)
D35				.69
D40	.47			(.40)

subscale (theoretical dimension) from the original tool conceptualization are presented in Table 5.18.

The reduced 30 item four factor solution contained similarities with the original four theorized dimensions or subscales for the initial DPBS. Consequently, in addition to the interpretation of the researcher, the reduced 30 item and PC factored version of the developing tool was reviewed by external content judges for their definitions of the factors. The three items comprising factor four were all items from the theorized valuation subscale. The judges, independently, described this factor in terms such as value, worth, and having meaning.

Five of the seven items from the theorized empowerment subscale loaded on factor three. All judges described this factor in terms that portrayed empowerment. For the second factor, four of the nine items were from the readiness subscale. The judges described this factor using terms such as mastery, preparation, competence, and development.

Factor one, the largest factor with 11 variables, was a mixture of items from the original four theoretical dimensions. Comments of the judges indicated similarities to the original subscale of application. Two judges expressed feelings that the items comprising this factor indicated a presence of achieving through actualizing autonomy in practice.

Table 5.18

Items and Salient Loadings of the
Reduced 30 Item Four Factor Solution of the DPBS

Salient Loading	Item	Original Subscale
<u>FACTOR 1</u>		
.72	D2 ..self-determine my role and activities.	(A)
.66	D16 ..establish the parameters of my practice activities.	(R)
.61	D4 ..am valued for my independent actions.	(V)
.58	D3 ..have been professionally socialized into an independent thinking role.	(R)
.56	D38 ..make my own decisions related to what I do.	(A)
.55	D8 ..possess ownership of my role, that is, my role belongs to me.	(V)
.54	D34 ..take control over my environment and situations I confront.	(V)
.53	D39 ..have the power to influence decisions and actions of others.	(E)
.52	D10 ..function with the authority to do what I know should be done.	(E)
.47	D40 ..have the respect of those in other disciplines.	(V)
.45	D15 ..have developed the image of myself as an independent professional.	(R)
<u>FACTOR 2</u>		
.76	D23 ..take responsibility and am accountable for my actions.	(A)
.71	D11 ..accept the consequences for the choices I make.	(A)
.68	D24 ..provide quality services through my role.	(V)
.60	D30 ..base my actions on the full scope of my knowledge and ability.	(R)
.58	D29 ..have a sense of professionalism.	(V)

Table 5.18 Continued

Salient Loading	Item	Original Subscale
.56	D31 ..am confident in my abilities to perform my role independently.	(R)
.56	D21 ..have the professional experience required for independent action.	(R)
.52	D12 ..collaborate with others outside my field when I feel there is need.	(A)
.50	D36 ..demonstrate mastery of skills essential for freedom of action.	(R)
<u>FACTOR 3</u>		
.75	D37 ..cannot adequately perform my role because I do not have legal status.	(E)
.70	D14 ..am constrained in what I can do because I am powerless.	(E)
.60	D18 ..have too many routine tasks to exercise independent action.	(A)
.55	D27 ..am provided with a legitimate basis for independent functioning.	(E)
.54	D33 ..have the rights and privileges I deserve.	(E)
.48	D32 ..have my activities and actions programmed by others.	(A)
.47	D25 ..am constrained by bureaucratic legalities.	(E)
<u>FACTOR 4</u>		
.76	D19 ..derive feelings of self-respect and esteem from what I do.	(V)
.69	D35 ..have a sense of self-achievement.	(V)
.68	D17 ..derive satisfaction from what I do.	(V)

(R) = Readiness

(E) = Empowerment

(A) = Application

(V) = Valuation

Reliability estimates for the four factor solution based on the 30 items were conducted (refer to Table 5.15). Results of this reliability analysis were the strongest of any previously performed reliability estimates suggesting that the factoring procedures performed to this point had successfully enabled data reduction, item selection, and parsimony related to the new instrument.

However, the rearrangement of items from the original theorized dimensions (subscales) into the four factor solution suggested the potential for theoretical overlap of content or correlated factors. The need to further assess the underlying structure for correlated factors was determined. Consequently, the 30 item four factor scale was subjected to a higher level or confirmatory common factors alpha analysis.

Alpha factoring maximizes the alpha (Cronbach) reliabilities of the common factors and the generalizability to factors underlying a domain of variables. Generally, the common factors alpha approach considers variables in an analysis to be a sample from the universe of potential variables (Gorsuch, 1983; Kim & Mueller, 1978b; Norusis, 1988). Furthermore, Ferketich and Muller (1990) view alpha factoring a logical extraction approach for initial phases of tool development. The key inference is psychometric and not

statistical. Correspondingly, oblique rotation, which assumes the factors are correlated, is recommended where the factors are felt to be correlated and is often used with the common factors alpha approach (Anastasi, 1988; Ferketich & Muller, 1990; Gorsuch, 1983; Norusis, 1988; Zeller & Carmines, 1980).

In contrast to the exploratory principal components factoring utilized as the initial data reduction factorial approach, confirmatory -- or higher order -- factoring through the common factors alpha method essentially involves factoring the factors (Anastasi, 1988; Gorsuch, 1983). This type of approach is commonly utilized as a means of confirming findings and is conducted after initial exploratory factoring has been performed (Kim & Mueller, 1978a, 1978b; Nunnally, 1978).

Anastasi (1988) and Gorsuch (1983) note that the confirmatory approach with alpha factoring can identify a general factor as a higher order factor if underlying correlations of factors have been justified by the data. Such procedures can, in addition, be further validation of multidimensionality or unidimensionality of a set of variables (Jacobson, 1988).

Consequently, the 30 item four factor scale was subjected to a confirmatory factor analysis using the common factors alpha approach. The intent was to factor the factors to further assess the underlying structure

since correlated factors were suspected. Through the alpha approach all items loaded (minimum acceptable loading .40) on the first factor which accounted for 40.8% of the total variance. This loading onto the first factor further supported the presence of theoretical overlap and unidimensionality of the tool due to underlying correlated factors. Table 5.19 presents the alpha factor structure and salient loadings. When the alpha factoring was rotated using the oblique method, the factor structure, based on extraction of four factors, revealed similar structure with the previous orthogonal rotation of the PC factoring. A single factor is not maintained when alpha is obliquely rotated and oblique and orthogonal rotations yield similar results (Anastasi, 1988; Gorsuch, 1983; Norusis, 1988).

Comparison of results of several factorial approaches and factorial rotations to furnish the most advantageous agreement strengthens confidence in the end product (Anastasi, 1988; Ferketich & Muller, 1990). Anastasi comments that interpretation often blends with insights and perspectives from the conceptual framework of the study to arrive at the strongest terminal solutions. As a consequence, examination of the new instrument for further determination of multidimensionality versus unidimensionality was conducted before making final decisions related to overall conceptualization of the developing tool.

Table 5.19

Alpha Factor Solution of the 30 Item DPBS

	Factor 1	Factor 2	Factor 3	Factor 4
D2	.63			
D16	.72			
D4	.65			
D3	.62			
D38	.75			
D8	.67			
D34	.73			
D39	.65			
D10	.62			
D40	.58			
D15	.75			
D23	.56			
D11	.55			
D24	.65			
D30	.65			
D29	.70			
D31	.64			
D21	.64			
D12	.53			
D36	.71			
D37	.45			
D14	.53			
D18	.58			
D27	.69			
D33	.62			
D32	.51			
D25	.42			
D19	.69			(.42)
D35	.74			
D17	.65			

Multidimensionality versus Unidimensionality

Examination of the developing tool for multidimensionality versus unidimensionality of instrument construction was done through calculation of Pearson product moment correlation coefficients. The original 40 item measure demonstrated correlations in the high range (over .70) among subscales. Table 5.20 presents the correlations from the original 40 item instrument with the from theoretically constructed subscales. It can be noted that the subscale correlations ranged from .73 to .83. These high correlations did not support an empirically multidimensional tool (McIver & Carmines, 1981).

While the concept of dimensionality is complex and has many interpretations, in general terms, unidimensionality indicates that a set of items empirically corresponds to a single dimension. On the other hand, multidimensionality suggests that there is more than one dimension underlying the set of items (Kruskal & Wish, 1981; McIver & Carmines, 1981). As a rule of thumb, low correlations (under .40) between subscales indicate that an instrument is multidimensional with empirically separate subscales, while high correlations (over .70) indicate a unidimensional, or lack of empirically separate or independent subscales comprising the design of the new instrument. However, Miller (1983) and Weinert (1987) comment that moderate (.40 to .70 range) correlations

Table 5.20

Correlations for Multidimensionality vs Unidimensionality
of the Original 40 Item DPBS Dimensions (4 Subscales)

	Readiness	Empowerment	Application	Valuation
Readiness		.73	.83	.83
Empowerment			.74	.74
Application				.83
Valuation				

Table 5.21

Correlations for Multidimensionality vs Unidimensionality
of the Reduced 30 Item DPBS 4 Factor Solution

	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1		.75	.72	.69
Factor 2			.55	.67
Factor 3				.59
Factor 4				

indicate subscales contribute uniquely to the total construct of the tool.

Correlations were performed periodically throughout the psychometric evaluation and data reduction process. This was done to assess whether reliability analysis and factoring with item deletion and subscale revision would have any impact on the original high correlations between the four proposed theoretical dimensions.

The correlation coefficients for the 30 item four factor solution are presented in Table 5.21. After the series of analyses, it was noted that the subscale correlations, while still not low enough to support empirically independent subscales, had improved. The correlations ranged from .55 to .75 which placed them in the moderate to low end of the high range as compared to the original high correlations in the .73 to .83 range.

Multitrait-multimethod Matrix for Construct Validity

Additional construct validity, including convergent and discriminant validity, was established through construction of a multitrait-multimethod (MTMM) matrix. Campbell and Fiske (1959) proposed the MTMM matrix construction as an effective and efficient way to demonstrate construct validity of abstract concepts through determination of reliability, convergent validity, and discriminant validity. The approach to this technique for assessing the validity of a construct is based on two

assumptions (a) that different measures of the same concept or construct should correlate at least moderately for convergent validity, and (b) that measures of different concepts or constructs will have low correlations indicating discriminant validity (Allen & Yen, 1979; Anastasi, 1988; Coates, et al, 1982; Frank-Stromberg, 1988; Thorndike, 1982; Waltz, Strickland, & Lenz, 1984). Through use of Pearson product moment correlation coefficients, correlations between two traits (autonomy and anxiety) by two measurement methods (Likert and true-false) were established.

After an extensive search for autonomy instruments utilizing measurement formats different from the Likert-type response style of the new DPBS, Chabot's (1975) Personal Autonomy Scale (PAS) was selected for measurement of convergent validity with the DPBS for the MTMM matrix construction. The PAS was employed because it met the criteria for measurement of the same overall concept (autonomy) by a different measurement method (monotrait-heteromethod). The PAS was constructed on a dichotomous true-false measurement method format. Chabot's PAS was described previously in the instrument section. Appendix 5.G contains the PAS and its scoring format.

For discriminant validity, two instruments relating to social anxiety were incorporated into the MTMM matrix

construction. Social anxiety was used as the trait (concept/construct) to discriminate with autonomy because, hypothetically, if one were to be socially anxious, it could be deduced that autonomous behaviors would be minimal. Rationale and support for use of social anxiety as a concept different from autonomy in practice included descriptors of social anxiety such as antisocial behaviors, apprehension, negative self-evaluation, being socially anxious, self-handicapping, strong desire for approval by others, compliant behaviors, fear of negative evaluation by others, and feelings of social distress (Flexner & Stein, 1988; Leary, 1984; Watson & Friend, 1969).

The instruments utilized for discriminant validity were the Leary (1984) Brief Fear of Negative Evaluation Scale (BFNE) and the Social Anxiety and Distress Scale (SAD) developed by Watson and Friend (1969). The BFNE, a 12 item instrument with a Likert-type response format, met the criteria for a different trait with the same measurement method (heterotrait-monomethod). The SAD, a 28 item instrument using a true-false measurement basis, fulfilled the criteria for a different trait with a different method (heterotrait-heteromethod). Both of these instruments have been previously discussed. Copies of the two measures and their scoring procedures are found in Appendixes 5.H and 5.I.

The multitrait-multimethod matrix, a matrix of correlations, was constructed predicated on the reduced 30 item composition of the new Dempster Practice Behaviors Scale (DPBS). As the first step in the construction of the MTMM matrix a reliability diagonal of reliability coefficients was established. The reliability diagonal included reliability estimates for each of the four instruments included in the MTMM matrix. The DPBS evidenced a Cronbach's alpha of .95. The alpha, reflecting the Kuder-Richardson formula 20 (KR20) for dichotomous scaling, was .81 for the PAS. Leary's BFNE demonstrated a Cronbach's alpha of .91. Watson and Friend's SAD had an alpha of .93 (also based on KR20 for dichotomous scaling). Since all four tools reflected reliabilities above the .80 criteria advanced by Nunnally (1978), multitrait-multimethod matrix construction could proceed. Table 5.22 presents the multitrait-multimethod matrix constructed for this psychometric evaluation along with a key to interpret the table.

Next, a validity diagonal was constructed for evidence of convergent validity. The DPBS and the PAS, as the multimethod instruments for autonomy, demonstrated a correlation of .48. The BFNE and the SAD, as the multimethod instruments for social anxiety evidenced a correlation of .44. While what level of correlation is needed for convergent validity varies, Anastasi (1988)

Table 5.22

Multitrait-MultimethodMatrix Construction for Construct Validity

METHOD	Likert		True-False		
	TRAIT	DPBS	BFNE	PAS	SAD
Likert	DPBS	(.95)			
	BFNE	-.36	(.91)		
True-False	PAS	[.48]	.65	(.81)	
	SAD	-.24	[.44]	-.52	(.93)

DPBS = Dempster Practice Behaviors Scale

BFNE = Brief Fear of Negative Evaluation Scale

PAS = Personal Autonomy Scale

SAD = Social Anxiety and Distress Scale

() = Reliability diagonal (monotrait-monomethod) values

[] = Validity diagonal for convergent validity
(monotrait-heteromethod) values

= Discriminant validity (heterotrait-monomethod triangle)

= Discriminant validity (heterotrait-heteromethod triangle)

states that the correlations between tools measuring the same concept should be in the moderate (.40 to .70) range. This author comments that if correlations are too high there is needless duplication occurring with construction of another instrument. Following Anastasi's direction, both the correlations between DPBS and PAS and between the BFNE and SAD demonstrated convergent validity in the appropriate moderate correlational range.

The final maneuver in the MTMM matrix construction was exploration of discriminant validity. For discriminant validity, heterotrait-monomethod and heterotrait-heteromethod correlations should be lower than those of the validity diagonal (Allen & Yen, 1979; Anastasi, 1988; Thorndike, 1982; Waltz & Bausell, 1981). The solid line triangles in Table 5.22 display the heterotrait-monomethod values. The DPBS and BFNE had a correlation of $-.36$ which was lower than the validity diagonal value. The PAS and SAD had a correlation of $-.52$ which demonstrated a correlation that was lower than the validity diagonal correlation.

The correlations between heterotraits measured by heteromethods are displayed through the broken line triangles in Table 5.22. For the DPBS and SAD the correlation was $-.24$. The PAS and BFNE had a correlation of $-.65$. These correlations were also lower than those of the validity diagonal.

Campbell and Fiske (1959) forwarded the notion that the heterotrait-heteromethod (broken line triangle) coefficients for discriminant validity should be lower than the values in the validity diagonal and the corresponding values of the heterotrait-monomethod (solid line) triangle. However, they stressed that achievement of both conditions was the ideal and in reality would rarely be fully met due to factors such as performance on one instrument being influenced by performance on another instrument. Campbell and Fiske noted that evidence of discriminant validity could be still be demonstrated through the different traits having lower correlations than those of the validity diagonals (convergent validity).

Consequently, results of the MTMM matrix constructed for this psychometric evaluation provided support for construct validity of the DPBS through evidence of both convergent and discriminant validity. This support was based on general guidelines for MTMM matrix construction including components that all measures used must demonstrate appropriate reliability estimates; that the convergent validity values be in the moderate/high range; and that for discriminant validity, correlations are lower than the correlations for convergent validity of the measures (Allen & Yen, 1979; Anastasi, 1988; Polit & Hungler, 1989; Thorndike, 1982; Waltz & Bausell, 1981).

Skewness

Through examination of the frequency distributions of the items in the developing instrument (DPBS) it was noted that items tended to have negative skews. Therefore, in addition to the previously described psychometric evaluation of the new tool, a preliminary assessment of skewness of the items comprising the instrument was performed.

Skewness is essentially a quality of a set of scores relating to their asymmetric distribution around a central point (Anastasi, 1988; Polit & Hungler, 1989). While zero indicates a symmetrical or normal distribution, a negative or a positive skew suggests a disproportionate distribution (Munro, Visitainer, & Page, 1986; Waltz & Bausell, 1981). A negative skew points to scores clustered to the right of the mean. Anastasi (1988) comments that an example a negative skew would be responses on an instrument that was designed for the general population when taken by, for instance, individuals at a higher level than that of the general population.

The total group skewness of items and skewness of a subsample of the total group was compared. The subsample selected for the comparison was that of associate degree nursing (ADN) education level ($n = 97$). Rationale for this choice was based on the fact that approximately half

of the subjects responding to the study indicated a master's degree or higher level of education. It was felt to be appropriate to explore Anastasi's (1988) assertion that an instrument designed for a general population (which was the intent of this tool) would, when taken by subjects at a higher level, demonstrate a more negative skew. As noted in Table 5.23, the amount of skewness did vary, relative to responses, in the sample of items with some items reflecting skewness more dramatically than other items.

For example, while the total group responded strongly (skew of -1.342) about taking responsibility for their actions, the ADN subsample reflected a skew of $-.440$. On the other hand, some responses of the subsample indicated a higher negative skew than those of the total group. Such a reverse in response was evidenced related to the item about having mastery of skills. For this particular item, the skew of the total group was a $-.615$ while it was a -1.053 for the subsample. In essence, this implies that the subsample responded with more agreement to the item than did the overall population of subjects. Such responses warrant further exploration in the continuing evaluation of the new DPBS. Consequently, while not a primary psychometric evaluative technique for the overall psychometric testing of the DPBS, the potential impact of skewness justified preliminary assessment.

Table 5.23

Comparison of the Total Group
Skewness and Subsample Skewness for a
Sample of Items from the Reduced 30 Item DPBS

Item		Skewness Total Sample (n=569)	Skewness Subsample ADN Education (n=97)
D2	self-determine role	-.420	-.338
D16	establish parameters	-.502	-.435
D3	professionally socialized	-.382	-.354
D23	take responsibility	-1.342	-.440
D31	have confidence	-.739	-1.225
D21	have experience	-.643	-.576
D36	mastery of skills	-.615	-1.053
D14	am powerless	-1.403	-1.169
D18	too many tasks	-.892	-1.070
D27	have legitimate basis	-.658	-.445
D33	have rights/privileges	-.194	-.227
D19	derive self-respect	-.774	-.926
D17	derive satisfaction	-.853	-.855

ADN = Associate Degree Nursing

CHAPTER 6

DISCUSSION

The 30 item Dempster Practice Behaviors Scale (DPBS), as a first generation instrument, is the outcome of the retroductive triangulation process for instrument development (Quayhagen & Quayhagen, 1988). Psychometric evaluation analysis and results indicate the initial construction of an instrument to measure autonomy in practice that has reliable and valid properties. However, it is pertinent to further discuss aspects of the construction and development of the new tool as a logical consequence of the final phase of the retroductive triangulation process, that of instrument reformulation and retesting.

Inductive Data Triangulation

The inductive data triangulation conducted during the early phases of the tool conceptualization necessitates consideration as a single qualitative study. While the qualitative study was carefully designed and data saturation was approached, the realization remains that there is, undoubtedly, a wealth of information and data yet to be tapped in the exploration of autonomy in practice through the qualitative research methods. This is because, while results of the extensive theoretical and

empirical triangulations revealed considerable data, no research was encountered that examined autonomy, let alone autonomy in practice, from a qualitative perspective.

Use of the subject selection grid assisted in the generation of a representative sample for the study. However, it must be noted that the 28 interviews conducted were with recruited volunteers. Consequently, a more randomized method for obtaining subjects should be considered for future efforts in this area. Also, even though the 28 interviews appeared to begin to approach data saturation, additional subjects should be included to further validate and or expand findings from a qualitative perspective.

Related to the qualitative study procedure, tape recording interviews would, in addition, furnish more strength in the data collection than is provided by even the most careful compilation of field notes. The systematic approach to content analysis must be continued to enhance interpretability of data. Even with rigorous attention, data interpretation during the content analysis process requires continual cross-checking and validation.

Consequently, recommendations for future efforts include additional research to further enhance knowledge related to qualitative perspectives of autonomy in practice. Such continued exploration has the potential to increase generalizability of vistas of autonomy in

practice. Further qualitative examination can, in addition, maximize the variability of potential dimensions and validate and/or expand ecologically valid meanings, conceptualization, and development of new measures (Quayhagen & Quayhagen, 1988; Waltz, Strickland, & Lenz, 1984) such as the new tool for autonomy in practice constructed in this research.

Instrument Development

Item development for the DPBS was based on results of the theoretical, empirical, and data triangulation of this study. Authentic verbalizations provided the core for the content of items developed into an initial item pool. Related to item formulation, future attention should be given to development of items that are as straightforward as possible in meaning and interpretation. This is because, as with any language, semantic interpretation can be a realistic concern in responses from a wide variety of subjects (Sudman & Bradburn, 1987). Item development is most definitely a critical aspect of the instrumentation process. Ghiselli, Campbell, and Zedak's (1981) assertion that the purpose of an item is to elicit information that can be measured, should be foremost in item development.

Attempts to operationalize behavioral aspects of an abstract concept such as autonomy need to be continued. Further efforts to clarify and simplify the focus of individual items must be considered. This is because it

is possible that some items loading on more than one factor during the factor analysis likely had interpretations with theoretical overlap, consequently preventing establishment of empirically independent dimensions of autonomy in practice. Items failing to load saliently may have had, also, similar problems.

Scaling format utilizing a five point Likert-type response set, while felt to be adequate, could potentially be expanded to seven responses for further discrimination in intensity of replies to items comprising the newly developed instrument (Grinnell, 1985; Miller, 1983). It is felt by the investigator, that in the effort to measure the abstract concept of autonomy, a five or seven point response set would be a better indicator of the extent of practice behaviors than a four or six response set that would force an answer into a positively or negatively focused reply.

Length of the finalized new tool, at 30 items, is within parameters of recommendations of current instrument development (Anastasi, 1988; Grinnell, 1985; Hudson, 1982). The new instrument is long enough to display high reliability, yet short enough to take minimal time to finish, thereby enhancing completion of the tool by potential respondents. Further examination of the new instrument could result in removal of a few additional

items without affecting the reliability, however, psychometrically such removal of items would have to be justified.

Content Validity

Actual psychometric evaluation of the DPBS was initiated with the determination of the content validity index. Through quantification of the content validity estimation, a maximum content validity index was established. Utilization of the content validity index approach, as presented by Waltz, Strickland, and Lenz (1984), enabled an enhanced determination of content validity for the new tool. Seven content judges were recruited to make independent assessments of items for content validity. While attempts were made to achieve a variety of specialty areas within the diverse arena of the practice of nursing, potentially, additional judges could have been included to further enhance the generalizability of the content validity index results. Removal of potential items based on the evaluation of the content judges, or experts, did reduce the total number of items from 60 to 40 and, consequently, provided a content validity index (CVI), by deletion of items, of the maximum 1.00 value.

Sample and Procedure

The DPBS was developed to provide a general assessment of the extent of behaviors related to the concept of

autonomy in practice. The intent of the instrument is to enable measurement of autonomy in practice in any discipline with concerns about the status of their autonomy in practice. Consequently, results of this instrument testing cannot be generalized to any other population until it is also applied and evaluated in other disciplines and professions in addition to nursing.

More specifically, this initial testing of the DPBS with nurses was performed with a recruited sample of practicing registered nurses. Suggestions for further evaluation of the instrument would be to apply more rigorous sample and population requirements. A randomized selection of a sample population could possibly reduce potential response bias. This is due to the type of response a subject may make through a selection from a nonprobability procedure instead of through a randomized sample selection.

On the other hand, the sample size of 569 subjects revealed a diverse population of practicing registered nurses. Because the sample was so generalized, the strength of the new instrument's capacity to assess autonomy in practice was enhanced. However, additional testing is needed to further appraise differences of autonomous practice behaviors related to various nursing practice positions, speciality areas, roles, practice

sites, educational preparation, years of practice experience, sex, and age.

Procedurally, while use of mailed questionnaires is controversial (Wooley, 1984), it is also supported for data collection where generalizability is a focus (Austin & Cromwell, 1985; Baker, 1986; Miller, 1983). Therefore, collection of data through mailed questionnaires was felt to be an appropriate approach for testing the newly developed instrument. Although an additional expense, providing a stamped, self addressed envelope for the return of the mailed questionnaire was also felt to be beneficial and is recommended for future studies involving mailed questionnaires. The response rate could have potentially been increased by a follow-up reminder or second mailing and warrants attention in future studies.

Careful formatting of the questionnaire booklet enhanced receptivity as evidenced by comments written on returned questionnaire packets such as "I'm really a busy person, but this caught my eye"; "I appreciate filling out something that has been carefully planned out"; and "I like the booklet format, it was so simple to complete". Conversely, several returns could not be used because the subjects failed to complete one or more pages of the booklet. Since there was no pattern to these occurrences, it appeared that missing the pages was an oversight when going through the booklet. For future use of this type

of format, specification of the contents of the booklet in the introductory letter could possibly reduce this occurrence and increase the overall usable returns.

One other procedural comment should be made regarding the need for the signed consent of potential respondents. Return of the completed materials implies consent on the part of the subject (Miller, 1983; Grinnell, 1985; Frank-Stromberg, 1988). Therefore, requesting subjects to return a signed consent may have kept some potential subjects from replying. Evidence for this were completed booklets returned without the signed consent. Several had comments such as "I don't need to sign this if I'm returning it", "I've given you my permission by sending this back"; and "I don't see why I have to sign since I'm returning it". Future studies could provide an introductory letter explaining the informed consent procedure and a disclaimer statement such as the return of the completed questionnaire indicates permission to use the responses. Hopefully, this would improve the response rate of potential subjects.

Instruments

Instruments used for convergent and discriminant validity assessment of the developing DPBS also warrant additional discussion. Chabot's (1975) Personal Autonomy Scale (PAS) was utilized for examination of convergent validity with the DPBS. When the decision was made to

employ multitrait-multimethod matrix construction for construct validity of the DPBS, there was difficulty locating an applicable instrument to use for the same trait (autonomy) by a different measurement method. The PAS, with a dichotomous true-false measurement method was felt to be appropriate for the monotrait-heteromethod comparison due to its reliability and validity reports.

Chabot (1975) reported a point-biserial correlation coefficient computed between each item and the total score distribution with a total of 51 items demonstrating correlations equal to or more than .20. However, when the reliability analysis was performed on the PAS in preparation for the multitrait-multimethod matrix construction for this study, the inter-item correlation mean for the overall tool was a .07 even though the overall reliability coefficient (Kuder-Richardson formula 20) of the tool was a .81.

Nunnally (1978) comments that correlations among multiple point items are usually higher than with dichotomous items. In addition, the reliability estimate could have been affected through the use of a different population (Anastasi, 1988; Nunnally, 1978) than the one reported by Chabot. Nonetheless, the reason for the low inter-item mean correlation for the PAS and possible reasons for the difference in this testing situation requires further exploration. Future testing of the DPBS

should be done with another instrument of the same trait by a different method and results compared with the present study.

For this tool development the two instruments utilized for discriminant validity with the DPBS were found to converge at a moderate correlational level of .44. This was an interesting finding since the brief Fear of Negative Evaluation Scale (BFNE) by Leary (1984), was a modification of a longer tool to assess social anxiety. The longer tool was the Fear of Negative Evaluation questionnaire (Watson & Friend, 1969) which was developed at the same time and by the same researchers as the Social Anxiety and Distress Scale (SAD). These two tools originally developed by Watson and Friend (1969) were reported to have high convergent validity. Leary (1984) reported that his modified BFNE correlated highly with the SAD. However, in this study the BFNE and the SAD correlated at a moderate level and not a high level.

Through application of Anastasi's (1988) level of correlation for the convergent validity estimation, the DPBS and the PAS converged at an appropriate level, thereby satisfying convergent validity requirements in the construction of the multitrait-multimethod matrix. The same could be concluded related to the convergence of the BFNE and the SAD. Also, again with reference to Anastasi,

the moderate level of convergence of the DPBS and the PAS indicated development of separate instruments without needless duplication of effort.

Analytic Techniques and Results

Internal consistency reliability for the DPBS was determined to be strong with the initial reliabilities exceeding all established criteria. Use of a four factor solution with a reduced 30 item format improved the reliability estimates even further. Items were robust with strong corrected inter-item correlations. Poorly functioning items were identified and removed. High reliability estimates indicated minimal measurement error (Bostwick & Kyte, 1985). As reliabilities vary depending on the application of any instrument, further testing of the DPBS is required to assess stability of the tool and before any generalizations can be made about the overall strength of the new instrument.

Factorial validity of the new tool was addressed through several factor analysis methods. Factoring was initially used as a means of data reduction and to assess the underlying structure of the developing instrument. Exploratory factoring was performed through principal components with orthogonal varimax rotation. A four factor solution with a reduced 30 item scale appeared to approach simple structure; to be conceptually consistent; and to have meaningful interpretability.

However, testing for multidimensionality versus unidimensionality realized correlations between subscales that did not support empirically multidimensional subscales. Additional confirmatory, or higher order, factoring via common factors alpha approach placed all items on the first factor thereby providing further evidence of the unidimensionality of the new tool due to correlated subscales. Chabot (1975), in his testing of a new instrument to measure personal autonomy, had similar results. He concluded that each of his theorized subscales could not stand alone because they were not completely independent components of autonomy.

Consequently, while the four factor solution conceptually appeared to blend with the four original theoretically emerged dimensions of autonomy in practice, the results of additional factoring through common factors alpha approach demonstrated the challenges of determining in advance conceptual areas to be measured. This potentially indicates that, even when items are carefully extracted through the triangulation process and evaluated by expert judges, they may measure elements other than the original intent. Abstract concepts such as autonomy in practice may not be able to be reduced to distinct and discrete empirical factors.

Repeated correlational analyses performed on the new tool during the psychometric evaluation also did not

support empirical multidimensionality, but did support unidimensionality of the instrument. McIver and Carmines (1981) note that unidimensional scaling has advantages in that unidimensionality may be a first step in the development of a multidimensional framework. They comment that unidimensional conceptualizations are easier to understand and are more amenable to theoretically relevant research.

On the other hand, multidimensional scaling is more complex, ambiguous and often difficult to measure with precision, especially with regard to abstract concepts (Kruskal & Wish, 1981). Hudson (1985) asserts that it is prudent to be cautious of any tool claiming to be multidimensional. He states that many multidimensional scales are nothing more than a collection of unidimensional scales. Hudson posits that it is often more effective to develop scales one dimension at a time and work towards multidimensionality with progressive instrument development.

Because placement of variables on the 30 item four factor solution extracted from the principal components factor analysis demonstrated similarities with the original four conceptualized subscales (dimensions) of autonomy in practice, the new developing instrument was determined to be theoretically multidimensional if not empirically multidimensional. Independent assessments of

external content judges were similar to those of the investigator, thereby additionally validating instrument conceptualization. Consequently, support is noted for validation of the DPBS, as an empirically unidimensional measure while retaining theoretical multidimensionality. Future evolution of the new tool could include the intent to progress towards development of an empirically multidimensional instrument.

Multitrait-multimethod (MTMM) matrix construction also merits discussion. Construction of such a matrix requires at least two tools measuring the same trait by two different methods with two tools of a different trait by two different methods. Determination of instruments to enable construction of a MTMM matrix must be done with care. Location of tools to be used for discriminant validity with autonomy that would be appropriate to include in the matrix construction was arduous. Social anxiety was selected only after an extensive search for a trait that could be supported to be different from autonomy and that, also, had measurement methods matching those of the autonomy tools being tested (DPBS and PAS). Since the measurement trend is towards development of instruments using Likert-type formats, location of stated reliable and valid tools by other measurement methods was extremely difficult.

The Personal Autonomy Scale (PAS) (Chabot, 1975) and the Social Anxiety and Distress (SAD) questionnaire (Watson & Friend, 1969) were the only tools out of the extensive search that were felt to possess the characteristics needed for the matrix construction. Both these tools used a true-false dichotomous response format. Concerns related to the use of the PAS have been previously discussed. The SAD appeared to have necessary psychometrics which were upheld during the reliability analysis prior to construction of the MTMM matrix. The SAD had a reliability coefficient of .93 with a inter-item correlation mean of .34. Consequently, the reasons for the extremely low .07 inter-item correlation mean for the PAS is not understood.

Nevertheless, initial reliabilities for the four instruments warranted MTMM matrix construction. With continued construction of the matrix, of interest was the strong negative correlations between the autonomy tools and the social anxiety tools. Negative correlations indicate opposite relationships, that is, two variables are inversely correlated (Polit & Hungler, 1989). An inverse relationship could be assumed with autonomy and social anxiety. If one were to possess increased autonomous behaviors relating to independence of action, social anxiety should be minimal. The high negative correlations supported this assumption of inverse

relationships between autonomy and social anxiety. Chabot (1975) reported similar findings with construction of a MTMM matrix during the development of his tool to measure personal autonomy.

The impact of social desirability on responses to the developing instrument (DPBS) was not included in this study. Further testing of the DPBS should include evaluation of the phenomena of social desirability which has potential to bias responses on the new tool. Crowne and Marlow (1960; 1964) developed an instrument to attempt to locate individuals who describe themselves in favorable or socially desirable terms in order to achieve the approval of others. Such responses could affect the ultimate interpretation of a developing instrument.

Chabot (1975) examined social desirability with the testing of the instrument he developed. He commented that a small portion of the test variance could possibly be attributed to the tendency to respond in a socially desirable manner. Potentially this could be due to autonomy being viewed from the perspective of autonomous elements of social desirability such as responsibility, competence, or determination. Chabot cautioned that the interpretation was far from clear and that further investigation was needed.

An initial exploration of skewness was conducted during the psychometric evaluation of the DPBS. This was

done after it was noted that frequency of responses to items tended to negatively skew to the upper end of the response set. Such disproportionate distribution of responses to items requires further examination. Reasons for these occurrences could relate to the fact that the intent was to develop an instrument which could be used in a general population. However, when the demographics of the sample population were assessed, approximately half of the subjects in the sample population were found to have characteristics such as advanced education, advanced practice status, and more years of experience than would constitute a general population.

Anastasi (1988) comments that tools completed by those at a higher level on a instrument designed for a general population will show a negative skew. Consequently, additional analysis and/or testing with selected groups could better determine the skewness of responses to items of the DPBS. Since the best measure of skewness is the average of Z scores (Munro, Visitainer, & Page, 1986; Waltz & Bausell, 1981), transformation of the skewness value into Z scores would be helpful in expressing responses in terms of the relative distance from the mean. This would provide additional information for future investigation.

In general, further exploration is suggested for interpretation of the overall tool and for individual

items in relation to responses of subgroups within a total population. Autonomy in practice behaviors could very well be specific to practice characteristics such as practice setting, experience, practice status, type of practice, practice speciality, education, sex, or age. Chabot (1975) concluded that autonomy can be viewed along a continuum of differences among populations related to different groups demonstrating divergent degrees or levels of autonomy. Consequently, a strength of the new DPBS possibly lies in comparison and validation of differences between groups. This is because there is a dearth of knowledge related to autonomy in practice, even though the concept has been extensively stated in the literature to be critical to the present and future practice status of the profession.

Conceptual Schema Reformulation

Based on the psychometric evaluation of the Dempster Practice Behaviors Scale (DPBS), the originally emerged conceptual schema for autonomy warrants certain revision. Psychometric evaluation did not validate empirical multidimensionality of the originally conceptualized theoretically multidimensional unmeasured emerged components of autonomy in practice. Autonomy, as an abstract, complex, multifaceted concept, was found to be difficult to empirically operationalize into discrete and independent dimensions. The more abstract the concept,

the more formidable are the attempts to operationalize the concept into distinct and empirically isolated aggregates or dimensions (Chabot, 1975; Waltz, Strickland, & Lenz, 1984). That is to say, while abstract concepts may demonstrate theoretical multidimensionality, they may not be found to be empirically multidimensional.

Chabot (1975), as a result of his work with tool development in personal autonomy measurement, advanced the notion that each of his theorized dimensions could not adequately assimilate a full meaning of autonomy. He noted that the intricate interrelationships among dimensions and variables was evident in overriding dynamic meanings which led to a final outcome of reporting his instrument as an empirically unidimensional tool. As with Chabot's instrument, there is possibly a similar situation with the DPBS.

While not ultimately empirically established, initial factor analysis through principal components with varimax rotation supported a four factor solution that evidenced simple structure, conceptual consistency, and meaningful interpretability similar to the original theorized emerged dimensions of autonomy in practice. Based on these findings, four theoretical dimensions of autonomy in practice, following the factored solution interpretation, have been retained in the overall conceptual reformulation of autonomy in practice. The reformulated conceptual

schema for autonomy in practice is presented in Figure 6.1. In the figure the dotted lines indicate theoretical dimensionality. Retained from the original conceptualization, these theoretical dimensions are readiness needed for autonomy in practice, empowerment needed for autonomy in practice, and valuation as an outcome of autonomy in practice. The dimension of application has been relabeled actualization, that is, autonomy in practice existing in fact or through action. Theoretical definitions have been revised, where needed, to reflect changes in conceptualization of the dimensions. Table 6.1 presents the revisions of the theoretical definitions. In addition, as per the futuristic conceptualization of the schema, other elements contributing to the overall model have been retained. This can be noted through comparison with the original conceptual schema (Figure 4.2).

Instrument Revision

In keeping with the psychometric evaluation of the DPBS, the developing instrument has been revised and reduced in total number of items. The tool is introduced as a 30 item empirically unidimensional instrument with an orientation to theoretical multidimensionality. Items are presented in a unified format with negative items randomly distributed throughout the tool. To reduce redundancy, a common stem for all of the items has been retained. All

AUTONOMY IN PRACTICE

Figure 6.1. Reformulated emerged conceptual schema.

Table 6.1

Revised Theoretical Definitions
for Conceptualization of Autonomy in Practice

Definitions

AUTONOMY IN PRACTICE

Autonomy in practice is theoretically defined from a self, other, or joint locus as a dynamic process that demonstrates varying amounts of independent, self-governed, not controlled, or not subordinate behaviors, actions, or conduct related to the readiness for, empowerment for, actualization of, and valuation of autonomous performance and exercise of one's profession.

REVISED EMERGENT THEORETICAL DIMENSIONS

READINESS (including components such as competence, skill, mastery) is behavior and action involving transitioning, opportunity, evolution, growth, development, movement, and/or progression from one level or degree to another related to autonomy in practice.

EMPOWERMENT (including components such as legitimacy, having rights, having privileges) enables action and conduct involving being entitled and having legitimate status and rights, given permission or sanction, not having constraints, not having others delimit one's performance in a practice setting.

ACTUALIZATION (including components such as determination, decision making, directing, taking action, controlling, accountability, responsibility) is the reality, to realize in action, to make actual, the existence of, the exercise of, the application of autonomy in practice that involves action to accomplish.

VALUATION (including components such as self-respect, self-achievement, satisfaction) is the act of setting and/or having value, worth, merit, and usefulness related to autonomy in practice.

items refer to the same stem of "In my practice I....". Responses to items are summed with a possible scoring range of 30 to 150 with higher scores indicating a greater extent of behaviors related to autonomy in practice. The name, Dempster Practice Behaviors Scale (DPBS) has been retained as it is thought to reduce response bias by not including a semantic reference to autonomy.

The four theoretical dimensions or themes of readiness, empowerment, actualization, and valuation provide the focus of the items. Because the instrument is empirically unidimensional, these theoretical dimensions are not delineated for scoring of the tool according to the theorized dimensions.

Items are generically worded for anticipation of application to any professional group interested in measurement of autonomy in practice. It is hoped that the new instrument will be utilized and tested by multiple groups. Such use will increase the generalizability of the DPBS. Appendix 6.A presents the first generation of the Dempster Practice Behaviors Scale in its form at the conclusion of this research.

Reflections on the Process of Retroductive Triangulation

Retroductive triangulation provided the overall methodological pattern and structure for this study. The retroductive triangulation process (Quayhagen & Quayhagen, 1988) incorporates elements of retroduction and

triangulation of information into the conceptualization of a framework for empirical instrument formulation.

Triangulation as a vehicle for conducting research studies employs combining multiple research methods or approaches in a variety of ways to produce richer and more comprehensive analysis of complex phenomena (Duffy, 1937; Murphy, 1989). Consequently, use of the retroductive triangulation process provided a unique and comprehensive framework for instrument development as evidenced by the psychometrics of the newly developed Dempster Practice Behaviors Scale (DPBS).

For this instrument development the retroductive triangulation process promoted and inspired tool development through enhanced quantitative and qualitative conceptualization of autonomy. The resulting instrument evidenced initial robust psychometric qualities. Therefore, it is felt that through the process of retroductive triangulation there is potential for improved empirical measurement for present and future research agendas, such as those for autonomy in practice.

Implications

Research and instrumentation related to autonomy has been hindered by the way autonomy has been conceptualized and operationalized. The need for development of new and creative measures to assess concepts, such as autonomy in practice, has been well established (Atwood, 1980;

Breaugh, 1985, 1987; Brown & Grove, 1987). Lawler, Nadler, and Cammann (1980) cite the need for future studies to incorporate a variety of tools that have been developed within the profession, but that have the capability to be generalized not only inside the profession, but also to outside the discipline. These authors posit that nurse researchers must pursue new designs, methods, and measurement techniques to generate knowledge essential for the continued progression of the profession.

Measurement tools are needed that can provide insights into understanding, prediction, and control of occurrences such as autonomy in practice in the crowded nursing and health care practice arena. The development of a valid and reliable instrument enhances and enables objective data collection, provides feedback on status, and indicates when changes may be needed (Corcoran & Fischer, 1987). Rew, Stuppy, and Becker (1988) cite the need to strengthen the link between practice, research, and theory. They note that development of measurement instruments that have strong construct validity can further research, promote theory development, and influence nursing practice.

The availability of well designed and empirically sound tools can advance the measurement of conceptual and theoretical foundations of the practice of nursing. The

ability to add to the existing body of knowledge is enhanced. The capability to assess current practice is increased. Also, the ability to develop interventions based on sound educational foundations which have relevance to the practice of the profession is intensified.

More specifically, the development of the Dempster Practice Behaviors Scale (DPBS), evidenced to possess strong psychometric properties in its first generation state, has multiple implications for the practice and the profession of nursing. The DPBS has potential to benefit the profession, for example, by enabling improved assessment of the extent of autonomous behaviors in the practice of nursing; by investigating relationships between autonomy and the practice of nursing; through the expansion of measurement parameters related to autonomy in practice; by testing diverse populations within the domain of nursing related to the reality and/or the extent of autonomy in practice; and by helping to identify areas of concern related to autonomy in practice.

Autonomy has become an issue of importance to nursing (Dempster, 1988; Hershey, 1989; Searse, 1989). Nursing must address the demand for autonomy in practice. Nursing needs to determine how autonomy in practice transfers into meeting health care needs of people. Historically and traditionally, nursing has not been rewarded for autonomy

or independence in practice. Consequently, if the viability to practice goes away because there is no autonomy, then nursing as a profession may go away. This is a reality the profession of nursing must face in the increasingly crowded and competitive health care arena to help protect the future of the profession.

Autonomy, then, is of eminent importance to nursing. Accordingly, the significance of the development of valid and reliable instruments to assess autonomy in practice has a wide array of implications. It is felt that the DPBS has appropriate reliability and validity to be applied in the measurement of autonomy in practice. With such application the DPBS has potential to expand measurement parameters of autonomy in practice to the benefit of the profession of nursing.

The first generation of the DPBS, as the result of this study, is only the beginning. Phase seven of the retroductive triangulation process for instrument development is the reformulation and retesting of the instrument (Quayhagen & Quayhagen, 1988). Through use, application, continued psychometric evaluation, and revision the future generations of the Dempster Practice Behaviors Scale will have improved capabilities to enhance the measurement of autonomy in practice.

Correspondingly, this research and conceptualization of autonomy has emerged a conceptual schema of autonomy in

practice that extends a unique synthesis of elements. Future research utilizing both qualitative and quantitative approaches is anticipated to further clarify, develop, and expand the current conceptual schema into a more comprehensive theoretical framework that will have relevance to the autonomous practice of a profession.

Phase seven of the retroductive triangulation process, then, will continue into the future. It will address issues, concerns, and psychometric outcomes that have emerged in the initial conceptualization, development, and testing of the first generation Dempster Practice Behaviors Scale.

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Appendix 3.B
RECRUITMENT LETTER

May, 1989

Dear Colleague:

I am recruiting practicing Registered Nurses to assist in the first phase of my dissertation. All that is required is your participation in an informal interview with me. I will meet with you at the time and location of your choosing.

The focus of the dissertation is to develop a valid and reliable research tool to measure autonomy in the practice of nursing. Before I can develop the tool it is critical for me to know what nurses think about autonomy in practice. Therefore, your assistance in this first phase of the dissertation is of utmost importance.

Please take time to participate !! I will contact you during the last two weeks of May or the first two weeks of June to arrange the interview.

Please contact me if you have any questions.

Your willingness to take part is greatly appreciated. Thank you !

Sincerely,

Judith S. Dempster, MSN, RN-C, FNP
DNSc Candidate, University of San Diego

Appendix 3.C

UNIVERSITY OF SAN DIEGO

PHILIP Y. HAHN SCHOOL OF NURSING

CONSENT FORM

You are being asked by Judith S. Dempster, a doctoral candidate in Nursing at the University of San Diego, to participate in a study to develop a new research tool. The intent of this tool is to gain insight into autonomy in the practice of professional nursing. If you agree, you are asked to take part in an informal verbal interview with Judith Dempster about what autonomy is and what autonomy in the practice of nursing means to you.

To preserve anonymity, your name and this consent form will not be attached to your responses on the questionnaires. The data from this study will be analyzed and published only in group form to maintain confidentiality of each participant. The researcher will be the only individual to see this consent form. Consent forms will be kept separate from collected data. All data and consent forms will be kept in locked files in the office of the investigator.

Participation in this study is completely voluntary. No risk or discomfort is expected as a result of participating in the study. There is no agreement, written or verbal, beyond that which is expressed in this consent form. You may refuse to participate or may withdraw from the study at any time without risk or penalty.

Please ask any questions you may have at any time during your participation. Feel free to contact Judith Dempster at (xxx) xxx-xxxx.

Thank you for your interest and cooperation.

I, the undersigned, understand the above explanations and, on that basis, I give consent to my voluntary participation in this research.

Signature of Participant

Date: _____

City and State

Appendix 3.D

DEMOGRAPHIC PROFILE

Please circle one response in each category below:

AGE

- 01. Under 20
- 02. 20 - 24
- 03. 25 - 29
- 04. 30 - 34
- 05. 35 - 39
- 06. 40 - 44
- 07. 45 - 49
- 08. 50 - 54
- 09. 55 - 59
- 10. 60 - 64
- 11. 65+

YEARS PROFESSIONAL NSG PRACTICE

- 01. Under 1
- 02. 1 - 4
- 03. 5 - 9
- 04. 10 - 14
- 05. 15 - 19
- 06. 20 - 24
- 07. 25 - 29
- 08. 30 - 34
- 09. 35 - 39
- 10. 40 +

MAJOR CLINICAL PRACTICE AREA

- 01. Adult Health
- 02. Community/Public Health
- 03. Family Health
- 04. Gerontology
- 05. Home Health
- 06. Medical/Surgical
- 07. Obstetrics/Gynecology/FP
- 08. Occupational Health
- 09. Operating Room
- 10. Pediatrics
- 11. Psychiatric/Mental Health
- 12. School Health
- 13. Other (specify)_____

TYPE OF POSITION

- 01. Staff
- 02. Supervisor/Manager
- 03. Administrator
- 04. Head Nurse/Charge Nurse
- 05. Instructor/Faculty
- 06. Cl Spec (Specify)_____
- 07. NP (specify)_____
- 08. Other (specify)_____

PRACTICE STATUS

- 01. Part time
- 02. Full-time

SEX

- 01. Male
- 02. Female

SITE OF PRACTICE

- 01. Clinic
- 02. Health Department
- 03. Home Health Agency
- 04. Hospital
- 05. Nursing Home
- 06. Occupational Health/Industry
- 07. Physician Office
- 08. Schools
- 09. Nursing Education Program
- 10. Self-employed

HIGHEST LEVEL EDUCATION COMPLETED

- 01. RN Diploma
- 02. Associate Degree
- 03. Baccalaureate in Nursing
- 04. Baccalaureate in other field
- 05. Master's in Nursing
- 06. Master's in other field
- 07. Doctorate

Appendix 3.E

THEMATIC INTERVIEW GUIDE

WHAT DOES AUTONOMY MEAN TO YOU?

HOW WOULD YOU DEFINE AUTONOMY?

IN WHAT WAYS ARE YOU AUTONOMOUS?

WHAT DOES AUTONOMY IN PRACTICE MEAN TO YOU?

WHAT DOES AUTONOMY IN YOUR PRACTICE MEAN TO YOU?

HOW WOULD YOU DESCRIBE YOUR AUTONOMY IN PRACTICE?

WHAT DO YOU SEE AS THE MAJOR INGREDIENTS, COMPONENTS, OR ELEMENTS OF AUTONOMY IN PRACTICE?

WHAT BEHAVIORS DOES AN RN EXHIBIT IF SHE/HE HAS AUTONOMY IN PRACTICE?

PLEASE DESCRIBE HOW YOU HAVE DEMONSTRATED OR EXHIBITED AUTONOMY IN YOUR NURSING PRACTICE.

PLEASE DESCRIBE INSTANCES WHERE YOU HAVE NOT DEMONSTRATED OF EXHIBITED AUTONOMY IN YOUR NURSING PRACTICE.

DO YOU THINK PERSONAL, PROFESSIONAL, AND PRACTICE AUTONOMY ARE THE SAME OR ARE DIFFERENT? PLEASE EXPLAIN....

DISCUSS CONCEPTS (OR IDEAS) THAT YOU THINK ARE DIFFERENT FROM AUTONOMY IN PRACTICE.

WHAT ELSE CAN YOU SHARE ABOUT YOUR THOUGHTS AND/OR ACTIONS RELATED TO AUTONOMY IN PRACTICE?

THANK YOU ! !

Appendix 3.F

FIELD NOTES SAMPLE

DO (Date of Observation): 5-31-89

DR (Date of Recording): 5-31-89

MN: This interview was arranged by phone. I am meeting 24 (subject ID number) at a restaurant. Booth for privacy.

ON: We chatted for a short period of time so she would feel more comfortable. I reviewed what I was doing and 24 signed and filled out the demographic profile. 24 said "well...let's start...what do you want to know?". I told her I had some general areas to cover and that was where I would begin. I asked her what autonomy meant to her. 24 replied "I can see where this isn't going to be easy...well, well, I think it is self-direction...setting one's own goals...controlling the methods used to get to those goals and then...it is really reaching the goals. Oh, its also self-evaluating yourself... being free from control, from limits and from expectations of others....its assuming responsibility for what you do."

TN: As this is interview 24 I hear repetition of what others have said--like--self-direction, controlling, setting goals and achieving them, self-evaluation, responsibility, free from control---these are becoming recurrent themes.

ON: I asked how she would define autonomy. 24 said " I think I just did. To be a little more direct.. its the ability to be self-directed, independent, self-reliant, and responsible. I acknowledged her comments and continued by asking her to think about autonomy in practice--what that meant to her. 24 was quiet for a short while. She sipped some soda and said after a few moments "Truthfully, I think it seems to have come to mean working independently, as in a consultant role or in private practice...where one can regulate conditions and be free from bureaucratic restrictions and limitations that are imposed on you...is that what you mean?"

TN: Bureaucratic restrictions and limits--again limits imposed on a person from outside--by others.

ON: I countered with asking her to be more specific and relate autonomy in practice to her in her practice. 24 responded "Presently I work in a situation that allows some independence, some control, but only of the direction of my own specific momentary actions. THIS IS NOT (stated loudly) my ideally autonomous situation...I'm supposed to be a part of a team...but I see it more as a design for conformity and regulation".

Appendix 3.F continued

- MN: Oops--I think I struck a nerve---follow this up---
- ON: I said "You seem to have some feelings about this...how about telling me some more about how you have experienced autonomy in your nursing practice..." 24 replied, "Sure...I've had a taste of it...this makes it hard to do things I do now... I was a director of nursing in a skilled nursing facility, working for a boss who combined trust in my abilities with a great deal of indifference in the process...he focused on results. This was the most autonomy I have ever experienced ...with free reign over the department to plan, direct, and implement changes...but my husband took a job here...so...
- TN: More repetition--trust from others in ability to perform-- also--focus on results not process--free reign
- ON: I continued by asking about instances where she had not had autonomy. 24 stated, "...that's easy...just about every other setting I have worked--acute care, critical care, med-surg ...almost every hospital in town...staff and charge...nurses seem to be completely unable to organize, plan, implement or evaluate themselves, nursing care, or outcomes without rigid, externally imposed criteria...its very, very sad and discouraging...."
- TN: Interesting--nurses unable to do for themselves--without external control--is this knowingly the case?--is it wanted?
- ON: I noted I thought her comments were interesting and asked her continue--to tell me what behaviors she thought a nurse displayed if they were to have autonomy in practice. 24 said "Such a person must want to be autonomous...she..or he..must be intelligent, competent...be able to what they do...be self-reliant, have critical thinking skills, have the authority to exercise these characteristics...and be willing to be responsible..for their actions and actions of those under them."
- TN: Again--want to be (desire for?)--competence--authority-- intelligence--critical thinking skills--willing to be responsible--
- MN: I think the waitress is getting impatient---she has stopped serving us---this disrupted the flow---watch this for future
- ON: We chatted awhile when the service stopped---I commented after a short while that I was interested in anything else she had to say or felt like sharing with me----24 was quiet then said "I bet you haven't had too many like me...I tend to say what I think. I was interested in talking with you because...well,

Appendix 3.F continued

this thing about autonomy is getting to me...I see myself being wasted...I mean I don't feel like I can practice what I can do...I'm trying to decide if I want to stay in nursing ...it seems to me that there's no place for autonomy...and I don't mean from outside to us...I think, more and more, that nursing discourages independent thinking, action and practice. ...and, well, if I can't resolve my feelings about it..... well, I'm outta here...."

TN: 24 raises some very interesting points---how much lack of autonomy comes from inside nursing? Feelings that she can do more than she is allowed to do because it is not fostered from within the profession---

MN: Look back over notes from others and see if this has come through before---do others feel it is from inside as well as from outside.

ON: I told 24 I was trying to learn about what was thought about autonomy in practice and appreciated her candid thoughts and feelings.....

This is a sample---the interview was ended after more discussion.....

Appendix 3.G

BEHAVIORS EXHIBITED
WITH AUTONOMY IN PRACTICE

"The ability to be creative and flexible in client care...individualistic. Supported by the institution and acknowledged for what she can do."

"...leadership, independence, decision making skills."

"...self-direction, self-motivation, expertise in practice, equal status with others, make decisions, sets own goals, carries out or follows thru with actions, stands up for patients, creative, innovative, takes responsibility."

"...self-starter, motivated, good self-image, strong identity, knows what is doing, has power, makes decisions and acts of those decisions, takes risks, felt by others to be their equal."

"...confidence, satisfaction, authoritarianism, is accountable."

"...increased knowledge, ability to consult when needed, understands data, sees alternatives for action...and takes it."

"...self-confidence, independent thinking and decision making, high level of skills, intuitive sense."

"...confidence in decisions based on level of knowledge and experience and readiness to accept the credit or consequences of intervening...sense of responsibility."

"...competence and expert knowledge, self-direction, authority, empowerment, legal status to do things, control over practice."

"...strong sense of self, self confidence, strong knowledge base, ability to follow-through, professionalism, accountability, delivers high quality care."

"...excellence in practice, leadership, control, empowerment, take risks and take responsibility, strong self-image, socialized to feel is an equal to others and not dependent, desire to be in control, wants to make own decisions."

"...strong skills, excellent knowledge base, sound judgement, assertiveness."

"Acting and thinking independently on own, being able to recognize that at times, that others are correct and not taking away their autonomy."

Appendix 3.G continued

"...confidence, self-assured, able to communicate ideas, able to delegate...leadership, power, respected by others, listened to."

"Oh wow...uh...the ability to make decisions, integrity, permission to act."

"...confidence in abilities, knowledge to defend decisions, incentive to act and to do things without being told."

"...mostly characteristics...like identity, strong ego, ability to think and act on own, make own decisions, take risks, have power, be able to control, have respect of others, feel is equal status, be self-directed, self-motivated, be self-determining, be a leader and manager, stand up for rights of patients--be an advocate, be able to collaborate with others."

"...able to cope, able to make decisions and support decisions with rationale, able to positively impact client care."

"...is socialized differently than most nurses--is not dependent, is self-assured, positive image, willing to take risks, an expert in what does, has much knowledge, has authority, take responsibility for actions, is accountable."

"...knowledge, competence, expertise, strong communication ability, able to integrate info and make plan of care."

"...assurance of abilities, confidence in decisions, open to other people's input, willing to share and discuss her observations."

"...be a strong person, assert self, has knowledge, takes initiative, delivers expert care, makes sound judgements, sets and attains own goals, does self-evaluation."

"...self-reliance, intelligence, competence, judgement, creative and critical thinking skills, independence, responsibility, authority to exercise all these characteristics."

"...self starter, is accountable, has power and knows how to effectively use it...knows what direction to take, has alternatives and understands the consequences of own actions...self-confident, competent, pride in abilities, self-determination. Participates with others, consults and collaborates when needed, knows own limits of practice and ability/knowledge."

"...able to make decisions, manages own activities, finds solutions to problems, knows resources and uses them effectively...is a critical thinker...possesses expertise, education, knowledge in order to make autonomous decisions."

Appendix 4.A

EXAMPLE OF ITEM IDENTIFICATION PROCESS

EMPOWERMENT (definition)

Empowerment (including components such as legitimacy, authority, having rights, having power) is action and conduct involving being entitled and having legitimate status and rights, given permission or sanction, being acknowledged, having authority, and having power to practice autonomously.

Legitimization items.....

- E.1.1. have a legitimate basis to perform.
 - E.1.2. have fear of censure of reprisal.
 - E.1.3. am recognized for what I can do.
 - E.1.4. am constrained by bureaucratic legalities.
 - E.1.5. have the permission I need to think and act on my own.
 - E.1.6. am recognized for what I do.
 - E.1.7. have constraints imposed on me to which I must conform.
 - E.1.8. cannot adequately perform because I do not have a legalized basis.
-

Authorization items.....

- E.a.1. have the authority to do what I know should be done.
- E.a.2. have the necessary sanction to be able to act.
- E.a.3. have the required credentials to perform in my setting.
- E.a.4. my position gives me authority.
- E.a.5. lack authority.
- E.a.6. must ask permission of act.
- E.a.7. must have everything approved by others.

Appendix 4.A continued

Having rights items.....

- E.r.1. am always under someone else's thumb.
- E.r.2. say and do what needs to be done.
- E.r.3. am oppressed.
- E.r.4. have independence of thought
and action.
- E.r.5. am free to do what I want.
- E.r.6. have the privileges I deserve.
- E.r.7. provide more effective service when
I can act independently.

Having power items.....

- E.p.1. am powerless.
- E.p.2. have the influence to get things
done.
- E.p.3. am not heard or seen.
- E.p.4. have power to control my actions.
- E.p.5. others listen to me.
- E.p.6. am restrained in what I can do
because I lack power.
- E.p.7. have power to influence decisions.

Appendix 5.A

ITEM CONTENT VALIDITYThe D. Star Practice Behaviors Scale (DPBS)

Thank you for serving as a content validity judge for items developed to measure the concept of autonomy in practice.

The purpose of this instrument is to gain insight into behaviors, actions, and conduct related to autonomy in the practice of a profession. It is anticipated that this tool can be utilized by those in positions involving practice of a wide range of professions.

For this tool development, autonomy in practice is theoretically defined as independent, self-governed, not controlled, or not subordinate behaviors, actions, and conduct related to the readiness, empowerment, application, and valuation of autonomous practice.

The format for scaling and scoring will be a Likert type format indicating autonomy in practice and utilizing a five point scale with scoring of 1-not at all, 2-a little, 3-some, 4-alot, and 5-extensive.

DIRECTIONS:

- * Four dimensions of autonomy in practice have been identified. They are readiness, empowerment, application, and valuation. A pool of items has been developed for each dimension.
- * A definition of each dimension is placed at the beginning of the subscale for that dimension. Please refer to the definition as each item within that subscale is reviewed for content validity.
- * Rate each item in terms of validity to the specified dimension of autonomy in practice.
- * Circle the number next to each item which you feel best indicates its validity from -- 1 (not valid) to 4 (very valid).
- * Remember, focus on if the content of an item is appropriate and valid to the dimension....not if you agree or disagree with the item.
- * Feel free to write comments and suggestions as you go through the dimensions and items.
- * Your careful consideration of each item is greatly appreciated.
- * PLEASE PROCEED AND BEGIN ON THE NEXT PAGE.....

Appendix 5.A continued

DIMENSION OF READINESS: (including components such as transitioning, establishing limits or scope, competence, mastery) is behaviors and actions involving opportunity, evolution, growth, development, and progression from one level to another level for autonomy in practice.

	NOT VALID	SOMEWHAT VALID	QUITE VALID	VERY VALID
IN MY PRACTICE I.....				
1. Have the opportunity to think and act on my own.	1	2	3	4
2. Have the courage to take risks when I think something is wrong.	1	2	3	4
3. Have been professionally socialized into an independent thinking role.	1	2	3	4
4. Have developed the image of myself as an independent professional.	1	2	3	4
5. Base my actions on the limits of my knowledge and ability.	1	2	3	4
6. Establish the scope or parameters of my practice activities.	1	2	3	4
7. Am restricted by limits set by others.	1	2	3	4
8. Am confident in my abilities to to perform my role independently.	1	2	3	4
9. Have the competence needed to perform at an optimum level.	1	2	3	4
10. Base my actions on my capabilities.	1	2	3	4
11. Have the credentials validating my ability to perform independently.	1	2	3	4
12. Demonstrate mastery of skills essential for freedom of action.	1	2	3	4
13. Have the professional experience required for independent action.	1	2	3	4
14. Keep my professional knowledge and skills current.	1	2	3	4
15. See myself as developing towards more freedom of action.	1	2	3	4

Appendix 5.B

Construction and Testing of an Instrument to Measure

Autonomy in Practice

1. Background and Purposes of Research

In the context of ongoing rapid change and increasing competition in the health care delivery arena there is valid reason for nursing to be concerned with its autonomous status. Nursing's future existence and roles in the delivery of health care may well depend on the autonomy of nursing practice (Beyers, 1987; Schlottfeldt, 1989).

However, there is a dearth of literature and research relating to autonomy in practice. Additionally, due to the abstract nature of autonomy, instrument construction has been hindered by the way autonomy has been conceptualized and operationalized. Only limited dimensions of the concept have been empirically measured. Consequently, there is a need for the development of new, innovative, and useful tools which consider a wide range of variables for generalizability that have relevance for understanding, prediction, and control of occurrences in today's practice arena (Atwood, 1980; Breaugh, 1985).

Therefore, the purpose of this dissertation study is to construct and to establish psychometric properties of an empirical instrument, through the process of retroductive triangulation (Quayhagen & Quayhagen, 1988), to examine unmeasured dimensions of autonomy in the practice of professional nursing. It is proposed that a more accurate assessment of autonomy has potential to benefit the overall professionalization and practice of nursing and to add to the continued viability and future expanded potential for nursing in the arena of health care delivery.

2. Research Methodology

Due to the nature of this instrument construction dissertation, the retroductive triangulation research process is being conducted in two stages. Stage I encompassed a qualitative component to emerge data to be used in the development and formatting of the new tool (Stage I was approved by the Human Subjects Committee in May, 1989).

Stage II, presented for approval at this time, involves the instrument development process and psychometric testing of the new tool based on the data emerged in Stage I.

STAGE II -- Instrument development and psychometric testing

a. Subject Population. The subject population for instrument development and psychometric testing will be a volunteer recruited sample of a professional mix of practicing registered nurses (RNs) from the community at large.

Appendix 5.B continued

Subjects will represent a wide range of positions, roles, clinical specialties, educational preparation, and age. Volunteers will be recruited from: 1) RN students in the nursing programs at the University of San Diego; 2) mailing lists from professional organizations; and 3) hand distribution of materials to be tested to volunteers attending professional nursing conferences. Permission will be obtained from organizations and groups where necessary.

b. Facilities Where the Research will be Conducted.

Facilities where the study will be conducted are the University of San Diego School of Nursing and sites of professional conferences the researcher will attend to recruit volunteer participants for the research. Mailing of the tool packet, with self-addressed and stamped envelopes provided for its return, to RN's from organization mailing lists will also be done.

c. The Research Procedure. The research procedure for this portion of the process of instrument construction and testing will involve:

- 1) establishment of content validity of potential items for inclusion in the instrument being developed.
- 2) final item selection and instrument development based on the results of the content validity.
- 3) psychometric testing of the newly developed tool.

Testing of the newly developed instrument involves requesting, in one session, study participants to respond in written form to: a) a brief demographic data profile (copy attached); b) the newly developed instrument (sample items are attached since the tool will not be fully developed until content validity is determined); c) two established reliable and valid tools to assess convergent validity (refer to attached listing); d) two established reliable and valid tools to assess discriminant validity (refer to attached listing). All tools will involve a simple response to items on scaled formats. The demographic data profile simply requires checking the appropriate response.

The method for selecting subjects will be by recruitment of RN volunteers from the community at large. Each volunteer will be asked to sign an informed consent form (sample copy attached).

d. Estimated Duration of Subject Participation. Estimated duration of subject participation is approximately 30 to 45 minutes per subject. Total anticipated length of this stage of the dissertation study is anticipated to be approximately 2 to 3 months.

Appendix 5.B continued

3. Subjects Risks and Benefits

a. Potential Risks. Potential risks to subjects are not anticipated. All subjects will be volunteers who have signed informed consent forms. A subject can withdraw from participation in the study at any time without risk or penalty.

b. Risk Management Procedures. Informed consent procedures will include a brief narrative explaining the purpose of the study; the confidentiality of responses; anonymity of responses; use of only grouped data for publications; and risks (if any) and/or benefits of participation in the study. The key to code numbers and all raw data will be kept in a locked file cabinet in the office of the investigator. All data will be stored in locked files. Consent forms will be kept separate from the data collected. Also, completed data, as grouped results, will be available to study participants upon request.

c. Potential Benefits. Potential benefits to subjects could include increased knowledge of the components and dimensions of autonomy in professional practice; the importance of autonomy in practice; and increased knowledge of their own perceptions of autonomy in the professional practice of nursing.

d. Risk/Benefit Ratio. It is anticipated there will be minimal to no risk/benefit ratio as it is felt there are no risks involved with a one time voluntary participation in an informal interview setting.

e. Expense to Subjects. There is no expense to subjects except for the use of approximately 30 to 45 minutes of their time. If subjects are requested to return the tool packet by mail, self-addressed and stamped envelopes will be provided for the subjects.

Appendix 5.D

INFORMED CONSENT/INTRODUCTION LETTER

DEAR PROFESSIONAL COLLEAGUE:

Nursing literature cites the need to conceptualize and to construct innovative, valid, and reliable tools to enhance the measurement of practice. Consequently, I have developed an instrument that I feel has implications for present and future practice of professional nursing. I am asking you to participate in a research study to test this newly constructed tool.

The purpose of this study is to establish reliability and validity of the tool so that it can be used in future research. Testing the new instrument involves comparing it to other tools that are both similar and different in content and in format. This is the reason why there are four tools in the booklet.

Participation in this study is completely voluntary. There is no agreement, written or verbal, beyond that which is expressed here. Data from this study will be analyzed and published only in group form. Your name will not be used or attached to your responses. All data and consent forms will be kept in separate locked files in the office of the researcher.

PLEASE take time (approx 30 min) to respond to the demographic profile and questionnaires in the booklet.

TO RETURN the completed materials to me:

- * Read, remove, sign, and seal/staple closed the consent form below
- * Place and seal the completed questionnaire booklet and consent form in the already addressed and stamped return envelope
- * MAIL TO ME BY _____

YOUR INPUT IS CRITICAL -- PLEASE RESPOND !! If you have questions feel free to contact me at (xxx) xxx-xxxx. Your active participation and speedy response greatly appreciated. THANK YOU VERY MUCH FOR YOUR ASSISTANCE.

Most sincerely,

Judith S. Dempster, DNSc (Candidate), RN,C, FNP
University of San Diego

.....

.....

CONSENT FORM

I, the undersigned, understand the above explanations and, on that basis, I give consent to my voluntary participation in this research.

SIGNATURE: _____ DATE: _____

Appendix 5.E

DEMOGRAPHIC PROFILE

PLEASE CIRCLE ONE RESPONSE IN EACH CATEGORY BELOW:

MAJOR CLINICAL PRACTICE AREA

01. Adult Health
02. Community/Public Health
03. Emergency
04. Family Health
05. Family Planning
06. Geriatrics
07. Home Health/Hospice
08. ICU
09. Maternal/Child
10. Medical/Surgical
11. Obstetrics/Gynecology
12. Occupational Health
13. Operating Room/RR
14. Pediatrics
15. Primary Care/Ambulatory
16. Psychiatric/Mental Health
17. School Health/College Health
18. Other (specify) _____

USUAL POSITION

01. Administration
02. Head nurse/charge nurse
03. Instructor/Faculty
04. Inservice/Staff Development
05. Research
06. Staff/General Duty
07. Supervisor/Manager
08. Other (specify) _____

ARE YOU A....

01. Nurse Practitioner
(specify type) _____
02. Clinical Specialist
(specify type) _____
03. Nurse Midwife
04. None of the above

PRACTICE SITE

01. Clinic, community/free standing
02. Clinic, hospital
03. Clinic, nurse managed
04. Health department
05. Home Health agency
06. Hospice agency
07. Hospital/Medical Center
08. Independent practice
09. Industry/Business
10. Nursing education program
(specify type) _____
11. Nursing Home
12. Office, physician/HMO
13. Schools/College
14. Self-employed
15. Other (specify) _____

HIGHEST LEVEL EDUCATION COMPLETED

01. RN Diploma
02. Associate Degree in Nursing
03. Baccalaureate in Nursing
04. Baccalaureate in other field
05. Master's in Nursing
06. Master's in other field
07. Doctorate in Nursing
08. Doctorate in other field

SEX

01. Male
02. Female

ALSO, PLEASE COMPLETE

PRACTICE STATUS

01. Full time
02. Part-time
03. Inactive

YEAR OF BIRTH _____YEARS OF PROFESSIONAL
NURSING PRACTICE _____

Appendix 5.F

THE DEMPSTER PBS QUESTIONNAIRE
(Original proposed tool)

Please mark the response that best indicates **TO WHAT EXTENT**, that is, how much each of the following statements is **TRUE** for you in **YOUR PRACTICE** or position.

IN MY PRACTICE I....	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
1. ... am ready to take risks when I think something is wrong.					
2. ...self-determine my role and activities.					
3. ...have been professionally socialized into an independent thinking role.					
4. ... am valued for my independent actions.					
5. ...must ask permission and have things approved before taking action.					
6. ...take action without fear of censure or reprisal.					
7. ...act as an advocate by standing up for the rights of others.					
8. ...possess ownership of my role, that is, my role belongs to me.					
9. ... am restricted in my actions to limits set by others.					
10. ...function with the authority to do what I know should be done.					
11. ...accept the consequences for the choices I make.					
12. ...collaborate with others outside my field when I feel there is need.					
13. ...have the trust of others in what I do.					
14. ... am restrained in what I can do because I am powerless.					
15. ...have developed the image of myself as an independent professional.					
16. ...establish the parameters of my practice activities.					
17. ...derive satisfaction from what I do.					
18. ...have too many routine tasks to exercise independent action.					
19. ...derive feelings of self-respect and esteem from what I do.					

PLEASE CONTINUE >>>

IN MY PRACTICE I.....	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
20. ...see myself progressing towards increasing freedom of action.					
21. ...have the professional experience required for independent action.					
22. ...feel that I am not heard or seen, that is, I am not acknowledged.					
23. ...take responsibility and am accountable for my actions.					
24. ...provide quality services through my role.					
25. ...am constrained by bureaucratic legalities.					
26. ...am talked down to by others.					
27. ...am provided with a legitimate basis for independent functioning.					
28. ...wait for others to tell me what to do.					
29. ...have a sense of professionalism.					
30. ...base my actions on the full scope of my knowledge and ability.					
31. ...am confident in my abilities to perform my role independently.					
32. ...have my activities and actions programmed by others.					
33. ...have the rights and privileges I deserve.					
34. ...take control over my environment and situations I confront.					
35. ...have a sense of self-achievement.					
36. ...demonstrate mastery of skills essential for freedom of action.					
37. ...cannot adequately perform my role because I do not have legal status.					
38. ...make my own decisions related to what I do.					
39. ...have the power to influence decisions and actions of others.					
40. ...have the respect of those in other disciplines.					

Appendix 5.F continued

ITEMS BY DIMENSION AND SCORING PROCEDURES

DIMENSIONS (SUBSCALES)

READINESS: 1, 3, 9, 15, 16, 20, 21, 30, 31, 36
EMPOWERMENT: 5, 6, 10, 14, 22, 25, 27, 33, 37, 39
APPLICATION: 2, 7, 11, 12, 18, 23, 28, 32, 34, 38
VALUATION: 4, 8, 13, 17, 19, 24, 26, 29, 35, 40

SCORING PROCEDURES

REVERSE SCORE: 5, 9, 14, 18, 22, 25, 26, 28, 32, 37

SCORING:

RANGE -- OVERALL: 40 - 200

RANGE -- EACH DIMENSION: 10 - 50

PROCEDURE: * Sum responses

* Higher scores indicate more autonomy

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These consist of pages: 244-249

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Appendix 6.A

THE DEMPSTER PRACTICE BEHAVIORS SCALE (DPBS)

Please consider EACH statement VERY CAREFULLY.

Mark the response that BEST indicates TO WHAT EXTENT, that is, how much THAT PARTICULAR STATEMENT is TRUE for you in YOUR PRACTICE or position.

IN MY PRACTICE I....	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
1. ...take responsibility and am accountable for my actions.					
2. ...have developed the image of myself as an independent professional.					
3. ...base my actions on the full scope of my knowledge and ability.					
4. ...self-determine my role and activities.					
5. ...derive satisfaction from what I do.					
6. ...take control over my environment and situations I confront.					
7. ...am valued for my independent actions.					
8. ...am constrained by bureaucratic legalities.					
9. ...provide quality services through my role.					
10. ...am confident in my abilities to perform my role independently.					
11. ...have been professionally socialized into an independent thinking role.					

PLEASE CONTINUE >>

Appendix 6.A continued

IN MY PRACTICE I....	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
12. ...function with the authority to do what I know should be done.					
13. ...have too many routine tasks to exercise independent action.					
14. ...have a sense of professionalism.					
15. ...have the rights and privileges I deserve.					
16. ...have the professional experience required for independent action.					
17. ...am restrained in what I can do because I am powerless.					
18. ...collaborate with others outside my field when I feel there is need.					
19. ...derive feelings of self-respect and esteem from what I do.					
20. ...make my own decisions related to what I do.					
21. ...possess ownership of my role, that is, my role belongs to me.					
22. ...have the power to influence decisions and actions of others.					
23. ...have a sense of self-achievement.					
24. ...am provided with a legitimate basis for independent functioning.					
25. ...demonstrate mastery of skills essential for freedom of action.					

PLEASE CONTINUE >>

Appendix 6.A continued

IN MY PRACTICE I....	NOT AT ALL TRUE	SLIGHTLY TRUE	MODERATELY TRUE	VERY TRUE	EXTREMELY TRUE
	1	2	3	4	5
26. ...have my activities and actions programmed by others.					
27. ...have the respect of those in other disciplines.					
28. ...cannot adequately perform my role because I do not have legal status.					
29. ...establish the parameters of my practice activities.					
30. ...accept the consequences for the choices I make.					

SCORING KEY: Reverse score items 8, 13, 26, 28

SCORING: * Range of scores 30 - 150
 * Sum all responses
 * Higher scores indicate greater extent of autonomy in practice

ITEMS REFLECTING THEORETICAL DIMENSIONS:

READINESS 2, 4, 6, 7, 11, 12, 20, 21, 22, 27, 29

EMPOWERMENT 8, 13, 15, 17, 24, 26, 28

ACTUALIZATION 1, 3, 9, 10, 14, 16, 18, 25, 30

VALUATION 5, 19, 23