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Nurse Practitioners' Beliefs Regarding Controlled Substance Prescriptive Privileges

By

Holly Taylor Robertson

A Thesis
Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Nursing
in the Division of Nursing
Mississippi University for Women

COLUMBUS, MISSISSIPPI

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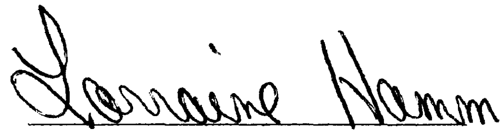

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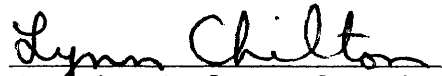

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ABSTRACT

Prescriptive authority for controlled substances for advanced practice nurses has been a very controversial topic over the past years and continues to be an issue today. Research has shown that nurse practitioners prescribe medications appropriately but that barriers to nurse practitioner's prescribing practices remain even though legal authority has been granted. This descriptive study sought to describe the beliefs of nurse practitioners in the state of Mississippi concerning prescriptive privileges of controlled substances. Erickson, Tomlin, and Swain's Theory of Modeling and Role-modeling (1983) provided the conceptual framework for this study. The research question asked in this study was as follows: What are the beliefs of nurse practitioners regarding controlled substance prescriptive privileges? A convenience sample of 80 nurse practitioners (Family, Adult, Gerontological, Pediatric, and Ob-Gyn) registered with the Mississippi Board of Nursing were surveyed using the Robertson's Prescriptive Privilege Survey (RPPS). Responses to the instrument were analyzed using descriptive statistics including frequencies and percentages. Answers to open-ended questions were subjected to content analysis. While 60% of those surveyed would like to have some controlled substance privileges, a majority of nurse practitioners desired to continue to practice with some constraints regarding controlled substances. Nurse practitioners who do not wish to have the privilege to prescribe controlled substances cited issues of liability, responsibility, and competency as reasons not to prescribe. If nurse practitioners did have prescribing privileges, they would utilize them primarily to manage pain, cough, and anxiety for Schedules III, IV, or V. Nurse practitioners believed that the inconvenience of not having controlled substance prescribing privileges was mitigated by collaborative physicians' willingness to prescribe needed schedule drugs. Further research is recommended to

examine the prescribing practices of nurse practitioners in states with controlled substance prescriptive rights and to explore the attitudes and beliefs of physicians regarding controlled substance prescritive rights for nurse practitioners.

Acknowledgements

Life often surprises and delights mortal man. I am both surprised and delighted to be writing this acknowledgement. The task of graduate school has not been an easy one. I could not have accomplished all that has been required alone. Many friends and loved ones have suffered through this year with me.

First and foremost, I thank God for His love and care throughout my life. I know I could not survive this year without Him. I also want to thank Lorraine Hamm, chairman of my research committee. Without Lorraine, I am sure this thesis would still be unpublished. I would also like to thank my committee members. I would like to thank my fellow students for their support and prayers.

No one has sacrificed more in my academic career than my loving husband, Spencer. Thank you for all your help and support. I appreciate all that you have done for me and the love you have given me. Spencer, this thesis is dedicated to you.

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Chapter I

The Research Problem

With escalating national health care costs, the focus of policymakers has shifted to the provision of quality, cost-effective medical care. Expansion of nurse practitioner function holds the potential for resolving the dilemma of access to cost-effective health care in this country. It is therefore imperative that nurse practitioners examine issues which may affect their ability to provide comprehensive quality care to the clients they serve. Many issues concerning nurse practitioner standards of care, prescriptive privileges, hospital admitting status, and referral patterns have arisen (American Nurses Publishing, 1995).

The issue of prescriptive authority has evolved as a critical element in the nurse practitioner's role. Prescriptive privileges afford the nurse practitioner independence and latitude within his or her scope of practice (Craig, 1996). In the state of Mississippi nurse practitioners do not have the privilege to prescribe controlled substances; therefore, nurse practitioners are limited in their therapeutic regime options unless a physician is consulted. Before attempting to address limitations and gaps in privileges, nurse practitioners need to first understand their personal attitudes and roles in facilitating the acquisition of prescriptive privileges. The purpose of this study was to examine the beliefs of nurse practitioners regarding controlled substance prescriptive privileges.

Establishment of the Problem

Prescriptive authority for advanced practice nurses has been a very controversial

topic over the past years and continues to be an issue today. Nurse practitioners in many states continue to struggle to gain prescriptive authority. Total independent prescriptive authority including controlled substances is held by nurse practitioners in only nineteen states (Pearson, 1997). In states that grant prescriptive privileges, nurse practitioners battle strict regulations and mandatory supervision by a physician (Craig, 1996). By 1996, 49 states and the District of Columbia had granted some form of prescriptive authority to nurse practitioners, although many still required additional educational preparation and/or the use of protocols (Pearson, 1997). In a discussion on the competency of nurse practitioners, Safriet (1992) identified nurse practitioners as providers of quality and cost-effective care. Recognition as competent health care providers was important in demonstrating the credibility needed to write prescriptions. Another milestone during the early 1990s was the assignment of Drug Enforcement Agency registration numbers to nurse practitioners in some states to prescribe, dispense, or administer controlled substances in their practice in accordance with the state law governing their actions (Towers, 1993).

Advanced practice nurses in the state of Mississippi have prescriptive privileges excluding controlled substances (Pearson, 1997). As more advanced practice nurses begin to assume the responsibility for patient management in primary, secondary, and tertiary care sites, prescriptive privileges for controlled substances may become a major issue in providing patients with needed therapeutic regimes especially in the area of pain management. According to Gilliland (1993), pain is the most common complaint of all persons seeking health care, and a majority of pain medications are controlled substances. Additionally, many mental health drugs, especially anxioltics and stimulants for the management of attention deficit disorder, are controlled substances.

Prescriptive privileges for controlled substances would provide advanced practice nurses' autonomy in their role. However as advanced practice nurses' autonomy

increases, nurse practitioners become more susceptible to legal actions and meet with more resistance from other health care providers. Mahoney (1995) concluded that nurse practitioners strongly agreed that prescriptive authority would facilitate treating clients. Nevertheless, administrative barriers to nurse practitioner prescribing remains even after prescriptive authority has been legalized (Mahoney, 1995). State nurse practice acts represent the primary legislative obstacle to nurse practitioners prescriptive authority. Many states require mandatory collaboration with and/or supervision by a physician. State nurse practice acts further restrict nurse practitioner prescriptive authority through eligibility criteria and pharmacology education requirements. Some states require specific educational preparation and/or additional pharmacology education. Medication formularies that are required in many state practice acts impede nurse practitioner prescriptive authority. Statutes can include limitations on refills and certain types of drugs, usually excluding controlled substances (Pearson, 1997).

Physicians represent perhaps the strongest opposition to prescriptive authority for nurse practitioners. They fear loss of income, power, and control of health care in this country. In many instances, physicians only agree with the bylaws of the nurse practice acts when legislative pressure exists or in areas of acute access problem such as rural areas or undeserved inner city areas (Birkholz and Walker, 1994).

External barriers are not the only factors affecting nurse practitioners' prescribing practice. Nurse practitioners themselves may represent a hindrance to their own practice by resisting independent prescriptive authority. It has been postulated that some nurse practitioners fear the responsibility and accountability of prescriptive practice, which may be due to a lack of education in pharmacology (Birkholz and Walker, 1994).

No research that was specific to the beliefs of nurse practitioners concerning the prescribing of controlled substances was found in a review of the literature. McDermott (1995) suggested that nursing researchers need to design studies to outline the process

and identify the outcomes of nurse practitioners' practice and prescriptive authority.

According to McDermott (1995), disseminating the findings of the research studies to the public, legislators, and other professionals would promote public awareness that prescriptive authority enhances total patient care, promotes cost-effectiveness, and does not jeopardize the safety of patients. Therefore, the purpose of this study was to examine and describe the beliefs of nurse practitioners in the state of Mississippi regarding controlled substance prescriptive privileges.

Significance to Nursing

For many years, nurse practitioners have been providing quality care to individuals across the life span. However, this care may have been limited because of the lack of controlled substance prescriptive privileges for nurse practitioners. Currently there is a lack of literature and research data about the beliefs and needs of nurse practitioners regarding controlled substance prescriptive privileges. Findings from this study may serve as a primary empirical resource for further studies on this topic area. These data also may serve as an information resource base for generating political action to change legislation concerning prescriptive privileges of controlled substances for nurse practitioners in the state of Mississippi and elsewhere.

As the scope of practice for nurse practitioners continues to change, nurse researchers must continue to use a sound theoretical base for their investigations. The use of Erickson, Tomlin, and Swain's Theory of Modeling and Role-Modeling (1983) as a foundation for health care practices may serve to further the use of the model in research related to nursing practice issues.

Nurse practitioners need to know and understand the beliefs of their peers. An awareness of the beliefs and desires of nurse practitioners about practice issues is the first step toward making changes in practice settings for all nurse practitioners.

Theoretical Framework

Erickson, Tomlin, and Swain's (1983) Theory of Modeling and Role-Modeling served as the theoretical framework for this study. The client's perception of his/her problem/illness was the central concept of the theory. The theorists believed the most effective care possible was provided when the nurse provided care that was unique to the client's situation within the client's perception of his/her world. The theorists referred to the client's perception as the client's model of the world. Also, care a nurse provides that is adjusted to the client's unique situation is known as role-modeling. (Erickson et al., 1983).

According to the theorists, to better understand the client's "model of the world," data must be collected. Data may be collected from several different sources of information, but the primary and most important source is the client. In order to obtain data from the client, an interactive, interpersonal working relationship must be established with the client. The most important goal of data collection is to elicit the person's perspectives. According to Erickson et al.(1983), the health care professional starts with the person's stated concerns and stays with these concerns until the person changes the focus of the interaction. The focus of data collection should be on the client's full perception of his/ her concern. Such data will allow the nurse to understand the client's situation and a movement toward a health goal will be facilitated.

In order for the professional to role-model a better and healthier world for the client, it is essential that the client's world is first modeled. Role-modeling involves the changing of the client's role without the client feeling a threatening sense of loss of the old role. Role-modeling takes place when a unique plan is implemented to better the client's model of the world (Erickson et al., 1983).

The implementation of a unique plan to better the client's model of the world is essential to the nurse practitioner's practice. The inability to prescribe controlled

substances limits the nurse practitioner's ability to formulate a unique plan that is client specific. Therefore, role-modeling is limited. After obtaining information regarding the nurse practitioner's beliefs regarding controlled substances, nurse practitioners will have the needed data to improve modeling and role-modeling for the clientele.

For the purposes of this study, nurse practitioners may be conceived as the client whose perception of the world must first be understood in order that change may later be effected. The researcher's compilation of the data and recommendations for the future serve as the role-model for the changes which may need to occur in order that the nurse practitioners' practice world may become healthier and more effective.

Assumptions

For the purposes of this study, the following assumptions were made:

1. Nurse practitioners treat conditions which require the use of controlled substances.

2. Nurse practitioners have beliefs regarding controlled substance prescriptive privileges.

3. Nurse practitioners' beliefs about controlled substance prescriptive privileges can be empirically measured.

4. The most important goal of data collection is to elicit the client's perceptions (Erickson et al, 1983).

Statement of the problem

Nurse practitioners in the state of Mississippi do not have prescriptive privileges for controlled substances. No research has been found that addresses the issue of nurse practitioners' beliefs regarding controlled substance prescriptive privileges. The purpose of this study was to examine the beliefs of nurse practitioners in the state of Mississippi regarding controlled substance prescriptive privileges.

Research Question

One question was used to guide this research study. The question was: What are the beliefs of nurse practitioners regarding controlled substance prescriptive privileges?

Definition of Terms

The terms used in this study were defined as follows:

1. Beliefs:

a) Theoretical definition: Ideas, opinions, and thoughts held by an individual regarding a particular issue.

b) Operational definition: Responses of nurse practitioners on the Robertson's Controlled Substance Prescriptive Privilege Survey.

2. Nurse Practitioners:

a) Theoretical definition: "Nurse practitioners are registered nurses prepared through a formal, organized educational program that meets guidelines established by the profession" (American Nurses Publishing, 1995, p 3.).

b) Operational definition: A nurse practitioner in the state of Mississippi whose name appears on the list of nurse practitioners who are currently certified as Adult, Family, Pediatric, Ob-gyn or Gerontologic Nurse Practitioners.

3. Controlled substance prescriptive privilege:

Theoretical and operational definition: Having the right and legal power to independently prescribe drugs that fall under the jurisdiction of the Controlled Substance Act and are categorized according to Schedule I through V.

Summary

Nurse practitioners in the state of Mississippi have no prescriptive rights for controlled substances. This study sought to examine and explore the beliefs of nurse practitioners regarding controlled substance prescriptive privileges. In this chapter, an introduction to this research problem was provided. Erickson, Tomlin, and Swain's

Theory of Modeling and Role-Modeling was described as the theoretical foundation for the study.

In chapter II, literature pertinent to this study is reviewed and discussed. In chapter III, the method for empiricalization of this study is described. Chapter IV contains the findings of the research and a summary of the data. Finally, in Chapter V, an interpretation of the findings and the conclusions drawn from the interpretation are presented with implications for nursing.

Chapter II

Review of Literature

The search for literature concerning nurse practitioners' beliefs regarding prescriptive privilege of controlled substances revealed no formal research published in this area. The researcher then focused on information that was available and appropriate for this study. The following studies have been collected and reviewed to provide structure for this study.

The Nurse Practitioners Education Associates (NPEA) conducted a research study to describe nurse practitioners' practice. A survey was distributed to nurse practitioners attending the 1996 National Nurse Practitioner Conference in Washington, DC in October 1996. The sample was one of convenience drawn from approximately 1000 nurse practitioners who attended the conference. Seven hundred seventy-six nurse practitioners completed the survey. The sample represented a cross-section of nurse practitioners practicing in different states and under different legal constraints (Scudder, 1997).

The majority of survey respondents who completed the survey were new nurse practitioners with 51% having 4 or fewer years of experience and 17.4% having fewer than 10 years experience. Ninety-six percent of the respondents were female. Of the 776 survey respondents 84.2% held a master's degree or higher. More than 87% of the respondents described their current position as predominantly clinical. Seventy percent of respondents were practicing in ambulatory settings. The respondents consisted of family nurse practitioners (44.7%), adult nurse practitioners (34%), and pediatric and women

health nurse practitioners (7.8%) respectively.

The survey was designed to document how many patients nurse practitioners saw on a daily basis and what type and how many medications they prescribed. The researchers also sought to document the role of physicians in nurse practitioner-patient encounters and the ability of nurse practitioners to bill insurance companies under their own names.

The researchers reported that the majority of the respondents saw between 15 and 20 patients a day (35.7%) or between 10 and 15 patients a day (25.5%). The majority of nurse practitioners wrote between 10 and 20 prescriptions per day (40.7%). Forty-six percent of nurse practitioners reported that all patients required education or counseling. The researchers found that 5 to 10 patients per day were seen for acute, self-limiting, or episodic health problems, fewer than 5 patients per day were seen for health maintenance, and between 5 and 10 patients per day were seen for chronic health problems. Also, 47% of nurse practitioners surveyed managed 10 to 20 patients per day without consultation with a physician. The researchers further found 73.6% of nurse practitioners had no ability to bill third parties under their own names. Federal legislation mandates direct reimbursement to nurse practitioners for Medicaid patients. Therefore, a large number of nurse practitioners who are billing under their own name are probably seeing Medicaid patients (Scudder, 1997). These findings suggest that while nurse practitioners may have a relatively high degree of professional independence, they are tied closely to physicians financially.

The NPEA study is pertinent to the current research endeavor because the findings identified types of clients nurse practitioners are providing medical care for, the numbers of clients nurse practitioners are seeing on a daily basis and the number of prescriptions nurse practitioners are writing daily. The study further underscores the number of patient encounters that nurse practitioners conduct independently, without

physician consultation. These findings strengthen the case for the role of the nurse practitioner to have full privileges to manage client care. The current study was conducted to explore the beliefs of nurse practitioners relative to consulting and prescribing in the specific area of using controlled substances to treat client conditions.

Sekscenski, Sanson, Bazell, Salmon, & Mullan (1994) conducted a descriptive study which explored the supply of physician assistants, nurse practitioners, and certified nurse-midwives in relation to state practice variations. The hypothesis the researchers sought to support was that a larger supply of generalist physicians in a state is associated with a less favorable practice environment for nonphysician practitioners.

The researchers constructed a 100-point scoring system for each group with points allocated to the categories of legal status, reimbursement, and authority to prescribe. A score of 100 represented the most favorable environment, and a score of 0 the least favorable. All fifty states and the District of Columbia were analyzed.

Estimates of the supply of nonphysician practitioners in each state were obtained from various sources. The population of individual states was obtained from the Bureau of the Census. Estimates of the percentage of each state's population that was living in areas designated as having a shortage of primary care were obtained from the Bureau of Primary Health Care of the Department of Health and Human Services.

The researchers found that there were positive correlations within states between the practice-environment scores for the state and the supply of physician assistants, nurse practitioners, and nurse mid-wives. Spearman rank-correlation coefficients are as follows: r_s (51)= 0.63, ($p < .0001$), $r = 0.41$, ($p = .0003$), and $r = 0.51$, ($p < .001$), respectively. Also, positive correlations were found between the supply of generalist physicians and the supply of physician assistants ($r\{51\} = 0.54$, $p < .001$) and nurse practitioners ($r\{51\} = 0.35$, $p = .014$). Positive correlations were further identified between favorable practice-environment scores and the supply of physician assistants

($\underline{r}\{51\} = 0.68$, $\underline{p} = .003$), nurse practitioners ($\underline{r}\{51\} = 0.54$, $\underline{p} = .026$), and certified nurse-midwives ($\underline{r}\{51\} = 0.42$, $\underline{p} = .09$) in seventeen states that had the greatest shortage of generalist physicians.

Sekscenski et al (1994) concluded that states which had favorable practice-environment scores for physicians also had favorable scores for physician assistants and nurse practitioners. The states with favorable practice environment scores had higher practitioner-population ratios. The researchers further concluded that the lack of authority to write prescriptions was a major contributing factor to low scores for all groups among those states with unfavorable practice environments. Therefore, the researchers rejected the hypothesis that a larger supply of generalist physicians in a state was associated with less favorable practice environments for nonphysician practitioners. Also, the researchers discovered that states with favorable environments and documented shortages of primary care physicians did have more practicing physician assistants and nurse practitioners than the national average.

The research is relevant to the current research endeavor because Sekscendki et al (1994) concluded that the lack of prescriptive authority was a major contributing factor to an unfavorable practice environment. Therefore, state regulations regarding prescriptive authority of controlled substances may influence the number of practicing nonphysician providers in a state. As nurse practitioners strive to increase their scope of practice and become more autonomous, the issue of prescriptive authority for controlled substances may begin to influence the state in which a nurse practitioner will practice.

Mahoney (1994) compared the prescribing decisions of nurse practitioners and physicians using three standardized geriatric case vignettes. The purpose of this research was to determine whether prescriptive decisions made by nurse practitioners were appropriate and whether the quality of nurse practitioner prescribing intentions differed from that of physicians. Mahoney (1994) proposed two hypotheses. The first hypothesis

was that there would be no difference in the appropriateness prescribing scores among nurse practitioners with differing legal status. The second hypothesis was that nurse practitioners would score within an acceptable range of the physician scores while prescribing fewer drugs and more nondrug interventions than the physicians.

The sample was drawn from a nurse practitioner population considered to be the universe of nurse practitioners who were providing adult primary health care services in the United States in 1986. The population of nurse practitioners was acquired with the assistance of the American Academy of Nurse Practitioners who shared their membership listing and assisted in acquiring data from other organizations, educational programs, and state licensing rosters. One thousand two hundred names were randomly drawn and used in a four-to-one probability ratio to attain a quota sample of 298 nurse practitioners. Eliminated by the sampling criteria were, retired or inactive practitioners, pediatric and obstetric specialists, and those practitioners who usually had no clients over 65 years old.

In the secondary data analysis, the nurse practitioners legal status became the major independent variable. Two nurse practitioners did not report their legal status and were removed from the sample. Of the remaining 296 nurse practitioners, 40% reported that they had legal authorization to prescribe medications. The 118 nurse practitioners with prescriptive authority were divided into two groups, one labeled "dependent," composed of nurse practitioners who reported that they could only prescribe with the specific agreement of a physician (n=60); the second labeled "independent," was comprised of nurse practitioners able to prescribe without the specific agreement of a physician (n=58).

The physician sample in Mahoney's (1994) study consisted of 501 practicing physicians drawn from a population of United States primary care physicians who were general practitioners, family practitioners, or internists. The physician sample was

provided by an organization that maintains a national listing of physicians. Of the 501 physicians, 140 were general practitioners, 151 family practitioners, and 210 were internists. Only 373 physicians completed the same geriatric case vignettes as the nurse practitioners.

A national representative random sample of primary care nurse practitioners and physicians participated in a telephone survey conducted to elicit treatment recommendations. Participants were presented with three hypothetical case vignettes in which older adults sought health care for problems common in primary care practice: insomnia, joint pain, and stomach discomfort. Each clinician initially was given identical baseline information. Additional information concerning relevant medical history, diet, activities, habits, medications, and whether there was any prior therapy for the problem was available upon request.

The surveyors used a computer-assisted telephone interviewing system that permitted direct entry of the respondent's questions, provided standardized responses, and recorded the respondent's treatment recommendations. Telephone surveyors were monitored to ensure adherence to the interview protocol and consistency in data entry.

A multidisciplinary panel of experts, enlisted specifically for the Mahoney (1994) analysis, determined the appropriate treatment approach for each of the three vignettes. The panel members evaluated respondents answers independent from each other to eliminate the possibility of bias from interpersonal pressures. Also, to minimize any professional bias, the judges were not aware of whether the response was from a nurse practitioner or a physician. The judges rated prescribers' responses on a four-point scale ranging from very inappropriate to very appropriate. An appropriateness index was constructed from the items receiving unanimous agreement among the judges as being appropriate or very appropriate. The standard for consensus was established at complete agreement in order to attain 100 percent reliability.

For every item that a respondent matched with the judges' appropriate rating, the respondent received one point; any mismatch accrued no points. The prescribing appropriateness score was the dependent variable and consisted of the total accumulation of points across the three vignettes. Statistical analyses were performed using SPSS-X.

For the total nurse practitioner sample, the appropriateness score ranged from a minimum of zero to a maximum of 33 points out of a possible total of 58 points. On average, the nurse practitioners scored 15.3 points (SD=6.5, SE=0.382) but the most frequent score was 13.

The hypothesis that there would be no difference in the appropriateness prescribing scores among nurse practitioners with differing legal status was tested in two ways. First, nurse practitioners were divided into two groups, those with legal authorization to prescribe and those without such authorization. Those with authorization had a slightly higher mean score (15.8) than those without authorization (14.9). However, this difference was not statistically significant.

Secondly, the nurse practitioners were divided into three subgroups according to their legal status. The mean score of nurse practitioners with independent authority (15.8) was compared to those with dependent authority (15.8) and to nurse practitioners with no legal authority (14.9) using the one-way ANOVA test. There were no significant differences among the three groups (F ratio = 0.71 and F test = 0.49 respectively).

The second hypothesis was that nurse practitioners would score within an acceptable range of the physicians scores while prescribing fewer drugs and more nondrug interventions than the physicians. A total of 373 physicians completed the same geriatric vignettes as the nurse practitioners. An analysis of the physicians' characteristics revealed that they had considerably more years of experience, saw more patients per week, and had a higher percentage of patients over age 65 than the nurse practitioners.

The physician scores ranged from 1 to 31 with an average 13.3 points. The mean appropriateness scores of nurse practitioners at 15.3 (14.56 to 16.04, 95% CI) and the physicians at 13.3 (12.75 to 13.85, 95% CI) were significantly different ($t = 4.24$, $p<.001$). The nurse practitioner group averaged significantly higher scores than the physician group.

The analysis of drug and nondrug interventions proceeded in two stages. First, physicians and nurse practitioners were compared according to the number of drugs they prescribed in the hypothetical vignettes. Second, both of the prescriber groups were again compared on the number of nondrug treatment recommendations they made. In order to make these comparisons, two additional scores were constructed; one was a count of the number of drugs recommended across the three vignettes; the other, a similar count of the number of nondrug interventions. In both situations, the items were taken from those judged appropriate by the panel of experts.

In the combined sample of physicians and nurse practitioners (n=669), the average number of drugs prescribed was 2.3 (SD=1.3, SE=.04) and ranged from a minimum of zero (12 percent) to a maximum of six drugs (one percent). The physician group and the nurse practitioner group were compared using a t-test to determine if a statistically significant difference occurred between the groups.

The original hypothesis that nurse practitioners would use fewer drugs than physicians was supported. The difference between the average number of drugs prescribed by nurse practitioners (1.7, SD=1.3, SE=.08) and physicians (2.7, SD=.99, SE=.05), upon testing was significant (t =10.7, $p<.001$).

The number of nondrug appropriate interventions ranged from a low of zero (22 %), to a maximum of 11 (0.05 %). Although the average provider prescribed 2.6 (SD=-2.2, SE=.09) nondrug interventions, most frequently, one-fifth of the sample,

(22 %), did not prescribe any of the appropriate nondrug interventions across the three vignettes.

Again a t-test was employed to determine if nurse practitioners and physicians significantly differed concerning their prescribing of nondrug interventions. The hypothesis that nurse practitioners would recommend more nondrug therapeutic interventions also was supported. The nurse practitioners' mean score was 3.2 (SD=2.3, SE=.14), in comparison to the physicians' score of 2.1, (SD=2.0, SE=.10), and the difference was significant ($t = 6.71$, $p < .001$).

The relative contribution of each of the various predictor variables in establishing the prescribing appropriateness score was determined by ordinary least squares multiple regression. The data met all assumptions necessary for using this statistical procedure. The appropriateness of nurse practitioner prescribing activity was posited to be a function of Legal Status, Graduate Education, Length of Practice as NP, Prescribing Experience, Geriatric Experience, Practice Format, Practice Setting, Caseload, Medicaid Clients.

The model accounted for seven percent of the variation in the dependent variable, prescribing appropriateness, and was statistically significant ($p < .001$). Prescribing experience and geriatric experience emerged as the most prominent explanatory variables, with graduate education nearing statistical significance. The legal status variables, independent($t = 0.93$, $p > .05$) and dependent ($t = 0.67$, $p > .05$), were so insignificant, that they clearly did not affect prescribing appropriateness.

The belief that granting prescriptive authority to nurse practitioners would lower the prevailing quality of prescribing failed to be supported. Nurse practitioners achieved a higher level of appropriate prescribing than physicians, a difference that remained regardless of the nurse practitioners' prescriptive authorization status. Also, the regulatory intent to ensure appropriate prescribing practices by refusing or limiting prescriptive authority of nurse practitioners was not supported by this research. Results

from this study suggested that prohibitions or complex restrictive prescribing regulations should be reconsidered. According to this research, qualifications for nurse practitioners who prescribe for older adults should primarily be related to prescribing experience, experience working with older adults, and completion of graduate education.

The need for greater awareness of the factors that significantly affect the appropriateness of drug prescribing should encourage policy makers to develop scientifically based and equitable prescribing polices. The necessity of such research validate conduction of current study because there is a lack of research concerning the beliefs of nurse practitioners regarding the authority to prescribe controlled substances. Research in this area is sorely needed in order that nurse practitioners can empirically express their needs with regard to client care.

Although nurse practitioners (NPs) have been granted the privilege to prescribe drugs, there have been instances where NPs were unable to utilize this privilege. Mahoney (1995) explored NPs' initial response to this regulatory change. The question that Mahoney (1995) asked was, "What factors encourage NPs to attain prescriptive authorization and what factors deter them?" The purpose of the study was to ascertain whether the policy intention of enabling NPs to prescribe was being met and, if not, to identify the related reasons.

The conceptual framework used was Lewin's model of organizational change complemented by Zaltzan's two-stage model of implementation of organizational innovation. The researcher designed a survey questionnaire to elicit the personal and organizational characteristics related to Lewinian model with specific items related to Zaltman's model. The survey included eighty structured questions and open-ended questions and took approximately twenty minutes to complete.

The target group for this exploratory pilot study was masters' prepared NPs. Among the criteria for inclusion were active practice with adults in Massachusetts

for at least three years and at least two years of experience precepting NP students from one of the University-based programs. Twenty-five NPs were eligible but only thirteen (52%) returned the questionnaire within the study period. On the average, the thirteen participants had nine years of experience and were in their position for at least five years. Mahoney (1995) found that the NPs were employed by varying agencies, typically saw forty-six clients/week with varying illnesses, and serviced a diverse population. The researcher also showed that 92% of NPs worked in salaried positions.

The researcher reviewed four different categories of findings. The first category was the rate of adoption of prescriptive authority. The researcher revealed that nine (70%) of the NP respondents had not obtained prescriptive authority. The second category was barriers to NP prescribing. The major barrier cited by six (67%) of the respondents was that employers would not permit NPs to prescribe regardless of enabling legislation. The third category by Mahoney (1995) was the support for NPs prescribing. The two major supports of NPs prescriptive authority were NP colleagues (92%) and physician colleagues (69%). The last category the researcher explored was the reasons NPs obtained prescriptive authority. Mahoney determined the main reason NPs obtained prescriptive authority was to achieve more autonomy (75%).

Mahoney (1995) concluded that NPs strongly agreed that prescriptive authority would facilitate treating clients (85%). The researcher also concluded that NPs were comfortable prescribing medications (100%) and were very familiar with the drug prescribing practices in their setting (100%). Mahoney (1995) further concluded that administrative barriers to NP prescribing remain even after prescriptive authority has been legalized. The author recommended further investigations into the extent to which other NPs experience barriers.

The study is very relevant to the future of the NP's scope of practice in regard to the elimination of barriers which obstruct the NP's legal authorization to prescribe.

Mahoney's findings are vital to consider in the current research endeavor because even though nurse practitioners in Mississippi have legal authorization to prescribe noncontrolled substances, they may still face similar barriers, especially if and when the arena of controlled substance privileges is entered.

In a study related to nurse practitioners' beliefs, Coggins (1996) performed a quantitative descriptive study to ascertain primary care nurse practitioners' attitudes toward chronic pain and the interventions utilized by these practitioners. The research questions that Coggins sought to answer were as follows: 1) What are nurse practitioners' attitudes toward chronic pain? and 2) What are nurse practitioners' interventions for chronic pain? The researcher utilized Travelbee's Human-to-Human relationship model to guide the study.

The target population for the study was two hundred fifty-eight Family, Adult, and Gerontologic nurse practitioners in the State of Mississippi who were currently listed with the Mississippi Board of Nursing. One hundred sixty-one (62%) of the nurse practitioners in the State of Mississippi responded to the study by completing and returning the Coggins Chronic Pain Questionnaire. The questionnaire consisted of twenty-six items and took approximately fifteen minutes to complete.

Coggins (1996) found the majority of respondents were Family Nurse Practitioners (83.8%) in primary care clinics (57%) with an average of four years of experience. One hundred fifty-nine (99%) of the responding nurse practitioners believed chronic pain existed. But only one hundred five (66%) of the respondents believed that chronic pain was legitimate greater than fifty per cent of the time. The two major types of chronic pain seen by the nurse practitioners were arthritis (58%) and back pain (42%). Furthermore, one hundred forty-two (92%) of the respondents believed that less than fifty per cent of clients with a presenting compliant of chronic pain were merely seeking prescription pain medications.

Coggins (1996) further found that a physician consult or referral for controlled substances was shown to be a third choice of treatment, following NSAIDS and heat/ice by nurse practitioners who believe that chronic pain is legitimate greater than fifty per cent of the time. Only 5% of respondents strongly agreed and 38% of respondents somewhat agreed that adequate pain medications were given. However, one hundred thirty-six of the respondents (84%) believed that the client is in fact the best judge of pain.

Coggins (1996) concluded that there were varying attitudes among nurse practitioners in the State of Mississippi regarding chronic pain. The researcher suggested that further research needs to be conducted in the area and in patient's satisfaction and patient's beliefs about chronic pain treatments.

Coggins(1996) revealed that nurse practitioners believe that inadequate pain medications are given to clients with chronic pain. In the current research endeavor, the beliefs of nurse practitioners regarding prescriptive privileges for controlled substances, such as opiate pain medications, was explored.

In summary, the review of the literature revealed barriers to the comprehensive practice of nurse practitioners especially as they related to prescribing privileges (Mahoney, 1994; Mahoney,1995; Sekscenski et al, 1994; Coggins, 1996; Scudder, 1997). As nurse practitioners' scope of practice expands to better care for the patient population, it is imperative that the beliefs of nurse practitioners and their needs are assessed in order to better serve the community as a whole. The current study sought to describe the beliefs of nurse practitioners regarding controlled substance prescriptive privileges.

In chapter III, the design of the current study, the variables, limitations, and the setting, population, and sample will be discussed as well as instrumentation, methods of data collection, and methods of data analysis. Chapter IV includes a presentation of the

research findings. Finally, Chapter V entails a discussion of the findings and conclusions drawn from the research .

Chapter III

The Method

The purpose of this study was to examine the beliefs of nurse practitioners regarding prescriptive privileges of controlled substances. This chapter will describe the empiricalization of this problem. The limitations are explained and the setting, population, and sample are described.

Design of the Study

A descriptive study was undertaken to determine the beliefs of nurse practitioners regarding controlled substance prescriptive privileges in the state of Mississippi. According to Polit and Hungler (1995), the goal of a descriptive study is to obtain information about the current status of the phenomena of interest. Since this study sought to identify the currents beliefs of nurse practitioners in relation to their beliefs about controlled substance prescriptive privileges, a descriptive study was deemed appropriate.

Variables. For this study the variable of interest was the beliefs of nurse practitioners regarding prescriptive privileges of controlled substances. Controlled variables included the geographic location of the study and the number or participants available for questioning. Intervening variables may have included the honesty of the participants and any biases participants had based on previous experiences.

Limitations. This study had limited external validity. The results were not generalizable to other settings because the population was from a limited geographical area. The sample of the study was not formally randomized. The researcher selected the names of the participants from the 1996 master list of the actively practicing nurse

practitioners from the Mississippi Board of Nursing by systematic sampling. Every other individual was chosen starting with the second name on the list to serve as a participant in the study; therefore, the sample was subject to researcher bias.

There were a number of additional limitations of survey research that should be considered. Information obtained in surveys tends to be superficial. Survey data do not permit the researcher to have much confidence in inferring cause-and-effect relationships. Survey researchers have no control over any variables. Mail-out surveys have also been subject to low completion rates. Thus, it may be inappropriate to generalize the results of the study to a target population (Polit and Hungler, 1995).

Setting, Population, and Sample

The setting of this study was the state of Mississippi. Nurse practitioners in Mississippi predominately practice in rural medically underserved areas. Nurse practitioners in Mississippi are able by law to prescribe all FDA approved medications excluding Schedules I through V controlled substances according to a physician backed protocol.

The sample surveyed was 200 nurse practitioners whose name appeared on the Mississippi Board of Nursing's list of currently practicing nurse practitioners. The list included Family, Pediatric, Adult, Ob-Gyn, and Gerontological nurse practitioners. The accessible population for this study was comprised of a list of nurse practitioners from the roster of the Mississippi Board of Nursing (1996). Systematic sampling was utilized in the selection of participants. The researcher selected every other nurse practitioner starting with the second name appearing in the roster as the target sample. From among the 200 surveys mailed, 93 surveys were returned. Thirteen were unusable because the surveys were not received prior to the deadline for a total sample size of 80.

Methods of Data Collection

Instrumentation. The instrument utilized for this study was the Robertson's Prescriptive Privilege Survey (RPPS, Appendix A). The RPPS, developed by the researcher, was a survey form designed to obtain data regarding nurse practitioners ' beliefs regarding controlled substance prescriptive privileges as well as certain demographic information. The RPPS consisted of 14 items. Seven questions, three multiple choice questions and four open-ended questions, assessed the beliefs of nurse practitioners regarding controlled substance prescriptive privileges. Subjects were asked to mark the appropriate response or write the response in the space provided. Questions 1 through 7 provided demographic data such as type of nurse practitioner, years in practice, type of nurse practitioner preparation, highest degree earned, practice site location, physician on site, and preceptor support. Questions 8 through 14 elicited data concerning nurse practitioners beliefs regarding controlled substance prescriptive privileges. Examples of these questions were as follows: would you like to have the right to prescribe controlled substances, which level of controlled drugs would you like, and if you need to order controlled substances now, how do you obtain them for your patient. Questions 13 and 14 were open-ended questions asked in order to elicit incidents where controlled substance prescriptive privileges would have been wanted or needed and to provide opportunity for the nurse practitioner to share additional beliefs concerning controlled substance prescriptive privileges. Each question was independent and analyzed separately. There was no total score. Face validity of the survey was determined by a panel of expert researchers. The survey was pilot tested by thirty-eight family nurse practitioner graduate students for clarity of content.

Procedures. Permission to conduct the study was first obtained from Mississippi University for Women's Committee on Use of Human Subjects (Appendix B). The researcher designed survey was then mailed to the nurse practitioners selected from the

master list from the State Board of Nursing in Mississippi. A cover letter (Appendix C) was included explaining the study and the procedures that safeguard the participant's rights and a stamped return envelope. The completion and return of the survey indicated consent of participation. A follow up postcard (Appendix D) was mailed two weeks after the initial survey dispersion to augment response. Data collection was continued for a total of four weeks after the initial surveys were mailed.

Methods of Data Analysis

Descriptive statistics were used to examine the collected data. The data obtained from the RPPS was analyzed. Each question was individually analyzed using frequency distributions and percentages. All information was elicited from the population itself. Since no inferences were made from these statistics, they were labeled as descriptive statistics (Polit and Hungler, 1995). Questions 13 and 14, open ended questions, were subjected to content analysis and sorted for common themes.

Summary

In this chapter, the empiricalization of this research study exploring nurse practitioners' beliefs regarding controlled substances was described. The design of the study, the variables, the limitations, as well as the setting, population, and sample were discussed. The instrument and methods of data collection were explained in detail. Finally, the methods of data analysis were addressed. In Chapter IV the research findings will be presented with a discussion of the findings and conclusions drawn from the research following in Chapter V.

Chapter IV

The Findings

The purpose of this study was to describe the beliefs of nurse practitioners in the state of Mississippi regarding controlled substance prescriptive privileges. A descriptive survey design was implemented for this descriptive study. The Robertson's Prescriptive Privilege Survey was utilized to obtain information from nurse practitioners regarding their beliefs toward the prescriptive privilege of controlled substances. The data from each question were analyzed using percentages and frequency distributions. The findings from the study are presented in this chapter.

Description of Sample

A total of 200 surveys were mailed to Family, Adult, Gerontological, Ob-Gyn and Pediatric nurse practitioners in Mississippi. The sample consisted of 80 nurse practitioners (NPs) who responded to the survey. The 80 nurse practitioners who returned the survey represented 16% of the approximately 500 Family, Adult, Gerontological, Ob-Gyn and Pediatric nurse practitioners in Mississippi. Composition of the sample by specialty can be seen in Table 1. Seven of the respondents were certified in two areas. Two were certified in Adult and Gerontological, two were certified in Adult and Pediatric, and three were certified in Family and Ob-Gyn.

Table 1

Composition of the Sample by Nurse Practitioner's Specialty

Type of Nurse Practitioner	f	%
Family	58	67
Adult	12	14
Pediatric	6	7
Ob-Gyn	4	5
Gerontological	3	3
Neonatal	3	3
Family Planning	1	1

Note. N = 80.

The educational preparation of the nurse practitioners in the sample also was assessed. Of the respondents there were 57 (71.25%) Masters prepared, 14 (17.5%) Post-mastered prepared, and 9 (11.25%) Certificate prepared. The highest degree held by the respondents were 3 (0.037%) ADN, 3 (0.037%) BSN, 65 (81.25%) MSN, 2 (0.025%) MPH/MCH, 1 (0.013%) EDD, 4 (0.05%) DSN, , and 2 (0.025%) Ph.D. The years of practice of the respondents ranged from 6 months to 23 years.

The participants practiced in a variety of clinical sites. The practice sites are presented in Table 2.

Table 2

Composition of Practice Sites.

Practice Site	f	%
Rural Health Clinic	40	50.00
Collaborative Practice with Physician	17	21.25
Hospital	7	8.75
College	4	5.00
Health Department	4	5.00
Community Health Center	3	3.75
Nursing Home	3	3.75
Private Nurse Practitioner Clinic	1	1.25
Ambulatory Care Clinic	1	1.25

Note. N = 80.

Forty-nine (61.25%) of the respondents practice with a physician on site. Only 2 (2.5%) of the respondents had ever practiced in a state where nurse practitioners had controlled substance prescriptive rights. One nurse practitioner practiced in Georgia where she/he could not sign a prescription for controlled substances but could telephone order up to Class II and could dispense under protocol. The other nurse practitioner had practiced in the state of Utah where she/he could order Level III, IV, V controlled substances. One of the nurse practitioners who had practiced in states where nurse

practitioners had prescriptive rights desired prescriptive rights for controlled substances again. However, the other did not.

Findings Related to the Research Question

The following data supply the answer to the research question regarding nurse practitioners' beliefs about controlled substance prescriptive privileges. Of the 80 nurse practitioners who responded to the Robertson's Prescriptive Privilege Survey (RPPS), 54 (67.5%) of the respondents believed their current collaborating physicians would support nurse practitioners' prescriptive rights for controlled drugs. Twenty-four (30%) of the respondents believed their preceptors would not support this right and 2 (2.5%) of the respondents were not sure of their preceptor's opinion.

Forty-eight (60%) of the nurse practitioner respondents indicated that they would want prescriptive rights for controlled drugs. Thirty (37.5%) respondents did not want prescriptive rights for controlled substances and 2 (2.5%) respondents were undecided. Forty-eight (60%) of the respondents answered Question 9A pertaining to the highest level of controlled substances nurse practitioners would like to be able to prescribe. These responses are presented in Table 3.

Table 3

Level of Controlled Substance Prescriptive Privileges Desired by Nurse Practitioners.

Level of Drug	f	%
Schedule I	0	0
Schedule II	9	19
Schedule III	14	29
Schedule IV	6	12
Schedule V	19	40

Note. N = 48. Schedule I is the highest level of controlled substance and Schedule V is the lowest.

Thirty-five (43.75%) of the respondents answered Question 9B which was an open-ended question asking participants why they would not want privileges for controlled substances. Data from the respondents were content analyzed and categorized according to three emerging themes. Those themes were as follows: Issues of liability, issues of responsibility, and issues of competency.

Issues of Liability. Some nurse practitioners' statements regarding issues of liability including the following:

"The ability to prescribe would open my license to the possibility of overprescribing abusable drugs. As it is, this is not a threat."

"Too much hassle...and liability associated."

Issues of Responsibility. Sample comments regarding issues of responsibility were as follows:

"My focus is alternative therapies; besides, I don't want the responsibility of a medical doctor....I'm a nurse practitioner."

"Being a nurse practitioner without authority to write controlled drugs helps to eliminate or at least reduce the number of people seen with drug seeking behaviors."

"Nurses have creative ways of alternative methods of pain control-OK to let MDs have the privilege and burden of controlled drugs."

"Prescription of controlled substances entails an added responsibility."

"I don't want to deal with drug seekers."

Issues of Competency. Issues of competency were reflected in the following comments:

"I feel this is outside our scope of practice and in a preventative setting I do not see the need."

"If a patient is in need of a controlled substance, he/she should be treated by a physician."

"Because I feel a physician is better qualified to prescribe narcotics, sedatives, antipsychotics, antidepressants, etc."

"Do not feel nurse practitioners are prepared to do so safely."

Question 10 read, "Do you feel qualified to prescribe controlled substances?" Data were analyzed according to negative or positive answers. Forty-six of the 54 (85%) respondents believed they were qualified to prescribe controlled substances. The following were some of the responses given:

"Yes. Good educational background and continuing education in pharmacology keep me current- and this knowledge is useful if a patient is on these medications, whether or not I prescribe them."

"Yes. I realize the laws and regulations pertaining to controlled substances. I also am aware of my preceptors guidelines; therefore I feel that I could prescribe based on his beliefs."

"If the reason for the controlled substance is clearly understood, I feel qualified."

"My NP program covered pharmacology including controlled substances. Also, I am safe enough to prescribe strong antibiotics, coumadin, and other high risk drugs, therefore there is no reason I shouldn't be allowed to prescribe controlled drugs."

Eight of the 54 respondents(15%) replied they did not feel qualified to prescribe controlled substances. Some reasons for this response were given as follows:

"No. However with a little study I could learn everything I would need to know about the drug I would limit myself to prescribe."

"This was not covered in nurse practitioner school."

"Not ready at this time. I would have to study about it first."

Question 11 asked participants to indicate all circumstances in which controlled substances would be used. Seventy-six (95%) of the nurse practitioners responded. The primary instances in which nurse practitioners would use control drug prescriptive rights were revealed as pain 67 (88%), cough 67 (88%), and anxiety 54 (71%). Other instances cited were sleep 15 (20%), depression 8 (10%), ADHD 4 (5%), seizures 2 (3%), diarrhea 2 (3%), and weight reduction 1 (1%). One respondent said, "None, even if I had the right."

Question 12 asked how nurse practitioners currently obtained controlled substances for clients. All respondents except one (98 %) stated that they consult their collaborating physician and the physician either writes the prescription if on site or gives a telephone order for the controlled drug. Only one respondent admitted to having used illegal methods in the past such as presigned prescription pads or calling in the drug using the physician's name. The nurse practitioner stated that these methods were employed at the physicians insistence.

Question 13 read, "Please describe an incident in your practice where you believe you needed or would have wanted controlled substance prescriptive rights?" A variety of responses were elicited. Content analysis revealed four themes related to such a critical incident. These themes were as follows: Emergencies, convenience, expense, and none.

Emergencies. Examples of emergency situations in which nurse practitioners would have needed controlled substances were as follows:

"Young man with dislocated shoulder for 24 hours. Physicians were away (it was Spring Break)."

"A patient called me after hours with migraine headache. She had tried all the meds I had prescribed her (Imitrex, Phenergan, Esgic). My preceptor was unavailable and I spoke with another preceptor who was less familiar with me and the care I give."

"Because of the law, I felt uncomfortable even keeping controlled substances locked up in my clinic for prn emergency use. One day, in my clinic, a logger came in with a severe fracture. He was in AGONY and I couldn't offer him anything stronger than Tylenol. This is one of many."

"Acute seizure activity-needed to order Valium or Ativan IV."

Convenience. Nurse practitioners indicated that many times controlled substance prescriptive privileges were needed for client and nurse practitioner convenience. Sample comments included the following:

"A patient that I regularly see takes Xanax for anxiety; I have to refer her to my MD for prescription refill."

"Friday afternoon and the MD is out of the office. A mother comes in needing a refill on Ritalin- This must be written out and I could not provide it for her. She had to wait in the waiting room for 45 minutes before she could get the needed prescription."

"I occasionally work in the clinic without a MD and it is very inconvenient not to be able to prescribe cough meds, pain meds, etc. I feel sorry for NPs who must work alone all the time.

Expense. Expenses were occasionally an issue for nurse practitioners and their clients. Some examples were as follows:

"Patient with abscessed tooth who had no insurance. Patient was placed on Keflex and no Ultram samples were available. Ultram is an expensive med for someone on a limited income, no insurance, who is now facing a dental bill as well. Tylenol #3 or Lorcet would be much cheaper."

"Patient with history of arthritis-previously on expensive NSAID- experiencing a great deal of pain-unable to go to a MD due to no money."

None. Many nurse practitioners denied having a critical incident in which they would need controlled substance prescriptive privileges. Some of those nurse practitioners' responses were as follows:

"Haven't had a single one."

"Haven't had an incident- This is not hard for me to get an order."

"On site physician never questions signing a prescription for me."

"Do not want or need."

"None."

Responses to Question 14 which solicited additional beliefs the nurse practitioner held about controlled substance prescriptive rights were content analyzed and assigned placement according to three emergent themes: Additional reasons in favor of controlled substance prescriptive rights, additional reasons against controlled substance prescriptive rights, and mixed responses.

Additional Reasons for Controlled Substance Prescriptive Rights. Examples of reasons nurse practitioners gave for being in favor of controlled substances prescriptive privileges are listed as follows:

"The Medical Board, Nursing Board, and supervising MD could establish guidelines within the NPs' scope of practice and physician comfort that would promote patient care and clinic efficiency."

"I believe that NPs can prescribe some of the controlled substances both safely and judiciously."

"I do not believe NPs would abuse the privilege if it were extended and I believe also that we could better care for our total patient load."

"Our judgment should count-we diagnose and manage complex patients and diseases and should be trusted in this area."

"I believe there are situations where NPs need prescriptive privileges (rural solo practices). Main reason I'd like to see prescriptive privileges is that it's going on 'under the table' now, and I dislike 'making do' to get around laws that no longer apply to practice today."

"It disturbs me when NPs say that I don't want privileges because I don't want to have to deal with 'drug-seekers'. What's wrong with those NPs' ability to say NO?"

Additional Reasons Against Controlled Substance Prescriptive Rights. Reasons nurse practitioners gave for being against controlled substance prescriptive rights were as follows:

"If the NP has a preceptor who has confidence in the NP's ability, the controlled substance can be ordered by the preceptor based on the information provided by the NP. At this point in my career, not having the right to prescribe controlled substances is not a major concern."

"I feel that the medical association would be looking forever on our part, and there are some NPs who would abuse the privileges. Therefore, we would take a giant step backwards in our progress. The time will come later to pursue this privilege."

"Addiction and abuse are terrible problems and I do not want that burden nor do I want to be concerned by chronic abusers."

"Without the ability to prescribe controlled substances I need to listen more carefully to patients, teach more alternative types of therapy and generally be more creative in meeting patient's needs. Sometimes an prescription for pain is the 'easy' way to treat."

Mixed Responses. Some nurse practitioners had ambiguous beliefs about the need for controlled substance privileges. A sampling of those nurse practitioners' comments were as follows:

"Be careful of what you ask for because that privilege is a two-edged sword. I don't have to argue with drug-seekers all day like the MD does. I would not want Schedule I, II, or III for that very reason. However, it is very difficult not to be able to

prescribe codeine for otitis media pain, cough suppressants, etc. in a primary practice. I look at it this way- conditions requiring analgesics at the Schedule I-III need to be seen by a physician. That gives us the best of both worlds- freedom to treat for relief of symptoms and freedom from the headaches of drug seekers."

"It should be very limited. This protects the NP from being in a situation of prescribing to frequent users."

"...if we get those rights I think it should be mandatory [for nurse practitioners] to have drug test as part of OK for certification....also I would be in favor of restrictions for use based on area of practice."

"I don't believe it should be across the board II-V approval at the point of graduation. Perhaps with an approved and detailed protocol (certain meds only)."

The data obtained from the Robertson's Prescriptive Privilege Survey was described and analyzed to answer the research question concerning the beliefs of nurse practitioners regarding the prescriptive privilege of controlled substances. Overall, nurse practitioners in the state of Mississippi are torn as to whether or not prescriptive privileges for controlled substances would be desirable. Answers to open-ended questions reflect very strong opinions on both sides of the issue. Chapter V contains an interpretation of the data described in this chapter, as well as conclusions, implications, and recommendations for future research.

Chapter V

The Outcomes

Prescriptive authority for controlled substances for advanced practice nurses has been a very controversial topic over the past years and continues to be an issue today. Research has shown that nurse practitioners prescribe medications appropriately (Mahoney, 1995) and that nurse practitioners believe that clients with chronic pain are given inadequate pain medications (Coggins, 1996). Also, research has shown that barriers to nurse practitioner's prescribing practices remain even though legal authority has been granted (Mahoney, 1994). This descriptive study sought to describe the beliefs of nurse practitioners in the state of Mississippi concerning prescriptive privileges of controlled substances. Erickson, Tomlin, and Swain's Theory of Modeling and Role-modeling (1983) provided the theoretical framework. The research question asked in this study was as follows: What are the beliefs of nurse practitioners regarding controlled substance prescriptive privileges? A convenience sample of 80 nurse practitioners (Family, Adult, Gerontological, Pediatric, and Ob-Gyn) certified with the Mississippi Board of Nursing were surveyed using the Robertson's Prescriptive Privilege Survey (RPPS). Descriptive statistics were generated to explain current beliefs of nurse practitioners regarding controlled substances prescriptive privileges. Responses to the instrument were analyzed using descriptive statistics including frequencies and percentages. Additionally, open-ended questions were analyzed using content analysis.

Summary and Discussion of the Findings

The sample for this study consisted of nurse practitioners who responded to the

RPPA mailed to 200 Family, Adult, Pediatric, Gerotinological, and Ob-Gyn. A final sample of 80 was obtained. Although the sample represented only 16% of the population of the approximately 500 nurse practitioners in Mississippi, the results of the study were assumed to be representative of the beliefs of nurse practitioners in Mississippi.

Although 60% of nurse practitioners indicated they would like to have controlled substance prescriptive rights, there was a varied response to the level of scheduled drugs that nurse practitioners desired. Forty percent of the nurse practitioners who indicated a desire for controlled substance prescriptive privileges only desired prescriptive privileges for Schedule V drugs, while 29% of responding nurse practitioners indicated the desire for schedule III drugs. Forty percent of nurse practitioners indicated that they did not have the desire for prescriptive rights for controlled drugs. The relatively high percentage of nurse practitioners who did not desire prescriptive privileges for controlled substances and those who only desired Schedule V drugs support the findings of Birkholz and Walker (1994) who asserted that nurse practitioners often create barriers to their own practice. Conclusions from the NPEA (1996) study suggested that while nurse practitioners may have a relatively high degree of professional independence, they are tied closely to physicians financially. Findings from this current study regarding controlled substance prescriptive privileges indicate that nurse practitioners are bound to physicians in ways other than financially. In the case of controlled substance prescriptive privileges, these bonds appear to be largely of the nurse practitioners' choosing. This supposition was supported by statements such as: "If a patient is in need of a controlled substance, he/she should be treated by a physician", "...because I feel a physician is better qualified to prescribe narcotics, sedatives, antipsychotics, antidepressants, etc.", and ,"...I don't want the responsibility of a medical doctor...I'm a nurse practitioner."

Responses of the nurse practitioners indicated the lack of education was not an issue concerning their level of comfort in prescribing controlled drugs. Positive responses

regarding whether or not nurse practitioners felt qualified to prescribe controlled substances ranged from an unqualified "yes" to "If I am safe enough to prescribe strong antibiotics, coumadin, and other high risk drugs, there is no reason I should not be allowed to prescribe controlled drugs." These beliefs uphold the findings of Mahoney (1995) that nurse practitioners strongly agreed that prescriptive authority would facilitate treating clients. Mahoney (1995) also concluded that nurse practitioners were comfortable prescribing medications and were very familiar with the drug prescribing practices in their setting. Conversely, Birkholz and Walker (1994) postulated that education was an issue concerning confidence in prescribing medications. The themes of confidence and competency were revealed by nurse practitioners through statements such as, "Not ready at this time. I would have to study about it first." However, Mahoney (1994) found that nurse practitioners prescribe as safely and effectively as physicians. The conflict among findings can be interpreted to mean while nurse practitioners could safely and competently prescribe controlled substances, the majority of nurse practitioners in Mississippi simply do not have the confidence nor the desire to prescribe all schedules of controlled substances.

McDermott (1995) stated the physician opposition was the strongest barrier to nurse practitioners prescribing. However, this study did not support McDermott's claim since 54 (67.5%) of the respondents believed their collaborating physician would support nurse practitioner prescriptive privilege of controlled substances. A possible reason for this confidence in physician support may be connected to the findings of Sekscenki et al. (1994) who concluded that states with favorable practice environments and with documented shortages of primary care physicians have more physician assistants and nurse practitioners than the national average, and that on the whole these states have a more favorable practice environment for nurse practitioners. Since Mississippi has a documented shortage of physicians, physicians may have a more favorable opinion about

the nurse practitioner role and prescriptivè privileges for controlled substances associated with the role.

The researcher asserts that the compilation of the literature and the findings from this study indicate that nurse practitioners need to examine their own beliefs about prescriptive privileges for controlled substances with regard to the quality of care of their clients. Although most nurse practitioners believe chronic pain is a valid compliant (Coggins, 1996), apparently nurse practitioners do not have the desire to treat these client since 40% of respondents did not want prescriptive rights of controlled drugs. Of the 60% who desired prescriptive rights for controlled drugs, 40% only desired Schedule V drugs. Furthermore, a large number of responses to open-ended questions indicated that nurse practitioners did not want to deal with "drug seekers". The findings give rise to the issue of nurse practitioners' willingness to assume the accountability inherent in controlled substance prescribing privileges. This insight into the nurse practitioners' world reveals that nurse practitioners may not feel comfortable with the responsibility of the prescriptive privileges for controlled substances. According to Erickson, Tomlin, and Swain's Theory (1983) of Modeling and Role-Modeling, more modeling of the nurse practitioner's world is needed with further role-modeling by those nurse practitioners who feel competent to claim prescriptive privileges for controlled substances.

Limitations

The limitations in this study were both internal and external. The greatest threat to generalization of this study's findings was a lack of randomization. Sample selection was restricted to the number of subjects who responded to the survey. The sampling design was one of convenience, thus a true representation of nurse practitioners must be questioned.

The instrument was researcher designed and had only face validity. This was the first time the instrument had been used in a study. The instrument was self-administered

and data were not validated. Question 12 in particular was suspect in that only one nurse practitioner admitted to ever having used inappropriate methods to obtain controlled substances for a client. Perhaps a multiple choice question would have elicited a more honest response.

In all cited limitations, the researcher was aware of lack of control for certain intervening variables. However, beliefs of nurse practitioners regarding controlled substance prescriptive privileges have not been studied; thus the weaknesses were admissible given the application of the research as a pilot study and the constraint of time for research implementation.

Conclusions

The results of this study lead the researcher to conclude that there are varying beliefs among nurse practitioners regarding prescriptive privileges for controlled substances. While 60% of those surveyed would like to have some controlled substance privileges, a majority of nurse practitioners desire to continue to practice with some constraints regarding controlled substances. Nurse practitioners who do not wish to have the privilege to prescribe controlled substances cite issues of liability, responsibility, and competency as reasons not to prescribe. However, if nurse practitioners did have such privileges, they would utilize them primarily to manage pain, cough, and anxiety from Schedules III, IV, or V. Overall, nurse practitioners believed that the inconvenience of not having controlled substance prescribing privileges was mitigated by collaborative physicians' willingness to prescribe needed scheduled drugs. Nurse practitioners held strong views and opinions regarding the need to pursue or not pursue privileges for controlled substances, and these opposing views possess the potential for controversy in the future. Lastly, Erickson, Tomlin, and Swain's Theory of Modeling and Role-Modeling (1983) was appropriate as a framework since the researcher was able to gain a fair amount of insight into the client's world.

Implications for Nursing

Practice. The nurse practitioner has been viewed as the health care provider best suited for primary health care. As the need for health care providers and health care prevention in rural and urban areas continue to grow, the role of nurse practitioners will expand. With this expansion of the role of the nurse practitioner, the autonomy and the scope of practice of the nurse practitioner will grow and increasingly include prescription of controlled substances. The ability of nurse practitioners to prescribe scheduled medications would be less time consuming in a primary care practice than consultation with a physician every time a controlled substance was needed. Less time spent in ordering medications would translate into greater access and more cost-effective primary care for more patients, as the nurse practitioner would be able to see more clients.

Research. Prescriptive rights for controlled substances has been a very controversial topic among nurse practitioners. However, no formal research has been performed to describe the beliefs of nurse practitioners concerning this issue. This study shows there are varying attitudes and beliefs about prescriptive rights for controlled drugs. Therefore, more research in this area needs to be performed to accurately ascertain the beliefs and the implications of those beliefs among nurse practitioners in the state of Mississippi before any group begins to lobby to gain these rights. Nurse practitioners need to present a united front and provide empirical data from research outcomes in order to gain more autonomy in practice.

Education. Findings from this study revealed that while lack of knowledge about controlled substances was a barrier for some nurse practitioners, other felt knowledgeable enough to hold prescriptive privileges for controlled substances. The ambiguity among nurse practitioners concerning whether they were educationally prepared to prescribe should alert nursing educators at every level of education to include clear and precise information about controlled substances in pharmacology curricula.

Recommendations

Nursing Research

1. Conduction of research examining the prescribing patterns of nurse practitioners in states with controlled substance prescriptive privileges.

2. Conduction of research exploring physicians attitudes and beliefs regarding controlled substance prescriptive privileges for nurse practitioners.

3. Publication of this study and other studies to document nurse practitioners' need and desire for controlled substance prescriptive privileges.

Nursing Practice

1. Utilization of Erickson, Tomlin, and Swain's Theory of Modeling and Role-Modeling as a framework for practice by nurse practitioners in primary care.

2. Incorporation of client-centered theories such as Ercikson, Tomlin, and Swain's Modeling and Role-Modeling into nurse practitioner practice.

3. Education of nurse practitioners on the pharmacological use of controlled drugs in order to provide a consistent standard of care.

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Appendix A

Robertsons Prescription Privilege Survey

Robertson's Prescriptive Privilege Survey

Please check (✓) appropriate answer or write answer in space provided. If more space is required, you may use the back of the survey.

1. What is your nurse practitioner preparation?
   ___ Certificate
   ___ Master's
   ___ Post-Master's Certificate

2. What is your highest degree earned?
   ___ ADN ___ BSN ___ MSN ___PhD ___ EDD
   ___ Other (please specify):______________________________

3. What is your area of NP certification?
   ___ Adult ___ Family ___ Pediatric ___ Gerontological
   ___ OB/GYN ___ Psychiatric ___ Other (specify)__________________

4. How many years have you practiced as an NP? ______

5. What is your practice site location?
   ___ College
   ___ Rural health clinic
   ___ Private NP clinic
   ___ School-based clinic
   ___ Collaborative clinic with physician
   ___ Community health center
   ___ Health department
   ___ Hospital
   ___ Other (please specify) ______________________

6. Do you practice with physician on site? ___ Yes ___ No

7. Do you believe your current preceptor would support NP's prescriptive rights for controlled drugs?
   ___ Yes ___ No

8. Have you ever practiced in a state where NPs have controlled substance prescriptive rights?
   ___ Yes ___ No

   If yes, where did you practice and what privileges did you have?

   ____

   ____

9. Would you like to have the right to prescribe controlled substances?
   ___ Yes ___ No

9a. If yes, which level of controlled drugs would you like? (Check highest level applicable)
- ___ V (Codeine in cough syrup)
- ___ IV (Ativan, Valium)
- ___ III (Pentobarbital, Hydrocodone)
- ___ II (Morphine, Dilaudid, Ritalin)
- ___ I (LSD, Heroin)

9b. If no, why not? ____

____

____

10. Do you feel qualified to prescribe controlled substances? If so, please elaborate. ____

____

____

11. If you had control drug prescriptive rights, in what circumstances would you use them?

___	Pain	___	Sleep
___	Cough	___	Depression
___	Anxiety	___	Other (please specify): ____________

12. If you need to order controlled substances now, how do you obtain them for your patient? ____

____

____

13. Please describe an incident in your practice where you believe you needed or would have wanted controlled substance prescriptive rights?

____

____

____

14. Is there anything you would like to share about your beliefs of controlled drug prescriptive rights? If so, please elaborate. ____

____

____

____

Appendix B

Approval of Mississippi University for Women

Committee on the Use of Human Subjects in Experimentation

MISSISSIPPI UNIVERSITY FOR WOMEN
Columbus, MS 39701

Office of the Vice President for Academic Affairs
Eudora Welty Hall
P.O. Box W-1603
(601) 329-7142

April 1, 1997

Ms. Holly Taylor Robertson
c/o Graduate Program in Nursing
Campus

Dear Ms. Robertson:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research as submitted.

I wish you much success in your research.

Sincerely,

Susan Kupisch, Ph.D.
Vice President
for Academic Affairs

SK:wr

cc: Mr. Jim Davidson
Dr. Mary Pat Curtis

Appendix C

Cover Letter to Nurse Practitioner Participants

Letter of Introduction & Informed Consent

Dear Survey Participant:

My name is Holly Robertson. I am a registered nurse working on a Master's degree at Mississippi University for Women. I am conducting a research study concurring the beliefs of nurse practitioners regarding controlled substance prescriptive privileges. The findings of this study may help to change to change to the nurse practitioner's role. I am requesting that you participate in my study. Your name was chosen from the list of currently practicing nurse practitioners from the Mississippi Board of Nursing.

Participation is voluntary and your confidentiality will be maintained. The completion and return of the survey will indicate your agreement to participate.

Thank you in advance for your willingness to share from your experience.

Thank you,

Holly Robertson, RN, BSN

Appendix D

Follow Up Postcard

Message on follow-up postcard: Holly Robertson

Dear Nurse Practitioner:

Thank you for your participation in my research study "Nurse Practitioners' Beliefs Regarding Controlled Substance Prescriptive Privilegs." If you have not returned the Robertson Prescritpive Privilege Survey, please do so at this time. Your assistance is appreciated.

Sincerely,

Holly Robertson