Herbal Prescribing Practices Among Nurse Practitioners In Mississippi

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HERBAL PRESCRIBING PRACTICES AMONG
NURSE PRACTITIONERS IN MISSISSIPPI

by

MICHELLE SMITH

A Thesis
Submitted in Partial Fulfillment of the Requirements
for the Degree of Master of Science in Nursing
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COLUMBUS, MISSISSIPPI
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Herbal Prescribing Practices Among Nurse Practitioners in Mississippi

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Abstract

Alternative therapies, especially herbal therapies, are rapidly gaining popularity among the general population. As the self-prescribed use of herbs increases, researchers have identified a paucity of data regarding the herbal therapy prescribing practices among health care providers. The focus of this descriptive study was to examine herbal therapy prescribing practices of nurse practitioners in Mississippi. Benner's (1984) Novice to Expert Model was the theoretical framework that guided this study. Three research questions were formulated: What are the herbal therapy prescribing practices of nurse practitioners? What is the perceived level of competence of nurse practitioners in prescribing herbal therapies? And what are the herbal therapies most frequently prescribed by nurse practitioners? The target population was certified nurse practitioners in Mississippi. A convenience sample design was utilized with a final sample of 65 participants. The participants completed the researcher-developed Demographic Survey and the Herbal Prescribing
Questionnaire. Descriptive statistics, including frequencies, distributions, and percentages, were used to analyze the data. The findings indicated that 48% of nurse practitioners do not prescribe herbal therapies because of lack of confidence (75%) regarding herbal usage. The nurse practitioner, in order to attain competence, should seek every opportunity to obtain knowledge regarding herbs and their usage. As the nurse practitioner gains knowledge, competence related to herbs in clinical practice will increase. Recommendations for further research included incorporating education on herbs at the baccalaureate level and replication of this study with a larger, more diverse sample of nurse practitioners including practices in other states.
Acknowledgments

The last year has been a very trying and memorable year. New friendships developed that will last a lifetime. I am reminded as I reflect back on the year of moments that gave me reason to smile and also those times when the tears came down like rain.

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will never be forgotten. Thanks, Momma, for being my friend, mother, and father.

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Chapter I

The Research Problem

During the last two decades, herbal therapies have become increasingly popular among Americans seeking treatment for ailments such as arthritis, depression, diabetes, menstrual irregularity, and pulmonary conditions. An estimated one out of every five clients seen in a health care setting use some form of herbal therapy, and it is suspected that the use of the herbal therapy is most often self-prescribed by the client (Eisenberg et al., 1993).

Herbal therapies have advantages and disadvantages. Advantages, such as fewer side effects than traditional pharmacological drugs, relief of symptoms, and access to the herbs, have attracted consumers who easily forget such disadvantages as lack of standardization and interaction with prescription drugs.

As more knowledge becomes available regarding herbal therapy, nurse practitioners may suggest such therapies in their client population. Minimal research has been
identified regarding the use of herbal therapies by nurse practitioners. The purpose of this study was to examine the herbal prescribing practices among nurse practitioners in Mississippi.

Establishment of the Problem

According to Eisenberg et al. (1993), one of three Americans reported using at least one alternative therapy in the past year. Eisenberg et al. reported that herbal therapies were frequently taken to treat or prevent a variety of medical conditions. The researchers also reported other frequently used alternative therapies which included acupuncture, massage, chiropractic, and relaxation techniques (Eisenberg et al., 1993).

Relief of symptoms was one of the major reasons cited by clients for the use of herbal therapy (Astin, 1998). Herbal therapy was perceived by users to have minimal side effects as compared with prescriptive medications. For example, in the treatment of nausea, ginger was found to be more effective than Dramamine, a common over-the-counter antiemetic, while devoid of side effects as associated with the traditional drug (Duke, 1997). Herbal therapies also are more economical than most prescription drugs. In addition, herbal therapies are more accessible
to the general population because no prescription is required.

According to Sorgen (1998), herbal therapy use by a health care provider for a client requires a holistic view of the situation. Sorgen (1998) defines herbal therapy as, "choosing natural remedies to aid in the treatment of health conditions" (p. 23). Along with apparent benefits, herbal therapy has some drawbacks. Many health care professionals believe that there is not enough empirical data to support the use of herbs in the treatment and prevention of illness. Other individuals who oppose herbal use have suggested that information is not available to the client who purchases these therapies over-the-counter. Many less expensive forms of the herb, and even some from reputable distribution sources, lack appropriate warning labels. Drug interactions, in particular, are often not cited on herb labels. Such interactions potentially can be detrimental for the client. For example, the pharmacologic agent, warafin sodium and gingko biloba, an herb, may be used for peripheral vascular disease and vertigo, yet both act as anticoagulants and should not be taken together (Sorgen, 1998). Herbal therapies have been used for years; however, successful use should come with education.
Because the widespread use of herbal therapy in the United States is a relatively new phenomenon, doctors, advanced practice nurses, pharmacists, and other professionals who prescribe medications may be relatively unfamiliar with the potential risks and benefits associated with herbal therapies. This lack of knowledge, along with pressure from the pharmaceutical industry to use standardized Food and Drug Administration (FDA) approved drugs and skepticism of colleagues in the field of health care, results in a reluctance to recommend or prescribe the use of herbal therapies to clients (Eisenberg et al., 1993). Largely because of controversies among health care providers about the use of herbs, 66% of clients do not reveal their use of herbal therapy unless explicitly asked by the health care professional (Astin, 1998). The reluctance of clients to divulge herbal use can result in potentially harmful health care because professionals are unaware of herbal therapies used in conjunction with prescribed medications, therefore, potentiating a harmful medication interaction. Health care professionals need to achieve a sufficient knowledge base of herbal therapies and interactions in order to prescribe with confidence. Choices between prescription medications
and herbal therapies can then be negotiated to provide a regimen that is acceptable to the health care professional and the client.

With the popularity of herbal therapies among clients and the holistic approach of the nurse practitioner’s clinical practice, herbs and confidence in educating clients about herbs are necessary. Nurse practitioners need to take every opportunity to seek information about herbs so they can assume the role of educator for clients. Such information would ideally include the facts that even though herbs are not drugs regulated by the FDA and are classified as dietary supplements, they still may produce side effects with a pharmacological impact, thus should be treated with the same respect as drugs. Allergic reactions to herbs are rare; however, it is the responsibility of the nurse practitioner to teach signs and symptoms of allergic responses. Because clients usually do not reveal herb use unless specifically asked by the health care professional, perhaps, the most important contribution of the nurse practitioner educator is to keep lines of communication open with the client by asking historical information about all sources of medicinal treatment. Anecdotal evidence reveals that a number of nurse
practitioners throughout the United States are already prescribing herbal therapies as a routine part of clinical practice. However, there has been no formal research regarding the theory base or prescribing methods of these nurse practitioners. A beginning knowledge base regarding herbal prescribing practices is an essential component for the development of expert and ethical nursing care for clients who use herbs. Without empirical evidence and formalized education upon which to base interventions, nurse practitioners cannot effectively perform the important roles of educator, advocate, and counselor regarding herbal therapies for clients. It is important to establish where nurse practitioners are in the knowledge of herbs, if they prescribe herbs, and, if so, what herbs they prescribe. Currently, the competence among nurse practitioners regarding herbal prescribing practices and their competence level regarding herbs in general are unknown.

Significance to Nursing

The current study has potential significance to nursing science in a number of areas. The dearth of information in the literature regarding how, and among whom, herbal therapies are being prescribed has made
serious inquiry into the effectiveness of such therapies almost impossible. Findings from this study will add to a growing knowledge base about the use of herbal therapies in primary care practice. This study is particularly significant because virtually no literature exists concerning nurse practitioners’ perceptions of competence to prescribe herbs.

The study also contributes information for nursing education. Findings from this study may serve as an impetus to increase competency in prescribing by incorporating herbal therapies into pharmacology courses in schools of nursing. As the use of herbs by the general population expands, an increased knowledge base about herbal therapies will be necessary for both baccalaureate and graduate programs in nursing.

The use of herbs related to nursing practice is also of interest. In addition to a knowledge base produced by findings, this study may stimulate an interest in herbal therapies and a desire for increased competency in prescribing among those who read the outcomes. Awareness regarding the potential benefits and relative contraindications of prescribing herbs may eventually lead to the development of safer clinical practices by nurse
practitioners, including the development of empirically based protocols upon which to base herbal prescribing practices.

Theoretical Framework

The theoretical framework for this study was Benner’s (1984) Novice to Expert Model. Benner asserted that there are five levels of acquisition through which nurses move through to accomplish excellence and expertise in nursing practice. These five levels of acquisition include novice, advanced beginner, competent, proficient, and expert.

Novice. A novice is one who has no background experience of the situation. A novice can be related to the nurse practitioner who is not familiar with herbal therapy prescribing practices because of a lack of knowledge, minimal years of practice, or both. The novice, therefore, does not prescribe herbs at all.

Advanced beginner. Advanced beginner is one who has been exposed to a situation and who can display beginning abilities in the behavior. In the context of this study, many nurse practitioners learned about herbal therapy prescribing practices at conferences, school, or self-study but were still not confident prescribing to clients.
responsibility for managing client care by becoming more proficient through education and practice. The advanced beginner can increase competence through gaining information on herbal therapies and sharing the information with his or her clients.

Competent. Through exposure to various situations, the nurse practitioner has gained knowledge and the ability to master client care. As knowledge is gained through exposure to herbal therapies, the nurse practitioner moves from being a novice to becoming organized and effective in dealing with herbal therapy. The competent nurse practitioner will prescribe some herbal therapies.

Proficient. At this level, the nurse practitioner is able to incorporate a broader perspective of the client, which incorporates all aspects of a client’s long-term care, producing a more comprehensive view of the client. As the nurse practitioner increases his or her knowledge regarding herbs, he or she will be able to avoid focusing on a particular symptom and view the client as a whole. The practitioner will begin to incorporate knowledge of pharmacologic principles to aspects of client care.
The expert nurse practitioner has an intuitive grasp of client needs. After acquiring information on herbal therapies through years of practice, one has the competency needed to effectively use herbal therapies confidently. Nurse practitioners prescribing practices for their client population now has an impact on client outcomes for the improvement of care for that client.

The focus of Novice to Expert was the process of acquiring knowledge either by experience, furthering one’s education, conferences, research, or self-study. Increased knowledge should lead to increased confidence and competence of nurse practitioners regarding herbal therapy prescribing practices. The ultimate goal of expertise in practice as a nurse practitioner is positive outcomes for the client.

Statement of the Problem

The use of herbal therapies has become widespread in the United States. Many clients who are seen in primary care clinics are using herbs for illness prevention or treatment for a variety of ailments. Herbal therapy could be used more safely and effectively if health care providers competently prescribed and monitored them. No
research has been found that addresses the herbal prescribing practices among nurse practitioners. The purpose of this study was to examine the prescribing practices of nurse practitioners regarding herbal therapies and to assess their perceived level of competency regarding herbal use in general.

Research Questions

This study was guided by the following three research questions:

1. What are the herbal therapy prescribing practices of nurse practitioners?
2. What is the perceived level of competence of nurse practitioners in prescribing herbal therapies?
3. What are the herbal therapies most frequently prescribed by nurse practitioners?

Assumptions

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

1. People want to assume control of their own health problems by using herbal therapies.
2. Nurse practitioners prescribe herbal therapy to his or her level of competence.
Definition of Terms

The terms defined for this research study were as follows:

Herbal therapy: Theoretical: medicinal plants used to treat diseases or for symptom relief. Operational: all the herbs listed on the Herbal Prescribing Questionnaire.

Prescribing practices: Theoretical: a mechanism by which nurse practitioners indicate the use of a medicinal plant to provide a service in the prevention, treatment of an illness, or maintenance of health. Operational: written directions provided by the nurse practitioner for the use of herbs to treat illness and/or maintain health as measured by questions 1 to 3 on the Herbal Prescribing Questionnaire.

Nurse practitioners: Theoretical: a registered nurse with advanced preparation in the care of particular types of clients with emphasis in primary care. Operational: a registered nurse with advanced preparation to care for clients in a variety of primary care, acute care, or long-term care settings as determined by responses to the Demographic Survey.

Competent: Theoretical: a nurse practitioner who feels qualified to prescribe herbal therapies.
Operational: Competence is reflected in the participants' responses to questions 5-6 on the Herbal Prescribing Questionnaire.

Summary

The herbal prescribing practices among nurse practitioners in Mississippi are presently unknown. This study sought to determine the herbal prescribing practices and what herbals, if any, nurse practitioners prescribe. In this chapter, an introduction to this research problem was provided. Benner's Theory of Novice to Expert was described as the theoretical foundation for the study.

In Chapter II, literature pertinent to this study is reviewed and discussed. Chapter IV describes the findings of the research 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 the Literature

A review of the literature was conducted to ascertain the use of herbal therapies in primary care settings. To date, research regarding the use of herbal therapies with medical conditions remains limited. Herbal therapies are becoming more popular among the general population. Although herbal therapies are usually self-prescribed, no research studies were identified regarding the herbal prescribing practices of nurse practitioners.

Alternative therapies, in general, have rapidly gained popularity among the general population. A descriptive study was conducted by Eisenberg et al. (1993) to determine why many people use unconventional therapies to treat health problems. Data were gathered from a telephone interview, composed of a series of questions mainly focused on medical problems and the type of care sought over the past 12 months. Criteria for inclusion in the target population were that the subjects needed to be English-speaking persons, 18 years of age or older, and
have no cognitive or physical impairment that would hinder completion of the interview. The final sample of 1,500 was selected by means of random digit dialing. The problem was identified as the need to determine the incidence, cost, and patterns of use of unconventional therapies by people in the United States. Specific research questions were used:

What is the extent of use of unconventional therapy in the United States? How much is spent annually on these therapies, including out-of-pocket and third party payments? What sociodemographic factors distinguish users of unconventional therapy from nonusers? For what medical condition do people commonly use unconventional therapy? And to what extent are medical doctors responsible for or informed about the use of unconventional therapy by their patient. (p. 246)

Eisenberg et al. (1993) established that one in three subjects used at least one unconventional therapy in 1990. The use of unconventional therapy was more common among people 25 to 49 years of age (p < .05) and less common among African Americans (p < .05). Subjects with an income of greater than $35,000 (p < .05) and who had a college education were more likely to use unconventional therapy. The use of unconventional therapy was not confined to any particular segment of society in the United States. The rates ranged from 23% to 53% in all groups. However, usage
was seen more frequently with those living in the West (44%) than those in the rest of the country. In addition, the most frequently reported medical conditions for which unconventional therapies were used were back problems (chiropractics, massage), allergies (spiritual healing, lifestyle, and diet), and arthritis (chiropractics, relaxation techniques). Payments for these services were 55% third-party payers and 70% out-of-pocket at the patient’s expense.

Eisenberg et al.’s (1993) study demonstrated consumer interest in unconventional therapy, which related to the present study. The current study focused on herbal therapy as a type of unconventional therapies and what the prescribing practices of nurse practitioners were in Mississippi. It is important to understand what information influenced the nurse practitioners to use unconventional therapies and for what medical conditions the nurse practitioner prescribed herbal therapies. Healthcare professionals must be familiar with alternative therapies used by clients, especially herbal therapies, to avoid complications with conventional treatments.

In the interest of examining cultural diversity, types of alternative health practices used by Mexican
Americans in the Texas Rio Grande Valley were evaluated in the descriptive research study conducted by Keegan (1996), who used Madeline Leininger’s Theory of Transcultural Caring to guide the study. The researcher wanted to identify the types of alternative health practices used by Mexican Americans in the Texas Rio Grande Valley and to what extent the use of alternative health care practices were discussed with the primary health care provider. Specific research questions were as follows: “What specific kinds of alternative therapies are sought by Mexican Americans in the Rio Grande Valley? What is the frequency of their use? And do Mexican Americans self-report these therapies to their established health care provider?” (p. 277). The researcher defined the term alternative therapies as those health practices that fell outside conventional mainstream healthcare and included, but not limited to, herbal medicine, prayer, massage, charms, and folk healing.

Keegan (1996) composed a one-page bilingual survey to obtain demographic characteristics of the participants, types of alternative therapies frequently used, and what medical conditions prompted treatment seeking. Consent was obtained from each participant by filling out the survey
form. The survey form focused on how 13 specific therapies were used during the past year, how frequently these alternative therapies were discussed with their primary health care providers, and how well the therapies were working. Keegan used research assistants who were bilingual to gather data at the research sites.

Ninety-four of the participants in the study (44.2%) used some form of herbal therapy at least one time during the past year. Herbal therapies also were among the most frequently used alternative therapies along with prayer, spiritual healing, and massage. In addition, 60% of the sample received massage therapy during the past year. Curanderos or folk healers were used annually by 13.75% of the participants. The majority of the participants (66.1%) stated that they never discussed alternative therapy usage with their primary health care provider. This finding suggested that the majority of the health care providers were unaware of the patient’s participation in dual treatment because often folk medicine or alternative therapy was seen as a “secret” by the consumer. In addition, from 1993 to 1994 alternative therapy use increased from 34% to 44% as reported in this study.
Keegan's (1996) study relates to the current researcher's endeavor, which is focused on herbal therapy and how often it is prescribed by nurse practitioners to assist people with medical conditions. The main alternative therapy used most frequently by the participants in Keegan's (1996) study was herbal therapies, which was the main focus of the current researcher's study.

Astin (1998) sought to determine why patients chose to use alternative medicines in his descriptive research study. The researcher emphasized the need to identify the predictors that influence patients to choose alternative health care. The study tested the following five hypotheses using multiple logistic regression:

1. Users of alternative health care will be distinguished from nonusers.

2. Having access to more financial resources will predict the use of alternative health care.

3. Higher levels of education will be predictive of alternative medicine usage.

4. Users of alternative health care will be more likely to be a part of a cultural group.
5. Those who report relying primarily on alternative forms of health care will be more likely to subscribe to a holistic philosophy of health. The researcher defined the term unconventional health care as practices that are neither taught in medical schools in the United States nor available in hospitals in the United States.

The study used an extensive mail survey to obtain data from a random sample of 1,500 individuals. Astin (1998) gathered data on use of alternative therapy, perceived benefits and risks of these therapies, health beliefs and attitudes, views toward and experience with conventional medicine, and their world view. The sample was composed of a panel of persons who had agreed to participate in mail surveys representing a national sample from which subsamples were drawn. The final sample included 1,035 people who completed the survey (response rate of 69%).

The findings of the study were based on data gathered from multiple logistic regression. Being dissatisfied with conventional treatments was not significant in distinguishing users of alternative health care from nonusers. Thirty-nine percent of the participants who were highly satisfied with their conventional treatments were
consumers of alternative health care, while 40% were very dissatisfied with their current conventional treatment and sought to use some form of alternative health care. In addition, neither feelings of autonomy of self-care, gender nor race were predictors of users versus nonusers of alternative health care. For example, users of alternative therapies in relation to race were as follows: Whites was 41%, African Americans was 29%, and Hispanics was 40%. As for gender, 51% of the ones who sought alternative health care were females compared to 49% being males. Financial resources, also, were not significant in predicting the use of alternative health care. Household incomes of less than $12,500 had 33% users of alternative health care, while household incomes of $39,999 had 36% users. However, education was a strong sociodemographic predictor for those who sought alternative health care. The majority of alternative health care users (50%) who participated in the study had graduate degrees versus 31% who had a high school education or less. Users of alternative health care also were more likely to report poorer health status than nonusers. Participants classified as belonging to a cultural group were significantly more likely to use alternative healthcare.
The philosophical belief behind holistic health also was a strong predictor for those who sought alternative health care. The participants who believed the holistic philosophy of health reported using alternative health care 46% versus 33% nonphilosophical participants.

Astin's (1998) study related to the current researcher's endeavor because from the data reviewed it was evident that alternative health care is sought by clients, thus it is imperative for the health care professionals to be knowledgeable about what is being used by the client population. Nurse practitioners, as well as other educated professionals, may be more likely to use herbal therapies because of a holistic approach to client care. The nurse practitioner's belief may be tempered by how competent they feel about herbal therapies.

Gorden, Sobel, and Tarazona (1998) sought to determine the use of alternative therapies in the primary care setting and the interest among the health care providers to have them incorporated into HMO-delivered care. The researchers identified as the need to identify the use of alternative therapies in the primary care setting and the interest among health care providers to have these alternative therapies incorporated into
HMO-delivered care. Specific research questions were as follows:

What specific kinds of alternative therapies are used in the primary care setting? What is the frequency of their use and for what conditions? And what interest among the health care professionals existed regarding usage of alternative therapies and HMO coverage? (p. 154)

The design of the study was descriptive. A random sample of 1,252 health care providers, which included physicians who practiced 50% of their time in adult primary care, obstetrician/gynecology (Ob/Gyn) physicians, and nurse practitioners were surveyed.

The researchers defined the terms alternative, unconventional, or complementary therapies as medical practices that are not in conformity with the standards of the western medical community. HMO was defined as the health maintenance organization. The conceptual framework for this study was Orem's Model of Self-Care.

Gorden et al. (1998) composed a questionnaire for the random sample. For those nonresponders, telephone follow-up interviews were conducted to eliminate response bias. On the questionnaire the participants were asked to indicate from a list provided which of the following 20 alternative therapies had been used to treat or prevent a health problem over the past 12 months. In addition, the
participants were asked to list the conditions for which
the alternative therapies had been used.

Chi-square tests were used to assess whether there
was a difference in proportions; for example, the
percentage of herbs used by adult care physicians vs.
Ob/Gyn or the percentage of those used among the different
patient age groups. Pearson’s product-moment correlation
and multiple linear regression were used to assess
significance of differences between groups regarding
continuous variables, such as the level of interest. The
sample consisted of approximately 624 adult primary care
physicians and 157 Ob-Gyns and 211 nurse practitioners who
participated in the study. Ob-Gyns and nurse practitioners
were very interested in the use of alternative therapies
(78.9%) compared to 35.3% of adult primary care
physicians. The level of interest was consistently related
to age and sex, with females and those younger than 55
expressing a greater interest in alternative therapies. In
addition, the level of interest was also significantly
influenced by the patient mentioning these alternative
therapies to their health care provider, \( r = 0.35, p <
.001 \). Of the total group of participants, 93% had
recommended at least one alternative therapy to their patients during the past 12 months.

Ob-Gyns and nurse practitioners were more likely than the adult primary care physicians to recommend herbal and homeopathic medicines (29.3% vs. 8.8%). Other forms of alternative therapies that ranked high among the participants were manipulation therapies, such as chiropractic, acupuncture, and massage therapy. In relation to incorporation of alternative therapies as a choice in HMO-care coverage, 65.6% of the adult primary care physicians expressed interest compared to the 74.3% of the Ob-Gyns and nurse practitioners (Gordon et al., 1998).

Recommendations generated from this study included expanding the study beyond one geographic area of the country to see if there were differences among various settings (i.e., rural, urban, and ethnic groups). The strength of this study was the large diverse sample and the thoroughness of the questionnaire sent to each participant. This review of literature supports the fact that nurse practitioners are interested in herbal therapies and that their interest tended to increase because of client inquiries.
Alternative therapy use has also been identified among children. Spigelblatt and Laine (1994) sought out to determine the frequency with which alternative medicine was employed in a pediatric population that also uses conventional medicine. The researcher also wanted to determine what sociodemographic factors encouraged the choice of these forms of therapy. The researchers sought to determine the frequency these alternative therapies were used among a pediatric population and to what extent sociodemographic factors influence that choice. Specific research questions were as follows:

What frequency was alternative therapies used among children under 18 years? What type of alternative therapies were most frequently employed? What were the reasons for choosing alternative therapies? And what was the level of satisfaction and the cost incurred? (p. 811)

The researchers defined the term pediatric as anyone under the age of 18 years.

The design of the research study was descriptive. The random sample of 2,055 parents whose child was to receive health care. The researchers composed a one-page questionnaire that consisted of 26 multiple-choice and three open-ended questions. The trained volunteers who assisted at the clinic insured that only one questionnaire was completed for each child and that the procedure was
designed to insure anonymity. The questions focused on “what type of conditions did the parent try an alternative therapy, what factors influenced the choice made, and what costs were incurred?” (p. 812). All the questions were asked in French, the language spoken by 90% of the clinic population. The responses of the questionnaire were entered by a trained research assistant following a defined coding form.

Data were analyzed using SYSTAT to provide descriptive statistics, cross-tabulations, and to examine relationships between sociodemographic characteristics and the use of alternative therapies. To adjust for intercorrelation, a logistic regression analysis also was performed. Of the 2,055 questionnaires distributed, 1,911 were returned and able to be used. Eleven percent of the children had previously used some form of alternative therapy since birth. In 70% only one type of therapy was used, 22% used two types of therapy, and 8% used three or more types of therapy. Only one half of all the parents told their primary care provider of the use of alternative therapies. The types of therapies most frequently used were chiropractic (106), homeopathy (73), and naturopathy (treating disorders with the use of herbs) (34). The main
medical condition for which most parents sought alternative therapy treatment for were infections of the ear, nose, and throat. The parents who used alternative therapies with their children consulted their primary care physician less than nonusers (34% vs. 56%). Most parents (84%) who chose to use alternative therapies made the choice on their own or were influenced by family, friends, or both. Thirteen percent of referrals for alternative therapies were actually made by a health care professional. The most common factor that led the parents to alternative therapies was by word-of-mouth (32%), followed by fear of drug side effects (21%), then chronic medical problem (19%). Sociodemographic factors which influenced the use of alternative therapies were the child’s age, parental use of alternative therapy, and the mother’s education. In relation to satisfaction and cost for alternative therapy, 59% of the parents noted a significant improvement ($p < .05$) in the child’s condition than parents who did not use alternative therapy. The cost of the alternative therapy was less than $20 in 37% of the cases, between $21 and $60 in 48% of the cases, and more than $60 in 6% of the cases. The Spigelblatt and Laine (1994) study articulated the use of alternative
Barrett (1997) conducted a descriptive study to determine the alternative health care practices of patients who were clients in nurse practitioner clinics in North Mississippi. The researcher’s variables of interest included frequency of use, types of alternative health care practices, and the sociodemographic characteristics of patients who chose to use the alternative health care practices. The controlled variables of the study included age, the ability to speak English, and literacy. The theoretical framework for the research study was Leininger’s Transcultural Nursing Theory.

The setting for the study was two clinics in North Mississippi that were operated by nurse practitioners as the primary care providers. One clinic was in a rural setting; the other clinic was located in an urban area. The target population consisted of adults 18 years of age or older who were literate, spoke English, and sought care at one of the two clinics. A convenience sample (N = 113) was used.

The instrumentation used for the data collection was the Barrett Folk/Alternative Health Information Survey.
Data compiled were analyzed using the chi-square test of independence. One qualitative question was analyzed using content analysis for common themes.

The participants ranged in age from 18 to 89 years. In the rural clinic 11% were male and 89% were female. On the other hand, in the urban clinic, 64% were male and 36% were female. The majority of the respondents worked full-time (50%), had an annual income of $40,000 (30%), and were white (71%). In addition, the majority of participants were married, had a college education, and some form of health care coverage.

Barrett (1997) discovered that the most used alternative therapies were chiropractic, megavitamins, meditation, massage therapy, and hypnosis. The most common herbs used to treat an illness were aloe, peppermint, garlic clove, ginseng, Witch Hazel, and alfalfa. The most common spiritual, cultural, or religious practice used by the participants was prayer.

The findings of the study were consistent with those found in the review of literature. Barrett (1997) recommended replicating the current study expanding the geographical area and conduction of a study to assess the knowledge of health care providers regarding alternative
health care practices. The researcher stressed the importance of the need for nurse practitioners to be competent with alternative health care practices and the possible harmful side effects associated with certain alternative therapies.

Barnes (1998) conducted a descriptive study to identify the alternative health care practices among homebound adults. The variables of interest were the different types of alternative therapies used by the participants.

The setting for the study was the homes of clients who received home health service in Northeast Mississippi. The target population consisted of rural homebound adults age 21 years or older who were oriented to person, place, and time. A convenience sample of 100 participants was used.

The instrumentation used was the Barrett Polk/Alternative Health Information Survey (Revised). The participants completed the survey, and descriptive statistics were used including frequencies, distributions, and percentages to analyze the data. Chiropractic, massage therapy, and homeopathy were the top three alternative therapies used by the participants. The most commonly used
herb to treat an illness was aloe followed by peppermint, cranberry fruit, and garlic clove. The most commonly used spiritual practice was prayer.

The findings of the study also were consistent with those found in the review of literature. The researcher recommended replicating the study to include more age difference in the population. The researcher was limited to the homebound population which was primarily of elderly. The researcher also stressed the importance for the nurse practitioner to gain knowledge in the various alternative therapies to provide the patient with a more holistic approach to family practice.

Summary

From the review of literature, it is suggested that alternative therapy usage is steadily increasing among the patient population, but the predictors to seek this type of therapy are not clearly understood. The review of literature also supported the fact that nurse practitioners need to be more aware that their patient population may be using alternative therapies. Questions regarding alternative practices should be asked in a nonjudgmental way. The nurse practitioner should emphasize to the patient the importance of not abandoning
conventional medicine when alternative therapies are revealed, especially for chronic medical conditions such as diabetes.
Chapter III

The Method

The purpose of this study was to determine the herbal prescribing practices among nurse practitioners in Mississippi. In this chapter, empiricalization of the problem will be described. The instruments used to collect the data will be explained, and the setting, population, and sample will be described in this chapter.

Design of the Study

A descriptive survey research design was employed to identify the herbal prescribing practices among nurse practitioners in Mississippi. Polit and Hungler (1995) defined descriptive research as research aimed predominantly at describing phenomena rather than explaining them. The design was appropriate because the purpose of the research was to identify the herbal prescribing practices among nurse practitioners. No manipulation of variables occurred.
Setting, Population, and Sample

The setting for the study was various healthcare settings where nurse practitioners were employed. Mississippi has a variety of populations and cultures. The poverty rate for Mississippi families in 1996 was 12%, compared to the national poverty rate of 10.0%. The three leading causes of death in Mississippi are heart disease, cancer, and cerebrovascular disease (Comprehensive Planners, 1996).

The population consisted of 600 certified nurse practitioners in Mississippi. A systematic sampling method was used to reduce the target sample size to 150. The final sample (N = 65) consisted of nurse practitioners employed in primary care, acute care, or long-term facilities in Mississippi who responded to the survey and returned the questionnaires. The sample was one of convenience and depended on the number of respondents who completed the Demographic Survey and the Herbal Prescribing Questionnaire.

Instrumentation

Two instruments were used to collect data for the study. The first instrument was the researcher-designed Demographic Survey, which was utilized to assess
characteristics of the sample (see Appendix A). The survey contained eight questions that participants were instructed to check or fill in the most appropriate responses. Items were constructed to elicit information pertaining to length of practice and area of practice. Estimated time required to complete the instrument was 5 minutes.

The second research instrument for the study was a researcher-designed Herbal Prescribing Questionnaire, which was utilized to assess the herbal prescribing practices of nurse practitioners, if any (see Appendix B). The questionnaire contained six questions, which participants were instructed to check or fill in the most appropriate responses. Items were constructed to elicit information regarding competency among nurse practitioners related to herbal prescribing practices. Competency was assessed on a scale of 1 to 4, with 1 = Not competent, 2 = Slightly competent, 3 = Fairly competent, and 4 = Very competent. Estimated time required to complete the instrument was 10 minutes.

Procedures

Protection of the rights of human subjects was achieved by seeking approval to conduct the study from the
Mississippi University for Women Committee on Use of Human Subjects in Experimentation (see Appendix C). Packets were collated and consisted of a letter of introduction and informed consent (see Appendix D), the Demographic Survey, the Herbal Prescribing Questionnaire, and a self-addressed, stamped envelope. The introduction letter advised participants that there were no identified risks in participating in the study and assured the subjects of confidentiality. Packets were mailed to 150 licensed nurse practitioners in Mississippi. At a later date, reminder postcards were also sent (see Appendix E). The participants were assured of anonymity by unmarked data sheets, and consent from each participant was indicated by completion of the Demographic Survey and the Herbal Prescribing Questionnaire.

Data Analysis

Data from this study were analyzed using means, frequency distributions, and percentages. Data from the Demographic Survey and the Herbal Prescribing Questionnaire were tabulated using descriptive statistics, such as measures of central tendency and frequency distributions. Responses to open-ended questions were
content analyzed and grouped according to recurrent themes.

Summary

In this chapter, the empiricalization of the research study, which examined the herbal prescribing practices among nurse practitioners in Mississippi, was described. The design of the study, as well as the setting, population, and sample were discussed. The instrumentation and methods of data collection were explained in detail. Finally, the methods of data analysis were addressed.
Chapter IV

The Findings

The purpose of this study was to determine the herbal prescribing practices among nurse practitioners in Mississippi. The researcher-developed Demographic Survey and Herbal Prescribing Questionnaire were utilized to obtain information from nurse practitioners regarding their herbal prescribing practices. Data from each question were analyzed using percentages and frequency distributions. The findings from the study are presented in this chapter.

Description of the Sample

A total of 140 surveys were mailed to nurse practitioners in Mississippi. The sample consisted of 65 nurse practitioners who responded to the survey. The age of the respondents ranged from 26 to 64 years with a mean age of 39 and a median age of 40 years. The sample consisted of 7.69% (n = 5) males to 92.31% (n = 60) females. Of the respondents, 4.62% were African American and 95.38% were Caucasian. The majority of the respondents
practiced in a rural setting (71.21%) while the others practiced in an urban setting (24.24%). Primary care was the practice setting of most respondents (74.24%) followed by acute care (7.58%) and long-term care (1.52%). The average length of time the respondents had practiced as a registered nurse before becoming a nurse practitioner was 13.2 years. The average length of time the respondents had practiced as a nurse practitioner was 5.7 years.

Composition of the sample by specialty is depicted in Table 1. Four of the respondents marked more than one response. These four respondents were certified as both adult and pediatric nurse practitioners.

These findings reflect that the average respondent was a 40-year-old female Caucasian. Most respondents were family nurse practitioners with an average of 6 years experience in the role. The majority practiced primary care in a rural setting.
Table 1

Composition of the Sample by Nurse Practitioner’s Speciality Expressed in Frequencies and Percentages

<table>
<thead>
<tr>
<th>Speciality</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult</td>
<td>4</td>
<td>5.80</td>
</tr>
<tr>
<td>Pediatric</td>
<td>4</td>
<td>5.80</td>
</tr>
<tr>
<td>Family</td>
<td>54</td>
<td>78.26</td>
</tr>
<tr>
<td>Gerontological</td>
<td>1</td>
<td>1.45</td>
</tr>
<tr>
<td>Other (Neonatal, Ob-Gyn, Women’s Health)</td>
<td>6</td>
<td>8.70</td>
</tr>
</tbody>
</table>

*N = 65. Four respondents marked more than one choice; therefore, the percentages equal more than 100.

Findings Related to the Research Questions

Three research questions guided this study. The first research question was as follows: What are the herbal therapy prescribing practices of nurse practitioners? Items 1 and 3 on the Herbal Prescribing Questionnaire were used to answer this question.

Item 1 was designed to assess how frequently nurse practitioners prescribed herbal therapies as a part of their practice role. Responses to item 1 can be found in
Table 2. Write-in responses, including occasionally, seldom, and rarely, also are included. Findings revealed that almost half of the nurse practitioners surveyed never prescribed herbs.

Table 2

Herbal Prescribing Practices Among Nurse Practitioners in Mississippi

<table>
<thead>
<tr>
<th>Prescribing practice</th>
<th>( f^a )</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>31</td>
<td>47.69</td>
</tr>
<tr>
<td>Daily</td>
<td>2</td>
<td>3.08</td>
</tr>
<tr>
<td>Weekly</td>
<td>10</td>
<td>15.38</td>
</tr>
<tr>
<td>Monthly</td>
<td>16</td>
<td>24.62</td>
</tr>
<tr>
<td>Written responses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occasionally</td>
<td>3</td>
<td>4.62</td>
</tr>
<tr>
<td>Seldom</td>
<td>1</td>
<td>1.54</td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
<td>3.08</td>
</tr>
</tbody>
</table>

\(^aN = 65.\)
Item 3 on the Herbal Prescribing Questionnaire was designed to elicit information regarding conditions herbs were prescribed. Respondents were encouraged to check all conditions that applied as well as to write in additional conditions. The most common health conditions for which nurse practitioners prescribed herbs may be seen in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Health condition</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prevention/health maintenance</td>
<td>25</td>
<td>30.12</td>
</tr>
<tr>
<td>Othersa</td>
<td>20</td>
<td>24.10</td>
</tr>
<tr>
<td>Depression</td>
<td>15</td>
<td>18.07</td>
</tr>
<tr>
<td>Insomnia</td>
<td>8</td>
<td>9.64</td>
</tr>
<tr>
<td>Cardiovascular disease</td>
<td>7</td>
<td>8.43</td>
</tr>
<tr>
<td>Diabetes</td>
<td>4</td>
<td>4.82</td>
</tr>
<tr>
<td>Hypercholesterolemia</td>
<td>4</td>
<td>4.82</td>
</tr>
</tbody>
</table>

Note. Respondents were asked to select as many as applied and to write in other health conditions if they were not included in the list.

aArthritis, migraines, nausea, BPH, and weight loss.
These findings indicate that about one third of the nurse practitioners who prescribe herbs prefer to use them for health maintenance. When herbs are used to treat a health condition, mental health issues, such as depression and insomnia, are frequently targeted.

Research Question 2 read as follows: What is the perceived level of competence of nurse practitioners in prescribing herbal therapies? Items 5 and 6 on the Herbal Prescribing Questionnaire were designed to elicit answers to this question. Item 5 asked respondents to rate themselves regarding how competent they felt prescribing herbs. The ranking scale ranged from 1 (not competent) to 4 (very competent).

Among the respondents, 28 (43.08%) answered not competent, 21 (32.31%) answered slightly competent, 10 (15.38%) answered fairly competent, and only 2 (3.08%) answered very competent. Four of the respondents (6.15%) had no response. The same question format was also used to assess the competency level of the respondents regarding answering client questions related to herbal usage. The results were as follows: Not competent (n = 23, 35.38%), slightly competent (n = 20, 30.77%), fairly competent
(n = 17, 26.15%), and very competent (n = 2, 3.08%). Three of the respondents (4.62%) had no response.

To further elucidate findings related to the research questions, item 4 on the Herbal Prescribing Questionnaire stated the following: How did you learn about herbal therapies? Self-study was the most frequent way the respondents learned about using herbal therapies (n = 36, 43.90%), conferences (n = 24, 29.27%) contributed to their knowledge of herbal therapies, followed by school (n = 11, 13.41%) and other (journals, CEUs) (n = 11, 13.41%).

The compilation of these findings reveals that the majority of nurse practitioners in this study did not perceive a high level of competence in either prescribing herbs or counseling clients about herb use. Those who felt competent regarding herb use sought their knowledge through personal self-study or conference attendance. Only a small percentage had learned about herbal use and prescribing during their formal educational programs.

Research Question 3 was as follows: What are the herbal therapies most frequently prescribed by nurse practitioners? Item 2 on the Herbal Prescribing Questionnaire provided a list of 19 items from which respondents could choose commonly prescribed herbs.
Respondents also had the option of writing in frequently prescribed herbs. Responses to item 2 are presented in Table 4.

Table 4
Frequently Prescribed Herbal Therapies

<table>
<thead>
<tr>
<th>Herbal therapy</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. John's Wort</td>
<td>14</td>
<td>11.86</td>
</tr>
<tr>
<td>Ginkgo Biloba</td>
<td>10</td>
<td>8.47</td>
</tr>
<tr>
<td>Saw Palmetto</td>
<td>10</td>
<td>8.47</td>
</tr>
<tr>
<td>Others(^a)</td>
<td>10</td>
<td>8.47</td>
</tr>
<tr>
<td>Glucosamine</td>
<td>9</td>
<td>7.63</td>
</tr>
<tr>
<td>Aloe</td>
<td>8</td>
<td>6.78</td>
</tr>
<tr>
<td>Chromium Picolonate</td>
<td>8</td>
<td>6.78</td>
</tr>
<tr>
<td>Chondroitin</td>
<td>8</td>
<td>6.78</td>
</tr>
<tr>
<td>Echinacea</td>
<td>8</td>
<td>6.78</td>
</tr>
<tr>
<td>Garlic</td>
<td>7</td>
<td>5.93</td>
</tr>
<tr>
<td>Ginseng</td>
<td>5</td>
<td>4.24</td>
</tr>
<tr>
<td>Bilberry</td>
<td>4</td>
<td>3.39</td>
</tr>
<tr>
<td>Evening Primrose Oil</td>
<td>4</td>
<td>3.39</td>
</tr>
<tr>
<td>Valerian</td>
<td>4</td>
<td>3.39</td>
</tr>
</tbody>
</table>

(table continues)
Table 4 (continued)

<table>
<thead>
<tr>
<th>Herbal therapy</th>
<th>f</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ginger</td>
<td>3</td>
<td>2.54</td>
</tr>
<tr>
<td>Witch Hazel</td>
<td>3</td>
<td>2.54</td>
</tr>
<tr>
<td>Coenzyme Q10</td>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>Kava Kava</td>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>Milk thistle</td>
<td>1</td>
<td>0.85</td>
</tr>
<tr>
<td>Bayberry Bark</td>
<td>0</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Note. Respondents were asked to rank the five most frequently prescribed herbs.

*aFever Few, Chamomile tea, red raspberry tea, melatonin, grape seed, and flax seed oil.

Findings regarding Research Question 3 revealed that the three herbs most commonly prescribed by nurse practitioners in Mississippi were St. John’s Wort, Gingko Biloba, and Saw Palmetto. Herbs rarely prescribed included Coenzyme 10, Kava Kava, and Milk Thistle.

Other Findings

Responses to Questions 8 and 9, which solicited additional thoughts on either the personal or professional usage of herbal therapies, were content analyzed and
assigned placement according to three emergent themes: Not being regulated by the Food and Drug Administration (FDA), lack of research studies, and lack of personal knowledge regarding herbal therapies. The researcher noted that these themes indicate reasons why herbs should not be prescribed, a trend which supports the lack of competence revealed by the nurse practitioners. Examples of comments from each theme are included below.

Not being regulated by the FDA. Examples of reasons nurse practitioners gave for not prescribing herbal therapies are listed as follows:

- Until we have standards, I don’t feel we can confidently suggest herbal remedies.
- There is not enough information given.
- There are no FDA regulations on these “meds.”
- Until herbs are standardized for OTC use, I am reluctant to recommend or prescribe.

Lack of research studies. Reasons nurse practitioners gave for not prescribing herbal therapies related to lack of research were as follows:

- I do not know of any research that I can quote that gives standardized dosages for herbs.
- There are not enough reliable studies done on these “meds” to prescribe.
- There is little known (due to lack of research) about long-term effects of herbal therapy. It
takes longer to see the effects of herbal therapy.

Lack of personal knowledge. The following are examples of reasons nurse practitioners gave regarding not prescribing herbal therapies because of lack of personal knowledge:

I intend to become more knowledgeable about herbal therapies because I do feel they are an essential modality for practice and consumers are becoming more demanding for our assistance in this matter.

I would love to know more about herbal therapies so I would feel comfortable prescribing them to my patients.

Summary

Data obtained from the Demographic Survey and the Herbal Prescribing Questionnaire were described and analyzed to answer the research questions concerning the herbal prescribing practices among nurse practitioners in Mississippi. Overall, nurse practitioners who participated in the study do not feel competent prescribing herbal therapies for their client population or answering client questions regarding herbal therapies. Answers to the open-ended questions reflect strong opinions regarding prescribing herbal therapies. 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

The purpose of this study was to determine the herbal prescribing practices among nurse practitioners in Mississippi. Since herbal therapies are rapidly gaining popularity, some clients are using herbal therapies to assist in treating their health conditions. This researcher posed the following three research questions:

1. What are the herbal therapy prescribing practices of nurse practitioners?

2. What is the perceived level of competence of nurse practitioners in prescribing herbal therapies?

3. What are the most frequently prescribed herbal therapies by nurse practitioners?

Benner’s Novice to Expert nursing theory served as the theoretical framework for this study.

The sample consisted of 65 nurse practitioners in Mississippi ranging in age from 26 to 64 years who are currently practicing as a nurse practitioner in Mississippi. A researcher-developed Demographic Survey and
a Herbal Prescribing Questionnaire were used to elicit information from the participants.

Summary and Discussion of Findings

The sample (N = 65) used in this study consisted of nurse practitioners who were randomly chosen from a current list of certified nurse practitioners in Mississippi provided by the Mississippi State Board of Nursing. At present there are approximately 600 certified nurse practitioners in Mississippi. Although the sample of this study represented 10.8% of the population, the results of the study were assumed to be representative of the nurse practitioners in Mississippi.

The majority of the participants (48%) indicated they never prescribed herbal therapies. Forty-three percent did not feel competent prescribing herbal therapies. Conversely, only 3% indicated by prescribe herbal therapies daily; therefore, these respondents indicated they felt very competent prescribing herbs and answering client questions about herbs. The small percentage of respondents in this study attributed this feeling of competency to expanding their knowledge base through self-study and conferences. On the other hand, the majority of the participants who did not prescribe herbal therapies
and reported were not competent with herbs and their usage. What knowledge they did describe was related to information obtained through limited self-study about herbs.

Responses from the participants to the open-ended questions indicated the lack of information. The need for research and regulations on herbal therapies were reasons for low levels of confidence related to prescribing herbal therapies.

The respondents who felt some degree of competence with prescribing herbal therapies seem to prescribe the same herbs. St. John’s Wort was the herb chosen as most frequently prescribed (12%) from the list given on the questionnaire. This herb is often prescribed for mild depression which ranked third (18%) when asked for what conditions, as nurse practitioners, they prescribe herbs. Prevention/health maintenance (30%) was the leading condition herbs were prescribed by the participants.

Eisenberg et al. (1993) estimated that approximately 22 million Americans use alternative therapies and that the primary health care providers are usually not aware of their use. The findings are significant because this study also established that over a third of the participants did
not feel competent answering client questions regarding herbs. A lack of competence could contribute to the client withholding questions about herbal usage from the nurse practitioner. Barnes (1998) discovered 97% of the participants did not withhold information regarding alternative therapies from their health care provider. By contrast, 62% of the participants in Keegan’s (1996) study did not share their alternative therapy use with health care providers for fear of non-acceptance, misunderstandings, or ridicule.

This researcher speculates that the acceptance of alternative therapies by health care providers has increased since the Keegan (1996) study. However, it is evident from the results of the present study that due to a low competence level regarding prescribing herbal therapies and answering client questions about herbs, there can be an increased risk for misunderstandings and miscommunication between the practitioner and the client. The current findings offer avenues for the expansion of knowledge regarding herbal therapies. The knowledge expansion can increase the health care provider’s competence level for prescribing herbs and answering
client questions about herbs, which will promote holistic continuity of care and positive outcomes.

Limitations

The limitations in this study were both internal and external. Randomization was the greatest threat to generalization of this study’s findings. Sample selection was restricted to the number of respondents who were randomly selected from a list of nurse practitioners in Mississippi who responded to the survey. The sampling design was one of convenience, thus a true representation of nurse practitioners in Mississippi must be questioned.

The instruments used were researcher-designed and had only face validity. This was the first time either instrument had been used in a study. The instruments were self-administered and data were not validated.

In the cited limitations, the researcher was aware of lack of control regarding certain intervening variables. Herbal prescribing practices among nurse practitioners have not been studied, thus the limitations were admissible because the research was a pilot study.
Conclusions

The finding of this study led the researcher to believe that there is a lack of competence in prescribing herbal therapies among nurse practitioners. While 3.08% of the respondents felt very competent with prescribing herbal therapies, the majority of the respondents did not feel competent (43.08%). Nurse practitioners who do not feel competent prescribing herbal therapies responded with themes about lack of research studies, not regulated by the Food and Drug Administration, and lack of personal knowledge regarding herbal therapies. However, the respondents in the study did agree that herbal therapies are widely used by their client population and that the respondents were interested in gaining knowledge regarding herbal therapies.

Those respondents who did feel competent with prescribing herbal therapies prescribed the following most frequently: St. John’s Wort, Gingko Biloba, Saw Palmetto, Fever Few, and Glucosamine. The top five health conditions for which these herbal therapies were prescribed were as follows: prevention/maintain health, arthritis, depression, insomnia, and cardiovascular disease. Lastly, Benner’s (1984) Novice to Expert was appropriate as a
framework to determine the level of competence among nurse practitioners regarding prescribing herbal therapies.

The findings of the research study indicated that nurse practitioners do not feel competent in either prescribing herbal therapies or answering client questions related to usage of herbs. From the responses given to the open-ended questions, this lack of competence is mainly due to the lack of information and the need for research and regulations on herbal therapies. These findings support Benner’s (1984) theory of Novice to Expert that, through exposure to information and research related to herbal therapies, confidence increases which, in turn, improves the nurse practitioner’s competence related to this area. Benner’s (1984) theory maintained that there are five levels of acquisition in which competence is acquired. These levels include the novice, advanced beginner, competent, proficient, and the expert. Movement through these levels occurs by expanding one’s knowledge base either through experience, furthering one’s education, research, conferences, and self-study. This expansion of the knowledge base leads to increased confidence in competencies in herbal therapy prescribing practices among nurse practitioners.
Implications for Nursing Practice. In the clinical setting nurse practitioners need to initiate conversation regarding herbal therapies and their usage when talking with their clients to ensure safety and avoid possible interactions with other medications. This conversation will come with ease as the competence level of nurse practitioners regarding herbal therapies increases through further research, furthering one’s education, self-study, or through conferences. The current study reinforces that it is crucial for the practitioner to familiarize oneself with these ever-growing developments in alternative therapies to ensure holistic management of a client’s condition.

Research. This study sought to determine the herbal prescribing practices among nurse practitioners in Mississippi. Findings from this study revealed that 15.38% prescribe herbal therapies weekly, compared to the 47.69% that never prescribe herbal therapies. More research is needed regarding herbal therapies and their usage for treatment of health conditions in order to have nurse practitioners feel competent with prescribing herbal therapies. Publication of nursing research will also help nurse practitioners be more aware of the available herbal
therapies used for certain health conditions by the client population.

Education. Findings from this study revealed that while lack of knowledge or exposure to herbal therapies was a barrier for some of the respondents, others felt competent enough to prescribe herbal therapies to their clients. With herbal therapies rapidly gaining popularity, information regarding herbal therapies should be incorporated in curricula of schools of nursing at the undergraduate and graduate levels.

Recommendations

Based on the findings of this study, the following recommendations are made:

1. Replication of the study with a larger, more diverse sample of nurse practitioners including practices in other states.

2. Publication of this study and other studies to document nurse practitioners' need and desire for competence in prescribing herbal therapies.

3. Education of nurse practitioners on herbal therapies and their usage in order to provide a holistic and consistent standard of care.
References


APPENDIX A

DEMOGRAPHIC SURVEY
Demographic Survey

Please check (✓) and/or fill in the appropriate responses.

1. Age:________

2. Gender
   ___ Male
   ___ Female

3. Ethnicity
   ___ African-American
   ___ Caucasian
   ___ Other (please specify):_______________________

4. Setting
   ___ Rural
   ___ City

   Practice Setting:
   ___ Primary Care
   ___ Acute care
   ___ Long-term care

5. Length of time you have practiced as a registered nurse before becoming a nurse practitioner:________

6. Length of time you have practiced as a nurse practitioner?
   __________________________

7. Specify area
   ___ ANP
   ___ PNP
   ___ FNP
   ___ GNP
   ___ Other (please specify):_______________________

The following questions are related to personal utilization of herbal therapies:

8. What herbal therapies do you or have you used?

9. Would you share additional thoughts regarding usage of herbal therapies?
APPENDIX B

HERBAL PRESCRIBING QUESTIONNAIRE
Herbal Prescribing Questionnaire

Please check (✓) and/or fill in the appropriate responses.

1. In your NP role do you prescribe herbal therapies?
   - Never
   - Daily
   - Weekly
   - Monthly

2. If so, indicate the most frequently prescribed herbal therapies from the list below: (Please write the top five herbs prescribed.)
   a. __________________________
   b. __________________________
   c. __________________________
   d. __________________________
   e. __________________________
   Aloe
   Bayberry Bark
   Bilberry
   Chromium Picolonate
   Chonodroitin
   Coenzyme Q 10
   Echinacea
   Evening Primrose Oil
   Garlic
   Ginger
   Ginseng
   Glucosamine
   Kava
   Milk Thistle
   Saw Palmetto
   St. John’s Wort
   Valerian
   Witch Hazel
   Other(s) (please list):

3. For what condition(s) do you prescribe herbs? (Check all that apply)
   - Cardiovascular disease
   - Diabetes
   - Depression
   - Hypercholesterolemia
   - Insomnia
   - Prevention/maintain health
   Other(s) (please list):
4. How did you learn about using herbal therapies: (Check all that apply)
   — Self-study
   — School (undergraduate/graduate)
   — Conference
   — Other (Please specify):

5. How competent do you feel prescribing herbs?
   1  2  3  4
   Not Slightly Fairly Very
   Competent Competent Competent Competent

6. How competent do you feel about answering patient questions about herbs?
   1  2  3  4
   Not Slightly Fairly Very
   Competent Competent Competent Competent

Additional Comments:
APPENDIX C

APPROVAL OF THE COMMITTEE ON USE OF HUMAN SUBJECTS IN EXPERIMENTATION OF MISSISSIPPI UNIVERSITY FOR WOMEN
March 22, 1999

Ms. Michelle Smith
C/o Graduate Program in Nursing
Campus

Dear Ms. Smith:

I am pleased to inform you that the members of the Committee on Human Subjects in Experimentation have approved your proposed research as submitted, provided you identify yourself as an MUW student and you make it clear in the materials that the results will be confidential and no names will appear on any forms.

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
Ms. Patsy Smyth
APPENDIX D

LETTER OF INTRODUCTION
AND INFORMED CONSENT
Dear Survey Participant,

My name is Michelle Smith. I am a registered nurse currently enrolled in the master’s degree program at Mississippi University for Women. I am conducting a research study to determine the herbal prescribing practices among nurse practitioners in Mississippi. 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 in the self-addressed, stamped envelope will indicate your agreement to participate in the study.

Thank you for your time and cooperation.

Sincerely,

Michelle Smith, RN, BSN
APPENDIX E

FOLLOW-UP POSTCARD
Dear Nurse Practitioner,

Thank you for your participation in my research study, Herbal Prescribing Practices Among Nurse Practitioners in Mississippi. If you have not returned the Demographic Survey and the Herbal Prescribing Questionnaire, please do so by June 15, 1999.

Your assistance is appreciated.

Michelle Smith