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# Nurse Practitioner Professional Autonomy: Relationship Between Structural Autonomy and Attitudinal Autonomy

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Nurse Practitioner Professional  
Autonomy: Relationship between Structural  
Autonomy and Attitudinal Autonomy

by

Dolores C. Jones

A dissertation submitted to the Educational  
Leadership Program in partial fulfillment  
of the requirements for the degree of  
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## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
TABLE OF CONTENTS	ii
LIST OF TABLES	iv
LIST OF FIGURES	v
ABSTRACT	vi
I. INTRODUCTION AND BACKGROUND	1
Background of Problem	1
Purpose	6
Significance	6
Research Questions	10
Limitations	11
Conceptual Framework	12
Practice Environment	14
Educational Background	16
Managed Care	19
Organization	21
Summary	22
II. REVIEW OF LITERATURE	24
NP Professional Development	24
Conceptual Model of Components of Structural Autonomy	41
Practice Environment	41
Educational Background	46
Managed Care	52
Autonomy	54
Autonomy and Professional Status	55
Autonomy in Nursing	57
Autonomy and Job Satisfaction	64
Facets of Autonomy	67
Summary	74
III. PROCEDURE AND METHODS	76
Introduction	76
Population and Sample	77
State Practice Environment	78
Data Collection	80
Instruments	81
Summary	89

## TABLE OF CONTENTS

IV.	ANALYSIS OF DATA	90
	Introduction	90
	NP Characteristics	91
	Research Questions	100
	Practice Environment	100
	Preceptor Experience	104
	Pharmacology Preparedness	106
	Managed Care	111
	Demographic Variables	116
	Evaluation of Autonomy Scales	124
	Summary	129
V.	CONCLUSION AND RECOMMENDATIONS	130
	Conclusions	133
	Structural Autonomy	133
	Preceptor Experience	136
	Pharmacology Education	139
	Managed Care Environment	141
	Demographic Variables	143
	Recommendations for Further Research	146
	Generalizability	146
	Instrument Development	147
	Qualitative Inquiry	148
	Continuing Pharmacology Education	149
	Managed Care	150
	Implications	150
	Summary	152
	APPENDICES	
	Appendix A: Cover Letter	154
	Appendix B: Follow-up post cards	155
	Appendix C: Demographic Questionnaire	156
	Appendix D: Index of Work Satisfaction Scale	159
	Appendix E: Professional Inventory Scale	160
	Appendix F: Nursing Attitude Scale	161
	Appendix G: Nursing Practitioner Questionnaire	163
	REFERENCES	167

## LIST OF TABLES

	Page
Table 2.1: States with Prescriptive Privilege Education Requirements	51
Table 3.1: Identified Population and Sample	78
Table 3.2: 1997 State Practice Environment Scores	80
Table 4.1: Individual State Survey Returns	92
Table 4.2: NP Demographic Characteristics	93
Table 4.3: NP Educational Preparation	95
Table 4.4: Year of Certification	96
Table 4.5: Practicing NPs in each State	97
Table 4.6: Independent T-Test on Current Practicing Status by Age	97
Table 4.7: Practice Setting	99
Table 4.8: 1997 State Practice Environment Groups	101
Table 4.9: State Practice Group Returns	101
Table 4.10: ANOVA on Autonomy Scales for Practice Environment	103
Table 4.11: ANOVA on Autonomy Scales for State Environment	104
Table 4.12: Independent T-Test on Autonomy Scales by Preceptor	105
Table 4.13: ANOVA on Autonomy Scales for Pharmacology Preparedness	107
Table 4.14: Chi-Square Analysis of Pharmacology Credit Hours and Preparedness	109
Table 4.15: Chi-Square Analysis of Pharmacology Teaching Method and Preparedness	110
Table 4.16: Managed Care Distribution	112
Table 4.17: Pearson Correlation for Managed Care and Autonomy Measures	112
Table 4.18: ANOVA on Autonomy Scales for Managed Care	113
Table 4.19: Managed Care Distribution	115
Table 4.20: Pearson Correlation for Demographic Variables	116
Table 4.21: Multiple Regression Among Demographic Variables and Autonomy Scales	118
Table 4.22: T-test on Autonomy Scales for Educational Preparation	121
Table 4.23: T-test on Autonomy Scales for Highest Level of Education	122
Table 4.24: T-test on Years Since Graduation for NP Education Program	123
Table 4.25: T-test on Years since Graduation and Highest Level of Education	124
Table 4.26: Autonomy Scores for NP Sample	125
Table 4.27: Pearson Correlation for Autonomy Scales	128
Table 4.28: Reliability Coefficient of Autonomy Scales	129

LIST OF FIGURES

	Page
Figure 1: Relationship between Structural and Attitudinal Autonomy	13



## Abstract

The purpose of this study was to identify and describe the possible components of structural autonomy that influence Nurse Practitioners' (NPs) perceptions of independence in practice. The components identified were NP state regulatory practices, educational background, and managed care environment. The study explored the relationship between NP structural autonomy as it relates to the above components and attitudinal autonomy as it relates to perceptions of independence in practice. A conceptual framework derived from a review of the literature demonstrated the possible relationships.

The investigator employed a mail survey to collect data from certified NPs in six eastern and mid-eastern states. Current state regulations regarding advanced nursing practice were used to establish current state practice scores. The Nursing Autonomy Scale (Pankratz & Pankratz, 1974), the Index of Work Satisfaction (Stamps & Piedmonte, 1986), and the Professional Inventory (Hall, 1974) measured perceptions of autonomy. Additional information was collected to determine the NP demographic background, educational background, practice setting and managed care circumstances.

Of 300 surveys mailed, 227 participants responded. Data analysis included correlation analysis, t-tests, analysis of variance, and multiple regression procedures. Demographic information was summarized with descriptive statistics. The

major findings of the study were: (1) State regulatory guidelines do not affect perceptions of autonomy as measured on the scales used. (2) Preceptor experience during NP education does not affect perceptions of autonomy as measured on the scales used. (3) Pharmacology preparedness does not affect perceptions of autonomy as measured on the scales used. (4) Managed care circumstances do not affect autonomy as measured on the scales used.

It was concluded that structural autonomy is a more complex and multi-dimensional experience than originally hypothesized. Many additional factors must be taken into consideration when exploring NPs' perceptions of autonomy. It may be that most NPs are practicing in an independent, yet collaborative role, which provides opportunity for autonomy. The investigator also concluded that NP educational programs do not adequately prepare NPs for independent prescriptive authority.

Variables related to NP autonomy were not determined in the study, yet it is evident that NPs' perceptions of autonomy are affected by many variables. Further study is needed to ascertain these variables.

## CHAPTER I

### Introduction and Background

#### Background of the Problem

Many economical, societal, and political forces affect change in the U.S. healthcare delivery system. As healthcare reform emerges, the context in which healthcare is delivered changes. Traditional duties of physicians are increasingly overlapping with those of other healthcare providers, creating an evolution of the traditional nursing role. These changes have heightened awareness in alternative approaches to healthcare as advanced practice nurses (APNs) are becoming visible members of the healthcare team. Our nation is in an era of healthcare reform where additional primary care practitioners are needed and APNs' role as direct primary care providers to meet this need is expanding. The concept of advanced nursing practice, however, is one that varies widely in interpretation and regulation. The role of the APN in the changing healthcare delivery system is an important and timely issue. Thus, a study exploring the various facets of the APN role is appropriate at this time.

The role of the APN requires an additional set of skills and knowledge added to the core content of nursing. APNs are registered nurses whose formal education and clinical preparation extend beyond the basic requirements for licensure, resulting in either a certificate or master's

degree. Care provided by APNs emphasizes early intervention and ongoing management of common health problems (Inglis & Kjervik, 1993). Advanced practice nursing encompasses several categories of care providers, including nurse practitioners (NPs) clinical nurse specialists (CNSs), certified nurse midwives (CNMs), and certified registered nurse anesthetists (Mittelstadt, 1993). The Nurse Practitioner (NP) is one such role that has developed over the past three decades.

The NP is educated to practice in an area that was originally reserved for the physician. A NP functions as a primary care provider assisting clients in developing a plan to optimize their health. A NP is a registered professional nurse (RN) with advanced skills, additional formal education and clinical training in a healthcare specialty. NPs provide advanced nursing care in an expanded role, emphasizing wellness promotion, illness prevention, and acute minor and stable chronic illness management to individuals, families and communities (Morgan, 1993). Primary care, consisting of health promotion and disease prevention, is the cornerstone of their practice (Florida Nurses Association, 1994). The NP role includes both the independent functions of prevention and primary care, which the nurse traditionally assumes, plus advanced practice that includes decision making, diagnosis, treatment, and, often, prescription of medications and medical devices (Jones, Spock, & Mullinix,

1995). NPs practice under the rules and regulations of the Nurse Practice Act of the state in which they work.

The number of specialties falling within the scope of advanced practice include psychiatric/mental health, women's health/obstetric-gynecologic, pediatric/child care, family/adult health, and geriatric (Mittelstadt, 1993). The unique training of NPs prepares them to perform a variety of professional nursing tasks as well as functions that were historically performed by physicians (Safriet, 1992). This added skill set positions NPs to work in collaboration with physicians (Schaffner, Ludwig-Beymer, & Wiggins, 1995).

The NP role itself originated with Henry Silver, M.D., and Loretta Ford, Ph.D., RN, in Colorado in 1965. The inception of the role was a response to increased awareness of inequities in access to health care for children. Since that time, however, the NP role has expanded to include other patient populations such as family, women's health, geriatrics, community and occupational health (Booth, 1981; Fenton, Rounds & Anderson, 1991; Koch, Pazaki, & Campbell, 1992; Sultz, Henry, Kinyon, Buck, & Bullough, 1983a, 1983b, 1984; Sultz, Zielesny, Gentry, & Kinyon, 1980). The scope of services offered by the NP has also expanded to include full, comprehensive health service to clients (Krauss, 1992; Mahoney, 1992a; Pickwell, 1993). NPs differ from RNs in that they have a more extensive range of practice and function in an independent role (Butler, 1983; Kraus, 1994; Sultz,

Zielezny, Gentry, & Kinyon, 1978; Sultz et al., 1980). As the NP profession has progressed, a trend toward greater independence and responsibility has taken place (Cruikshank & Lakin, 1986; Dunn, 1993b; Lawler & Valand, 1988; Pearson, 1993).

Autonomy is critical to the overall success of the NP role. Early definitions of autonomy focused on the conviction that practitioners ought to be able to make their own decisions without external pressures from clients, those who are not members of the profession, or the employing organization (Engel, 1970; Hall, 1968; Snizek, 1972). More contemporary definitions of autonomy do not focus on client pressures but instead denote it as freedom for the professional to practice the profession in accordance with training (Hart & Marshall, 1992) or the "freedom to make discretionary and binding decisions within ones' scope of practice and freedom to act on those decisions" (Batey & Lewis, 1982, p.15). Autonomy is only one of the many elements involved in the development of the NP role. During the transition from RN to NP the nurse must, among other things, learn to use diagnostic equipment, further develop problem solving skills, master history taking and interviewing techniques, broaden basic science background, and reinforce nursing skills (Dachelet & Sullivan, 1979). It is professional autonomy, however, that allows NPs to function to their fullest potential.

The concept of autonomy merits further analysis in its practical application for NPs. Freidson (1970) acknowledged that autonomy is central to the definition of a profession. "Their (nursing's) autonomy is only partial, being second and limited by the dominant profession (medicine). This is the irreducible criterion which keeps such occupations paraprofessions, in spite of their success at attaining many of the institutional attributes of professions" (p.76). The central issue is professional autonomy or discretion in the performance of work. All workers everywhere practice some degree of autonomy in their day-to-day work. Professionals, however, differ in the degree of control they exercise. Professional workers are distinguished from others because they are expected to exercise judgement and discretion on a routine, daily basis in the course of performing their work (Freidson, 1984).

Autonomy is a two dimensional professional attribute. It has both a structural and attitudinal dimension (Hall, 1968; Katz, 1969). The structural aspect of autonomy is indirectly controlled by the efforts of professional associations to exclude the unqualified and to provide the legal right to practice (Hall, 1968; Hart & Marshall, 1992). Structural autonomy is displayed in the work setting wherein the professional is expected to utilize expert judgement and will expect that only others in the profession will pass judgement on the competence of decisions made. This self

regulation is a visible feature of professional autonomy. A less evident aspect of professional autonomy is the attitudinal dimension. This is the internal belief of the professional that there is freedom to exercise expert judgement and decision making and to assure responsibility for that judgement.

#### Purpose of the Study

The purpose of this study was to identify and describe the possible components of structural autonomy that may influence NPs perceptions of independence in practice. These components include 1) NP state regulatory practices, 2) educational background, and 3) managed care environment. In addition, the purpose was to explore the relationship between NP structural autonomy as it relates to the above components and attitudinal autonomy as it relates to the NP's perceptions of independence in practice.

#### Significance of the Study

Numerous, descriptive reports in the literature attest to the value and contribution to healthcare, as distinct from medical care, being made by NPs (Bibb, 1982; Feldman, Ventura, & Crosby, 1987; Ford & Silver, 1967; Mahoney, 1989; Sackett, Spitzer, & Gent, 1974; Safriet, 1992; Spitzer et al., 1974). Despite the momentum of the NP movement in the late 1960s and 1970s, NPs are not consistently available as healthcare providers throughout the country and there still are insufficient numbers of primary care providers



(DeAngelis, 1994). At the present time, the United States is on the verge of major healthcare reform with a continuous national debate (Keane & Richmond, 1993). At the same time, the role of the NP within the healthcare system is a matter of controversy.

Fundamental aspects of healthcare reform include guaranteed access to primary and preventive care for both children and adults, continued quality of care, cost containment and elimination of barriers to practice for NPs (Inglis & Kjervik, 1993; Wysocki, 1994). If suggested healthcare reform recommendations regarding deployment of NPs are adopted, regulations constraining NPs' proven ability to provide primary and preventive healthcare will also become a major issue in the healthcare reform debate (DeAngelis, 1994). To meet future challenges within the healthcare arena, a combination of physician and nonphysician providers will be required (Schaffner et al, 1995). Legal limitations on NP scope of practice, prescriptive authority, physician influence on NP education, pharmacology education and managed care may decrease structural autonomy for NPs. NPs with low structural autonomy may have decreased attitudinal autonomy. Decreased attitudinal autonomy may impair NP integration into the delivery of healthcare.

If national healthcare reform defines basic healthcare as a fundamental right for all Americans, many more

providers of primary healthcare will be needed. Continued expansion of the number of NPs could offer one solution to the unmet healthcare needs in the United States. The Department of Health and Human Services (1987) estimated that for the year 2,000 at least 19,000 NPs will be necessary to provide for the healthcare needs of elderly persons alone (Burns, 1994). Estimates of NP numbers vary widely. Through 1992, about 42,600 employed registered nurses had received formal training as NPs beyond their professional education as nurses. Estimates of the number of practicing NPs ranged from only 27,200 (Morgan, 1993) to 30,000 (Booth, 1995). The numbers of practicing NPs as compared to those educated suggest that 25 percent of trained NPs are not functioning in the advanced role. Also, compared to future predictions, the numbers of trained and practicing NPs are not sufficient to meet society's demands.

The barriers to effective utilization of NPs are the conflicting and restrictive provisions governing their scope of practice and prescriptive authority (Department of Health Professions, 1991). Legal constraints which limit professional autonomy are a major impediment to fully maximizing the potential of the NP role. Prescriptive privileges and independent legal status are necessary components of advanced practice in all states because patients need the full benefit of modern nursing care (Pearson, 1995). Limits on NP practice may decrease

satisfaction with the advanced role and prevent large numbers of NPs from working efficiently. Attainment of professional autonomy in the way of prescriptive authority and legal status for NPs as a group will be an indication of society's trust in and acceptance of the role. The clear variations between different state requirements and approaches to the regulation of nursing practice restrict the public's acceptance of the role. The variation in authority and scope of practice may also cause confusion to the public when an aspect of practice permitted in one jurisdiction is not in the scope of practice in another.

The variations in educational programs may impede mobility for some nurses in advanced roles. As NPs develop professional identities, it is important to understand what factors, if any, foster or inhibit a positive perception of autonomy. Knowledge of these influences will promote the recruitment and retention of NPs who make meaningful contributions to the provision of cost effective, high quality healthcare. Legislative approval of independent practice for NPs will foster role autonomy and will allow NPs to increase their services to consumers. Curricula to support the development of independent practice in the NP must reflect the anticipated scope of practice and the current practice expectations and opportunities. Clinical components of preparation need to provide role models that will adequately prepare NPs for independent practice (Hayes,

1994). Educators need to be able to respond to and adequately prepare NPs to provide comprehensive care. Although all states do not have prescriptive authority for NPs, pharmacologic management of patients with specialized healthcare needs should be an integral part of all NP curriculums (Fullerton & Pickwell, 1993).

#### Research Questions

The study was guided by five research questions. The dependent variable in the study is perception of attitudinal autonomy. The independent variables are type of preceptor, practice environment, pharmacology education, managed care environment and a variety of demographic variables.

Research Question 1. Do NP perceptions of professional autonomy differ among NPs who practice in a restricted practice environment, a moderate practice environment, and a favorable practice environment?

Research Question 2. Do NP perceptions of professional autonomy vary between NPs who have had NPs as preceptors and those who had physicians as preceptors?

Research Question 3. Do perceptions of professional autonomy differ between NPs who have had various levels of pharmacology education?

Research Question 4. Do NP perceptions of professional autonomy differ among NPs who practice in varying degrees of managed care?

Research Question 5. Is there a relationship between

demographic variables (age, sex, ethnic background, years employed as a NP, and type and location of practice settings) and perceptions of autonomy?

#### Limitations of the Study

Based on the research design, methodology, and human imperfections, the study was determined to have limitations. The limitations of this study are designated to include issues regarding sampling, survey outcomes, and human error.

The first limitation of the study is based on the mechanism in which the sample was determined. The sample of this study represents only a subset of the total population of NPs in the United States. It is based on a sample drawn from the population of only certified NPs from only two of the four certifying agencies, from only six of fifty states that utilize NPs. The final sample, therefore, is not representative of the total population of NPs in the United States. Specifically, NPs who are not certified, NPs who are certified by other agencies, and NPs for 44 states were not included in the sample. It is important to note that the specialty areas of two NP certifying agencies are pediatric/child care and women's health/obstetric-gynecologic, thus NPs from psychiatric/mental health and family/adult health specialty areas are not represented.

A second limitation of the study is inherent in the use of a mail survey. The characteristics of the NPs who did not respond to the questionnaire were not available. It could

not be determined, therefore, if the nonrespondents differed significantly from the respondents. The possibility of a biased group of respondents was not investigated and no analysis of the way the nonrespondents may have changed the results was completed.

A third limitation to the study is based on the element of human imperfection. The methodology, procedures and instruments used to conduct this study are the embodiment of human analysis judgement and thereby, human error.

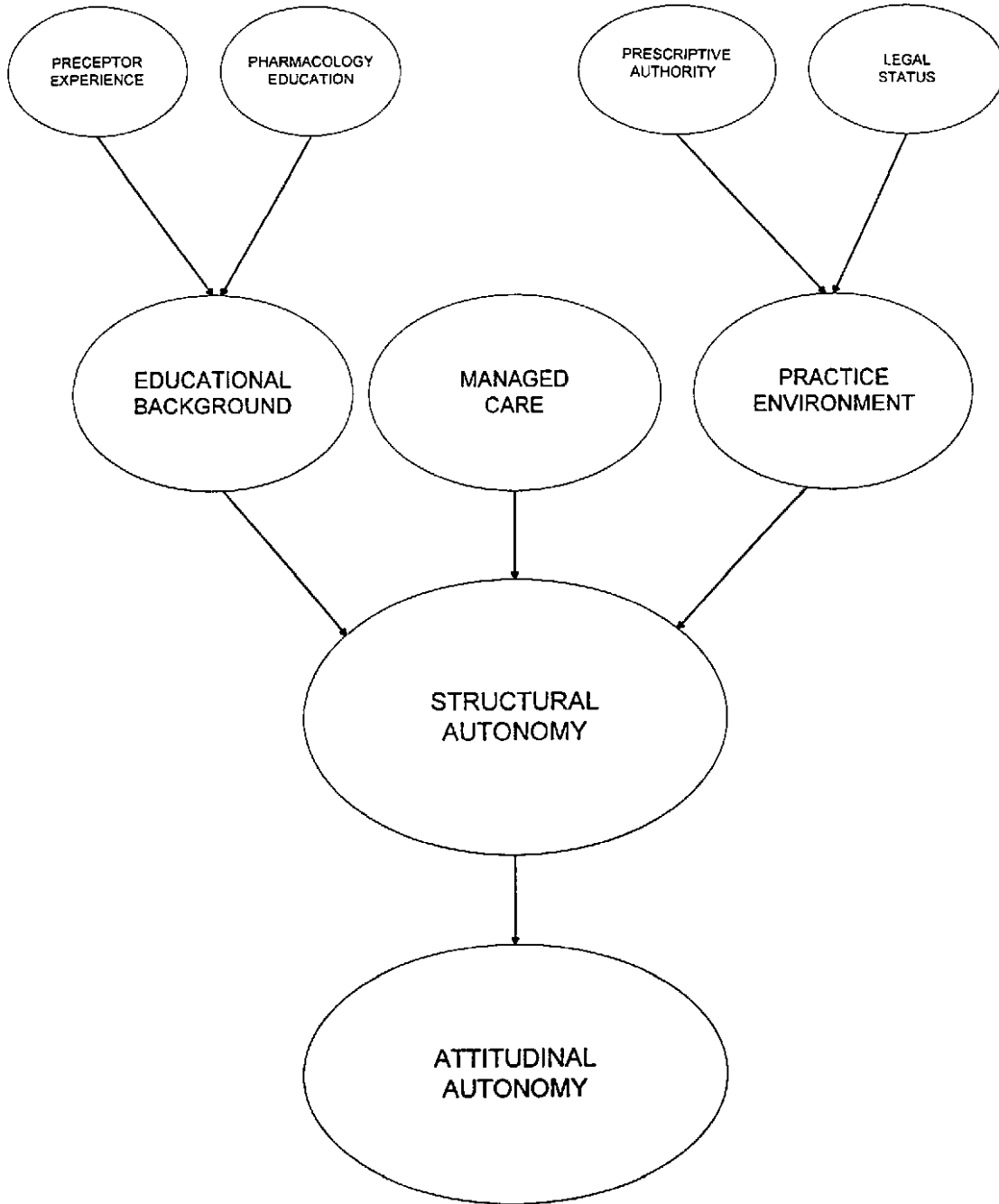
#### Conceptual Framework

Attitudinal autonomy may be affected by the amount of structural autonomy granted to the NP. In order to understand the various facets of autonomy for NPs, structural autonomy must be operationalized into tangible components of real life practice. Structural autonomy for the NP is influenced by many factors. Three main factors influencing practice are: 1) practice environment of the state, 2) managed care and 3) educational background of the NP. Practice environment consists of two elements, both prescriptive authority granted to the NP and the legal status of advanced nursing practice in the state. Managed care is the degree of impact managed care has on the NP practice. Components of educational background of the NP include the pharmacology education in the NP program and the type of preceptor that the NP student had.

Figure 1 delineates the hypothesized components of

structural autonomy and their potential relationship to attitudinal autonomy.

Figure 1. Hypothesized Components of Structural Autonomy.



### Practice Environment

The freedom to practice autonomously is accorded with prescriptive authority and legal status for NPs. It is bounded by the constraints of state statutes or regulatory policies, which vary from state to state, creating various practice environments that vary from restricted structural autonomy to extensive structural autonomy. Legislative issues at the state level affect the practice environment of NPs. The major issues are professional legal status allocated by a board of nursing and prescriptive authority. These factors impact structural autonomy of the NP profession.

Prescriptive Authority. Three basic levels of prescriptive authority are granted by states. The levels from least restrictive to most restrictive are (a) independent plenary prescriptive authority, (b) dependent or limited prescriptive authority and (c) no prescriptive authority. The highest level is that of independent plenary prescriptive authority. *Independent* designates the act of prescribing within the scope of nursing practice afforded and controlled by the Board of Nursing through statutory authority, without the requirement for a physician's signature (Inglis & Kjervik, 1993). *Plenary authority* designates that the nurse can prescribe all drugs, treatments, and devices, including controlled substances, without supervision, control, or oversight by another



profession (Conway & Biester, 1995). The next level is limited or dependent authority. This is the situation in which the NP is allowed to prescribe medications, but only under the specific agreement of a physician (usually an established protocol) or in a specific setting. This level of authority requires some degree of physician involvement or delegation of prescription writing, with or without permitting NPs to prescribe controlled substances (Pearson, 1995). The last level is no statutory prescriptive authority. This is the situation in which the NP is not authorized to prescribe medications at all (Fennell, 1991; Mahoney, 1992b; Safriet, 1992). It is presumed that the type of constraint influences the level of autonomy of NPs insofar as it places restriction on the discretionary and/or binding nature of decisions related to prescribing medications for clients (Batey & Holland, 1983; Mahoney, 1992b).

Legal Status. States vary widely with regard to accreditation, licensure requirements, and legal recognition for NPs (Schaffner et al, 1995). When the NP movement began, few states made a distinction by certifying them differently than other nurses. Initially there were philosophical objections to identifying NPs under the law, especially if special scope of practice was implied (Morgan, 1993). Safriet (1992) suggested that restrictions on legally defined scope of practice prohibit NPs from delivering the health services they are capable of providing.

When the practice of the NP is overseen by the Board of Nursing and NPs are granted legal processes in which to practice, the structural autonomy is high. For example, Oregon, one of the most liberal states, grants authority for NP practice through the Nurse Practice Act and practice is regulated by the Board of Nursing (BON). NPs must receive a certificate from the BON to be authorized to practice. Scope of practice for NPs is very broadly defined in statute. A master's degree is required for entry into practice and NPs can be granted hospital privileges (Pearson, 1995).

On the other extreme, when NP practice is regulated by a profession other than nursing and physician supervision over NP practice is required, the structural autonomy is low. A state with low structural autonomy is South Dakota. In South Dakota, NPs must submit a practice agreement that is approved by the BON, Board of Medicine (BOM), and Osteopathic Examiners representatives. NPs must work under the supervision of the physician, but the physician is not required to be on site at all times (Pearson, 1995). Several nursing practice acts have legitimized aspects of advanced nursing practice only when carried out under the supervision of physicians. Such legal mandates perpetuate nurses' dependence on physicians (Safriet, 1992) and limit nurses' autonomy.

#### Educational Background

NP experience with a preceptor and pharmacology

education may affect structural autonomy in that it may limit the NP's ability to implement discretionary and binding decisions. Physician involvement in NP educational programs may have an effect on socialization away from autonomy.

Preceptor Experience. The fundamental way that NPs obtain advanced clinical skills is through a clinical preceptorship. A preceptor is a professional (either a NP or a physician) who provides supervision, training and assistance to the NP student during the clinical component of the NP training program. The preceptor is considered to be a role model, demonstrating exceptional patient care expertise.

The medical model has governed nursing education since its origin, teaching nurses not how to care, but how to help physicians cure (Bent, 1993). Ashley (1976) documented the efforts of medicine and hospital administration to gain control of nursing in its early stages to prevent the profession from being independent of medicine. Medicine's power over nursing in its earliest day reflects a traditional male paternalistic healthcare structure (Bent, 1993) and treats women as less independent, less capable of initiative, and less creative than men, thus needing masculine guidance (Ashley, 1976). Physicians have historically been associated with NP educational programs (Geolot, 1987; Sultz et al., 1980). Although physicians no

longer regulate NP education, their influences may endure. Physicians often are the role models seen in practice and may serve as clinical preceptors for the NP student. Physicians may not have a full understanding of the autonomous NP role and may not support it as it has developed over the last thirty years. Physicians involved in NP education by serving as clinical preceptors may promote restricted autonomy or may lack an in depth understanding of the NP as an independent practitioner. This may create a potentially limiting socialization experience for the NP student and may affect development of a sense of professional autonomy.

Pharmacology Education. Another aspect of NP education that may influence the structural autonomy of the NP is the type of pharmacology education obtained in the educational program attended. Since the degree of structural autonomy accorded an individual is determined by the limits placed on the discretionary and binding nature of decisions and subsequent actions (Batey & Holland, 1983; Batey & Lewis, 1982), NPs must consider suitable options, not just those approved, preferred, or prescribed by others (Batey & Lewis, 1982). Knowledge produces the freedom to explore and to choose among alternatives. Insufficient pharmacology education may limit structural autonomy in as much as the NP would not be adequately prepared to make discretionary decisions regarding pharmacology needs of the client.

Methods and amount of pharmacology education vary from program to program and may provide the NP with diverse levels of preparation for the complex role of full, legal, prescriptive authority. As NPs gradually gain prescriptive privileges, a study to analyze pharmacology training is appropriate. No research has been done that explores the level of preparation for prescriptive privileges and its influence on the NP's sense of professional autonomy in the role.

#### Managed Care

Managed care may impact structural autonomy as it creates a controlled practice environment for healthcare providers. Managed care may have a positive or negative effect on the NP as it relates to structural autonomy. The term "managed care" has been applied to a wide variety of prepayment arrangements, negotiated discounts, and agreement for prior authorizations and audits of performance. As this definition indicates, managed care spans a broad continuum of entities, from the simple requirement of prior authorization for a service in an indemnity health insurance plan to the assumption of all legal, financial, and organizational risks for providing comprehensive benefits to a defined population. Common to all variations of managed care, however, are restrictions on traditional fee for service unlimited access. The purpose of these restrictions is to modify the behaviors of providers and consumers

through financial penalties and rewards and through delivery mechanism controls in order to improve the efficiency of the healthcare delivery system. The goal of a managed care system, therefore, is to get the decision makers (providers, consumers, and payers) to consider carefully the relative efficacy and importance of various services, procedures, and treatment modalities and to make decisions regarding the allocation of their limited resources accordingly (Langwell, 1990). The ultimate goal is to ensure that maximum value is received from the resources used in the production and delivery of healthcare services. As the managed care system controls resource utilization, a restrictive practice environment for NPs and other healthcare providers may be created.

Managed care may also have a positive effect on NPs' practice. NPs provide a wide scope of functions in managed care. Primary healthcare is a fundamental service of managed care organizations in their attempt to minimize the need for more specialized, resource intensive services. Since a primary focus of managed care is assisting people to know when, where, and how to receive health services in efficient ways, NPs have a major role in the delivery of primary care in managed care organizations. In general, these NPs perform health assessments, monitor chronic illness, provide direct patient care for acute problems, and provide education to patients regarding a wide range of issues (Davis, 1990).

Mezey (1986) advocates strengthening the role of the NP as a primary care provider in home care, with physicians acting in the consultative role. "This serves to clarify the responsibility for care, allowing clients and their families to negotiate directly with the health professionals most responsible for their care" (Mezey, 1986, p.48). Because a primary focus of nursing is health maintenance, NPs can assume a leadership role in coordination of services to ensure continuity, comprehensiveness, and individualization of care. NPs have the knowledge and abilities to assume key positions in coordinating such services, especially in view of the trend toward emphasizing the total needs of the child and family.

#### Organization of the Study

The study is organized into five chapters. The first chapter is the introduction which includes the purpose, research questions, limitations, significance of the study and the conceptual framework. An in-depth discussion of the background of the problem is also included in Chapter I.

Chapter II is a review of the literature containing a thorough review of the history of the professional development of the NP. It also includes issues impacting NP practice environments, NP educational background and managed care. Lastly, an in-depth review of professional autonomy is presented.

Chapter III contains the research methodology. It

describes the design of the study, the population and the instruments.

The results of the study are in Chapter IV which also describes the procedures for data analysis. A discussion of the findings as they relate to the five research questions is also contained.

The final chapter, Chapter V, is devoted to summation, conclusion, recommendation and implications. It is followed by references and appendices.

#### Summary

The development of a sense of autonomy in the NP was singled out for study here because the extent of the success of the NP role in meeting healthcare needs in the United States depends on the amount of professional autonomy granted. Lack of professional autonomy may discourage RNs from pursuing NP roles. True autonomy can not be realized for NPs unless the public at large is convinced of the NP's knowledge base, commitment to accessible healthcare, and ability to provide superior primary care. Access to healthcare is a critical health policy issue as we move into the twenty first century. A strong professional NP work force will enable healthcare needs to be met.

In summary, NP perceptions of professional autonomy may be related to the structural autonomy apportioned by the state in the way of prescriptive authority and legal status. Structural autonomy may also be impacted by NP educational



background, specifically the preceptor experience and pharmacology content. Managed care may have impact on structural autonomy as well. It is vital that enough autonomy be granted so that the role can realize its positive potential.

## CHAPTER II

### Review of the Literature

The literature reviewed for this study focuses on NP professional development, issues impacting NP structural autonomy, including the components described in the conceptual framework, and professional autonomy. The review is organized into three sections. In the first section, studies related to the development of the NP profession since its inception in 1965 are reviewed. The second section contains an overview of the conceptual model of issues influencing structural autonomy for NPs. In the third section, the concept of autonomy is defined. Studies related to professionalism and autonomy in nursing are reviewed.

#### NP Professional Development

The first section of the literature review is organized to review the development of the NP profession since its inception in 1965. Wilensky (1964) noted that occupations pass through a rather consistent sequence of stages on their way to becoming professions. The five stages of professional development as outlined by Wilensky (1964) are 1) creation of a full time occupation, 2) establishment of a training school, 3) formation of professional associations, 4)

political agitation in order to win the support of law for the protection of the job territory, and 5) development of a code of ethics. Each of these stages is described and addressed as it relates to the development of the NP role.

It is important to note that NPs are first and foremost, nurses. NP professional development has paralleled the progress of the nursing profession as a whole. One can not discuss the role of the NP over the last thirty years without including information regarding the progression of the nursing profession. The persistent advancement of the nursing profession has enabled the NP role to be established.

#### Stage 1: Creation of a full time occupation

The first stage in the development of a profession is the creation of a full time occupation (Wilensky, 1964). This involves the performance of functions which may have been performed previously, as well as new functions, and basically consists of doing full time the thing that needs doing. NP roles began as early as the Colonial period, when women were serving as autonomous healers or general practitioners, as well as midwives. Private duty nurses, frontier nurses and midwives are examples of nurses who espoused independence and practiced relatively autonomously since the early 1900s (Safriet, 1992). Prior to the era of industrialization and domination of medicine by men, women were an autonomous and primary healing group (Inglis &

Kjervik, 1993).

The financial depression of the 1930s propelled an increased number of nurses into hospitals. The bureaucratic nature of the hospital, however, did not always allow nurses the opportunity or autonomy to maximize their impact on the system. Nurses became subordinates who had little say in how things are done. Not all nurses, however, moved into the hospital setting. Nurses in public health and in medically underserved rural areas continued to practice in an autonomous role. They maintained a low profile in the health system and did not overtly challenge medicine's assumed dominance (Dachelet & Sullivan, 1979; Safriet, 1992). These nurses practiced in relative autonomy, often performing medical tasks in areas with shortages of primary healthcare providers.

The passage of the Medicare legislation in 1965 rapidly increased the demand for healthcare (Safriet, 1992). This subsequently highlighted a nursing shortage. In this same year, Special Projects Grant funds from the Division of Nursing were awarded to the University of Colorado to evaluate the first pediatric NP program in the country (Davis, 1992). The NP movement has gained steady momentum since the 1960s as a result of the need to provide economical primary care services to underserved populations (Booth, 1981; Mezey, 1986). Since the initial contemporary concept of professional nurses as primary care providers,

numerous studies have reported the satisfaction of patients, physicians, and nurses with the care given by NPs (Batey & Holland, 1983; Feldman et al., 1987; Safriet, 1992; Spitzer et al., 1974; Sultz et al., 1980). Studies have also found that selected functions traditionally restricted to the medical profession were fulfilled competently by NPs (Ford and Silver, 1967; Nichols, 1992; Perrin & Goodman, 1978; Simborg, Starfield, Horn, 1978).

The role of the NP has been critically examined by NPs who have developed their own expertise to meet clients' needs and have then evaluated their contribution. Most evidence tends to be positive, as in the case of the NP acting as an independent agent in the primary care setting. Stilwell, Greenfield, Drury, & Hull (1987) found that individuals seek access to the NP predominantly for health education, child-rearing problems, advice on caring for an elderly relative, counseling, and advice on managing practical problems related to chronic illness.

Neonatal NPs (NNPs) evolved during the 1970s shortly after the pediatric nurse practitioner (PNP) role. Several studies have validated the role of the NNP (Harper, Little & Sia, 1982; Johnson, Jung & Boros, 1979; Martin, 1985). Martin (1985) published a study focusing on consistency of care rendered by NNPs and neonatologists between day and night shifts. The investigators evaluated 65 infants admitted to the NICU on four clinical parameters.

Comparisons were made between shifts staffed primarily by NNPs and those with in house neonatology coverage. The data suggest coverage provided by the team of neonatologists and NNPs produces a consistent level of care that does not vary between shifts.

Schaffner et al. (1995) conducted a study to examine how NPs and physician assistants were used in major healthcare systems across the United States. They reported on 26 healthcare systems, located in 13 states. Participants in the study indicated that NPs functioned in inpatient settings, outpatient settings, and across settings. NPs were most commonly used in obstetrics and gynecology. Of the health systems surveyed, eighty percent used NPs in some way in clinics or physician offices, most often in internal medicine and family practice. Four of the systems reported an increasing amount of rural primary care being provided by NPs. Respondents also reported that NPs played a major role in healthcare delivery in outpatient pediatrics. Almost without exception, the systems were in the process of expanding the roles of NPs. The role of the NP over the past thirty years has certainly developed into a full time occupation.

#### Stage 2: The establishment of a training school

The second stage in the process of professionalism is the establishment of a training school. NP educational programs have a thirty year history as an educational

innovation for the advanced clinical practice of nursing. Over the past years, expansion of the NP role has changed the educational processes associated with it. With the initial interest and popularity, a plethora of NP certificate programs emerged, most often originating through existing continuing education systems (Davis, 1992; Dunn, 1993a; Fond, 1989; Price, Newberry, & Brykczynski, 1992; Sultz et al., 1983b). Until fifteen years ago, federal funding supported many of these programs (Davis, 1992). Indeed, these programs made it possible for the occurrence of a "critical mass" to have an impact on the healthcare marketplace. By 1990, there were approximately 25,000 nurses prepared as NPs (Price et al., 1992).

The first NP programs were funded as continuing education certificate programs, which included a combination of classroom time and clinical preceptorships with physicians. Some of the programs required NP students to have a BSN, while others required only clinical preparation (Booth, 1981; Brower, Tappen and Weber, 1988; Bullough, Sultz, Henry, & Fiedler, 1984; Cruikshank & Lakin, 1986). The University of Colorado set up the first formal program in 1965 to determine whether the NP role would be appropriate for individuals with master's and doctoral degrees in community health nursing (Ford & Silver, 1967). This concept was lost as other hospitals set up training programs in pediatric primary care (Mauksch, 1978). The

length of programs varied from 4 to 21 months. Most of them included classroom time and clinical preceptorships, relying heavily on physicians for teaching and serving as clinical preceptors (Geolot, 1987).

Since 1975, NP education and practice have become more sophisticated and education has moved more solidly into academic settings (Fond, 1989; Sultz, Zielesny, & Kinyon, 1976; Sultz et al., 1983a; Trotter & Danaher, 1994; Tschetter & Sorenson, 1991). A longitudinal study done in 1979 by the United States Department of Health, Education and Welfare revealed tremendous variation in NPs' basic educations, in the duration of NP programs, and in the amount of time each program devoted to each content area (Sultz et al., 1978). Fiedler (1986) used the national longitudinal data on NPs that was collected by Sultz's National Longitudinal Study of NPs. Fiedler utilized several preliminary scaling techniques to reduce the data into analyzable form to examine relationships between NP program preparation differences (type of program, admission requirements, class size, program length, content covered) and subsequent graduate employment experience (finding employment, task performance, work load, salary earned, barriers to NP practice, perceived autonomy, and job satisfaction). These scaling techniques provided new variates of interest to the NP research. The results indicated that programs were predictive of the employability



of NP program graduates. It was also discovered that a measure of program content covered was predictive of the task performance of the practicing NPs. This performance measure was in turn highly related to NP reports of autonomy and job satisfaction.

Since 1990, the number of NP programs has been increasing rapidly because of the growing demand for these specialized nurses. The number of NP program tracks is approximately 237 (Davis, 1992). NPs are not, however, always available to serve as preceptors. Most NP programs utilize expert clinicians (both NPs and physicians) as preceptors for their students. Tschetter and Sorenson (1991) described a Neonatal Nurse Practitioner (NNP) program that utilizes Clinical Nurse Specialists, NPs, and neonatologists to directly supervise a 32 week clinical preceptorship. The program described by the authors mirrors the progression from continuing education programs, in which physicians had a high degree of input and control, to the current focus on graduate level nursing education, where nursing holds the primary responsibility and authority for the education of its graduates. This program was successful in its multidisciplinary faculty and commitment of the clinical agency to the development of the program.

Societal changes and changes within nursing have occurred during the past thirty years. Changes within the NP arena have mandated a revision of NP curricula. These

changes include (1) a shift in the setting and funding of NP education, i.e., from continuing education and/or certificate programs to academic studies (graduate level); (2) documented research on the effectiveness and process of the NP role; and (3) clarification of content required for advanced practice nursing (Price et al., 1992). The shift of NP education from continuing education and certificate programs into graduate level education has been documented (Butler, 1983; Dellasega & Hupcey, 1991; Geolot, 1987; Sultz et al., 1983c).

NP educational curriculums vary from state to state in order to reflect the definitions and regulations for nurse-specialty practice contained within state administrative codes, as well as guidelines from professional associations that define the NPs scope of practice (American Nurse Association, 1987; National Association of Nurse Practitioner Faculties, 1990). NP programs are characterized by a broad diversity in curriculum focus, emphasis, and content, even among programs whose graduates will share similar titles upon graduation (Pearson, 1987; Price et al., 1992).

The American Association of Colleges of Nursing has released its official statement calling for a graduate degree requirement for advanced practice (Barrow-Spies, 1994). The National League for Nursing and the American Nurses Association also support a graduate degree

requirement of advanced practice nurses in the future (Barrow-Spies, 1994). Proponents of the higher standard say a graduate degree requirement will position nurses to take a greater role in primary healthcare under a reformed healthcare system (Barrow-Spies, 1994).

### Stage 3: Formation of professional associations

The third stage of professional development includes 1) the self-conscious definition of core tasks and the redefining of the scope of practice, 2) a contest between the home guard and the newcomers, and 3) hard competition with neighboring occupations (Wilensky, 1964).

It is not surprising that as the NPs came to assume more autonomy, more responsibility for patient care, and more confidence in their ability and contribution, role strains with physicians and other nurses occurred. This was not because the role was incompatible, but because it was new and accompanied by ambiguities, misconceptions and uncertainties. Such conditions have the potential to cause some physicians to feel threatened and some nurses to feel insecure in their contribution.

The nursing profession as a whole has not always supported the role of the NP (Weston, 1975). This is described in the literature as a conflict between RNs and NPs, hostile attitudes and activities of some other nurses toward NPs, and slow acceptance by other nurses of the NP role. To further complicate the matter, many physicians were

threatened by the concept of the nurses' expanding their practices to include what traditionally had been medicine (DeAngelis, 1994).

Historically, medicine has maintained considerable presence in directing nursing affairs through strategies such as medical presence on nursing boards and providing input into nurses' registration legislation (Adamson & Kenney, 1993). A measure of role overlap between physicians and NPs exists, the degree being influenced by the nature of problems and the clinical setting. Safriet (1992) suggested that competition between physicians and nonphysicians has triggered the creation of barriers to practice for NPs in some states.

A primary vehicle through which NPs exercise their collective professional autonomy is participation in self-governing and self-regulating professional organizations. Although there are numerous professional organizations, those most responsible to NPs are: The National Association of Pediatric Nurse Associates and Practitioners (NAPNAP), The American Academy of Nurse Practitioners (AANP), and The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN), National Association of Neonatal Nurses (NANN), and The American College of Nurse Practitioners (ACNP).

NAPNAP originated in 1973, when pediatric NPs representing six areas of the country met and decided forming a specialty nursing organization for pediatric NPs

best served their needs. The goals of the organization in those early months and today are to provide continuing education relevant to PNP's needs, provide standards for PNP education and practice, to develop and maintain a certification process to ensure the public of competent PNPs, to support legislation designed to improve the quality of infant, child, and adolescent health (NAPNAP, 1984).

The American Academy of Nurse Practitioners was formed in 1985 to promote the high standards of healthcare delivered by NPs and to act as a forum to enhance the identity and continuity of all NP specialties (American Academy of Nurse Practitioners, 1993). Booth (1995) described the challenge of maintaining integrity in the education of NPs. She focused on the need to ensure NPs are sufficiently educated to meet the client's needs.

The Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN) was originally established in 1969 within the American College of Obstetricians and Gynecologists. In 1993, the organization became an independent, nonprofit association whose mission is to promote excellence in nursing practice and improve the health of women and newborns (AWHONN, 1996).

The American College of Nurse Practitioners (ACNP) was founded in 1993 as a national non-profit membership organization. It is focused exclusively on advocacy, lobbying, and keeping current on the legislative, regulatory

and practice issues that affect healthcare reform. The mission is to unite, galvanize and represent politically NPs across the nation (ACNP, 1997).

As previously presented, other professional organizations have been developed and successfully attract NPs. The organizations advocate the role of the nurse in advanced practice and provide information to the public about the advanced practice role.

Stage 4: Political agitation in order to win the support of law for the protection of the job territory

Wilensky (1964) described a persistent political agitation in order to win the support of law for the protection of job territory and its sustaining code of ethics. NPs are still active in this stage of professionalization. Three main issues that NPs have struggled with politically include legal status (license recognition, scope of practice regulations, and physician supervision requirements), third party reimbursement, and prescription privileges (Pearson, 1995; Sekscenski, Snasom, Bazell, Salmon, & Mullan, 1994). Over the past twenty five years, legislative gains for NPs have been incremental. Recently, the American College of Nurse Practitioners formed an umbrella organization that will focus on political lobbying and major legislation issues. These issues all have significant impact on NPs ability to function in an expanded role.

The Advocates for Practitioner Equity (APE) Coalition combines lobbying efforts to ensure managed care legislation does not prohibit health plans from excluding or limiting any type, class or category of healthcare provider (Sharp, 1995). At the July 1995 American Nurses Association House of Delegates in Washington, DC, the House voted to promote multiple strategies to help establish nurses' full participation in managed care plans (Sharp, 1995).

#### Stage 5: Development of a code of ethics

Ethical codes provide members of a profession guidance during times of special difficulty or uncertainty (Wilenski, 1964). Codes of ethics are specific to each profession. The International Council of Nurses' Code of Ethics (1977) and the American Nurses' Association (ANA) Professional Code for Nurses (1985) provide a framework that contains essential ethical principles for nurses. The ANA Code mandates that professional nurses accept the responsibility and accountability for professional competence. The other essential components of the ethical framework are the general ethical principles of autonomy, beneficence, nonmaleficence, and justice. The total ethical framework rests on its deontological base, which necessitates an inherent belief in the nurse's obligations as a practicing professional. The framework becomes an inseparable part of professional nursing practice, reflecting the professional values and commitment to the client and to making healthcare

available to all who need it.

Certain general themes are present in most ethical codes. First, the professional must keep an emotional neutrality toward the client. Second, the professional must provide services to whomever requires them, regardless of personal convenience or the client's race, age, sexual orientation or religion. Finally, under all circumstances, the professional must provide the highest quality service available (Wilensky, 1964). NPs have a common code of ethics. It reflects the professional values of commitment to the client and to making healthcare available to all who need it.

Professional ethical beliefs are often disseminated through professional organizations. The American Nurses Association (ANA) is the leading professional nursing organization. ANA published Nursing: A Social Public Statement in 1980 (ANA, 1995). In 1995, the statement was revised to reflect the current healthcare environment. The ANA statement defines the role of the nurse in advanced practice. "The scope of advanced nursing practice is distinguished by autonomy in practice at the edges of the expanding boundaries of nursing's scope of practice. One hallmark of advanced nursing practice - whether in the primary care setting, the community, or the hospital - is the preponderance of self-initiated treatment regimens, as opposed to dependent functions" (p.16). The ANA has also



developed a position statement to deal with ethics and human rights. The purpose of this statement is to describe some of the features of human rights and to indicate how human rights and ethics are related (ANA, 1995).

A nursing professional code of ethics is contingent on values to guide and support the practice of nurses. Ethical quandaries are commonplace for nurses, and the contemporary context of healthcare has created new concerns and redefined others. Throughout its history, nursing has been an ethical endeavor, with nurses attempting to sift through complex ethical issues and fulfill their professional responsibilities. A professional code of ethics and values explicates the goals and norms of the profession and provides direction for practice. Values serve as a resource to guide professionals as they develop an ethically competent practice and confront ethical challenges.

NPs have also used specialty professional organizations to promote their values. The American Academy of NPs (1993) describes the responsibility of the NP as a client advocate. The Florida Nurses Association (1992) describes how NPs are aiming to make healthcare service more accessible and affordable. AWHONN advocates a mission of promoting excellence in nursing practice to improve the health of women and newborns (AWHONN, 1994).

The National Organization of Nurse Practitioner Faculties (1995) described the professional values that

define and shape advanced nursing practice. The professional values suggested to be threaded throughout a NP practicum include:

1. Concept of patient empowerment
2. Cultural competence to deal with diverse populations
3. Ethical practice with a life-long commitment to learning
4. Access to quality healthcare, especially for vulnerable and/or high risk populations
5. Human values take precedence over technological advances

The goal of developing ethically competent practice, maintaining professional integrity, and rendering quality patient care is of vital concern. Familiarity with and commitment to the primary ethical precepts and values of the profession are essential.

Another method NPs use to ensure that the value of having an adequate knowledge base for advanced nursing practice is carried out is specialization and certification. The National Organization of Nurse Practitioner Faculties (1995) described the specialization process which allows NPs to focus their education and practice, becoming expert with particular groups of clients. National certification is also described as the method NPs use to demonstrate adequate clinical knowledge in a particular specialty.

### Conceptual Model of Components of Structural Autonomy

As depicted in the conceptual framework, NP structural autonomy has three main components. Each of the three components has an effect on the perceptual autonomy experienced by the NP. The components of NP structural autonomy include professional practice environment of the state, educational background and managed care conditions.

#### Practice Environment

Several factors have had an impact on the practice environment of NPs. These factors influence the structural autonomy apportioned the NP. The first two issues of concern directly reflect the practice environment for the NP. The issues are prescriptive authority and legal status.

Prescriptive Authority. Prescriptive authority has been one major focus of political activity for NPs (Inglis & Kjervik, 1993). Prescription drugs include legend drugs and narcotics or controlled substances listed on various schedules established by federal and state governments. The first limited prescriptive authority was granted to NPs in North Carolina in 1975, and there are currently explicit regulatory or statutory provisions in 43 jurisdictions with proposals pending in legislatures in several other states (Pearson, 1992). The policy issue is not whether these providers can and do prescribe, but rather, whether the state will acknowledge and authorize their prescribing practices. In states without legislative authority to

prescribe, NPs still actively prescribe for their patients through one or more of the following mechanisms: 1) asking a physician to write a specific prescription for the NP's patient, 2) co-signing the physician's prescription pad, 3) calling the prescription into a pharmacy under the physician's name, and 4) using protocols jointly worked out with the NP, physician, and dispensing pharmacist (Pearson, 1993).

The lack of prescriptive authority has been recognized as a barrier to the effective utilization of NPs (Safriet, 1992). For example, even when a NP has diagnosed a child's ear infection, independent prescribing of antibiotics is not allowed. NPs' prescriptive authority traditionally has been restricted by the degree of autonomy they can exercise and the range of drugs they can prescribe. Some states said to have prescriptive authority permit NPs to prescribe but only as a delegated medical act. In other states, nurses' prescriptive authority is a delegated medical act but excludes certain drugs, such as controlled substances. Yet in some states nurses have true, independent plenary prescriptive authority. These restrictions and conflicting sanctions prevent NPs from practicing effectively.

As of January, 1995, only 10 states (Alaska, Arizona, Iowa, Montana, New Mexico, Oregon, Vermont, Washington, Wisconsin, and Wyoming) and the District of Columbia provided independent plenary prescriptive authority for NPs.

In contrast, three states (Alabama, Illinois, and Oklahoma) did not grant nurse any statutory prescriptive authority. The remaining 37 states required some degree of physician involvement or delegation of prescription writing, with 22 permitting and 15 prohibiting NPs to prescribe controlled substance (Pearson, 1995).

Griffin (1992) investigated the influencing factors of prescriptive authority for NPs and was able to describe the facilitators and barriers that are perceived by the NP. Of the 465 NPs who were eligible to participate in the study, only 261 (62 percent) fully utilized prescriptive authority. The number one reason given for not utilizing prescriptive authority stated by 128 NPs (65 percent) was legal restrictions and ambiguity of state statute. The number one facilitator affecting prescriptive practice stated by 393 (97.5 percent) NPs was the opportunity to provided total patient care. The number one barrier cited by 101 NPs (27.4 percent) was the legal restrictions in their state nursing statutes.

States vary principally with regard to the degree of autonomy (professional independence in decision-making granted to NPs) and the range of drugs from which they are permitted to select (Batey & Holland, 1985; Fullerton & Pickwell, 1993; Hadley, 1989; Kjervik, 1985). Many states limit prescriptive authority by imposing requirements for complex written protocols and physician supervision, and

developing guidelines specifying which drugs may be prescribed. Some states restrict or vary prescribing authority to certain geographic or practice settings. Alaska, Oregon, and Washington authorize the greatest prescriptive autonomy. In these states NPs may prescribe without any physician involvement, and none of these states requires physician control of NP practice, including diagnosing, treating and prescribing (Safriet, 1992).

Legal Status. The basic statute governing NP practice is the nurse licensure statute. Each state's statute is different, as each state has the power to regulate practice in the best interest of its own citizens (Pearson, 1993). The first nurse registration statutes were passed in 1903 in New York, North Carolina, New Jersey, and Virginia. By 1923, all states had nurse registration acts (Bullough, 1976). The purpose of professional licensure is to protect the public by requiring those who provide healthcare services for compensation to demonstrate a minimum level of competency. Each state in the nation has enacted legislation to license healthcare professionals, including physicians, nurses and others. Nurse Practice Acts are the state statutes that define the practice of nursing and set forth the licensing requirements for nurses (Hall, 1993). Nurse Practice Acts also establish a state board of examiners for nursing and define the functions of that board. In addition, the state board has broad authority to discipline nurses for

unprofessional conduct (Green, Crimson, Waddill, & Fitzpatrick, 1995).

States vary widely with regard to accreditation and licensure requirements for NPs. In 1970, acknowledging the NP role, the ANA suggested that states might modify their definitions to incorporate the expanded role of the NP (Kelly, 1978). It was not until 1980 that Kansas had passed a Nurse Practice Act which included the category of NP (Hawkins & Thibodeau, 1983). Currently, all states address advanced nursing practice in some manner. Most states mandate graduation from an approved school. Program lengths vary from 3 to 24 months (Morgan & Trolinger, 1994). Nine states require NP certification, whereas only two require a master's degree (Colon, 1992). The varying educational requirements create difficulty in defining and supporting legal status.

Several physicians and their organizations perceive the NP movement as a means for nursing to gain additional autonomy and broader scope of practice. It is no coincidence that NPs have most autonomy in states with serious shortages of primary care physicians (Sekscenski, et al., 1994). The barriers to effective utilization of NPs are the conflicting and restrictive provisions governing their scope of practice and prescriptive authority. Such has been the history of state regulation of the NP scope of practice. In the past 25 years, nearly all states have legally acknowledged in

varying degrees the expanded roles of NPs (Pearson, 1995; Safriet, 1992). As with all complex public policy, forms of acknowledgement include specific designation in statutes or agency rules, statutory interpretations by attorneys general and courts, and declaratory ruling by agencies. Conway and Beister (1995) recognized the difficulties NPs have in achieving legal status and presented strategies for NPs to advance legislation on a state level. Sharp (1995) described the legislative battle for NPs as they focus on regulatory changes to promote full participation in managed care. The many years of states' struggle with NP scope of practice have led to legislation which is restrictive and contradictory (Hadley, 1989; Hall, 1993; Hardy, 1993).

#### Educational Background

Two aspects of education have particular importance for an NP. The type of preceptor that the NP had during NP training and the pharmacology education that was provided are both important factors that may influence the NP's sense of autonomy.

NP Preceptor Experience. In early NP programs, physicians conducted the classes on medical history and physical examination. The nursing faculty was responsible for laboratory sessions for student practice. This approach seemed acceptable, because the physician was seen as the expert on these subjects (Geolot, 1987). In 1983, a survey of programs revealed that 58% were directed by nurse



directors and 42% had retained physician co-directors although most programs in the previous decade were headed by nurse and physician co-directors (Sultz et al., 1984).

Expert clinical preceptors are key resources in the education of NPs (Davis, Sawin, & Dunn, 1993; Hayes, 1994). The clinical component of NP education is typically completed during a practicum with a preceptor. The preceptor is usually considered an authority in the field. In order to assist the NP student, the preceptor needs to be clearly established in the area of expertise. The preceptor uses previous experience to educate the NP into the field. Collins (1986) has referred to this type of education as "teaching the ropes." She suggested that the relationship provides a learning experience which can be utilized throughout one's life by pointing out professional opportunities, helping set realistic goals, and giving feedback. Kelly (1978) defined the mentor as one with prestige within the profession. Mentors are established authorities in the field and have a positive reputation within the field. By demonstration of expertise, mentors are respected not only for their knowledge but also for contributions to the field. A recurring attribute defined as necessary for a mentor is one of expertise within the field (Gray, 1986; Hamilton, 1981; Kelly, 1978). Often discussed is the need for the mentor to have excelled within the profession in order to be able to share that level of

expertise with the protege and to exhibit knowledge of the profession (Gray, 1986; Hamilton, 1981).

In 1973, almost 72% of the certificate NP program utilized physicians exclusively as preceptors. Gradually, the number of certificate programs that utilized physicians solely as preceptors dropped to fewer than 15% in 1980. Similarly, the percentage of physician only preceptors in master's programs decreased from 17% to only 1 percent in 1980 (Sultz et al., 1983b, 1983c). The number of NPs acting as clinical preceptors has increased, although supervision solely by a NP has increased by only a few percentage points among both certificate and master's programs. Preceptors for a vast majority of both types of programs were NPs and/or physicians. (Sultz et al., 1983a, 1983b). Morgan and Trolinger (1994) completed a descriptive study to describe in more detail where and with whom primary care NP students obtain their clinical experience. Their results identified that providers of clinical supervision and teaching average close to two thirds graduate NPs and one third physicians. The survey also revealed some clinical instruction was also provided by other nurses, social workers and pharmacists.

Jordan (1994) described a NP program in which the graduate PNP faculty serve as preceptors for the students at pediatric primary care centers. In this situation, faculty practice provided a positive experience which allowed for immediate feedback concerning didactic knowledge and

clinical skills. The author depicted a situation in which physician preceptors were not used for NP students. The author reported that pediatricians did not take NP students because they were increasingly busy during the fall semester and either had less time to spend teaching the students or refused to take NP students because of their increased workload. The program described by Jordan (1994) is unique in that all preceptors for NP students are NPs in faculty practice.

When the NP's mentor is a physician, the professional knowledge and area of expertise are not analogous to that of the NP. No current literature reflects the difference between a physician preceptor and a NP preceptor as it relates to the development of autonomy in the student.

Pharmacology Education. The placement of pharmacology content in NP curriculum continues to change. In the early programs, pharmacology tended to be a discrete content area taught in a separate course (Geolot, 1987; Sultz et al., 1978). Because this approach was often repetitive and the content not well correlated, pharmacology was later integrated into the program and taught as part of the management of health problems. This integrated approach seemed to work, however, some states began to require evidence of advanced preparation in pharmacology. It is difficult to identify and document pharmacology content in the curriculum when it is totally integrated. In several

programs, pharmacology has again been pulled out so that content can be readily identified and the number of hours of instruction can be easily calculated (Geolot, 1987). No studies were found which evaluate the type of pharmacology education that best prepares the NP for this component of the role, or how this education affects prescription writing practices.

Brower, Tappen, and Weber (1988) conducted a survey of the educational needs of NPs in southeastern Florida. They found that greater than 91% of the pediatric NPs, greater than 76% of the family NPs, and greater than 79% of the geriatric NPs identified pharmacology as an inadequate area of content in their basic program of study, although greater than 70% of NPs within each specialty viewed pharmacology as a high use area of their practice.

Only eight states require NPs to have additional education, either additional courses or a graduate degree, to be identified as an authorized prescriber (Faucher, 1992; Pearson, 1993). States that require additional education for prescriptive authority for NPs are outlined in Table 2.1.

Table 2.1

States with Prescriptive Privilege Education Requirements

State	Requirement
Alaska	Continuing education units
Arizona	Continuing education units
California	Pharmacology course
Idaho	Continuing education units
Mississippi	Continuing education units
Oregon	Pharmacology course and continuing education units
Tennessee	Master's degree and continuing education units
Washington	Pharmacology course and continuing education units

Most states, however, do not require additional education and often do not have specific pharmacology requirements prior to granting prescriptive authority.

Waigandt and Chang (1989) compared pharmacology training of NP programs with that of medical and dental programs. This study covered 73 schools in 14 states. Results were that NP programs spent less hours (22.38) than both medical (93.15) and dental (65.29) schools on pharmacology education. The study also compared NP programs in states with prescriptive authority to programs in states

without prescriptive authority. No statistically significant differences were found. The authors of the study indicated that in order for NPs to be adequately prepared to prescribe medications, pharmacology content should be increased in most NP programs.

### Managed Care

The emergence of managed care organizations may have an effect on the structural autonomy allocated to NPs. Managed care can be defined as a comprehensive approach to healthcare delivery that encompasses planning and coordination of care, patient and provider education, monitoring of care quality, and cost control. (American Managed Care and Review Association, 1994). The concept of managed care is predicated on a health plan's ability to control healthcare costs while maintaining high quality. A variety of different models of managed care plans exist, and each uses its own mechanisms for reducing healthcare costs. Most types of managed care plans rely on primary care and preventive strategies to encourage wellness in addition to early detection of potential costlier future health problems (Hardy & Evans, 1995). Managed medical care is strictly an outgrowth of the private sector, dating back over five decades. The goal of these organizations to manage the use of appropriate health services by individual members and to focus on the individual's total needs, not just on a disease. A goal in managed care organizations is to maintain

the individual's health in order to minimize expensive healthcare services. Within the structure of managed care, the struggle is to provide quality services under greater resource constraints. This leads to the establishment of practice guidelines to ensure that resources are managed appropriately. As internal and external pressures intensify the necessity for change in the healthcare system, the futures of managed care and nursing will increasingly be interlocked. As managed care organizations multiply, tremendous opportunities will be created for nurses.

The impact of managed care on autonomy has not been explored in the literature. Clearly, changing structural and environmental forces are exerting increasing control over healthcare professionals. O'Connor and Lanning (1992) utilized deprofessionalization theory to suggest that the controls of managed care will have the effect of moving the medical profession toward greater rationalization and reduce expectations of work autonomy. The authors agreed that organized autonomy is the key feature of a profession and implied that managed care organizations are decreasing the autonomy. They suggested that a self-directed individual attracted to the role of independent healthcare provider may oppose the external guidance which is a part of managed care. Many physicians are beginning to feel their autonomy threatened as they react to individuals and events outside of their profession (O'Connor & Lanning, 1992).

Hardy and Evans (1995) argued that in some instances the managed care industry faces the same "barriers to practice" that NPs do. The authors suggested that if the state does not allow NPs to function in an autonomous role, the managed care industry can not use the NP role to its potential. They concluded that when the managed care industry recognizes NPs as independent providers, NPs will have a greater degree of autonomy in practice. Other authors suggested that managed care provides healthcare professionals with challenges and opportunities (Hicks, Stallmeyer, & Coleman, 1992).

#### Autonomy

Professional autonomy in nursing, defined by Maas and Jacox (1977) as "members of an occupation governing and controlling their own activities" (p.17), is both a topic of current interest and an issue underlying much of the discontent in nursing (Jenkins, 1991). Based on anecdotal evidence, autonomous practice among nurses is far from being achieved (Jenkins, 1991). While professional autonomy is a contemporary concern, Bixler and Bixler (1945) noted that "nursing is far from the goal of autonomy. The obstacles to be overcome are grounded in traditional conceptions which are quite contrary to the ideal of independent nursing" (p.733). Four recurrent focuses of autonomy occur in the literature. The first is that of autonomy as a component of professionalism and as it relates to professional status.



The next theme is that of autonomy as it is associated to nursing practice. Another component is the association between autonomy and job satisfaction. An additional concept explored in the literature is that of different components or subparts of autonomy, this includes explanations of structural verses attitudinal autonomy, autonomy from client and employing organization, differentiation between strategic, administrative and operational autonomy and job content verses job context autonomy.

#### Autonomy and Professional Status

Professional autonomy has traditionally been recognized as an essential component of professionalism. Autonomy implies independence, responsibility, accountability, self-determination and self regulation. Freidson (1970) asserted that an occupational group is most likely to be self-directing when it has a legal or political position of power and when it controls the production and application of its knowledge and skills. A "code of ethics" further ties autonomy to professionalism for it is through this code that an occupational group persuades the public to grant it autonomy (Wilensky, 1964).

The centrality of autonomy to the definition of profession is important. Freidson (1970) maintained that in differentiating between profession and occupation, "the most strategic distinction lies in legitimate, organized autonomy" (p. 143). Similarly Simpson and Simpson (1969)

used the presence or absence of autonomy to distinguish between professionals and semi-professionals, arguing that semi-professionals are less attached to the principle of autonomy and less confident in their ability to claim it or use it. O'Connor and Lanning (1992) stated that "an occupation that is lacking authentic autonomy may alternatively be given such designations as quasiprofession, paraprofession, semiprofession, subprofession, or a trade" (p.64). Freidson (1970) referred to autonomy as the prize sought by virtually all occupational groups.

Professional autonomy is often related to freedom. Freedom denotes the rightful power to act. Freedom derives from positional authority (that is, organizational expectations for the position) and from the authority of expert knowledge held by professionals who occupy the position. Discretionary decisions are those based on prudent and correct judgement involving extensive and relevant search behavior for means and goals related to the responsibility. Discretionary decisions and subsequent actions do not include the mere application of standard protocols imposed by others; neither do they include concrete and routine decisions (Batey & Lewis, 1982). The discretionary aspect of decision making is of particular importance in what Thompson (1967) referred to as boundary-spanning jobs, jobs like nursing in which the knowledge brought to bear on decisions and actions can be constantly

shifting because of the variability with and across patients being served.

Sociologists grant a central role to autonomy in the profession-building process (Forsyth & Danisiewicz, 1985). Freidson (1970) described the struggle for autonomy that occupational groups involved in the professionalization process generally go through to obtain the exclusive right to a particular kind of work, control training for the access to it, and control the right of determining and evaluating the way the work is performed. O'Connor and Lanning (1992) described the important role autonomy plays in defining a profession and how it has supported physician professional dominance in both healthcare organizations and society. Given medicine's long-term domination of healthcare personnel, autonomy is particularly problematic for professionalizing NPs (Koch, Pazaki, & Campbell, 1992).

#### Autonomy in Nursing

Autonomy is a frequent theme in nursing literature. The problem of professional autonomy is viewed by Munding (1980) as so significant that she claims that the continued existence of nursing depends on all of its members exercising such autonomy. Singleton and Nail (1984) stated their belief that nurses fail to exercise much of the autonomy they already have. The failure of nurses to recognize and exercise their own professional autonomy has resulted in the classification of nursing as a

semiprofession by both nurses and sociologists (Katz, 1969; Stuart, 1981). The lack of autonomy among nurses and within nursing has resulted in the continued attempts of groups outside of nursing to control the education, licensure, and scope of practice of nurses.

Autonomy as a nursing attitude. Autonomy has been examined as an attitude related to an occupation. McCloskey and McCain (1987) studied 350 newly employed nurses over their first year of work. All of the nurses employed in a large hospital reported decreased job satisfaction, decreased organizational commitment, and decreased professionalism over the first year. Of interest in this study was that of five subscales measuring professionalism, belief in self-regulation was rated the highest by the nurses and the feeling of autonomy lowest. This suggests that although the nurses regarded structural autonomy, defined as self regulation, as important, their attitudinal autonomy was low. Hall (1969) had similar results when studying 11 occupational groups. The nurses, librarians and social workers had the highest sense of calling to the field. Nurses, however, were the least autonomous of all the groups studied. Setterson (1991) used Wilensky's definition of structural and attitudinal autonomy as a framework to study the relationship between level of education, age and professional experience and degree of professionalism for NPs. Her sample consisted of one hundred obstetric-

gynecologic NPs who had graduated from a midwestern NP program. She used Hall's Professional Inventory to examine five attitudinal characteristics of professionalism. A significant finding is that the NPs identified autonomy as the third strongest of all attitudes as compared to McCloskey and McCain (1987) and Hall's (1969) findings. This leads one to believe that there is increased attitudinal autonomy among NPs as they practice in an advanced role. Setterson's (1991) work, however, was regional (Mid-West) and did not evaluate the legislation regarding prescriptive authority or legal status.

Autonomy and advanced nursing practice. Autonomy has also been linked to advanced nursing education and resultant advanced practice. Lukacs (1982) studied factors in NP role adjustment and found that autonomy in work was rated the most important in the decision to seek NP education. In an exploratory survey of NPs practicing in underserved rural areas, Lawler and Valand (1988) found role autonomy to be the foremost incentive for selecting rural practice. Almost one third of those surveyed, however, reported legal restrictions as the primary barrier to their role development. Because NPs are nurses prior to NP training, they may be unprepared for the attitudinal changes inherent in the NP role. New NPs may find that behaviors and attitudes useful in earlier nursing roles do not lend themselves to autonomous practice and equal relationships

with other health professionals (Renwanz, 1988). Full effectiveness for NPs hinges on developing attitudes and practices consistent with this new role (Brykczynski, 1989). Dineen (1985) studied 130 nurses with varied educational backgrounds: 43 of the nurses were educated in a general nursing program, 44 nurses had additional training as NPs and 43 nurses had advanced training as nurse-midwives (NMs). The framework for the study was professional socialization incorporating the construct of socialization and the related concept of role. Nurses' attitudes related to autonomy and professionalism were assessed. Statistical analysis revealed significant differences between the specialized (NPs and NMs) and general nurse groups' mean scores for the following scales: total autonomy, nursing autonomy, job autonomy, total professionalism, use of the professional organization, sense of calling and sense of autonomy. Dineen concluded that professional socialization experienced in two distinct modes of nursing education is a major determinant of practicing nurses' attitudes related to autonomy and professionalism.

The development of the NP role has challenged the traditional role to examine itself, and has been a major force in pulling nursing toward a more autonomous role. Looking at the relationship between selected individual attributes, situational characteristics and the job satisfaction of pediatric NPs, Lakin (1982) analyzed data

from a nationwide sample of 311 certified pediatric NPs. One finding by Lakin was that job satisfaction was related to both individual attributes and situational characteristics; however, situational characteristics (extent of routinization, participation and instrumental communication) made more significant contributions toward feelings at work. When the relationships between manifest needs and job satisfaction were examined, pediatric NPs with higher needs for autonomy experience significantly lower amounts of job satisfaction on every dimension except for pay. Manifest needs related to achievement and autonomy provided significant and consistent but low relationships with job satisfaction.

Barriers to nursing practice in relationship to autonomy. Many studies have discussed lack of autonomy in nursing as a barrier to effective practice. Over the years, NPs have been able to provide broad ranges of services, but in some states have been unable to provide the total plan of management because of the lack of prescriptive authority. In Virginia, a statewide survey of NPs revealed the more than half (56%) reported that delays in patient treatment, although brief or moderate, had been caused by their lack of prescriptive authority. Eleven percent reported significant delays which they believed negatively impacted the patient's health (Department of Health Professions, 1991). In 1992, a National Association of Pediatric Nurse Associates and

Practitioners (NAPNAP) survey was updated (Dunn, 1993b). Findings revealed that while most NAPNAP members have prescriptive privileges (60%), nearly 26% do not. An additional 14% of the respondents stated that prescriptive authority was pending, in the process of implementation, or still under debate. Respondents also expressed a high level of satisfaction with their practice, which the authors explained in part by the perception that they function with real independent autonomy. Later in the review, PNP's identified a number of the factors that limited their practice. These barriers to practice included consumer and physician misunderstanding or confusion regarding the nurse in an advanced practice role, lack of prescriptive privileges, and lack of time to focus on the nursing component of care in client interactions (Dunn, 1993b).

Exploring the same concept, Batey and Holland (1983) examined whether or not the requirements on NP prescriptive authority among states with broad based authority, and their consequent bearing on the NP autonomy made a difference in the prescribing practices of NPs. They found that the level of structural autonomy did not account for variations in the number of or type of prescriptions given. The average number of prescriptions given per patient was 1.32, with little variability across conditions of autonomy. Of particular concern in this study is the time that the study was completed. In 1983, only 17 states had granted any level of



prescriptive authority to NPs, and practices may have changed significantly since that time. Batey and Holland (1983) considered only structural autonomy in their study and only as it related to the structure defined by state regulatory policy regarding prescriptive privileges.

Advantages of nursing autonomy. Many authors attest that development of autonomy in the NP role will facilitate healthcare reform and support the public in receiving appropriate and economical healthcare (Beister & Collins, 1991; Hadley, 1989; Inglis & Kjervik, 1993; Safriet, 1992). NPs are seeking equal recognition for their contribution to healthcare and are willing to accept full accountability. Independence of practice or autonomy carries the full weight of providing optimum service to benefit those who ask for this. In order for NPs to achieve autonomy, their knowledge and skill must be established. It is important that others recognize their areas of independence and accept this care is necessary.

The advantages of autonomy in the NP role must also be viewed relative to the general healthcare system. The degree of impact that NPs have on structural changes in the healthcare system varies according to the autonomy granted to the NP. The NP functioning in a more autonomous role will necessitate and facilitate changes in the organization and delivery of healthcare services. However, the NP in a limited role will not significantly impact the system. One

advantage to the greater healthcare system of increased NP autonomy is that as NPs realize greater job satisfaction they are less likely to drop out of the work force due to job dissatisfaction, frustration and lack of a sense of independence and responsibility to their work. The healthcare system stands to gain from their continuing contribution. The greatest advantage of NP autonomy to the healthcare system is in stimulating the system to experiment with new practice patterns and settings (Dachelet & Sullivan, 1979). The increasingly competitive healthcare market in conjunction with the professional autonomy concerns of NPs, accounts for NPs seeking autonomous practice, unrestrained economic reimbursement and prescriptive authority. A clinically sound and economically viable NP profession depends on the ability to practice autonomously.

#### Autonomy and Job Satisfaction

Job satisfaction is an important priority for workers. Super (1968) states that values are related to interests but differ in that they are the qualities that people seek in satisfying their needs. Values are important determinants in making career decisions and failure to satisfy such needs may lead to job dissatisfaction (Super, 1983). Autonomy in the work situation has long been identified as an important factor in the job satisfaction of professionals (Alexander, Weisman & Chase, 1982). Johnston (1991) conducted an

exploratory, descriptive study to investigate sources of job satisfaction and dissatisfaction perceived by RNs. A sample group of 126 RNs were surveyed using the Index of Work Satisfaction Scale (Stamps & Piedmonte, 1986). Results found that professional status, pay and autonomy were the components that will enhance or lead to job satisfaction. This supports Mottaz's (1988) findings that perceptions of autonomous practice positively influence job satisfaction. This conclusion is congruent with findings of Spector's (1986) meta-analysis of 88 studies related to perceived control variables with employee outcome variables, such as job satisfaction and organizational commitment. Spector found that high levels of perceived autonomy were juxtaposed with significant levels of job satisfaction.

In a longitudinal study of hospital nurses' job satisfaction and turnover, Weisman, Alexander and Chase (1980) concluded that perceived autonomy was the most important determinant of staff nurses' job satisfaction. Autonomy has been cited in other studies as being a major factor in job satisfaction (Monro, 1983; Roedel & Nystrom, 1988; Seybolt, 1986; Slavitt, Stamps, Piedmont & Hasse, 1976). Adamson and Kenny (1993) surveyed 130 nurses in Australia to explore sources of discontent, powerlessness and lack of autonomy. The authors found that nurses' level of dissatisfaction was to a large extent based on perceptions of structural medical dominance. While previous

studies have investigated nurses' work dissatisfaction, this study incorporated the impact of perceptions of the disparity between the status of nursing and medicine.

Autonomy is one work value that has also been linked to turnover and organizational commitment. Kanchier and Unruh (1989) found that those who did not change jobs were concerned more with security, power, position, and situational factors while changers preferred more intrinsic rewards reflecting higher order needs. Hinshaw, Smeltzer and Atwood (1987) included both control over nursing practice and autonomy in their five stage theoretical model of turnover. Autonomy was defined as independence within one's own practice. In their study of 1597 nurses from 15 hospitals, both control of nursing practice and autonomy were important predictors of job satisfaction. McCloskey (1990) studied 321 nurses during their first year of employment. She concluded that autonomy and social integration are job concepts that are important for the job contentment of newly employed staff nurses. When nurses have both, they are more satisfied, are more committed to the organization, have more work motivation and are more intent to remain on the job. Even when they have only one or the other, nurses were relatively satisfied, committed and motivated. In particular, she found that the nurses most affected by this are those who are most experienced and those with more education. These results are of particular

interest since the NP has additional education and usually aspires to the NP role after clinical experience.

### Facets of Autonomy

Varying concepts of autonomy have been presented in the literature. Most models depict distinct components of autonomy. Among the views are explanations of job content verses job context autonomy, autonomy from client and employing organization, structural verses attitudinal autonomy, and differentiation between strategic, administrative and operational autonomy.

Job content verses job context autonomy. Bellinger (1971) made the distinction between job-content autonomy and job context autonomy. Job content autonomy refers to autonomy in the technological or scientific aspects of the job - having the freedom to determine the methods and procedures to be used to deal with a given problem. Job context autonomy includes the social and economic terms of the job - the freedom to name and define the boundaries of the problem and the price to be paid for dealing with it. Job context autonomy deals with the moral and social decisions as to what comprehensive healthcare should be, when and where and for what price it should be delivered, or how health monies should be allocated. These judgements should not be made unilaterally by any one profession, but should be negotiated with public input based on the needs of the client, the healthcare system and the

provider. Freidson (1970) also used the definition of job content autonomy, stating that job content autonomy is vital to determining an occupational group's status as a profession.

Dachelet and Sullivan (1979) presented a visual model of professional autonomy as a continuum, beginning with job content autonomy and progressing to job context autonomy. The authors' model depicted a caution area in the continuum that is dangerous for a profession. The caution area is described as a situation when a profession has inadequate job content autonomy, creating a condition in which the profession is not developing its expertise to realize the full potential of its contribution. Engel (1970) further clarified that autonomy may exist through definition of work-related autonomy, which is the freedom for the professional to practice the profession in accordance with professional training.

Client and organizational autonomy. Forsyth and Danisiewicz (1985) presented a model of professionalism that examines autonomy in a different light. They too explore the concept of autonomy as having two facets. The first variety incorporates the client's or public perceptions of the profession. The client must view the profession as essential (of serious importance), exclusive, and complex. A second variety of autonomy important to a profession is autonomy from employing organizations. This autonomy is the degree

that workers are constrained in the performance of their work by the controls and demands of others. According to this theory, a profession must have both dimensions of autonomy in order to be considered a true profession. The authors studied a sample of 1,000 students representing eight different occupational groups in order to discover the occupations in which students would have attitudinal autonomy from client and employing organization. The authors found that only law and medical students were highly autonomous on both dimensions. Interestingly, nursing students scored low on client autonomy and relatively high on organizational autonomy.

Examining a similar concept of organizational autonomy, Renwanz (1988) explored and described the role definitions and perceptions of experienced NPs. Two disparate roles were identified by the study participants. The individually desired role, delineated by professional nurse identity, professional autonomy, and activity integration was the ideal role. In contrast, the institutionally expected role, characterized by medical associated identity, decreased professional autonomy, and diminished activity integration, was the requisite NP role. Mahoney (1995) examined employer resistance to state authorized prescriptive authority which relates to the notion of employing organization autonomy. Mahoney's (1995) pilot study surveyed 13 NPs in a state which had recently obtained legal prescriptive authority.

She found that some employing organizations continue arbitrary practice restrictions on NP prescribing practices even after legislative reform. The organizations which were least supportive of NPs were those that had complex bureaucratic structures. If autonomy is to be operational, the structure of the work environment must allow it and the individual professional must be willing to exercise it. The formal structure, must thereby grant the appropriate authority to NPs to make discretionary and binding nursing decisions.

Other authors have called attention to autonomy from the client (Forsyth & Danisiewicz, 1985; Hall, 1969). Forsyth and Danisiewicz (1985) related the public's evaluation of the occupation's claim to professional status and the possible formation of professional autonomy. They associated development of a set of beliefs by the public that an occupation performs an essential, exclusive, and complex service to the development of autonomy. Successful public recognition, a concept that is larger than legal recognition or licensure, is likely to result in a grant of autonomy. If, despite the essential and exclusive skills a profession may display, the public remains unconvinced, there will be no grant of autonomy (Forsyth & Danisiewicz, 1985).

Structural and attitudinal autonomy. Wilensky (1964) described both structural and attitudinal autonomy.



Structural autonomy exists when professional people are expected, in the context of their work, to use their judgement in the provision of client services. Attitudinal autonomy exists for people who believe themselves to be free to exercise judgement in decision making. The autonomy of the individual practitioners has frequently been examined and discussed as an attitude. For instance, Freidson (1970) has pointed out the critical importance of attitudinal autonomy to the phenomenon of profession. Hall (1969) suggested that attitudinal autonomy is crucial, since individuals react to their perceptions of situations and their attitudes reflect the manner in which they perceive their work. The perceptions or attitudes of practitioners that they are free of decisional constraint are likely to be indicative of their power.

Hall explored the attitudinal attributes of professionalism as the manner in which the practitioners view their work (Hall, 1968). The assumption here is that there is some correspondence between attitudes and behavior. If this assumption is correct, then the attitudes comprise an important part of the work of the professional. If the occupation has met the structural prerequisites of professionalism, the approach taken in practice becomes the important consideration. The attitudinal components described by Hall (1968) include the following:

- 1) Use of the professional organization as a major

reference. This involves the formal organization and informal colleagues groupings as the major source of ideas and judgements for professionals in their work. It is to these professional organizations that members look for leadership and support as they strive for another fundamental aspect of professionalism: individual and collective autonomy.

2) A belief in service to the public, which includes the idea of indispensability of the profession and the view that the work performed benefits the public and the practitioner.

3) Belief in self-regulation, this involves the belief that the person best qualified to judge the work of a professional is a fellow professional, and the view that such practice is desirable and practical. It is a belief in colleague control.

As reflected in the American Association of Nurse Practitioners (AANP) Scope of Practice (1993), NPs have developed the above components of attitudinal autonomy. The Scope of Practice describes NPs as advanced practice nurses who provide primary healthcare and specialized health services to individuals, families, groups and communities. They recommend the completion of a formal, graduate educational program and a commitment to life long learning and professional self development.

Pankratz and Pankratz (1974) identified willingness as

a component of the attitudinal dimension of autonomy. Willingness was emphasized in their observation that nurses are their own worst enemies in gaining autonomy, suggesting that perhaps, nurses are not willing to accept the autonomous role. The authors surveyed 702 nurses using the factors of nursing autonomy, patient's rights, and rejection of the traditional role. The authors found that advanced education was related to positive attitudes toward autonomy.

Strategic, administrative and operational autonomy.

Raelin (1989) presented yet another model of autonomy. He described autonomy as having three components: strategic or institutional, administrative, and operational. Administrative autonomy is defined as the freedom to select the goals and policies guiding an organization. Administrative autonomy constitutes the responsibility for managing the activities and coordinating the tasks of a unit within the organization. Operational autonomy is described as the freedom, once the goal is set, to reach it by means determined by oneself but within strategic and administrative constraints. The author suggested that the standard practice in organizations is for administrative and strategic autonomy to reside in management and operational autonomy to belong to professionals. Raelin further suggested that granting of strategic autonomy to a professional may lead to self leadership, which allows professional discretion, but may also confuse the

professional as to what the role is. Raelin used extensive literature and input from interviews to suggest certain conditions under which professionals ought to be granted administrative and strategic autonomy. The conditions include items such as when the professional is a high performer, the professional is in a responsible and critical position, the professional is highly trained, the professional shares organizational goals, and the job entails client involvement. This model of autonomy tends to limit the professional autonomy that is supported in the previously described literature.

#### Summary

In summary, this literature review provided a comprehensive summary of NP professional development over the past thirty years. In addition, the components of NP structural autonomy were introduced, including practice environments, educational background, and managed care. Lastly, the concept of autonomy was explored. The role of the NP has developed significantly since its inception in the 1960s. Structural autonomy varies with each NP based on practice environment, which may impose restrictions on NP practice and may vary from state to state; educational background, which varies based on the type of NP training that was obtained; and the individual managed care situation in which the NP practices. Autonomy is a major factor related to job satisfaction and the ability of the NP to

function fully. Autonomy is a multi-faceted concept which undeniably has significant relevance to the professional role and practice of the NP.

The literature review in this chapter focused on NP professional development, issues impacting NP structural autonomy, including the components described in the conceptual framework, and professional autonomy. The literature provides a framework for this study.

CHAPTER III  
Procedures and Methods

Introduction

Chapter III provides an overview of the procedures and methodology used by the investigator. Included in this chapter is a description of how the population and sample were defined, how state practice environments were determined, and how data was collected. Also included in this chapter is a detailed description of the research instruments and information regarding the reliability and validity of the instruments.

The study used an ex post facto design with a written survey. Ex post facto design is used to explore possible causal relationships among variables that cannot be manipulated by the researcher. The purpose of ex post facto research is to investigate whether one or more preexisting conditions have possibly caused subsequent differences in groups of subjects. In this study, the independent variables, practice environment, educational background, and managed care, are determined by definition through the state regulations regarding NP prescriptive authority and legal status, previous pharmacology course work, previous

preceptor experience, and percent of managed care clients that the NP encounters in practice, respectively. No manipulation of the independent variables took place in that they had already occurred prior to the researcher beginning the study. The dependent variable is attitudinal autonomy.

#### Population and Sample

Respondents were recruited from six eastern to mid-eastern states with varying practice environments. Based on current practice environments, a purposive, convenience sample of states included Alabama, Delaware, Florida, Illinois, Maryland, New York, and Tennessee. The states were limited geographically since managed care in these regions is still progressing at various degrees, unlike the western United States where managed care has proliferated to almost every state. The NPs in the study had a scope of practice involving pediatric, family, neonatal, school health and obstetric-gynecologic, and were engaged in practice in one of the six states described above. Names and addresses of certified NPs from the identified states were obtained from two of the four existing NP certifying organizations - The National Certification Board of Pediatric Nurse Practitioners and Nurses (NCBPNP/N) and the National Certification Corporation for the Obstetric Gynecological and Neonatal Nurse Specialties (NCC). The American Nurse Credentialing Center (ANCC) does not release its listing of certified NPs and The American Academy of Nurse

Practitioners (AANP) charges substantially for rental of the list, hence, NPs certified by these organizations were not included in the population. The population consists of 2086 certified NPs in the above states. A total of 300 NPs was identified for the sample. Nonproportional stratified random sampling procedures were used to identify a sample of 50 NPs from each state. Table 3.1 depicts the identified population and sample.

Table 3.1

Population and Sample

	State						Total
	AL	DE	FL	IL	MD	TN	Total
Total Certified	246	95	616	394	448	287	2086
Total Mailed	50	50	50	50	50	50	300
Percent Mailed	21	53	8	13	11	17	14

State Practice Environments

State practice environments were determined by the scoring system described by Sekscenski et al. (1994). This system uses a one hundred point scale to assign numerical values to specific characteristics of the NP practice environment, awarding a maximum of 40 points for prescriptive authority, 20 points for legal status, and 40 points for reimbursement. The prescriptive authority portion of the score is based on the amount of independent plenary prescriptive authority accorded to the NP, while the legal



status portion is established based on the regulations that govern NP practice in each state. Sekscenski et al. (1994) identified the scores for state practice environments on a scale of one hundred for these states as follows: Alabama, 33; Delaware, 60; Florida, 68; Illinois, 7; Maryland, 93; and Tennessee, 27.

The author found no literature directly linking reimbursement with autonomy, consequently, reimbursement was not identified as an independent variable. For the purposes of this study, therefore, the reimbursement category was excluded. The scoring system then, had a total maximum of sixty points. Using the 1997 State Statutes (Pearson, 1997), the scores for each state were recalculated using the current Prescriptive Authority and Nurse Practice Act legislation. The six states had a wide variety of scores ranging from 0 to 60. The 1997 scores were determined as follows: Alabama, 33; Delaware, 60; Florida, 43; Illinois, 0; Maryland, 28; and Tennessee, 20. Table 3.2 describes the 1997 state practice environment scores.

Table 3.2

1997 State Practice Environment Scores

	Prescriptive Authority	Nurse Practice Act	Score
Alabama	NP can prescribe (excluding controlled substances) with some degree of physician involvement or delegation of prescription writing.	NP Title Protection and the Board of Nursing is the Sole authority in the scope of practice, but the scope of practice has a requirement for physician collaboration or supervision.	33
Delaware	NP can prescribe (including controlled substance) independent of any required physician involvement in prescription writing.	State has NP Title Protection and the Board of Nursing as Sole authority in Scope of Practice with no Requirements for Physician Collaboration or Supervision.	60
Florida	NP can prescribe (including controlled substances) with some degree of physician involvement or delegation of prescription writing.	NP Title Protection and the Board of Nursing is the Sole authority in the scope of practice, but the scope of practice has a requirement for physician collaboration or supervision.	43
Illinois	NP has no statutory prescribing authority.	State has no Nurse Practitioner Title Protection where APNs function under a broad nurse practice act.	0
Maryland	NP has dispensing authority only.	NP Title Protection and the Board of Nursing is the Sole authority in the scope of practice, but the scope of practice has a requirement for physician collaboration or supervision.	28
Tennessee	NP can prescribe (excluding controlled substances) with some degree of physician involvement or delegation of prescription writing.	State has no Nurse Practitioner Title Protection where APNs function under a broad nurse practice act.	20

Data Collection

Questionnaires were mailed to the identified sample. A cover letter (Appendix A) and stamped returned addressed envelope was included with the questionnaire. The basic

format for the design of the cover letter and follow-up procedures was based on a method for mail surveys by McMillan and Schumacher (1993). Particular attention was be given in the cover letter to stimulate interest in the study and emphasize the purpose and significance of this investigation. The voluntary nature of the study, the measures which were taken to assure confidentiality and anonymity of respondents during data collection and reporting phases of the investigation, and the method for follow up on nonrespondents was carefully explained.

After a period of fifteen days, the researcher sent follow up post cards (Appendix B) to all participants. Those who had responded to the survey were thanked, while nonrespondents were encouraged to participate with an emphasis on the value of the participant's contribution. A satisfactory return rate was obtained after a one month period, therefore, no additional follow up was made.

#### Instruments

Data was obtained from four instruments.

#### Demographic Questionnaire

A demographic questionnaire was used to obtain descriptive information about the respondents including factors thought to relate to the issues under study such as age, sex, ethnic background, years employed as a NP, and type and location of practice settings (Appendix C). Additional information regarding the educational background

of the NP was solicited, including the type of and number of hours of pharmacology education they received in their NP program and the type of clinical preceptor they had in their NP program.

Managed care was measured by one question which asked the NP the percentage of patients seen that are affiliated with some type of managed care organization. Pharmacology education was explored by three questions. The first question asked how many hours of pharmacology instruction was included in NP training. The second question asked how the pharmacology content was taught during NP training. The last question asked NPs how well prepared they felt in pharmacology upon completion of NP training. Pharmacology preparedness was operationalized by the third question. Type of preceptor was measured by one question which asked the NP to identify whether a NP or a physician provided the preceptor experience during their NP training.

In order to check for any confusing questions and to determine the length of time to complete the demographic questionnaire, a pilot test was done for this section of the instrument. The demographic questionnaire was administered to 17 NPs who were in attendance at a NP professional meeting. The NPs were asked how long the questionnaire took to complete, whether or not there were any confusing questions, whether or not there were any questions that they were unable to answer and if there were any suggestions for

improvement.

The demographic questionnaire took most NPs two to five minutes to complete. Three respondents selected two responses for the item regarding their preceptor experience. This item was revised to clarify that only the primary preceptor should be selected; therefore, only one response should be selected.

Attitudinal autonomy was operationalized by three separate scales. Each scale provided a separate score. The autonomy measurements are described below.

#### The Index of Work Satisfaction Scale - Autonomy Component

The Index of Work Satisfaction Scale (Appendix D) was developed by Stamps and Piedmonte in 1973. It was first published in 1978 (Stamps & Piedmonte, 1986). The entire Index of Work Satisfaction is a two part attitudinal measure predicated on the proposition that job satisfaction is a multifaceted concept composed of both internally and externally controlled variables. Measured variables include pay, autonomy, task requirements, organizational policies, interaction, and professional status. The index is designed to elicit the respondents' attitudes about the importance of the selected variables for job satisfaction and their perception of the degree to which these variables are present in the institution's work climate. For the purposes of this investigation, only the autonomy component of the index as it relates to the participants' attitudes toward

autonomy was used. The autonomy component consists of five 7-point Likert-type items to measure the current level of satisfaction with the autonomy component.

When administering the entire index, a separate score is derived for each component measured, and there is also a final composite score. Stamps and Piedmonte (1986) calculated the instrument's reliability and validity during the development process and again for comparative analysis of 21 studies that had used the scale. Internal reliability was tested using the split-half reliability technique. Although results from the individual subscales were not reported, the authors reported that all the coefficients ranged from .52 - .81. Factor analysis was used to assess the construct validity of the scale items. A principal component analysis with varimax rotation accounted for 62% of the variance.

Although the Index of Work Satisfaction has been used primarily with hospital nurses, it has been used in ambulatory settings as well. It has been administered to nurses, physicians, and additional healthcare providers (Stamps & Piedmonte, 1986). Permission to use the scale was obtained from Paula L. Stamps.

#### The Professional Inventory Scale - Autonomy Subscale

The Professional Inventory Scale (Appendix E) was developed by Hall in 1968. Permission to use the Professional Inventory was obtained from Richard Hall. The

Professional Inventory is an attitude scale designed to measure the degree of professionalism among practitioners of various occupations. Using Likert scaling procedures, Hall developed ten items to measure each of the five attitudes of professionalism. The attitudes of professionalism identified by Hall (1968) include use of the professional organization as a major referent, belief in service to the public, belief in self-regulation, a sense of calling to the field, and a feeling of autonomy. For the purposes of this investigation, only the autonomy subscale was utilized. Hall defined autonomy as a "feeling that the practitioner ought to be able to make his own decisions without external pressure from clients, those who are not members of the profession, or from his employing organization" (Hall, 1968, p.93).

Snizek (1972) using Hall's and his own data, statistically determined the degree of empirical "fit" of the items to measure the five attitudinal dimensions of professionalism on Hall's original fifty item inventory. By using rotated factor matrices, he found that approximately half of the fifty items had less than an acceptable fit within any of five theoretically established attitudinal dimensions of professionalism. Other items empirically corresponded to multiple dimensions which contributed to the gross empirical overlap of the scale's dimensions. Snizek recommended that certain of the scale's items be deleted in future use of the Professional Inventory. Snizek

noted that the deletion of certain items from the original inventory would decrease the scale's reliability, but only to a minimal degree. He reported a drop in the reliability coefficients for all dimensions from .86 to .84 on Hall's data and a drop from .80 to .78 on his own data using Kuder-Richardson Formula 20. For the autonomy subscale the reliability coefficients using only five items as compared to ten established a decrease as follows: Using Hall's data a drop from .776 to .760, using Snizek's data a change from .730 to .7338. In order to keep the questionnaire as brief as possible, Hall's Professional Inventory, using the five item subscale was chosen.

This scale was used by Dineen (1985) in a study which compared attitudes regarding nursing autonomy among nurses, NPs, and nurse midwives. Setterson (1991) also used this scale in her exploratory study of the degree of professionalism exhibited by NPs. McCloskey and McCain (1987) used the scale in their study of satisfaction, commitment and professionalism of newly employed nurses. The Nursing Attitude Scale - Nursing Autonomy Subscale The Nursing Autonomy Scale (Appendix F) developed by Pankratz and Pankratz (1974) comprised the fourth part of the questionnaire. The instrument has no copyright protection and is published in Instruments for Measuring Nursing Practice (1979). This scale measures three factors: extent that nurses feel comfortable in taking initiative and



responsibility in their setting, nurse's attitude toward the patient's rights for control, and traditional role limitations. The questionnaire focuses on the views of nurses regarding dependence versus independence for both nurses and patients. The Nursing Autonomy Scale consists of a total of 47 items designed to determine attitudes toward nursing autonomy and advocacy, patients' rights and traditional role limitations. The first subscale, nursing autonomy and advocacy, consist of 26 questions. It measures the degree of latitude a nurse feels she has in functioning as a responsible professional. The items in the Pankratz questionnaire regarding autonomy resulted from statements of nurses employed in the hospital setting regarding the degree to which they were willing to assert themselves within the environment and from nursing leaders on issues that they felt were currently being debated regarding professional autonomy for nurses (Pankratz & Pankratz, 1974).

The construct validity of the instrument was determined by administering the entire instrument to 200 registered nurses. A preliminary factor analysis indicated that the variables of interest were present. The authors expanded their sample to a total of 702 nurses. The variables were factor analyzed using two methods: (1) the factor analytic model and (2) the Try system cluster and factor analysis method. The two analyses resulted in identification of the three factors and were significantly congruent. The internal

consistency of the three subscales was determined using the Cronbach Coefficient Alpha. The Alpha computed for the subscale "nursing autonomy" was 0.91. Respondents are asked to rate each item on the level of agreement with her/his attitude and behavior using a five point Likert-type scale ranging from strongly agree (1) to strongly disagree (5).

Although the scale has some items that are dated and relate specifically to hospital staff nurses regarding care of inpatients, the scale also has several items that relate to independence in practice. The scale was used by Dineen (1985) in a comparative study that compared attitudes regarding nursing autonomy among nurses, NPs and nurse midwives. Schutzenhofer (1987) has since developed another instrument to measure professional autonomy in nursing. Although Schutzenhofer's instrument is more reflective of the current nursing environment, the researcher was unable to locate any studies that used this scale with NPs. The scale developed by Pankratz and Pankratz, therefore, was selected.

In order to create a user friendly instrument and to decrease the number of pages that would be sent, the demographic questionnaire and the three autonomy scales were incorporated into a single 4 page instrument (Appendix G). The instrument was printed on one large sheet of paper and then folded in half, to produce one booklet style page. The contents of the participant envelope contained only the

cover letter, a single instrument, and a return envelope, thus simplifying the process for the participant.

#### Summary

Data were collected from certified NPs in six states with varying practice environments to determine their perceptions of autonomy. Information regarding the NPs experience, current practice setting and educational background was obtained. Demographic characteristics were included to provide a comprehensive profile of the certified NP. An analysis of the data is presented in Chapter IV.

CHAPTER IV  
Analysis of Data

Introduction

This study was designed to identify and describe the possible components of structural autonomy that may influence NPs perceptions of independence in practice. These components include 1) NP state regulatory practices, 2) educational background, and 3) managed care environment. In addition, the purpose was to explore the relationship between NP structural autonomy as it relates to the above components and attitudinal autonomy as it relates to the NP's perceptions of independence in practice.

The purpose of Chapter IV is threefold: first, to describe the NP sample, secondly, to provide statistical analysis of the research questions and thirdly, to evaluate the research instruments. The results of the investigation are presented in three sections. In the first section, descriptive statistics are presented to provide a description of the participants in regard to the demographic characteristics. In the second section, descriptive statistics, analysis of variance, independent t-tests, chi-square and multiple regression are used to present findings

related to the research questions. This section is organized according to the five research questions. In this section, each research question is presented and then followed with the analysis. In the last section, the three autonomy scales are evaluated, based on correlation with each other and reliability measures.

All data were entered into the computer program independently by the investigator. Statistical analysis was performed using MYSTAT for Windows and SPSS 7.5 for Windows, two statistical software products. MYSTAT was used for all descriptive statistics and hypothesis testing, while SPSS 7.5 was used for multiple regression, correlation coefficients, and instrument reliability evaluation. MYSTAT utilizes a six-step procedure for conducting hypothesis testing. When using MYSTAT, the six-step solution is recommended to assist the researcher to set the level of significance, enter the data, calculate the test statistic, make a decision about the hypothesis test, and write a summary statement (Steagall & Hale, 1994).

#### NP Characteristics

Characteristics of the NP sample will be addressed during this discussion. Included in this section is a description of what the NP sample looks like in general. This includes information about the gender, age, and ethnic background of the sample. Also included is information about which states NPs practice in, the educational background of

the NP sample, and the practice setting of the NP sample.

#### State Return Rate

The total number of participants was 227. This was a return rate of 76 percent. The respondents were asked in which state they practiced. The rate of return was calculated for each state. The state with the highest number of returned surveys was Florida, with a return rate of 88%, while the state with the lowest number of returned surveys was Maryland, with a return rate of 62%. Table 4.1 reports the percentage of return for each state.

Table 4.1

#### Individual State Survey Returns

	AL	DE	FL	IL	MD	TN	Total
Number returned (of 50 mailed)	36	39	44	42	31	35	227
Percent returned	72	78	88	84	62	70	76

#### Gender, Age, and Ethnic Background

The participants were asked to report their gender, age, and ethnic background. The demographic characteristics of the sample were homogenous. Of those who returned the survey, 225 (99.12%) were female, while only 2 (0.88%) were male. The majority of the participants,  $n = 212$  (93.39%) were white, while there were 10 (4.41%) African American, 2 (.88%) Asian, and 2 (.88%) Hispanic. The mean age of

participants was 42.6 years, with a standard deviation of 7.8. Ages ranged from 21 years to 66 years. The median was 42 years. Table 4.2 describes the demographic characteristics of the sample.

Table 4.2

NP Demographic Characteristics

Characteristic	N	P
GENDER		
Male	2	0.9
Female	225	99.1
ETHNIC BACKGROUND		
African American	10	4.4
White	212	93.8
Asian	2	0.9
Hispanic	2	0.9

Educational Background

The educational background of the participants was also surveyed. The educational background of the sample was less homogenous than the gender, age and ethnic background of the sample; however, particular trends were evident. Out of 227 participants, 110 (48.5%) were prepared as NPs with a master's degree in nursing, while 111 (48.9%) were prepared in a certificate program. The participants were asked in what year they graduated from their NP program. The number

of years since graduation was calculated. The mean numbers of years since graduation from the NP program was 9.8 years. Sixty percent ( $n = 135$ ) of the participants held a master's degree, while 40 (17.6%) of the participants' highest educational level was a bachelor's degree in Nursing. Table 4.3 describes the educational preparation of the sample.



Table 4.3

NP Educational Preparation

Characteristic	<u>N</u>	<u>P</u>
NP EDUCATION PROGRAM		
Bachelor's Degree Program	1	0.44
Master's Degree Program	110	48.46
Certificate	111	48.90
Other	5	2.20
HIGHEST LEVEL OF EDUCATION		
Diploma	22	9.7
Associate Degree (Nursing)	4	1.8
Bachelor's Degree (Nursing)	40	18.6
Bachelor's Degree (Other)	8	3.7
Master's Degree (Nursing)	135	59.5
Master's Degree (Other)	15	6.6
Doctorate	3	0.1
YEAR GRADUATED FROM NP PROGRAM		
1996-1997	13	5.8
1991-1995	84	37.3
1986-1990	52	23.1
1981-1985	31	13.8
1980 or before	45	20.0

Previous Experience and Certification

The NPs were asked to describe the length of RN experience prior to becoming a NP and their length of employment as a NP. The average participant had been a RN for 9.5 years before becoming a NP. The mean number of years

employed was 8.5 years (SD = 6.4). The number of years employed ranged from zero to 25. The median years of practice as a NP was 7 years. Because the population consisted of certified NPs only, all of the sample was certified in their specialty area. The participants were also asked to report the year they had acquired certification as a NP in their area of specialty. The NPs had been certified on the average for 8.4 years, the standard deviation was 5.5 years and the median was 6 years. The certification history is reported in Table 4.4.

Table 4.4

Year of Certification

Year Certification Obtained	N	P
1996-1997	26	11.6
1991-1995	77	34.4
1986-1990	52	23.2
1981-1985	41	18.3
1980 or before	28	12.5

Current Practice

The participants were asked if they were currently practicing as a NP. Of the participants, 194 (85.5%) were currently practicing as NPs. Because the research questions focused on practicing NPs, these 194 responses were used for the remaining data analysis. Table 4.5 presents the number

of NPs from each state who were practicing at the time of the study and the percentage of those who were currently practicing as a NP.

Table 4.5

Practicing NPs in each State

	AL	DE	FL	IL	MD	TN	Total
Number returned (of 50 mailed)	36	39	44	42	31	35	227
Number of practicing NPs	32	36	38	36	21	31	194
Percent practicing	89	92	86	86	68	88	85

The age of those NPs who were currently practicing with the age of those NPs who are not practicing was compared. In order to determine if age of the NP was related to the NP's current employment status, an independent t-test was performed. Table 4.6 presents the findings of the t-test.

Table 4.6

Independent T-Test on Current Practicing Status by Age

GROUP	<u>N</u>	<u>M</u>	<u>SD</u>	<u>t</u>	<u>p</u>
Currently Practicing	193	42.25	7.45	-1.57	0.13
Not Currently Practicing	29	45.21	9.73		

df = 220

The average age of NPs who were currently practicing (M = 42.25 years) was not significantly different than the average age of NPs who were not currently practicing (M = 45.21 years).

#### Practice situations

The participants were asked to identify practice setting, area of practice and practice location. Practice settings, area of expertise and location of practice for the participants varied. Forty one percent of the participants (n = 88) were in an ambulatory practice setting. Area of expertise was concentrated in the maternal child arena with 72 (37%) having primary expertise in pediatrics, 59 (30%) practicing in Obstetrics/Gynecology and 45 (23%) practicing in the neonatal area. Over one half (110 or 57% of the participants practiced in a suburban setting, while 55 (28%) practiced in the inner city, leaving 27 (14%) who practiced in a rural area. Table 4.7 further describes the practice circumstances of the sample.

Table 4.7

Practice Setting

Setting	n	P
PRACTICE SETTING		
Independent Practice	13	6.7
In-hospital Practice	51	26.3
Ambulatory Practice	80	41.2
Non-hospital	21	10.8
Community	7	3.6
School Setting	22	11.4
Other		
AREA OF EXPERTISE		
Pediatric	72	37.1
Family	11	5.7
Obstetrics/GYN	59	30.4
Neonatal	45	23.2
School	4	2.1
Other	3	1.5
PRACTICE LOCATION		
Inner City	55	28.6
Suburban	110	57.3
Rural	27	14.1

## Research Questions

### Practice Environment

One of the major questions posited in this chapter is whether there was a relationship between the practice environment of NPs and their perceptions of autonomy. Specifically, the question was whether perceptions of professional autonomy differ among NPs who practice in a restricted practice environment, NPs who practice in a moderately restrictive practice environment, and NPs who practice in a favorable practice environment. In order to answer this question, the independent variable, the state practice environment, needed to be determined. Each NP was placed in one of three groups based on the state in which the NP practiced.

NPs who practiced in states with a score of 0 - 20 points were defined as the restrictive practice environment group. NPs who practiced in states with a score of 21 - 40 points were defined as the moderately restrictive practice environment group. NPs who practiced in states with a score of 41 - 60 points were defined as the favorable practice environment group. Table 4.8 describes the various state practice environments and the group delineation for each state.

Table 4.8

1997 State Practice Environment Groups

State	Score	Practice Environment	Group
Alabama	33.2	Moderate	2
Delaware	60	Favorable	3
Florida	43	Favorable	3
Illinois	0	Restrictive	1
Maryland	28	Moderate	2
Tennessee	20	Restrictive	1

The return rate percentage of each state group was then determined. Table 4.9 documents the response rate for each of the described groups.

Table 4.9

State Practice Group Returns

	Restrictive (IL/TN)	Moderate (MD/AL)	Favorable (FL/DE)
Total certified	681	694	711
Total mailed	100	100	100
Percent mailed	15	14	14
Number returned	77	67	83
Percent returned (mailed)	77	67	83
Percent returned (possible)	11	10	12

Three separate null hypotheses were tested. 1) There is no difference in perceptions of autonomy as measured with the Professional Inventory for NPs who practice in a restricted practice environment, NPs who practice in a moderately restrictive practice environment and NPs who practice in a favorable practice environment. 2) There is no difference in perceptions of autonomy as measured with the Nursing Autonomy Scale for NPs who practice in a restricted practice environment, NPs who practice in a moderately restrictive practice environment and NPs who practice in a favorable practice environment. 3) There is no difference in perceptions of autonomy as measured with the Index of Work Satisfaction for NPs who practice in a restricted practice environment, NPs who practice in a moderately restrictive practice environment and NPs who practice in a favorable practice environment. Analysis of variance was used to examine the difference among the means of the groups on each of the separate autonomy scales.

The results of the analysis of variance are displayed in Table 4.10.



Table 4.10

ANOVA on Autonomy Scales for Practice Environment

Dep. Var.	Restrictive ( <u>n</u> = 67)		Moderate ( <u>n</u> = 53)		Favorable ( <u>n</u> = 74)		F	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Nursing Autonomy Scale	103.64	9.49	102.89	9.62	105.92	11.05	1.60	0.21
Professional Inventory	16.72	3.25	17.51	3.65	17.65	3.94	1.29	0.28
Index of Work Satisfaction	26.67	6.50	28.30	6.84	28.07	7.35	1.40	0.36

df = 2, 191

In all three cases, the null hypothesis was retained. There was no significant difference among the three groups on the Professional Inventory, the Nursing Autonomy Scale or the Index of Work Satisfaction.

In addition, each individual state was considered a separate group, with additional analysis conducted to explore the difference among the six states. An analysis of variance was conducted using the state groups and the autonomy scores. Table 4.11 illustrates the results of this analysis.

Table 4.11

ANOVA on Autonomy Scales for State Environment

Dependent Variable	AL (n=32)	DE (n=36)	FL (n=38)	IL (n=36)	MD (n=21)	TN (n=31)	F	p
Nursing Autonomy Scale	102.7 8.9	105.2 9.7	106.6 12.3	102.3 9.3	103.2 10.9	105.2 9.6	0.96	0.44
	<u>M</u>							
	<u>SD</u>							
Professional Inventory	17.2 3.4	17.4 3.6	17.9 4.3	17.0 3.9	17.9 4.0	16.3 2.3	0.79	0.55
	<u>M</u>							
	<u>SD</u>							
Index of Work Satisfaction	29.0 6.2	28.4 5.7	27.7 8.7	25.8 6.5	27.2 7.8	27.7 6.4	0.87	0.50
	<u>M</u>							
	<u>SD</u>							

df = 5, 188

No significant differences were found among the states on the Nursing Autonomy Scale, the Professional Inventory, or the Index of Work Satisfaction.

Preceptor Experience

The next question to be answered was whether NP perceptions of professional autonomy differ between NPs who have had NPs as preceptors and those who had physicians as preceptors. The participants were asked who was their primary preceptor during their NP training. Primary preceptor was described to be the preceptor who provided the most hours of clinical guidance and supervision. Each NP was placed in one of two groups; Group 1 was NPs who had a NP as

their primary preceptor during training, and Group 2 was NPs who had a physician as their primary preceptor during training. An independent t-test was used to examine the differences between the means of each group on each of the autonomy scales. Table 4.12 describes the results of the t-test.

Table 4.12

Independent t-Test on Autonomy Scales by Preceptor

Autonomy Scale	NP Preceptor ( <u>n</u> = 95)		Physician Preceptor ( <u>n</u> = 99)		t	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Nursing Autonomy Scale	103.7	10.9	104.9	9.4	-0.79	0.43
Professional Inventory	17.3	3.6	17.2	3.7	0.18	0.86
Index of Work Satisfaction	28.2	6.8	27.1	7.1	1.09	0.28

df = 192

A significant difference between the NPs who had trained with a NP preceptor and the NPs who had trained with a physician preceptor was not found on the Nursing Autonomy Scale, the Professional Inventory or the Index of Work Satisfaction.

In addition, the year of graduation was examined in comparison to the type of preceptor the NP had as a student.

Using frequency counts, the type of preceptor for each year was computed. Of the NPs who graduated in 1985 or before ( $n = 54$ ), only eight (14.8 percent) had been precepted by an NP, the remaining 46 (85.2%) had been precepted by a physician. In the years 1986 - 1996, however, the distribution is quite different. A total of 138 NPs graduated in 1986 or later. Of these graduates, 87 (63%) were precepted by a NP and 51 (37%) were precepted by a physician. Further analysis of more recent years, however, was quite different. The analysis revealed that in both 1993 and 1994, 75 percent of the NPs were precepted by a NP and 25 percent were precepted by a physician. The analysis also revealed that in both 1995 and 1996, 50 percent of the NPs were precepted by a NP and 50 percent were precepted by a physician.

#### Pharmacology Preparedness

The next question to be answered was whether NP perceptions of professional autonomy differ among NPs who have been well prepared in pharmacology and NPs who have not been well prepared in pharmacology. Each NP was placed in one of three groups. The groups were 1) extremely well prepared, 2) sufficiently prepared, and 3) inadequately prepared. An analysis of variance was used to examine the difference among the means of each group on each of the three autonomy scales. Table 4.13 illustrates the results of the analysis of variance.

Table 4.13

ANOVA on Autonomy Scales for Pharmacology Preparedness

Autonomy Scale	Extremely well prepared (n = 16)		Sufficiently prepared (n = 112)		Inadequately prepared (n = 65)		F	p
	M	SD	M	SD	M	SD		
Nursing Autonomy Scale	105.3	8.7	103.6	10.8	105.1	9.4	0.52	0.59
Professional Inventory	18.7	4.4	17.4	3.6	16.7	3.4	2.07	0.13
Index of Work Satisfaction	30.4	3.5	28.8	6.4	24.8	7.6	9.33	0.00

df = 2, 190

No significant differences were found between the groups in the mean scores of the Nursing Autonomy Scale or the Professional Inventory. Significant differences were found between the groups in the mean scores of the Index of Work Satisfaction. Those NPs who were extremely well prepared in pharmacology scored significantly higher on the Index of Work Satisfaction ( $M = 30.4$ ), than those NPs who were sufficiently prepared in pharmacology ( $M = 28.8$ ) and those NPs who were inadequately prepared ( $M = 24.8$ ).

Additionally, chi square analysis were used to explore relationships among pharmacology preparedness and hours of pharmacology education and type of pharmacology education. A two way chi-square analysis (chi-square test of

independence) was done to determine if there was a relationship between the number of credit hours of pharmacology course work a NP received during NP training and how prepared in pharmacology the NP felt upon completion of the NP training. Of the 194 practicing NPs, 187 provided information regarding both the number of credit hours and pharmacology preparedness. Each NP was placed in one of four groups. The groups were those NPs who had 0 credit hours, 1-3 credit hours, 4-6 credit hours, and 7-10 credit hours of pharmacology course work. In order to overcome insufficient group numbers, the three participant pharmacology preparedness groups were condensed to two groups. One group contained those participants who were extremely well prepared and those who were sufficiently prepared, while the other group contained those participants who were inadequately prepared. Results of the chi-square analysis are presented in Table 4.14.

Table 4.14

Chi-Square Analysis of Pharmacology

Credit Hours and Preparedness

	0 credit hours	1-3 credit hours	4-6 credit hours	7-10 credit hours	Total
Extremely Well/ Suff. prepared	25	39	43	15	122
Inadequately prepared	34	25	6	0	65
Total	59	64	49	15	187

$X^2 (3, N = 187) = 82.28, p < 0.0005$

A significant relationship was found between the number of pharmacology credit hours and pharmacology preparedness.

An additional two way chi-square analysis was computed to determine if there was a relationship between the method of pharmacology education a NP received during NP training and how prepared in pharmacology the NP felt upon completion of the NP training. Of the 194 practicing NPs, 193 participants provided information regarding both their method of pharmacology education and pharmacology preparedness. Each NP was placed in one of four groups. The groups were those NPs who had pharmacology integrated into other courses, those who had pharmacology offered as a separate course, those who did not have pharmacology education, and an additional category was added which

included those who had pharmacology integrated into other course in addition to pharmacology offered as a separate course. Although this category was not offered as an item choice, 10 participants added this answer to their questionnaire, thus it was important to include this group as well. In order to overcome insufficient group numbers, the three participant pharmacology preparedness groups were condensed to two groups. One group contained those participants who were extremely well prepared and those who were sufficiently prepared, while the other group contained those participants who were inadequately prepared. Table 4.15 presents this analysis.

Table 4.15

Chi-Square Analysis of Pharmacology Teaching

Method and Preparedness

	Integrated Rx Curriculum	Separate Rx course	No Rx course	Both	Total
Extremely Well/ Suff. prepared	66	52	0	10	128
Inadequately prepared	27	20	18	0	65
Total	93	72	18	10	193

$$X^2 (3, N = 193) = 42.55, p < 0.0005$$

A significant relationship was found between the method of pharmacology education and pharmacology preparedness.



## Managed Care

The next area of study explored managed care and its influence on the NP. The research question was whether NP perceptions of professional autonomy differ between NPs who practice in a managed care environment and NPs who do not practice in a managed care environment. Correlational analysis was used to explore the relationship between percentage of managed care and autonomy as measured on each scale. The participants were asked the percentage of patients who participated in managed care. Of the 194 practicing NPs, 182 participants answered the question regarding managed care. The remaining 12 participants either left the item blank or responded that they did not know the percentage of patients that were under managed care. The percentage range was zero to 100 percent. The mean percent was 53 ( $SD = 33.49$ ). The median was 52 percent. In order to further understand the distribution of managed care among practicing NPs, the NPs were divided into three groups. The groups were divided into zero - 33% managed care, 34-66% managed care and 67-100% managed care. Table 4.16 presents the distribution.

Table 4.16

Managed Care Distribution (n = 194)

	No response or did not know	0-33%	34-66%	67-100%
Total	12	64	43	75
Percent of sample	6	33	22	39

In order to determine the degree of association between the percentage of managed care and the autonomy scales, Pearson correlation coefficients were calculated. Table 4.17 presents the findings of the correlational analysis.

Table 4.17

Pearson Correlation for Managed Care  
and Autonomy Measures (N = 182)

	r
Nursing Autonomy Scale/Managed Care	0.12
Index of Work Satisfaction/Managed Care	0.14
Professional Inventory/Managed Care	0.03

Using a table of Critical Values for the Pearson Correlation Coefficient, it was determined that there was not a significant correlation between the percent of managed

care and the scores on the Nursing Autonomy Scale, the Index of Work Satisfaction, or the Professional Inventory.

Additional analysis was performed to determine if there were significant relationships among the three groups of managed care and the mean autonomy scores. Analysis of variance was used to determine if mean autonomy scores differed across the three groups. Table 4.18 illustrates the analysis of variance results.

Table 4.18

ANOVA on Autonomy Scales for Managed Care Group

Autonomy Scale	0-33% (n = 64)		34-66% (n = 43)		67-100% (n = 75)		F	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Nursing Autonomy Scale	103.1	12.7	103.2	7.8	106.2	8.9	1.94	0.15
Professional Inventory	17.4	3.0	17.7	3.9	17.5	3.6	0.13	0.88
Index of Work Satisfaction	27.9	5.5	27.0	7.2	28.9	7.0	1.26	0.29

df = 2, 179

The amount of managed care in which a NP practices did not create a significant difference on the Nursing Autonomy Scale, the Professional Inventory or the Index of Work Satisfaction.

In order to further understand managed care and its

emergence into healthcare, additional analysis was done to understand the varying levels of managed care in different practice settings, areas of practice and practice locations. A frequency count, with percentages was completed to analyze this question. Table 4.19 illustrates the managed care distribution.

Table 4.19

Managed Care Distribution

Managed Care Group	0-33% f (P)	34-66% f (P)	67-100% f (P)	Total
<u>Practice Setting (n = 182)</u>				
Independent Practice	3(25%)	0	9(75%)	12
In-hospital practice	22(51.2%)	11(25.6%)	10(23.2%)	43
Ambulatory practice	18(22.8%)	18(22.8%)	43(54.4%)	79
Non-hospital comm. setting	11(57.9%)	5(26.3%)	3(15.8%)	19
School setting (K-12)	0	2(28.6%)	5(71.4%)	7
Other	10(45.5%)	7(31.8%)	5(22.7%)	22
Total	64	43	75	
<u>Area of Practice (n = 182)</u>				
Pediatric	18(26.1%)	10(14.5%)	41(59.4%)	69
Family	4(36.4%)	4(36.4%)	3(27.2%)	11
OB/GYN	20(35.1%)	18(31.6%)	19(33.3%)	57
Neonatal	20(52.6%)	10(26.3%)	8(21.1%)	38
School	0	0	4(100%)	4
Other	2(66.7%)	1(33.3%)	0	3
Total	64	43	75	
<u>Practice Location (n = 180)</u>				
Inner City	18(35.3%)	11(21.6%)	22(43.1%)	51
Suburban	36(34.6%)	27(26%)	41(39.4%)	104
Rural	10(40%)	5(20%)	10(40%)	25
Total	64	43	73	

The percentage of managed care varies among practice settings, practice specialty area and location.

Demographic Variables

The next research question explored the relationship between demographic variables and perceptions of autonomy. The independent variables included in the analysis were age, number of years certified, number of years since graduation, number of years employed as a NP, and number of years as a RN before becoming a NP. All of the variables were measured in years. A correlation coefficient was computed to explore the correlation between each of the variables. Table 4.20 presents the Pearson correlation matrix.

Table 4.20

Pearson Correlation Matrix for  
Demographic Variables (N = 194)

	Age	Years NP Employ	Years RN Practice	Years since graduation	<u>M</u>	<u>SD</u>
Age	1.0				42.2	7.4
Years NP Employment	0.52*				8.4	6.2
Years in RN Practice	0.49*	-0.12			9.6	6.4
Years since graduation	0.56*	0.76*	-0.14*		8.8	6.5
Years certified	0.55*	0.77*	-0.11	0.92*	7.6	5.5

\*p < 0.05

A significant positive correlation was found between age and each of the variables. A significant positive

correlation was found between years of NP employment and years since graduation and years certified. A significant negative correlation was found between years since graduation and years of RN practice. A significant high positive correlation was found between years since graduation and years certified.

To determine which variables contributed to the autonomy scores and to what degree, stepwise multiple regression analysis was done. Table 4.21 illustrates the results of the stepwise multiple regression for predicting the dependent variable, autonomy.

Table 4.21

Stepwise Multiple Regression Analysis for the Relationship  
Among Demographic Variables and Autonomy Scales (N =183)

	<u>B</u>	<u>SE B</u>	<u>B</u>	<u>t</u>	<u>p</u>
<u>Professional Inventory</u>					
1. Age	0.08	0.59	0.16	1.38	0.17
2. Years certified	0.07	0.14	0.11	0.54	0.59
3. Years employed	0.11	0.10	0.18	1.07	0.28
4. Years since graduation	-0.14	0.11	-0.26	-1.34	0.18
5. Years in practice as RN	0.01	0.06	0.26	0.26	0.79
<hr/>					
$R^2 = 0.051, F = 1.962, p = 0.086$					
<u>Index of Work Satisfaction</u>					
1. Age	0.25	0.11	0.27	2.30	0.02*
2. Years certified	0.19	0.26	0.15	0.75	0.45
3. Years employed	-0.35	0.19	0.32	1.87	0.06
4. Years since graduation	0.67	0.20	-0.64	-3.33	0.00*
5. Years in practice as RN	-0.15	0.11	-0.14	-1.42	0.16
<hr/>					
$R^2 = 0.083, F = 3.322, p = 0.007^*$					
<u>Nursing Autonomy Scale</u>					
1. Age	0.44	0.16	0.32	2.77	0.01*
2. Years certified	-0.33	0.37	-0.18	-0.88	0.38
3. Years employed	-0.18	0.27	-0.11	-0.64	0.52
4. Years since graduation	0.06	0.29	0.04	0.21	0.84
5. Years in practice as RN	0.11	0.15	0.07	0.71	0.4
<hr/>					
$R^2 = 0.106, F = 4.348, p = 0.001^*$					

On the Index of Work Satisfaction, the  $R^2$  indicates that eight percent of the variance in autonomy scores can be explained by the combined influence of age, years certified, years since graduation, years employed and years of RN



experience. On the Nursing Autonomy Scale, the  $R^2$  indicates that eleven percent of the variance in autonomy scores can be explained by the combined influence of age, years certified, years since graduation, years employed and years of RN experience. Although these provide statistically significant results, the low  $R^2$  values have no practical application.

Further examination of the regression data for both the Index of Work Satisfaction and the Nursing Autonomy Scale revealed large changes in the estimated coefficients. Only age and years since graduation were statistically significant ( $p = 0.02$  and  $p = 0.00$ ) for the Index of Work Satisfaction and only age ( $p = 0.01$ ) was statistically significant for the Nursing Autonomy Scale. Furthermore, On the Index of Work Satisfaction two coefficients (years employed and years in practice as RN) had negative signs and on the Nursing Autonomy Scale both years certified and years employed had negative coefficients. In addition, there were high correlations among the independent variables (see Table 4.20). Therefore, it was determined that multicollinearity was present. Multicollinearity often impairs the usefulness of a regression analysis, particularly the ability to determine the effects of the various independent factor variables (Freund & Wilson, 1998). Therefore, no further interpretation of the individual variables was completed.

In addition, the categorical variables gender, ethnic

background, type of NP education and highest level of education were analyzed to evaluate if the sample means of the groups were different from one another. The first factor examined was gender. The two gender groups were male and female. Of the 194 practicing NPs, 192 were female and only two were males. Because of the uneven distribution and small group size, no analysis was performed on the gender variable. The second area explored was ethnic background. Again, the group sizes were unevenly distributed and inadequate to perform analysis (African/American = 9, White = 180, Asian = 2, and Hispanic = 2).

The next factor explored was type of NP education. An independent  $t$ -test was conducted to explore this relationship. Because there was only one participant who responded that a bachelor's degree program was the preparation for NP education and only four participants answered other regarding their NP program, these two categories were eliminated from the data analysis. The sample size for this analysis, therefore, was 189. Table 4.22 shows the  $t$ -test results for the variable of NP education.

Table 4.22

t-test on Autonomy Scales for Educational Preparation

Dep. Var.	Master's (n = 94)		Certificate (n = 95)		t	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Nursing Autonomy Scale	106.45	8.77	101.91	10.96	-3.15	0.00
Professional Inventory	17.55	3.39	16.79	3.73	-1.47	0.14
Index of Work Satisfaction	27.81	6.53	27.15	7.33	0.65	0.51

df = 187

A significant difference was found between the means of the NPs who were prepared in master's degree programs and those who were prepared in certificate programs on the Nursing Autonomy Scale. A significant difference was not found between the means of the NPs who were prepared in master's degree programs and those who were prepared in certificate programs on the Professional Inventory or the Index of Work Satisfaction.

In addition, the variable of highest level of education was examined. In order to create groups of significant size,

the groups were consolidated into two groups. The groups were defined as those with a bachelor's degree or lower, and those with a master's degree or higher. An independent t-test was conducted to explore the difference in the means of the two groups on the autonomy scales. Table 4.23 presents the analysis.

Table 4.23

Independent t-test on Autonomy Scales  
for Highest Level of Education (N = 194)

Dep. Var.	Bachelor's or less ( <u>n</u> = 65)		Master's or higher ( <u>n</u> = 129)		t	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Nursing	100.57	12.10	106.19	8.50	3.75	0.00
Autonomy Scale						
Professional	17.25	3.77	17.31	3.59	0.12	0.92
Inventory						
Index of Work	27.63	7.35	27.66	6.74	0.03	0.98
Satisfaction						

df = 192

A significant difference was found between the means of the NPs who had a master's degree or higher and those who had a bachelor's degree or less on the Nursing Autonomy Scale. A significant difference was not found between the

means of the NPs who had a master's degree or higher and those who had a bachelor's degree or less on the Professional Inventory or the Index of Work Satisfaction.

To further discern the impact of educational background, additional analysis was done to explore the relationship between type of NP educational program and year of graduation, and highest level of education and years since graduation. The participants were categorized into groups as described above. Two independent t-test were performed. Table 4.24 and Table 4.25 illustrate the results of the t-tests.

Table 4.24

t-test on Years since Graduation and

Type of NP Educational Program (N = 189)

Dep. Var.	Master's (n = 94)		Certificate (n = 95)		t	p
	M	SD	M	SD		
Years since graduation	6.54	5.50	11.01	6.43	5.11	0.00

df = 185

Table 4.25

t-test on Years since Graduation and  
Highest Level of Education (N = 193)

Dep. Var.	Master's or higher (n = 127)		Bachelor's or lower (n = 65)		t	p
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>		
Years since graduation	7.45	5.80	11.41	6.96	-4.18	0.00

df = 190

A significant difference was found between the groups both for the type of NP educational program attended and the highest level of education obtained.

Evaluation of Autonomy Scales

The three autonomy scales used in the study were the Nursing Autonomy Scale, the Professional Inventory and the Index of Work Satisfaction. It was important to consider the principles of validity and reliability to determine the quality of the instruments used in the study. In addition the overall scores on the autonomy measures were examined. Descriptive statistics were used to describe the autonomy scores for the sample. Table 4.26 depicts the NPs scores on each of the autonomy measures.

Table 4.26

Autonomy Scores for NP Sample (N = 194)

	Professional Inventory	Index of Work Satisfaction	Nursing Autonomy Scale
Highest Possible	25.00	35.00	131.00
Lowest Possible	5.00	5.00	33.00
Minimum Score	5.00	5.00	66.00
Maximum Score	25.00	35.00	125.00
<u>M</u>	17.23	27.65	104.30
<u>SD</u>	3.64	6.93	10.18

Validity

The three autonomy scales have varying theoretical approaches to autonomy; therefore, it was meaningful to examine the relationship between the scales.

The Nursing Autonomy Scale was originally designed as a subscale of the Patients' Rights and Nursing Autonomy Questionnaire (Pankratz & Pankratz, 1974). The autonomy section is one of three subscales of the questionnaire. Autonomy is considered to be the extent that nurses feel comfortable in taking initiative and responsibility in the hospital. The focus of the items is specifically on nurses employed in the hospital setting regarding the degree to which they were willing to assert themselves within the

environment (Pankratz & Pankratz, 1974). The focus is on the view of the nurse regarding dependence verses independence as a patient advocate. The authors contend that in order to be a patient advocate, nurses must feel that they have some influence on the system. The autonomy dimension centers on the nurse's perception of how much latitude nurses have, are allowed or would be willing to take in functioning as a responsible professional.

The Professional Inventory autonomy scale is a subscale of the entire Professional Inventory, which is an attitude scale designed to measure the degree of professionalism among practitioners of various occupations. Autonomy is considered a professional attitude consisting of a practitioner's desire to be free to make decisions about work. The autonomy component of the scale was designed to measure the dimension of autonomy as it relates to a professional's feelings in regard to the threat of external pressures on independence or decision making. The items focus on issues of making decisions without review and exercising one's own judgement.

The Index of Work Satisfaction was designed based on the theoretical underpinnings of occupational sociology and specific concerns in nursing work satisfaction (Stamps & Piedmonte, 1986). The autonomy component is just one dimension that may contribute to work satisfaction. Stamps and Piedmonte (1986) define autonomy as the amount of work-



related independence, initiative, and freedom either permitted or required in daily work activities. In the Index of Work Satisfaction, the autonomy items are limited to a focus on issues related to freedom on the job and supervision of work activities.

In order to examine the relationship between the scales, concurrent criterion-related validity was examined. This is an empirical procedure that results in a correlation coefficient used to describe the degree of relationship between measures given at the same time. A Pearson correlation was performed to examine this relationship. Table 4.27 presents the findings of the Pearson correlation.

Table 4.27

Pearson Correlation for Autonomy Scales (N = 194)

	Nursing Autonomy Scale	Index of Work Satisfaction	Professional Inventory	<u>M</u>	<u>SD</u>
Nursing Autonomy Scale	1.0			17.23	3.64
Index of Work Satisfaction	0.15*	1.0		27.65	6.93
Professional Inventory	0.31*	0.57*	1.0	104.30	10.18

\*p &lt; 0.05

A significant correlation was found between the Professional Inventory and the Nursing Autonomy Scale as well as the Professional Inventory and the Index of Work Satisfaction and the Index of Work Satisfaction and the Nursing Autonomy Scale.

Reliability

Internal consistency, or homogeneity is the most common type of reliability. The Cronbach alpha assumes equivalence of all items in the instrument. It is generally the most appropriate type of reliability for survey research and other questionnaires in which there is a range of possible answers for each item. Using SPSS 7.5 for Windows, the reliability coefficient for each of the scales was calculated. Table 4.28 reports the Cronbach alpha for each of the scales.

Table 4.28

Reliability Coefficient of Autonomy Scales

Autonomy Scale	Cronbach Alpha
Professional Inventory	0.69
Index of Work Satisfaction	0.84
Nursing Autonomy Scale	0.77

McMillan and Schumacher (1993) suggest that a reliability coefficient of 0.65 or higher is acceptable for an instrument that is measuring personality traits. The Professional Inventory, the Index of Work Satisfaction and the Nursing Autonomy Scale each have an acceptable reliability coefficient, meaning that the scales have satisfactory internal consistency.

Summary

A total of 227 NPs responded to the NPQ. This represented a 76 per cent return rate. The participants were described, data were analyzed according to the five research questions, and the instruments were further evaluated. A discussion of the findings, the conclusion, recommendations for future study and recommendations for the profession is presented in Chapter V.

## CHAPTER V

### Conclusions and Recommendations

This study was designed to identify and describe the possible components of structural autonomy that may influence NPs perceptions of independence in practice. Based on a conceptual framework, the study describes these components as 1) NP state regulatory practices, 2) educational background, and 3) managed care environment. In addition, the study explored the relationship between NP structural autonomy as it relates to the above components and attitudinal autonomy as it relates to NPs' perceptions of independence in practice. This topic is considered worthy of study because limited perceptual autonomy of NPs may be related to a failure to develop a strong sense of professional autonomy. Lack of professional autonomy may lead NPs to practice advanced nursing in a constricted manner. The problems associated with the regulation of advanced practice nursing, such as unnecessary barriers and restrictions to practice for NPs, may limit consumer access to high quality, reasonably priced care.

A review of the literature on NP role development, the hypothesized components of structural autonomy and the

concept of autonomy revealed that no current data base existed that offered insight into the perspective of NPs as to perceptions of autonomy. The researcher postulated that practicing NP's perceptual autonomy was the outcome of the three separate components of structural autonomy. The hypothesis was that structural autonomy consisted of practice environment, educational background, and managed care. It was believed that NPs with high structural autonomy would also have high perceptual autonomy. Consequently, NPs who practice in a favorable practice environment, who had a strong NP role model as a student, who had high pharmacology preparedness, and who practiced within a limited managed care environment would score higher on scales measuring autonomy.

A series of research questions were developed that guided the design and implementation of this research. The following areas were investigated:

1. The state regulations regarding NP practice and their possible effect on perceptual autonomy.
2. The educational background of NPs including the NPs' preceptor and pharmacology training offered in the educational program and their possible effect on perceptual autonomy.
3. The extent that managed care in NPs' environments may affect perceptual autonomy.
4. The demographic factors that may affect perceptual

autonomy.

After a thorough search of the literature, no one suitable tool was found to measure all components of perceptual autonomy. Therefore, three separate autonomy scales were used. In addition, a demographic data section was developed and included in the instrument. Of the 300 questionnaires that were mailed, 227 were returned, representing a return rate of 76 percent.

After all respondents answered a series of demographic questions, they were asked whether they were still practicing as NPs. Of the 227 respondent, 194 were still practicing as a NP. These 194 served as the basis for data analysis for the research questions.

The general profile of the NP participants was a white female, 42.6 years of age, who graduated from either a master's degree program or a certificate program between the years of 1987 and 1995 and had been practicing as a NP an average of 8.4 years. The majority of the NPs were pediatric nurse practitioners, practicing in an ambulatory setting in a suburban location. The average percent of managed care in the practice setting was 53%.

The investigator was not able to compare the sample's autonomy scores to those of other nurses, advanced practice nurses or other healthcare professionals. The subscale portions of the Nursing Autonomy Scale, the Index of Work Satisfaction and the Professional Inventory have not been

used in previous investigations of this type, to this investigators's knowledge. Overall, however, the autonomy scores seem moderately high. On the Professional Inventory, the mean score was 17.23 out of a possible score range of five to 25. On the Index of Work Satisfaction, the mean score was 27.65 out of a possible score range of five to 35. On the Nursing Autonomy Scale the mean score was 104.30 out of a possible score range of 33 to 131.

### Conclusions

Based on the findings of a sample of 227 certified NPs, several conclusions were made. The concept explored in each research question is used as an outline for the conclusions.

#### Structural Autonomy

The first research question explored the relationship among NPs' perceptions of professional autonomy for NPs who practice in a restricted practice environment, NPs who practice in a moderate practice environment and NPs who practice in a favorable practice environment. Based on current advanced nursing practice regulations for each state, NPs were grouped into one of three practice groups. The groups were identified as restricted practice environment, moderate practice environment, and favorable practice environment.

The investigator concluded that on the three autonomy measures - Nursing Autonomy Scale, Professional Inventory, and Index of Work Satisfaction - there were no significant

differences among state practice groups. This suggests that the state practice environment, including legal status of NPs and the prescriptive authority granted to NPs, does not have a significant effect on perceptions of autonomy. The similarity among groups in perceptual autonomy attitudes may be indicative of current trends in healthcare relative to the consumer. As the client emerges as an informed participant in healthcare, the healthcare provider moves toward the role of advocate for the consumer (Hicks, Stallmeyer & Coleman, 1992). This new belief focuses on providing patients with enough information to enable them to make their own healthcare decisions, leading to a unconventional, and possibly less autonomous role for the healthcare provider. It is also important to note that ninety-two percent of the participants were in practice in the maternal-child specialty area. The concept of family participation in healthcare has been instituted in maternal-child nursing for several years (Jones, 1994). Thus, NPs in this specialty area may be more likely to take on the role of advocate, rather than autonomous caregiver.

The findings suggest that perceptual autonomy is not necessarily affected by structural autonomy, but instead is an internal conviction. Engel (1970) suggested that autonomy may exist through definition of work-related autonomy, which is the freedom for the professional to practice the profession in accordance with professional training. NPs, in



their professional training, are prepared for advanced practice and usually function in that role. Thus, NPs' perceptions of autonomy may reflect their professional training and expected practice, not their structural setting. Another possibility about the results can be derived from other autonomy interpretations. Forsyth and Danisiewicz (1985) conceptualized one part of autonomy to include the client's public perceptions of the profession. The authors related the public's evaluation of the occupation's claim to professional status to the possible formation of professional autonomy, associating development of a set of beliefs by the public that an occupation performs an essential, exclusive, and complex service to the development of autonomy. Healthcare reform has provided opportunities for the expansion of NPs autonomous role. In many states, NPs have achieved authority for the direct payment of their services under federal health programs. This increased authority has positioned NPs as direct providers of primary care and visible members of the healthcare team. This successful public recognition, a concept that is larger than legal recognition or licensure, is likely to result in a sense of autonomy and may be reflected in the autonomy scores.

Yet another possible explanation of the findings can be found in earlier autonomy literature. Hall (1968) described components of attitudinal autonomy to include the following:

use of the professional organization as a major reference; belief in service to the public; and belief in self-regulation with colleague control. As reflected in the American Association of Nurse Practitioners (AANP) Scope of Practice (1993), NPs have developed the above components of attitudinal autonomy. The Scope of Practice describes NPs as advanced practice nurses who provide primary healthcare and specialized health services to individuals, families, groups and communities. The AANP recommends the completion of a formal, graduate educational program and a commitment to life long learning and professional self development. Thus, the autonomy scores may be reflective of the fact that these components of attitudinal autonomy are present for most NPs.

#### Preceptor Experience

The second research question focused on NPs' perceptions of professional autonomy as they relate to the type of preceptor NPs had in their educational program. Specifically, the question was whether NPs' perception of professional autonomy varied between NPs who have had NPs as preceptors and those who had physicians as preceptors.

The investigator found that on the three autonomy measures, the Nursing Autonomy Scale, the Professional Inventory, and the Index of Work Satisfaction, there were no significant differences between NPs who had a NP preceptor and NPs who had a physician preceptor. This finding suggests that the preceptor experience may not be the period of time

in which professional role socialization takes place. Preceptors introduce students to the clinical setting and work with students to provide clinical assignments based on course objectives and student learning needs. The preceptor experience, in a clinical "hands-on" setting, tends to focus on the mastery of technical skills. Clinical preceptors, either NP or physician, are adequate for the providing the NP with the clinical component of the experience.

Professional role socialization, therefore, may not begin until the student is out of the clinical training situation.

Since NPs who had a NP for a preceptor did not have a greater perception of professional autonomy than NPs who had a physician for a preceptor, this study did not demonstrate the need for NP educational programs to utilize only NP preceptors for the clinical component of NP education. Preceptor supervision by a physician may actually complement the co-worker relationship of the NP and physician instead of setting the stage for decreased autonomy. Freidson (1984) stated that, at the very least, the first line of hierarchical supervision of professional employees should always be filled by a member of the profession. In the case of clinical "hands-on" training, however, the role of the teacher is not necessarily a professional role model but instead a clinical instructor. The National Organization of Nurse Practitioner Faculties (1995) suggests that on-site clinical supervision can be shared with a variety of

competent clinicians including NPs, other advanced practice nurses, physicians, and physician assistants.

Educational programs need to ensure an opportunity for professional role development, above and beyond the clinical technical skills experience. If a NP educational program plans for the introduction and socialization of a student to the NP role to take place in the clinical setting, a physician may not be able to provide that experience. A physician, as a role model, cannot share the values, attitudes, beliefs, and philosophies about NP practice. It is impossible for a physician to demonstrate to students how NPs behave, how they interact with physicians and other health professionals, and ways to resolve interdisciplinary and organizational conflicts. The NP student needs opportunities to integrate professional role behaviors sometime in the NP curriculum.

The data regarding the year of graduation and the type of preceptor that a NP had also shed light on current trends in NP education. As expected, a large percent of NPs who graduated before 1986 were trained by physicians. This is reflective of initial NP curricula. The trend toward NP preceptors after 1986 was expected as more NPs were available in the clinical setting and NP programs moved to a nursing orientation. The fact that fifty percent of NPs who graduated in both 1995 and 1996 were trained by physicians was quite surprising. Most NP programs advocate a strong NP

preceptor, so it was surprising to find that in this sample there were not more NP preceptors. One possibility is that there is an inadequate supply of NP preceptors available to provide a clinical experience, which may lead to the use of physician preceptors.

#### Pharmacology Education

The third research question explored the differences in perceptions of professional autonomy between NPs with different levels of pharmacology education. The investigator found that pharmacology preparedness did not affect perceptions of autonomy on the three autonomy measures. NPs who were well prepared in pharmacology did not have a greater sense of autonomy than those who were not well prepared. This finding suggests that pharmacology preparedness is not necessarily a component of structural autonomy or that knowledge in itself does not constitute structural autonomy.

The fact that not all NPs feel adequately prepared for the autonomous responsibility of writing prescriptions upon graduation is important for educators. Only 66 percent of the NPs felt either sufficiently prepared or extremely well prepared in pharmacology upon graduation from their NP program. This means that 33 percent of the NPs felt inadequately prepared to write prescriptions. Pharmacology education is a key to successful implementation of the NP role. NP educational programs may need to increase the

pharmacology content of their curricula in order to prepare independent NPs. Debate continues to surround prescription regulations for NPs. Opponents charge that the public will be jeopardized by non-physician prescribers whom they believe will prescribe less effectively than physicians, while proponents contend that without legal authorization to prescribe, the ability of NPS to fully serve the public is limited. Educators clearly need to respond to and adequately prepare NPs in pharmacology.

The investigator also found that the type of pharmacology education had an influence on NPs pharmacology preparedness. Of the 93 NPs who had pharmacology as an integrated part of the curriculum and the 72 NPs who had pharmacology as a separate course, 71 percent and 72 percent, respectively, felt prepared in pharmacology. However, 18 NPs stated that they had not had a pharmacology course and 100 percent of these NPs felt inadequately prepared in pharmacology. It was also interesting to note that of the 10 NPs who responded that their pharmacology education had been offered as both a separate course and integrated throughout the curriculum, 100 percent felt prepared in pharmacology. The number of pharmacology credit hours also had an impact on NP pharmacology preparedness. Of the NPs who felt inadequately prepared in pharmacology, 90 percent had taken 3 or less credit hours in pharmacology. The above findings suggest that pharmacology education

should have sufficient credit hours and can be taught as a separate course or integrated into the curriculum. This coursework should include both general and specialty pharmacological and therapeutic content. Pharmacologic management is a critical component of the comprehensive assessment and management of patients with specialized healthcare needs.

#### Managed Care Environment

The fourth research question dealt with NP perceptions of professional autonomy in relationship to managed care. The specific question was whether the perceptions of NPs who practice in a managed care environment differ from those NPs who do not practice in a managed care environment.

The investigator found that the percentage of managed care in a NP environment did not have an effect on the perception of autonomy. This finding suggests that the emergence of managed care organizations may be seen as an opportunity for NPs and not as a threat to autonomy. The goal of managed care organizations is congruent with the basic philosophy of nursing, which focuses on the total needs of the patient, and on maintaining the health of the individual. Within the structure of managed care there is a need for strong professional advocacy to ensure that the needs of the members are adequately met as the organization strives to maintain costs. In meeting the needs of the organization and of the members, NPs play an important role

in the managing the resources used in producing healthcare services.

Primary healthcare is a fundamental service of managed care organizations in their attempt to minimize the need for more specialized, resource intensive services. NPs have a major role in the delivery of primary care in managed care organizations. In general, NPs perform health assessments, monitor chronic illness, provide direct patient care for acute problems, and provide education to patients regarding a wide range of issues (Davis, 1990). NP care impacts positively on patient outcomes and is a cost effective way to achieve desired outcomes.

Mezey (1986) advocates strengthening the role of NPs as a primary care provider, with physicians acting in the consultative role. Because a primary focus of nursing is health maintenance, NPs can assume a leadership role in the coordination of such services to ensure comprehensive and individualized care. NPs have the knowledge and abilities to assume key positions in coordinating such services, especially in view of the trend toward emphasizing the total needs of the child and family. As managed care continues to emerge, NPs' sense of autonomy will likely increase with the changing role.

It is important to note here the limitations of the managed care measurement used in this study. Although the instrument used determined the percentage of patients



participating in managed care, it did not thoroughly measure all aspects of managed care. Several different types of managed care models exist, including independent practice associations, networks, group or staff models, and others. In each version of managed care, the role of the NP varies. The item on the instrument was not able to measure all the components of managed care that may impact the NP.

#### Demographic Variables

The fifth research question examined the demographic variables of the participants. The question asked was whether there is a relationship between demographic variables (age, gender, ethnic background, years employed as a NP, type of educational program, and type and location of practice setting) and perceptions of autonomy.

The investigator did not find a significant relationship among the demographic variables of age, years since graduation, years certified, years employed, and years in practice as an RN and perceptions of autonomy, as measured on the Nursing Autonomy Scale, the Professional Inventory and the Index of Work Satisfaction. The lack of relationships may be indicative of the homogeneity of the sample. In addition, the strong relationships among the independent variables may have been the cause for the regressions to have small magnitudes. It also may indicate that the type of individual who pursues advanced NP education may be a more autonomous individual than the nurse

who does not pursue advanced study. This conclusion is supported by Thibodeau & Hawkins' (1994) national random sample of 482 NPs. The authors found that NPs are very confident about their practice skills and knowledge and have a very strong nursing orientation. The authors found a direct positive correlation between level of confidence and degree of nursing orientation.

Additional demographic variables explored included the type of NP educational preparation and highest level of education and the relationship to perceptions of autonomy. The NPs who had graduated from a master's degree NP program had significantly higher autonomy scores than the NPs who had graduated from a certificate level NP program on the Nursing Autonomy Scale autonomy measure. In addition, NPs who had a master's degree or higher had significantly higher autonomy scores than NPs who had a bachelor's degree or less on the Nursing Autonomy Scale autonomy measure. This finding is not surprising, since master's level NP programs advocate professional role development, including values of professional practice and autonomy to practice as part of the curriculum (NONPF, 1995).

The number of years since graduation was significantly different for the groups based on their educational background as well. NPs who had graduated from a master's degree NP program had been out of school for an average of six years, while NPs who had graduated from a certificate

level program had been out of school for an average of eleven years. In addition, NPs who had a master's degree or higher had been out of school for an average of seven years, while NPs with a bachelor's degree or lower, had been out of school an average of eleven years. Again, the finding is not surprising. The American Nurses Association (1995) asserts that the acquisition of specialized knowledge and skills needed by NPs is attained through graduate level courses. Over the last decade, the NP role has evolved into one of advanced nursing practice, and the educational requirements have moved toward graduate education (NONPF, 1995).

#### Research Questions Review

No statistically significant differences in perceptions of autonomy were found among groups with varying educational backgrounds, varying practice environments and varying levels of managed care. These findings suggest that most NPs feel sufficiently autonomous in practice, and the educational background and the practice environment do not have a significant impact on these perceptions. NPs provide healthcare services on a daily basis in conjunction with other healthcare professionals. Given the nature and the variety of clients' healthcare needs and presenting problems, the need for autonomy in the NP role may actually be satisfied within the independent, dependent and interdependent functions in which the NP is involved. Comprehensive primary care is a collaborative endeavor,

requiring the unique expertise of many individuals. In this type of healthcare delivery situation, individual needs for autonomy may assume less importance, while the collaborative nature of the role creates an internal sense of autonomy.

These findings also suggest that the components of practice environment are not limited to prescriptive authority and NP legal status, educational background and managed care circumstances. The components of structural autonomy may be much more complex and intricate than originally hypothesized.

#### Recommendations for Further Research

Findings of this study have added to the knowledge of the role of the NP. Additional areas of study, however, might lead to a better understanding of autonomy as it relates to NPs. Further studies that might be undertaken and the rationale for the recommendations follow.

#### Generalizability

Generalizability of the findings of this investigator have to be constrained by the inherent limitations of the methodology. Because state practice environments were determined based on a combination of legal authority for scope of practice and prescriptive authority, it is impossible to determine the separate effect of either of these variables. It is recommended that the individual components of legal authority and prescriptive authority be investigated as separate variables. Two additional

components of practice environment, third party reimbursement and primary care provider designation, should also be examined. The results of such a study may provide data related to the separate components of practice environment, rather than the combination of these components. Additional variables that were not considered include the actual practice agreement that NPs have established with the physician, the type of responsibilities that NPs are given in the practice setting, the amount of collegial NP support that NPs have available, and NPs' participation in professional activities. It is reasonable to consider that these factors may also contribute to NPs' sense of autonomy.

#### Instrument Development

It is recommended that a questionnaire be developed that incorporates the items for the Nursing Autonomy Scale, the Professional Inventory and the Index of Work Satisfaction and new items that are designed to reflect the issues in contemporary healthcare including quality assurance and advanced practice nursing. The Nursing Autonomy Scale focused more on the role of the hospital staff nurse. A new instrument could explore autonomy for the nurse in advanced practice. The Professional Inventory has two items that deal directly with having one's work reviewed. The questions reflect that having one's work reviewed is contrary to a sense of autonomy. With the

current emphasis on quality improvement efforts, however, continuous review of procedures, processes and activities is advised. Performance measures of quality of care include process measures reflecting what is actually done in giving and receiving care and outcome measures concerned with the effect of care on health status, knowledge and patient satisfaction (Donnabedian, 1992). The two items which ask about decision review, therefore, are contrary to current practice and no longer seem appropriate as autonomy measures.

The three scales used also could be confusing to the participant. The Professional Inventory response scale has five intervals ranging from very well to very poorly. The Index of Work Satisfaction response scale has seven intervals ranging from disagree to agree. The Nursing Autonomy Scale response scale has five intervals ranging from strongly agree to strongly disagree. The variation in the number of intervals, as well as the direction of the responses could be confusing to the participant. It would be beneficial for the scales to be consolidated into one instrument which had only one ranking direction and equal intervals for each item.

#### Qualitative Inquiry

It is recommended that a qualitative investigation be conducted to further explore the preceptor/student experience. This one-to-one relationship between an

experienced practitioner and a student NP is complex and could be further understood with an in depth study of the experience. The focus of the study could be on preceptor qualities that are valued by students, sources of conflict in the student-preceptor relationship, physician preceptors' understanding of the NP role, students' expectations of the preceptor experience, and NP faculty responsibilities when the student is completing the preceptor experience. Additional concepts may emerge during such a study that would lead to additional inquiry.

In addition, it is recommended that a qualitative investigation be conducted to further explore the concept of autonomy as it relates to the NP role. Further inquiry may provide a more thorough conceptual framework of the issues related to both structural and attitudinal autonomy for NPs. Indepth inquiry might include extensive interviews, participant observation, or case studies. Additionally, analytical studies, both historical and legal, might provide a comprehensive understanding of the regulations that have affected NPs' autonomy in practice since the inception of the NP role in 1965.

#### Continuing Pharmacology Education

This study did not compare those states that require ongoing pharmacology education to those states who do not, nor did it examine the amount of pharmacology knowledge that is gained by experience. Future studies could examine this.

Although some NPs may complete their training without feeling sufficiently prepared in pharmacology, knowledge may be gained through experience and continuing education. It is important to understand how pharmacology preparedness may change as NPs gain experience in the practice setting and with continuing education.

#### Managed Care

No single, uniformly accepted definition for managed care presently exists. Managed care spans a broad continuum of entities, from the simple requirement of prior authorization for a service in an indemnity health insurance plan to the assumption of all legal, financial, and organizational risks for providing comprehensive benefits to a defined population. In general, very little is known about the arrangements between NPs and managed care plans. Further study to analyze all aspects of NPs' actual managed care circumstances would be useful.

#### Implications

Although the results of this study did not show a relationship between perceptual autonomy and structural autonomy, the study may provide a better understanding of the role of NPs and issues that are relevant to practice for NPs. The current number of NPs remains inadequate to meet the demands for healthcare today. The researcher continues to advocate that any policies which mandate complex physician arrangements for supervision or policies that



limit independent practice may be counter productive to the NP role. Ultimately, it is the individual states through their licensure responsibility that determine the legal practice boundaries of professions. The states must adopt nurse practice regulations flexible enough to allow for expanded nursing practice. NPs must be allowed to assume responsibility for the health and nursing care which is their area of expertise.

NP educational programs must examine curricula to ensure that NPs are prepared to practice in an independent, yet collaborative role. It is recommended that educators in practitioner programs include content of pharmacology in their programs. The content can be offered as a separate course or integrated within the curriculum, however, it is necessary to ensure sufficient credit hours are offered to prepare NPs for independent prescriptive authority. It is also suggested that the preceptor experience should be with a strong clinical instructor. This ensures that NPs are competent in technical skills. Professional role models, however, are also important for NP students. When a NP preceptor is not available, program faculty should ensure that professional socialization is supported in other ways.

Very few minorities were certified as NPs. It is recommended that nursing strive to encourage this untapped resource for increasing the professional pool of advanced practice nurses. The National Organization of Nurse

Practitioner Faculties (NONPF) (1995) recognizes the challenge of recruitment and retainment of minority students. The NONPF suggest that a NP program that includes culturally diverse faculty will have greater success attracting minority students than will a homogenous majority faculty. The NONPF also advocates strategies for minority student recruitment which include participation in The National Health Service Corps Faculty Advocate/Mentor Network, advertisement in local and national publications targeted to minority undergraduates, establishment of alliances with institutions that have large populations of culturally diverse groups, and utilization of minority alumni to promote the program. The NONPF also encourages provision of financial, social and academic support to ensure minority success in the program. All NP programs must take into consideration the above recommendations to ensure a culturally diverse NP workforce.

These are only a few of the implications that must be addressed by the profession. As the role of the NP continues to expand, the answers will have a significant impact on the future of NPs in the modern healthcare environment.

#### Summary

This study provided one possible framework for understanding the components of structural autonomy for nurse practitioners and the relationship these components may have to attitudinal autonomy. The study's findings,

however, lead the investigator to conclude that the conceptual framework did not capture all aspects of structural autonomy for NPs. The relationship between structural autonomy and attitudinal autonomy, therefore, was not completely explored. The study provides preliminary insight into the practice environment of NPs.

The study also explored pharmacology education and pharmacology preparedness in NPs. The findings can be useful for NP educators in determining the curriculum that will best prepare NPs for prescriptive authority and independent practice.

The investigator found no significant connection between NP state practice environments and perceptions of autonomy. Although no significant differences were found in this area, the information is important for legislators in understanding the type of statutes that may be most effective in a healthcare system during a time of change. As healthcare changes, the role of NP changes as well. In order for NPs to be utilized to their fullest potential, it is imperative that state health policies reflect the changing role of the NP. NPs must continue their efforts to achieve a satisfactory work environment or risk losing much of what they have achieved over the past decades.

## APPENDICES

## Appendix A

### COVER LETTER

July 23, 1997

Dear Colleague;

Advanced Nursing Practice Regulations vary from state to state. As we all know, the legislation regulating our professional practice has a great impact on the care that we are able to provide and how we feel about our work. As a doctoral student at the University of North Florida, I am interested in issues influencing Nurse Practitioners (NPs), particularly prescriptive authority and legal status and the relationship these variables may have to perceptual autonomy. My study will encompass six eastern states. The states are Alabama, Delaware, Florida, Maryland, Tennessee and Illinois. The selection was based on the varying practice environments in the states.

My data will be obtained by a mail survey which consists of a demographic questionnaire and a three separate instruments that measure autonomy. As a certified nurse practitioner in one of the above states, you are being asked to participate in this survey. Based on a pilot of the survey, it will require approximately 10-15 minutes to complete. Completion and return of the questionnaire will verify your willingness to participate.

Your responses will be kept strictly confidential, and results will be reported for aggregate groups only. A self-addressed, stamped envelope is provided for your convenience in returning the survey. Please return the completed survey by **August 10, 1997**.

I realize that you are very busy and may consider not completing the survey because of your time limitations. If so, please reconsider. Your input is very important, and an acceptable return rate is necessary to ensure that your state is represented. In addition to providing valuable feedback which may help nurse practitioners, you will be assisting me with my investigation. So please take a few minutes and complete the survey and mail it back to me.

Thank you in advance for taking the time to complete the survey.

Sincerely,

Dolores C. Jones, MSN, RN, CPNP  
Doctoral Candidate, University of North Florida

Appendix B

FOLLOW UP POST CARD

Dear Colleague,

Last week a questionnaire regarding Nurse Practitioner autonomy was mailed to you. Your name was randomly selected from certified Nurse Practitioners in one of six states. If you have already completed and returned it to me, I want to personally thank you for taking the time to complete it. If you have not filled out the questionnaire, please do so today. Although your participation is optional, it is important that your responses be included in the study. I appreciate your willingness to help me collect this information.

Sincerely,  
Dolores Jones

## Appendix C

### Demographic Questionnaire

Please complete the following information about yourself, your NP education, and your NP experience. There are two types of questions requiring your response. The majority of the questions ask you to circle your response and a few ask you to fill in the blanks. Also, most questions include an "OTHER" category for you to provide information that may not be included in the provided choices.

#### PART I - DEMOGRAPHIC DATA

Please circle your response or fill in the blanks.

1. In what state do you practice? \_\_\_\_\_
2. Sex: (1) M (2) F                      3. Age: \_\_\_\_\_
4. Ethnic Background:  
(1) African American  
(2) White/Caucasian  
(3) Asian  
(4) Hispanic  
(5) Other: \_\_\_\_\_
5. How many years have you been employed as a nurse practitioner? \_\_\_\_\_
6. What type of education prepared you as a nurse practitioner?  
(1) Bachelor's program  
(2) Master's program  
(3) Certificate program  
(4) Other: \_\_\_\_\_
7. In what year did you graduate from your nurse practitioner program? \_\_\_\_\_
8. What is the highest level of education completed?  
(1) Diploma  
(2) Associate Degree in Nursing  
(3) Bachelor's Degree in Nursing  
(4) Bachelor's Degree: Other (Please specify) \_\_\_\_\_  
(5) Master's Degree in Nursing  
(6) Master's Degree: Other (Please specify) \_\_\_\_\_  
(7) Doctorate Degree in Nursing  
(8) Doctorate Degree: Other (Please specify) \_\_\_\_\_

9. For how many years did you practice as a registered nurse before becoming a nurse practitioner? \_\_\_\_\_
10. In what year did you acquire certification as a nurse practitioner in your area of specialty?  
\_\_\_\_\_
11. Are you currently employed as a nurse practitioner?  
(1) yes  
(2) no

**To those who responded "no" to the previous question (11):**

*Thank you for your cooperation. Please return the questionnaire in the stamped, self-addressed envelope within the next few days.*

**To those who responded "yes" to the previous question (11):**

*Please continue to answer Part II of the questionnaire.*

## PART II

Directions: Please circle your answer or fill in the blanks.

12. What is your primary practice setting as a nurse practitioner?  
(1) Independent Practice  
(2) Extended care facility  
(3) In-hospital practice  
(4) Ambulatory practice  
(5) School of Nursing  
(6) Non hospital community setting  
(7) School setting (K-12)  
(6) Other (Please specify) \_\_\_\_\_
13. What is your primary area of expertise as a nurse practitioner?  
(1) Pediatric  
(2) Family  
(3) Geriatric  
(4) OB/GYN  
(5) Neonatal  
(6) Mental Health  
(7) Adult  
(8) School  
(9) Other (Please specify) \_\_\_\_\_



14. In what type of location is your primary employment setting?
  - (1) Inner City
  - (2) Suburban
  - (3) Rural
  
15. What percentage of your patients are affiliated with some type of managed care organization? \_\_\_\_\_
  
16. How many credit hours of pharmacology course work did you receive in your nurse practitioner training?
  - (1) 0 credit hours
  - (2) 1-3 credit hours
  - (3) 4-6 credit hours
  - (4) 7-10 credit hours
  
17. How was your pharmacology instruction offered during your nurse practitioner training?
  - (1) Integrated into other courses
  - (2) Offered as a separate course
  - (3) Not offered
  
18. How well prepared were you in pharmacology upon completion of your nurse practitioner training?
  - (1) Extremely well prepared
  - (2) Sufficiently prepared
  - (3) Inadequately prepared
  
19. How many hours of clinical training were included in your NP training?
  - (1) 1-100 hours
  - (2) 101-200 hours
  - (3) 201-300 hours
  - (4) 301-400 hours
  - (4) 401-500 hours
  - (5) 501-600 hours
  - (6) Greater than 601 hours
  
20. Who served as your primary preceptor during your NP training?
  - (1) Nurse Practitioner
  - (2) Physician
  - (3) Other: \_\_\_\_\_

Appendix D

Index of Work Satisfaction Scale

**Survey instrument deleted, paper copy is available upon request.**

Authors: Stamps, Paula, L. and Piedmonte, Eugene, B.

Appendix E

Professional Inventory

**Survey instrument deleted, paper copy is available upon request.**

Author: Hall, R.

Appendix F

Nursing Autonomy and Patients' Rights Questionnaire

**Survey instrument deleted, paper copy is available upon request.**

		Strongly Agree			Strongly Disagree	
13.	I generally know more about the patient than the doctor.	1	2	3	4	5
14.	Patients in a hospital have a right to select the type of treatments or care they wish.	1	2	3	4	5
15.	I would feel comfortable in authorizing a patient to leave the unit to go to another part of the hospital.	1	2	3	4	5
16.	It should be the doctor who decides if the patient can administer his own drugs.	1	2	3	4	5
17.	Patients should be permitted to wear what they want.	1	2	3	4	5
18.	I rarely give in to patient pressure.	1	2	3	4	5
19.	Nurses should be held solely legally responsible for their own actions and not expect to come under the umbrella of the doctor or hospital in a malpractice suit.	1	2	3	4	5
20.	Doctors must decide what nurses can and cannot do in the delivery of health care.	1	2	3	4	5
21.	It is the prerogative of the nurse to decide whether or not to wear a uniform.	1	2	3	4	5
22.	I would give the patient his diagnosis if he asks.	1	2	3	4	5
23.	It should be the nurse's decision when to talk to the terminal patient about his condition.	1	2	3	4	5
24.	I think it is my responsibility to initiate public health referrals on patients.	1	2	3	4	5
25.	I would never ask a patient about his or her sexual life.	1	2	3	4	5
26.	I would talk very little to patients about their past.	1	2	3	4	5

Authors: Pankratz, L. and Pankratz, D.

## NURSE PRACTITIONER QUESTIONNAIRE

This questionnaire is divided into two sections. The first section is a two part demographic questionnaire, and the second section contains three autonomy scales.

There are three types of questions requiring your response. The majority of the questions ask you to circle your response and a few ask you to fill in the blanks. Also, most questions include an "OTHER" category for you to provide information that may not be included in the provided choices. The third type of question asks you to rank your response on a scale of one to five.

## PART I - DEMOGRAPHIC DATA

Please circle your response or fill in the blanks.

1. In what state do you practice? \_\_\_\_\_
2. Sex: (1) M (2) F                      3. Age: \_\_\_\_\_
4. Ethnic Background:  
 (1) African American  
 (2) White/Caucasian  
 (3) Asian  
 (4) Hispanic  
 (5) Other: \_\_\_\_\_
5. How many years have you been employed as a nurse practitioner? \_\_\_\_\_
6. What type of education prepared you as a nurse practitioner?  
 (1) Bachelor's program                      (2) Master's program  
 (3) Certificate program                      (4) Other: \_\_\_\_\_
7. In what year did you graduate from your nurse practitioner program? \_\_\_\_\_
8. What is the highest level of education completed?  
 (1) Diploma  
 (2) Associate Degree in Nursing  
 (3) Bachelor's Degree in Nursing  
 (4) Bachelor's Degree: Other (Please specify) \_\_\_\_\_  
 (5) Master's Degree in Nursing  
 (6) Master's Degree: Other (Please specify) \_\_\_\_\_  
 (7) Doctorate Degree in Nursing  
 (8) Doctorate Degree: Other (Please specify) \_\_\_\_\_
9. For how many years did you practice as a registered nurse before becoming a nurse practitioner?  
 \_\_\_\_\_
10. In what year did you acquire certification as a nurse practitioner in your area of specialty? \_\_\_\_\_
11. Are you currently employed as a nurse practitioner?                      (1) yes (2) no

**To those who responded "no" to the previous question (11):**

*Thank you for your cooperation. Please return the questionnaire in the stamped, self-addressed envelope within the next few days.*

**To those who responded "yes" to the previous question (11):**

*Please continue to answer Part II of the questionnaire.*

## PART II

Directions: Please circle your answer or fill in the blanks.

12. What is your primary practice setting as a nurse practitioner?
  - (1) Independent Practice
  - (2) Extended care facility
  - (3) In-hospital practice
  - (4) Ambulatory practice
  - (5) School of Nursing
  - (6) Non hospital community setting
  - (7) School setting (K-12)
  - (8) Other (Please specify) \_\_\_\_\_
  
13. What is your primary area of expertise as a nurse practitioner?
  - (1) Pediatric      (2) Family
  - (3) Geriatric      (4) OB/GYN
  - (5) Neonatal      (6) Mental Health
  - (7) Adult      (8) School
  - (9) Other (Please specify) \_\_\_\_\_
  
14. In what type of location is your primary employment setting?
  - (1) Inner City      (2) Suburban
  - (3) Rural
  
15. What percentage of your patients are affiliated with some type of managed care organization? \_\_\_\_\_
  
16. How many credit hours of pharmacology course work did you receive in your nurse practitioner training?
  - (1) 0 credit hours      (2) 1-3 credit hours
  - (3) 4-6 credit hours      (4) 7-10 credit hours
  
17. How was your pharmacology instruction offered during your nurse practitioner training?
  - (1) Integrated into other courses
  - (2) Offered as a separate course
  - (3) Not offered
  
18. How well prepared were you in pharmacology upon completion of your nurse practitioner training?
  - (1) Extremely well prepared
  - (2) Sufficiently prepared
  - (3) Inadequately prepared
  
19. How many hours of clinical training were included in your NP training?
  - (1) 1-100 hours      (2) 101-200 hours
  - (3) 201-300 hours      (4) 301-400 hours
  - (4) 401-500 hours      (5) 501-600 hours
  - (6) Greater than 601 hours
  
20. Who was your primary preceptor (provided the most hours of clinical guidance and supervision) during your NP training?
  - (1) Nurse Practitioner      (2) Physician
  - (3) Other: \_\_\_\_\_

**PROFESSIONAL INVENTORY**

**Author: Hall, R.**

**Survey instrument deleted, paper copy is available upon request.**



**NURSING AUTONOMY AND PATIENTS' RIGHT QUESTIONNAIRE**

Authors: Pankratz, L. and Pankratz, D.

**Survey instrument deleted, paper copy is available upon request.**

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