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Facilitators and Barriers to Nurse Practitioners' Full Practice Authority in Primary Care in Mississippi.

By

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A Project Submitted in Partial Fulfillment of the Requirements for

the Degree of Master of Science in Nursing

College of Nursing and Health Sciences

Mississippi University for Women

Columbus, Mississippi

July 2023

Graduate Committee Approval

The Graduate Committee of Brittany Bowen, Clare Burnett, and Katie Robertson,

hereby approves his/her research project as meeting partial

fulfillment of the requirements for the Degree of

Master of Science in Nursing

Date____________________

Approved________________________________
Committee Chair

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Director of Graduate Studies

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Dedication

We wish to dedicate this research to our family and friends. Thank you for the prayers, love, and encouragement during this last year. Without your support and patience, obtaining this education would not have been possible. Thank you for allowing us to accomplish a long-awaited personal and professional goal, and for supporting us every step of the way.

Acknowledgements

We would like to express our most sincere thanks to Dr. Sueanne Davidson, our committee Chair and Advisor, who guided and mentored us throughout our research project. She is truly a student advocate, putting in countless extra hours and placing student needs above her own on numerous occasions just to help them get the most out of their educational endeavors. This research project would not have been possible without her help and guidance.

We also wish to thank our committee members who were more than generous with their expertise and precious time. Thank you, Dr. Alena Groves, and Dr. Shonda Phelon, for agreeing to serve on our committee and for providing your excellent feedback and advice that helped us to guide our research.

Finally, we would like to acknowledge and thank the Graduate Nursing Department at Mississippi University for Women for allowing us to conduct our research and providing any assistance requested. Also, special thanks to the Fant Library staff. Having their continued support and access to literary resources was invaluable.

Abstract

Nurse practitioners in the state of Mississippi are currently required to maintain a collaborating agreement with a physician to practice, despite being educated and obtaining national certification. This limitation of practice further limits patients from obtaining healthcare, especially in rural communities. The present study examined the effects that current practice restrictions have on nurse practitioners providing primary care to patients in the state of Mississippi amid a physician shortage. Surveys were distributed to primary care providers, including nurse practitioners and physicians throughout the state of Mississippi, and a total of 14 physicians (MDs and DOs) and 146 nurse practitioners responded to the survey. Survey results revealed that almost half of the NPs who responded have either considered leaving the field of nurse practitioner or have considered relocating to a full practice authority state due to state restrictions in Mississippi, which would decrease access to primary care even further. The study also revealed that of the nurse practitioners that responded to the survey, the majority stated they rarely consulted with their collaborating physician. This causes an increase in expenses for the nurse practitioner and proves to be yet another barrier in accessing care.

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Chapter I: Dimension of the Problem

Nurse practitioners (APRN/NP) in Mississippi are currently regulated by reduced practice laws. This reduced practice requires nurse practitioners holding a license by the state of Mississippi to obtain a collaborating agreement for at least one aspect of their practice. Although reduced practice laws are the same throughout Mississippi, the optimization of the role varies (Côté et al., 2019). This leads to nurse practitioners having less autonomy, therefore leaving them unable to fully utilize their acquired expert knowledge and advanced clinical skills (Htay & Whitehead, 2021). The barrier of decreased practice authority of nurse practitioners causes a multitude of deficits in patient care. These include decreased use of healthcare and poor patient outcomes, as well as leaving an increased number of patients without a primary care provider, resulting in an increased prevalence of acute and emergent care visits.

From 2016 to 2030, the estimated annual growth of the workforce of nurse practitioners is 6.8%, compared with just 1.1% growth for physicians (Fraze et al., 2020). These statistics pose a difficult situation for providers, payers, and lawmakers with more patients having comprehensive health needs; in turn, more comprehensive needs mean increased medical care demands. With a continuous aging population, the incidence of multi-comorbidities increases, thus increasing patients' acuity of care (Woo et al., 2017). In recent studies, nurse practitioners have been shown to provide care equivalent to that of a physician and have achieved desirable results in a multitude of facets. Progress has been made regarding the satisfaction of patients, controlling chronic diseases, and cost-effectiveness, while also reducing the time it takes for patients to receive care. Though the role of nurse practitioners is accepted throughout 81 countries, the recognition of the

competency and capability of the role is steadily developing and continuously studied (Htay & Whitehead, 2021). Given this information, this quantitative study will analyze the facilitators and barriers of full practice authority of nurse practitioners in primary care in Mississippi.

Problem Statement

Full practice authority of nurse practitioners is a controversial topic between all professions of health care providers. Nurse practitioners (NPs) are extensively trained to care for both chronic and acute illnesses along with the maintenance, prevention, and education of these diseases. Unfortunately, the barriers in place for nurse practitioners to practice exacerbates healthcare costs and accessibility for patients.

Practice authority varies from state to state, regardless of the consistency of education required to be obtained by NPs in the United States. Full practice regulations limit the care that can be given to patients from qualified NPs and have proven to be a serious barrier to NP practice and availability of primary care services amid a major physician shortage that is only projected to rise (Kleinpell et al., 2022)

Shortages in primary care, especially in rural areas, can be notably reduced by allowing NPs to practice to the extent of their education and training. In fact, numerous studies have shown patient outcomes, when seen by an NP, are “comparable” to what patients would receive from a physician, and NP have high patient satisfaction ratings (Martin & Alexander, 2019). Kleinpell et al. (2022) stated the following: “As identified in the Future of Nursing 2020-2030 report, until all APRNs are permitted to practice to the full extent of their education and training, significant and preventable gaps in access to care will continue, and “eliminating restrictions on APRN scope of practice to enable

them to practice to the full extent of their education and training will increase the types and amount of high-quality health care services that can be provided to those with complex health and social needs and improve both access to care and health equity" (Kleinpell et al., 2022, p.142).

Statement of Purpose

The purpose of this study is to evaluate the facilitators and barriers to full practice authority, which include physician understanding of the nurse practitioner role, job satisfaction and support, limitations of practice, decreased patient outcomes, and patient access to healthcare. Prior studies have revealed that restrictions vary from state to state with little explanation or reasoning for such restrictions. Additionally, it has been proven that the use of full practice authority of nurse practitioners in collaboration with physicians produces positive patient outcomes and better quality of care. Furthermore, applying restrictions to nurse practitioners, such as requiring collaborating agreement contracts with physicians, not only is unbeneficial regarding patient safety and outcomes, but it also causes further decline in patient care and healthcare availability. Martin & Alexander (2019) stated that the findings of their study showed that CPAs (Collaborative Physician Agreements) do "little to institutionalize potentially important checks on early career professionals, including regular communication and medical record reviews. Instead, they often inhibit access to care in regions that need it the most and can place significant financial and practice restrictions on midcareer and established APRNs, who are well positioned to address these shortfalls" (Martin & Alexander, 2019, p. 29). The article goes on to say that "CPAs, far from implementing checks and balances that augment patient safety, do little to generate a truly collaborative environment. Rather,

they ultimately divert care away from traditionally underserved areas, curtail consumer choice, and place unnecessary restrictions and financial burdens on an entire class of advanced providers" (Martin & Alexander, 2019, p.29).

Significance of the Study

The significance of this study is to provide insight on the reasons and implications of state laws that limit and restrict nurse practitioners from practicing to their maximum ability in Mississippi. In restricting these healthcare professionals, access to healthcare, especially in rural communities, is decreased. "Increased access to primary care is associated with lower mortality rates and lower costs due to better preventative care, lower hospitalization rates, and the reduction of unnecessary specialty care." (Kraus & DuBois, 2016, p.284). It has also been shown that NPs routinely have higher patient satisfaction scores, increased amount of compliance from patients, and more success in health promotion and disease prevention (Kraus & DuBois, 2016).

Kleinpell et al. (2022) mentioned a recent health report that acknowledged allowing NPs to have full practice authority would reduce the amount of people residing in an area with a shortage in primary care services by at least 70%. Approximately 44 million people are in an area where primary care is hard to obtain, and NPs with full practice authority could fill the gap and reduce this number to around 30 million.

Obtaining independence for practicing nurse practitioners would increase access to care, create a more efficient healthcare system, lower healthcare costs, and increase job satisfaction. There is a growing shortage of primary care providers and an increase in the aging population. Removing barriers placed on nurse practitioner practice will have a positive impact on this growing issue.

Theoretical Framework

Patricia Benner: Novice to Expert

Patricia Benner designed the "From Novice to Expert" model which describes the five stages of clinical competence that nursing professionals experience throughout their career. In her research, Benner (2001) argued that nurses became "expert" through the development of skills and knowledge that is accumulated over time by way of clinical experience and education. Her research helps us to understand that being a nurse practitioner falls in the "expert" category due to prior clinical experience and advanced education such as a masters or doctoral degree. The current research entitled "Facilitators and Barriers of Nurse Practitioner's Full Practice Authority in Primary Care in Mississippi" argues that there is a growing need for nurse practitioners in the state of Mississippi to be granted full practice authority. Benner's theory complements this research by explaining how nurse practitioners are trained experts in their field of practice and can safely care for patients in a primary care setting without the oversight of a physician. (Benner, 2001).

Benner's theory will be used to help support the argument that NPs are experienced in their field and can provide safe and quality patient care in the practice setting without the oversight of a collaborating physician. It has been argued that nurse practitioners may not have enough education to care for patients without physician supervision. In other words, one could assume that NPs are considered novice to the role of primary care. However, NPs' combined years of clinical experience in conjunction with years of continuing education, as well as clinical hour requirements with an NP or MD while obtaining that education, should most definitely qualify them for the expert

category. This theory brings to light that experience has never been based on years or length of time in a practice. Experience is based on personal encounters and understanding which cannot be taught in a classroom. This must be witnessed firsthand in clinical settings on real life individuals, which is what the NP brings to the table. The combination of clinical experience, nursing intuition and advanced education help to support the idea that the NP should be considered an expert in the field of patient care, and not a novice.

Research Questions

1. Is the required collaborative practice agreement between physicians and nurse practitioners utilized in practices in Mississippi?
2. Does reduced practice authority in Mississippi affect nurse practitioner retainment and job satisfaction?
3. Do physicians believe NPs are qualified with combined experience and education to provide primary patient care?

Definition of Terms

1. **Nurse Practitioner/Advanced Practice Registered Nurse (APRN/NP)**
   a. ***Theoretical.*** A nationally certified advanced practice registered nurse who combines their emphasis on health management and disease prevention with clinical experience to diagnose and treat health conditions to clients across the lifespan.
   b. ***Operational.*** A state licensed registered nurse who has advanced practice preparation that includes combined years of previous clinical experience as an RN, 9 to 24 months of supervised clinical experience in the diagnosis and

treatment of illness, and at least a Master of Science in Nursing (MSN). Depending on state laws, NPs may be allowed to write prescriptions. (Taber's, 2021).

2. **Knowledgeable**
    - **a.** ***Theoretical.*** "Having or showing understanding and skill gained through experience or education" (Merriam-Webster, 2022).
    - b. ***Operational.*** Nurse Practitioners' development of knowledge is based on their extensive education and combined clinical experience. Through continued education and experience, NPs knowledge is expanded.
3. **Primary Care Provider**
    - **a.** ***Theoretical.*** **"**A physician (M.D. - Medical Doctor or D.O. - Doctor of Osteopathic Medicine), nurse practitioner, clinical nurse specialist or physician assistant, as allowed under state law, who provides, coordinates or helps a patient access a range of health care services" (HealthCare.gov).
    - b. ***Operational.*** A licensed clinician who takes care of a patient's basic needs across a wide continuum of different health problems. He or she is the first point of contact for a person with a medical or health concern. The PCP makes sure the patient is provided with the proper care and coordinates with specialists when needed.
4. **Full Practice Authority**
    - **a.** ***Theoretical.*** "Full Practice Authority (FPA) is the authorization of nurse practitioners (NPs) to evaluate patients, diagnose, order, and interpret diagnostic tests and initiate and manage treatments-including prescribing

medications and controlled substances-under the exclusive licensure authority of the state board of nursing. In FPA states, NP licensure is not contingent on unnecessary contracts or relationships with a physician or oversight by the state medical board" (AANP.org).

b. ***Operational.*** NPs in states whose laws have granted full practice authority are authorized to provide detailed patient care as outlined in their scope of practice without the requirement of collaborative practice agreements.

5. Reduced Practice Authority

a. ***Theoretical.*** **"**State practice and licensure laws reduce the ability of NPs to engage in at least one element of NP practice. State law requires a career-long regulated collaborative agreement with another health provider in order for the NP to provide patient care, or it limits the setting of one or more elements of NP practice" (AANP.org).

b. ***Operational.*** NPs in states whose laws have granted reduced practice authority limit the patient care provided by the NP and require a regulated collaborative agreement with a physician. Health care is less accessible to patients in these states.

6. Restricted Practice Authority

a. ***Theoretical.*** **"**State practice and licensure laws restrict the ability of NPs to engage in at least one element of NP practice. State law requires career-long supervision, delegation, or team management by another health provider in order for the NP to provide patient care" (AANP.org).

b. ***Operational.*** NPs in states whose laws have granted restricted practice authority have the strictest regulations governing nurse practitioner's ability to provide care to patients. Health care is less accessible to patients in these states.

7. Collaborative Practice Agreement

a. ***Theoretical.*** **"**A collaborative practice agreement is a written statement that defines the joint practice of a physician and an advanced practice nurse (APN) in a collaborative and complementary working relationship. It provides a mechanism for the legal protection of the APN and sets out the rights and responsibilities of each party involved" (Herman J et al. AACN Clin Issues. 1999 Aug).

b. ***Operational.*** A collaborative practice agreement is a contract between a nurse practitioner and a physician. The agreement sets forth the rights and responsibilities of each party. These requirements vary by state.

8. Physician

a. ***Theoretical.*** "One who has successfully completed the prescribed course of studies in medicine in a medical school officially recognized by the country in which it is located and has acquired the requisite qualifications for licensure in the practice of medicine." (Taber's, 2021).

b. ***Operational.*** Medical providers including MDs and DOs that practice either primary care or a healthcare specialty in Mississippi.

Assumptions

The assumptions of this study are twofold: (1) participants fully understood the questions asked and (2) participants provided honest answers to the survey questions. It is assumed that participants fully understood the questions asked in this study based on their education level and provided definitions of terms. Each participant is assumed to be either a nurse practitioner or physician. Each term in the study was clearly defined to eliminate any misinterpretation. The anonymity of survey answers allowed participants to answer the questions openly and honestly.

Methods and Design

Study Design

This quantitative study included data from a sample of rural, urban, and suburban primary care health clinic settings in Mississippi. Mississippi by law is a reduced practice state for nurse practitioners requiring a collaborating physician to oversee at least one aspect of their patient care. Both physicians (MD, DO) and nurse practitioners will be surveyed in this study.

Variables

Variables for each primary care clinic included if the practice is private, group, hospital-based, or a large health maintenance organization. The location (rural, urban, or suburban) and size of the clinic were other variables of the study. The experience of the providers will vary from a minimum of 1 year to 16+ years.

Analysis

A survey of questions was constructed to provide to physicians and nurse practitioners in primary care clinics. The data from questions were analyzed by a statistician.

Limitations of the Research Project

The researchers predicted some limitations within the study. The response rate may be decreased due to some physicians and practitioners having a demanding patient load, therefore are unable or willing to fill out the survey tool. Some physicians may not have felt a vested interest in the research topic and may have chosen not to fill out the survey questions. The sample size is small due to only surveying providers in Mississippi, which is a reduced practice state, which may limit the findings of the research. Lastly, this quantitative study was conducted over the span of 1 year.

Chapter II: Literature Review

During the following chapter, literature reviewed by the researchers will be discussed in its relation to the study "Facilitators and Barriers of Nurse Practitioners Independently Practicing Primary Care in Mississippi." Both qualitative and quantitative studies were analyzed to show the necessity for further research regarding the practice authority of nurse practitioners. Each reviewed study designated future research suggestions required for the further analyzation of the topic of autonomy of nurse practitioners. Also, the conceptual framework chosen for the study is reviewed throughout this chapter. Patricia Benner and her theory *Novice to Expert* was selected as the theoretical foundation of the conducted research.

Conceptual Framework

Benner describes five stages of clinical competence that was developed by Stuart and Hubert Dreyfus and is known as "The Dreyfus Model." It is explained that "in the acquisition and development of a skill, a student passes through five levels of proficiency: novice, advanced beginner, competent, proficient, and expert" (Benner, 2000, p. 13). In summary, Benner describes these terms as follows: Novice and beginner are interchangeable. Beginners have no clinical experience but are taught objective traits that allow them to obtain experience. The usual behavior of the novice is limited and unbending. Advanced beginners have some real-life experience and can find similarities between past and current patients and can act on attributes and aspects that are based on prior experience. However, all situations are treated equally as the advanced beginner has yet to learn how to organize tasks by importance. The competent nurse has two to three years of experience and can decide which situations are most important and which can be disregarded. The competent nurse has developed a plan to achieve organization and time management, although they still may lack speed and the ability to be flexible in certain situations. The proficient nurse is able to see the entire picture when it comes to patient care. This includes long term goals for the patient. The proficient nurse has learned from past experiences and knows what to expect and is able to adjust each patient's care based on their current situation. The expert nurse has a large amount of experience to pull from and can use intuition and personal experience to discover problems quickly and decrease wasted time on incorrect diagnoses and treatments. Benner also describes the meaning of experience as "the refinement of preconceived notions and theory through encounters with many actual practical situations that add nuances or shades of differences to theory"

(Benner, 2000, p. 36). Benner also explains that truly expert clinicians not only treat and consult with patients but can also provide consultation for their peers and other nurses. The collaboration of the healthcare team including nurse practitioners, physicians, nurses, and other healthcare providers is key to advancing full practice authority for nurse practitioners in Mississippi and allowing them to work truly autonomously.

The American Association of Nurse Practitioners defines a nurse practitioner as "clinicians that blend clinical expertise in diagnosing and treating health conditions with an added emphasis on disease prevention and health management," and discusses how nurse practitioners have a comprehensive health perspective and approach to patient health. The years of study both in classes and in clinical experience that are completed in order to achieve the degree of Nurse Practitioner, be it masters or doctorate, is rigorous. The clinical and scientific knowledge of the competent through expert nurse practitioner culminates into an autonomous practitioner. The nurse practitioner functions independently, while exercising considered and well-informed judgement for positive patient outcomes.

Uemura and Kido (2022) used Benner's theory to conduct their own research titled "Clinical Reasoning Process of Novice and Expert using Consensual Qualitative Research in Observational Situations of Postpartum mothers and Newborns". The purpose of this research was to discern between clinical knowledge of the novice nursing students (fourth year) versus the expert midwives (10 years of experience). This was deemed important due to rising needs in clinical judgement skills and the association of proper clinical judgement and increased safety outcomes regarding patient care. It was argued that nurses were "majorly responsible for medical accidents in 2020" (Uemura &

Kido, 2022) and that “in order to examine educational methods in basic nursing education, it is important to clarify the differences in clinical reasoning patterns used by novices and experts in the same situation” (Uemura & Kido, 2022). The Dreyfus model was used, and a comparison was obtained focusing on observed behaviors of care provided to postpartum mothers and newborns on day three of their hospital stay. It was concluded that “Novices functioned mainly on analytic reasoning only and were likely to make errors in definitive diagnosis, while the experts used empirical knowledge intuitively and combined narrative reasoning to ensure the accuracy of their clinical reasoning.” (Uemura & Kido, 2022).

Miller & Hill (2017) used a “prospective, cross-sectional, descriptive correlational research design” (Miller & Hill, 2017) in their research entitled " Intuition in Clinical Decision Making: Differences Among Practicing Nurses” that was based off Benner’s theory. The study argued that “Expert nurses stand out in their intuitive assessment because they are able to make a rapid intuitive assessment and use that knowledge to guide them in concrete data collection. Whereas nurses of a lower proficiency level may have an idea of something lingering in-patient care but are unsure how to use intuition to better assess and plan for changes in patient care.” (Miller & Hill, 2017). The study took place in a large medical center located in the Midwest and involved nurses from three different units: medical/surgical, critical care, and progressive care. Participants were emailed a survey, known as the Rew Intuitive Judgment Scale (RIJS), asking to rate themselves according to their own level of proficiency, from novice to expert, as defined by Patricia Benner’s theory. The definitions were included in the email for the participants to refer to. Only ninety-nine nurses out of the four hundred who were invited

completed the survey. This resulted in a low sample size which could have hindered the findings of the research. However, the findings suggested that "nurses practicing at higher self-reported proficiency levels, novice to expert, scored higher on the RIJS. The correlation was low and positive but supports Benner's foundational theory." (Miller & Hill, 2017). The study also suggests that "intuition increases as the nurse gains more experience" (Miller & Hill, 2017) which further supports my current research that APRNs/NPs, having gained at least two years of clinical experience as a registered nurse prior to obtaining their graduate degree, have increased intuition which is a key factor in providing quality patient care. They conclude their study with this statement: "Standardized care is one way to positively affect patient outcomes; however, health care professionals must consider variable factors, such as the nurse's critical thought process and intuition, to ensure a comprehensive effort is made in achieving positive patient outcomes." (Miller & Hill, 2017).

Uemura and Kido (2022) explained how they used Benner's theory to guide their research by stating: "Benner identified the characteristics of nursing performance at various levels of education and experience, from novices to experts. This study used the Dreyfus model of Skill Acquisition, which focuses on the use of proficient attitudes and knowledge in certain clinical situations." (Uemura & Kido, 2022). Their study focused primarily on novices and experts, which is the only two variables included in their research. The Dreyfus model was used to identify differences in the clinical reasoning between the novice and expert nurse.

Miller & Hill describe why they used Benner's theory in their research: "Benner provides the most foundational and solid research on the use of intuition within nursing

practice." (2017). They also used Benner's definition of terms to describe proficiency from novice to expert and used this in their questionnaire that provided the findings for their research.

Review of Related Literature

Fraze et al. (2020) performed an observational study to evaluate trends in the percentage of Medicare beneficiaries cared for by nurse practitioners from 2012 to 2017. The purpose of the study was also to identify beneficiaries cared for by nurse practitioners in 2017 and explore how the percentage of beneficiaries seen by nurse practitioners varies by practice characteristics. The health care system has looked to nurse practitioners to fill the gap of increased medical care demands. "In the workforce of nurse practitioners, estimated annual growth of 6.8% is predicted from 2016 to 2030, compared with just 1.1% growth for physicians." (Fraze et al., 2020, p. 11). These statistics present a difficult situation for providers, payers, and lawmakers with more patients having comprehensive health needs. No theoretical framework for the study was identified.

Fraze et al. (2020) identified three hypotheses. The first hypothesis stated that nurse practitioners are usually the primary providers caring for patients in independently owned practices. The second hypothesis stated that Medicare beneficiaries for whom nurse practitioners are the primary provider are very likely to have three or more chronic conditions than those beneficiaries for whom physicians are the primary provider. Finally, the third hypothesis stated that patients with more chronic illnesses would have more visits when managed by nurse practitioners than physicians.

The observational study includes 2012-2017 Medicare physician and outpatient claims for beneficiaries aged 18 and older residing in Washington, DC, and continuously

enrolled in fee-for-service Parts A and B (Fraze et al., 2020, p. 3). OneKey database processed by the health care analytic firm IQVIA was utilized to link Medicare claims with their health care provider. Computation of the percentage of beneficiaries receiving the majority of their ambulatory visits from a nurse practitioner versus a physician was performed. A comparison of the beneficiary demographics, clinical characteristics, and utilization by the predominant provider was implemented. The primary provider was recognized by practice characteristics.

The study states that, “following statistical analysis, the researchers determined that in 2017, 28.9% of Medicare beneficiaries had at least one visit with a nurse practitioner, and 8% utilized nurse practitioners as their predominant provider. By 2017, over 1 in 4 Medicare beneficiaries received some ambulatory care from a nurse practitioner, a nearly 70% rise from 2012.” (Fraze et al.,2020, p.11). More patients with diagnoses of congestive heart failure and chronic obstructive pulmonary disease saw nurse practitioners, but a larger percentage of cancer patients saw physicians.

The researchers determined that the first hypothesis was statistically supported. “Beneficiaries cared for in practices owned by health systems were more likely to have a nurse practitioner as their predominant provider compared with those attending practices that were independently owned.” (Fraze et al., 2020, p.1). The second hypothesis was also supported, “beneficiaries with a nurse practitioner as their predominant provider were more likely to have 3 or more chronic conditions than beneficiaries with a physician as their predominant provider (25.9% vs. 20.8%, respectively)” (Fraze et al., 2020, p. 9). The third hypothesis was also supported. The study supports that “beneficiaries with 6 or more health care conditions who had a nurse practitioner as a predominant provider

received 23.4 visits on average, compared with 20.2 visits for similar beneficiaries with a physician as a predominant provider." (Fraze et al., 2020, p. 10).

Fraze et al. (2020) identified several limitations of the study. First, patients may be scheduled to physicians rather than nurse practitioners due to many different reasons other than the complexity of the patient's condition. Second, patients are also scheduled to providers by provider accessibility and patient requesting a specific provider instead of being assigned by complexity. The research was conducted in 2020, but the statistical numbers are from 2012-2017. Researching Medicare data is a strength due to an increasing aging population, and there are more patients with Medicare as their primary insurance. Medicare may be the best possible source for comprehending the nurse practitioners' role in caring for complex patients.

Although this research article did not list a theoretical concept, it is relevant to our group research on nurse practitioners obtaining full practice authority in Mississippi. It provides information on beneficiaries' increased medical needs based on the complexity of their conditions. The article also focuses on how nurse practitioners are responding to the crisis of the growing medical demands of our aging society by providing increased care. The health care system and providers are responsible to meet the future medical needs by working together for the common goal of accessibility of quality medical care for all beneficiaries.

Moldestad et al. performed a qualitative exploratory study to "understand patients' and providers' perceptions of primary care delivered by nurse practitioners (NPs) in the Veterans Affairs Healthcare System." (2020, p. 3092). One of the problems addressed is the lack of consistency of full practice authority of nurse practitioners in the

United States. The Department of Veterans Affairs Healthcare System is funded by the US Federal Government. VHA is one of the largest employers of nurse practitioners in the United States, and in September 2017 they authorized full practice authority across the organization. Nonetheless, nurse practitioners in VHA must abide by the state laws where the facility is established. The NPs employed by Veterans Affairs Healthcare System facilities in states without full practice authority have reduced or restricted scope of practice. (Moldestad et al., 2020). The study has significance for aiding in development of new policies to promote nurse practitioners in all states to practice to the full scope of their education and training. “Expanding Full Practice Authority would allow states to provide acceptable primary care without diminishing patient or provider experiences.” (Moldestad et al., p. 3092). No theoretical framework for the study was identified. Moldestad et al. (2020) identified three hypotheses:

1. Do nurse practitioners provide a more effective interpersonal relationship with their primary care patients than physicians?
2. Are primary care patients satisfied with the care provided by nurse practitioners?
3. Do primary care patients and providers view a provider’s professional experience and quality of care more important than provider type?

The researchers’ purpose was to identify VHA patients’, physicians’ and nurse practitioners’ perceptions and experiences with primary care provided by nurse practitioners in full and restricted practice authority states. (Moldestad et al., 2020, p. 3093)

The study was conducted using qualitative exploratory design. All of the hypotheses were answered through data collection as part of a convergent mixed-methods

study and data was analyzed using content analysis. (Moldestad et al., 2020 p. 3092, 3093)

1. "NPs provide a more 'human connection' and 'holistic' approach to patient care than physicians." (Moldestad et al., 2020, p. 3095)
2. "Patients were satisfied with (and sometimes preferred) NPs." (Moldestad et al., 2020, p. 3096)
3. "Provider's professional experience ultimately outweighs provider type." (Moldestad et al., 2020, p. 3097)

The population is the Veterans Affairs Healthcare System, and the sample group is the primary care patients, physicians, and nurse practitioners in the Veterans Affairs Healthcare System. The methods used were "semi-structured interviews in 2016 with primary care providers and patients from facilities in states with full and restricted practice authority for NPs. Patient sample based on reassignment to: (a) a NP; or (b) a different physician following an established physician relationship." (Moldestad et al., 2020, p. 3092)

28 patients, 17 physicians, and 14 nurse practitioners were interviewed. The patient sample was across age, gender, facility type, and state practice authority. The provider sample was represented across state practice authority. (Moldestad, et al., 2020, p. 3095) The findings of the study are included in the list of hypotheses and answers. The researchers' interpretation of the findings, "Our findings have important implications for health policy, as they challenge notions patients may not be satisfied with primary care provided by NPs and support expanding FPA to all states to provide acceptable primary care without diminishing patient or provider experiences." (Moldestad, et al., p. 3099)

Suggested recommendations for future research included qualitative studies to focus on female patient preferences. (Moldestad, et al., p. 3099)

The researchers identified several strengths including their approach reducing the possibility of bias from self-selecting one provider instead of another or reassignments of patients because of medical complexity. The possibility that the findings would be skewed by one type of state practice laws was reduced since the sampling across states with different practice restrictions occurred. One of the limitations of the study was that the data was from 2016 and may not reflect current perceptions. (Moldestad, et al., p. 3099)

Although this research article relates to primary care patients, physicians, and nurse practitioners in the Veterans Affairs Healthcare System, I feel this is a good article to use in the review of literature for our group research project. The Veterans Affairs Healthcare System is the largest employer of nurse practitioners in the United States and is in favor of full practice authority. The comparisons and outcomes through interviews with patients, physicians and NPs among full and restricted practice authority states would be beneficial to our research.

Traczynski & Udalova (2018) published a study of analysis of nurse practitioner independence and determining its effects on health care utilization and patient health outcomes. Since the start of the pandemic, patient care demands, and physician shortages have worsened. This issue was causing a strain on healthcare workers trying to fill the gaps causing primary care deficits. According to the Association of American Medical Colleges (AAMC) projections, by 2034, physician shortages will reach between 17,800 to 48,000 in primary care alone. (AAMC, 2021) This presents a huge issue for healthcare

as a whole. The need for nurse practitioners in the primary care setting is apparent, however, it is not a new discovery, as it is reported through statistics that physician shortages have been climbing for years.

This study identified two causes and effects as the basis of this study related to nurse practitioners' autonomy. First, primary care providers provide routine checkups that manage chronic illnesses. This leads to an increase in the utilization of healthcare and produces positive patient outcomes. Second, preventative care reduces the number of emergency room visits from a patient. In exchange, this reduces healthcare costs as primary care is much more cost-effective.

The study was completed using the Medical Expenditure Panel Survey (MEPS) Adult Self-Administered Questionnaire (SAQ). The SAQ asked questions from the period 1999-2012. This population group was diversified with a wide range of demographics, including race, gender, education, marital status, income, employment status, and type of health insurance. The SAQ was given to all MEPS respondents 18 years and older annually. The survey gave data on the patient's perception of healthcare quality and access. Then, the data was cross-referenced from surveys issued by The Nurse Practitioner from 1995-2012. This information was retrieved from state nursing organization representatives, and their understanding of the state regulations on nurse practitioners.

Researchers defined independent practice as "the absence of statutory or regulatory requirements for physician collaboration or supervision and independent prescriptive authority for NPs as the right to prescribe medications (including controlled substances, if allowed) without physician collaboration or supervision." In 2012, 17 states

and the District of Columbia were allowing nurse practitioners full independent practice. The survey identified the effect of NPs full independent practice in the following states, AZ, CO, HI, ID, MD, ND, VT, and WA.

The characteristics were viewed of states in 1970 that gave independent authority to NPs versus states that never did. This data was used to analyze if there were "pre-treatment systematic differences" between the two. In this comparison, it was found that these states that allowed the independent practice of nurse practitioners had lower individual healthcare costs, fewer medical schools, and younger populations. This same difference was exhibited from 1970-1980, thus disqualifying it as a consequence of a small, analyzed sample size.

The data was collected and configured into tables. Data describes the effect the independent practice of NPs has on the likelihood of routine checkups annually. It was shown that the probability of an adult patient having an annual checkup increased by 3.3% in the first two years of NP full independence. Other effects were related to NP independence on the availability of provider appointments and travel costs to the clinic. The effects included, (1) “Appt. when wanted”, (2) “Care when sick”, (3) “Travel”, and (4) “Usual source of care”. It was found that the patient factors (1– 3) were all increased when NPs gained full independence. In (4), a significant increase was seen in the group of participants reporting that they have a usual source of care following NPs gaining full independence. Researchers estimated a 3.6% increase among patients having a source of primary routine care and the independence of nurse practitioners.

Positive patient outcomes can be a result of higher quality care. The effect of NP independence on visit quality reported by the patient is examined and found that patients

reported better quality visits following full NP independence. Thus, resulting in an increase of 4 to 6% for adults from their reported baseline visit quality. Possibly concluding that increased numbers of providers resulted in more time spent with patients and could also be linked to increased appointment availability per provider.

Correlation of nurse practitioner independent practice related to the effects on patient health outcomes was next evaluated. Data shows more adult patients reported overall health was excellent following NP practice independence. Primary care providers can offer preventative care in hopes of better managing chronic diseases, stopping the onset of an illness, or controlling acute conditions. A decline of 11.6% was found in visits beyond the first established care visit for ambulatory care-sensitive (ACS) conditions. These ACS conditions are often kept from becoming severe through preventative care. In doing this, emergency room visit frequency is decreased as these conditions are better controlled.

Next, the relation between Health Professional Shortage Areas (HPSAs) and the underserved population of patients is observed. Per the Department of Health and Human Services, HPSAs are “geographic areas with an insufficient number of health care providers”. These HPSAs have a provider-to-patient ratio of more than 2000:1. The study found that an increase in annual wellness checkups is larger in states with a higher share of these needed populations. They estimated that if a one standard deviation increase was made in the statewide share of people living in HPSAs of primary care, the share of adults receiving a checkup would increase by approximately 30%. Therefore, this result suggests the utilization of NPs would increase to meet the demand of primary care patients and relieve physician shortages.

The researchers presented a few weaknesses within the study. First, they identified in certain areas a smaller number of observations. This issue led to large standard errors in some findings contraindicating presumptions. Also, the researchers found some statistically significant results that suggest vast differences between states that allow full practicing NPs, and those that do not. Despite these weaknesses, Traczynski & Udalova (2018) study showed many benefits to the full independent practice of NPs.

In concluding the study, Traczynski, J., & Udalova, V. (2018) showed that the full independent practice of nurse practitioners had increased health care utilization and positive patient outcomes, and decreased costs as more providers are available. Data showed that allowing full practice authority in NPs provided better care for rural and underserved populations, thus decreasing emergency room visits by these patients. These study findings magnify that with the full independent practice of NPs by state regulations, several important healthcare areas are positively affected, including cost-effectiveness, readily available care, and healthcare utilization and outcomes.

For many reasons, this study applies to the current study being conducted. The foundation of this study relates directly to the current study's topic of the effects on patient care and outcomes in relation to the independent practice of nurse practitioners. Future research is suggested in more areas of NP's independent practice. Current researchers plan to suggest education on the scope-of-practice laws and changes within these regulations that will motivate future nurses to pursue the career of the nurse practitioner. Present study research will seek to answer the future research suggestion, an

increase in nurse practitioner autonomy may seek to diminish the concerns of physicians and improve the productivity and collaboration of providers in healthcare.

Lusine Poghosyan, Ph.D., MPH, RN, FAAN, Jianfang Liu, Ph.D., MAS, and Allison A. Norful, MSN, MPhil, RN, ANP-BC conducted a cross-sectional study entitled "Nurse Practitioners as Primary Care Providers with their Own Patient Panels and Organizational Structures." The objective of the study was to investigate the role of nurse practitioners in delivering primary patient care versus episodic care and the effects of their work environment on their role. Primarily, the issue behind the study was the growing demand for primary care with an increasing shortage of primary care providers. This deficit is causing obstacles in delivering "timely, high quality and cost-effective primary care." (Poghosyan, Liu, and Norful, 2017)

Education and training of NPs prepare them for "independent patient care, prescribing medications, and ordering necessary tests and equipment." (Poghosyan, Liu, and Norful, 2017) Currently, each state is governing the practice of NPs. Each state chooses to allow nurse practitioners either full, reduced, or restricted scope of practice. The ability of NPs to provide continuity of care to their independent patient base is beneficial to the patient's outcomes and decreases unwarranted hospital stays.

Countless studies previously performed associate increased NPs patient panels to decreased primary care provider shortages. Nurse practitioners holding their own patient bases lead to "improvements in access to care, decreases wait time, promotes chronic disease management, and reduces hospital visits." (Poghosyan, Liu, and Norful, 2017) Thus, increasing patient populations receiving continuous care from a nurse practitioner is a constructive approach to increasing the provider volume in primary care.

Often, NPs are not given the appropriate work environments to successfully treat the patient load they are seeing. In many clinics, nurse practitioners are not provided staff to room patients and collect vital signs, height, and weight. This results in “delays in patient care and increased cost of care”. (Poghosyan, Liu, and Norful, 2017) Also, poor relationships between management and NPs are frequently seen, which affect the work environment. As previously shown, NPs that work in an understood and respected work environment are more likely to independently practice while providing continuing care for their certain set of patients.

This cross-sectional study was conducted via a survey mailed to nurse practitioners in Massachusetts. The study was intentionally limited to one state to maintain the same scope of practice for all NPs answering the survey. During this study, Massachusetts was a reduced practice state for nurse practitioners, requiring them to have a collaborating physician to diagnose, treat, and prescribe medication to patients. (Poghosyan, Liu, and Norful, 2017) These NPs were found using the Massachusetts Provider Database (MPD). The MPD is updated annually to reflect updated clinic providers. The MPD included 807 NPs in primary care, and clinic addresses were obtained for surveys to be mailed. Out of the 807 NPs in the state who were mailed the survey, 314 completed and returned it.

The survey questions related to the “NP role in care delivery, NP work environment, and demographics”. (Poghosyan, Liu, and Norful, 2017) The role of nurse practitioners in the delivery of care was examined with one question asking them if they did or did not have their own patient base. Next, the Nurse Practitioner Primary Care Organizational Climate Questionnaire (NP-PCOCQ) was used to determine the work

relations and environment of NPs. Four subscales were used, NP-Physician Relations, NP-Administration Relations, Independent Practice and Support (IPS), and Professional Visibility (PV). (Poghosyan, Liu, and Norful, 2017)

Data were computed into descriptive statistics and used in frequency tables. In response, 45% of NPs had their own patient panels with most working in community health clinics. A large number of the NPs without a patient base worked in physician settings. In settings where appropriate staff support was reported, NPs were more likely to have their own patient panels. The IPS subscale measured vital areas to improving the independent practice of NPs such as “physicians supporting NP patient care decisions, NPs being able to freely apply their knowledge and skills to care for patients, or NPs having adequate staff help to care for patients”. (Poghosyan, Liu, and Norful, 2017)

The researchers included multi-level facets of care that affect NP's ability to utilize independent or full practice authority in primary care settings. The study was conducted in only one state, which was a reduced practicing state at the time. This may have contributed to the overall generalizability of the results in the study. Also, data containing the patient type or panel size was not collected. NPs were the only providers subjected to this study. The study did rely on a self-response tool which can affect the study findings due to those that did not respond to the survey. Overall, the study provided information on the ever-growing gap in care due to provider shortages.

The researchers proposed a multitude of future research. Also suggested, the data needed to be collected from primary care physicians to understand how NPs and physicians would manage patient panels adjacently. The current study will answer this recommendation, as it is collecting data from both NPs and physicians.

Henderson, A and Prager, L (2022) performed a study using cross-sectional data for the purpose of examining the effects of Nurse practitioner (NP) satisfaction and how it relates to the intent to leave or maintain employment. The study focused on components of work perspectives, autonomy, increased independence, and usage of full scope of practice and how this all ties into job satisfaction. The importance of this study is to decrease turnover rates and increase performance and patient outcomes. The study argues that having a general satisfaction in the workplace can decrease the intent for NPs to leave their primary employment, which in turn increases access to care and reduces the cost of health care services. Retaining NPs within a clinical practice is directly linked to organizational effectiveness, better patient outcomes and an increase in patient satisfaction, hence the importance of decreasing intent to leave. No specific theoretical framework was mentioned in the study.

Henderson and Prager (2022) identified five hypotheses. The first hypothesis stated that nurse practitioners who are more satisfied with the patient load (a) and patient mix (b) found in their primary position will be more likely to have a longer-term perspective on remaining in their position. The second hypothesis stated that nurse practitioners who are more satisfied with their feelings of autonomy (a) and sense of value (b) will be more likely to have a longer-term perspective on remaining in their position. The third hypothesis stated that nurse practitioners who are more satisfied with their feelings of respect from physicians (a) and other colleagues (b) will be more likely to have a longer-term perspective on remaining in their position. The fourth hypothesis stated that nurse practitioners who are more satisfied with their opportunities for professional development (a) and the policies and procedures in place in their

organization (b) will be more likely to have a longer-term perspective on remaining in their position. The fifth hypothesis stated that nurse practitioners who are allowed to operate under the full scope of practice allowed by their home state (a) and who feel that their skills are being fully utilized (b) will be more likely to have a longer-term perspective on remaining in their position. The hypotheses were investigated using 2012 data from the National Sample Survey of Nurse Practitioners (NSSNP). Limitations to using data collected in 2012 were mentioned, however, the study states that it was the only publicly available large-scale data set of nurse practitioners that could be used to provide the needed data within this population.

The dependent variable was the individual NPs prospective timeline for intent to leave and used measures that addressed NP satisfaction such as patient load, patient mix, autonomy, and sense of value for the job. Measures of relational characteristics included respect from physician colleagues, and from other staff members in the organization. Measures of satisfaction with organizational variables included opportunities for professional development and organizational practices and policies. Ordinal variables included educational attainment, age, time since RN licensure and time since NP certification. Control variables included respondent gender, age, educational attainment, time since nursing licensure and NP certification, and annual income. Two survey items were used to measure the extent to which NPs felt that their clinical skills were being utilized, including questions about scope of practice and skill utilization (Henderson and Prager, 2022).

Two models were used; one focused on NPs that perceive an equal relationship with physicians, and the other focused on NPs that perceive a hierarchical

relationship. Both models used an ordinal dependent variable, and both focused on the NPs intent to leave the organization (Henderson and Prager, 2022).

Following analysis, more than 77% of respondents had no intention of leaving their primary NP job within the next two years, and most were satisfied with their primary NP position, agreeing that they were able to use their skills to the full extent of the state scope of practice and that they were fully utilized in their NP position. Over 15% of respondents indicated some desire to depart within 1-2 years and over 7% of respondents indicated intent to depart their organization within the calendar year. The NP's satisfaction with patient load showed to have a positive and significant relationship with a longer timeframe for intent to leave in both types of structures. Variables measuring satisfaction with opportunities for professional development and organizational practices and policies were both positively and significantly related to satisfaction. In the model examining intent to leave in hierarchical environments, the effects of both were identical. The relationship between autonomy and intent to leave was positive and significant in the hierarchical model. The relationship between satisfaction with respect from physician colleagues was positive and significant for the model examining NPs in hierarchical relationships but was not significant in the model examining NPs in equal relationships. Age had a negative and significant relationship with turnover intention and time since initial RN licensure was positive and significant in both models. Partial support was found for the following hypotheses: nurse practitioners who are more satisfied with the patient load and patient mix, with their feelings of autonomy and sense of value, who are satisfied with their feelings of respect from physicians, and who are satisfied with their opportunities for professional development

and the policies and procedures in place in their organization will be more likely to have a longer-term perspective on remaining in their primary position.

Henderson and Prager (2022) identified several limitations of the study. First, the study used cross-sectional data, therefore, no conclusions about causality could be made. Second, sample weights could not be used. As a result, these findings are not generalizable to a broader population of NPs. Due to the exploratory nature of the study, these limitations were deemed to be acceptable. The researchers recommended future studies focusing on state variation that keeps the regulatory context constant, examining states that represent the broadest and narrowest scopes of practice for NPs, employing more recent data from nurse practitioners as it becomes available from the HRSA, and natural experiments or targeted changes in clinical and administrative systems to determine the impact of these predictors on intent to leave.

Regardless of the limitations, the results found support past research stating NP satisfaction is an important factor in deciding to stay in a clinical position. NP satisfaction is directly related to patient load, autonomy and respect from colleagues, organizational policies and procedures, and opportunities for development. NPs having their advanced training and skills recognized and valued and purposefully incorporating some amount of autonomy into the NP role could reduce the potentially negative perception of the hierarchy for NPs.

The study is relevant to the current study because it explores autonomy and respect from colleagues and the impact it has on NPs and their satisfaction in the workplace. This study used items to measure the extent to which NPs felt that their clinical skills were being utilized, including questions about scope of practice and skill

utilization which directly relates to our current study. One of the recommendations posed in the article was looking at the scope of practice for NPs in individual states and gathering new data from NPs regarding job satisfaction as it becomes available. Our study is incorporating both items in our research as we explore practice independence and utilization of our skills to increase patient outcomes and improving access to care.

Muench, U., Whaley, C., Coffman, J., & Spetz, J. (2020) performed a study that evaluated patients medication adherence in relation to the expanded NP's prescribing without collaborating physician oversight. This study was conducted due to the number of patients who are noncompliant with their medications which is an expensive (billions of dollars annually) and complicated issue. There are many barriers to a patient's adherence to medication, but it is suggested that a variety of changes, including a change in policy that would expand NPs scope-of-practice, would improve the patient's adherence to medications.

Muench et al., (2020) hypothesized that expanding scope-of-practice for NPs would improve medication adherence in multiple ways. Nurse practitioners are trained in a more holistic way and thus, increase communication with the patient that leads to building a trusting relationship. NPs educate patients about medications and side-effects of medication which can help to achieve medication adherence. Evidence shows that patients have longer visit times with NPs versus Physicians and in turn, receive more education about their care. Expansion of the NPs scope-of-practice would also increase access to health care in general, which leads to more patients being seen and more medications being prescribed for chronic conditions. No theoretical framework was identified in this study.

The study was performed using three different analyses from commercial insurance claims and the participants had to meet several requirements. The first requirement was to fill at least two prescriptions related to one of three chronic diseases: diabetes, hyperlipidemia, and hypertension/heart failure. The second requirement was to continue to be enrolled in a health plan throughout the study. The last requirement participants had to live in the current state for the duration of the study. Data was retrieved from the Health Care Cost Institute (HCCI) regarding commercial insurance claims from 2008-2012 obtained from Aetna, Humana, and UnitedHealthcare. This data included approximately 50 million individuals located in the United States. Information from Area Health Resources File (AHRF) from 2008-2012 was also used to obtain state-level control variables. The two sets of data were combined for the study. A National Quality Forum (NQF) endorsed by the Pharmacy Quality Alliance was used to measure adherence. Patients taking the medications of interest were identified by combining NDC codes and pharmacy claims. Data regarding NP scope-of-practice regulations was gathered from the annual Pearson report.

Independent variables were binary and included states that allowed NPs to practice and prescribe medications without a collaborating physician. The treatment group consisted of states that changed their laws permitting NPs to practice without physician involvement (Maryland, Colorado, Hawaii, North Dakota, and Vermont) and the comparison group was made up of all the other states, which continued to restrict NP practice. Control variables were characteristics that could affect adherence to medication and included patient's age, type of insurance, median annual income, race/ethnicity, gender, and chronic diseases. According to the study, "difference-in-difference estimation

was used to measure the associations between removing requirements for physician oversight of NPs on medication adherence (continuous outcome) and on good medication adherence (>0.8; binary outcome)” (Muench et al., 2020, p.480).

Results showed that no improvements to medication adherence were obvious prior to law implementation, but adherence levels increased yearly after expanding NPs scope-of-practice. The study also showed that NPs being allowed to practice and prescribe medications without requiring a collaborative agreement had a positive effect on the patient's adherence to medication therapy. The study did suggest that increase in adherence may not have been caused by NP patient management necessarily, but an increase in the access to medications. With the amount of barriers involved in medication adherence, any increase is considered meaningful. No recommendations for future research were mentioned in the study.

Muench et al., (2020) mentions several limitations that could be considered weaknesses within the study, including; Only three commercial insurance companies were used, only three drug classes were used, the design was only based on five states which may not be generalizable to all other states, adherence was measured only by fill dates and does not prove whether the patient took the medications, only fixed effects were included and did not adjust for acute diseases, and information about NPs practicing closely with physicians, requirement or not, was not identified.

Nurse practitioners having full practice authority increases access to healthcare, medication access and adherence, and most importantly, does not compromise the quality of care that the patient receives.

Martin, B., & Alexander, M. (2019) performed a study entitled "The Economic Burden and Practice Restrictions Associated With Collaborative Practice Agreements: A National Survey of Advanced Practice Registered Nurses." This study argued that the healthcare system in the United States faces many challenges, especially regarding the shortage of providers available in rural areas and access to primary care. It highlighted the fact that APRNs (advanced practice registered nurses) have widely varied restrictions on their scope-of-practice that is solely dependent on the state they are located in. Considering "APRNs are more likely to serve traditionally underserved and minority populations" (Martin & Alexander, 2019), these restrictions cause further barriers to care and limit access to medical treatment in areas that are already facing difficulty in receiving healthcare. Martin & Alexander (2019) state that "currently, 21 states grant all APRN roles full practice authority, which means a written Collaborative Practice Agreement (CPA), supervision, and conditions on practice are not required. The remaining 29 states mandate reduced scope of practice on at least one APRN role. In these markets, a CPA specifies the scope of practice with a general or direct supervision requirement by a clinician" (Martin & Alexander, 2019). However, studies have shown that APRNs provide care that is comparable to that of physicians and that patients are highly satisfied with the care they receive from APRNs. No theoretical framework was identified for this study.

Information used in this study was obtained by the National Council of State Boards of Nursing (NCSBN) who "designed a cross-sectional study to identify current APRN practice trends in states that require CPAs and to ascertain the potential benefits and challenges such formal arrangements present" (Martin & Alexander, 2019). The

sample included 8,701 randomly collected APRNs practicing throughout the 29 reduced scope of practice states that encumbered at least one element of care provided by the APRN. Communication with participants was carried out via postcards and email from September 2017 to November 2017. Martin & Alexander (2019) stated that "an online survey was administered using Qualtrics. The instruments consisted of 47 questions divided across four content areas: (a) baseline demographics, (b) CPA framework, (c) practice patterns, and (d) CPA benefits/challenges." (Martin & Alexander, 2019). Two dependent variables were identified. The first variable was CPA fee requirements and the second was whether the participant experienced practice restrictions associated with their CPA. (Martin & Alexander, 2019). The independent variable was described as "a career stage variable" and was related to the number of years the APRN had practiced. (Martin & Alexander, 2019).

The findings revealed several facts regarding CPA and state restrictions on APRNs scope of practice. First, "only half of respondents indicated they communicate in person with their supervising physician at least once per month" and "approximately half respondents reported their supervising physicians conducts medical record reviews" and "96 respondents indicated they paid more than $500 per month, with 40 reporting monthly figures over $1,000" (Martin & Alexander, 2019). Findings also showed that "APRNs practicing in rural areas were 52% more likely to report needing to pay a fee to establish or maintain their CPA" (Martin & Alexander, 2019). Martin & Alexander (2019) included that having to find or replace the APRNs supervising provider could take from a matter of weeks to 6 months which also considerably increased constraints on

care. It was also discovered that the group with the most restrictions were older, more experienced nurses who served in rural areas.

Martin & Alexander (2019) stated that "in light of projected healthcare workforce shortages in rural areas and primary care settings, identifying strategies to maintain consumer access to high-quality care should be a national priority. One strategy is to allow APRNs to practice to the full extent of their education and training" (Martin & Alexander, 2019). The findings of the study provided "new and specific evidence on continued barriers to independent practice" with required CPA fees being identified as one of the "particularly strong barriers to independent practice" (Martin & Alexander, 2019). The study provided information that instead of collaborating agreements serving as a form of supervision and providing wellbeing for the patients, aimed at APRNs with less experience, the fees actually form obstacles for patients in "medically underserved communities" and is not truly beneficial for experienced APRNs. (Martin & Alexander, 2019). Results of the study also suggested that CPAs "do little to institutionalize potentially important checks on early career professionals, including regular communication and medical record review. Instead, they often inhibit access to care in regions that need it the most and can place significant financial and practice restrictions on midcareer and established APRNs, who are well positioned to address these shortfalls" (Martin & Alexander, 2019). Martin & Alexander (2019) mention several limitations to the study including: associations being correlative rather than casual, the survey instrument was not all-inclusive meaning topics not mentioned in the study may permit further research, and the study did not include physician or physician assistant feedback regarding CPA impact on their practice (Martin & Alexander, 2019).

Martin & Alexander (2019), conclude their study by stating “CPAs do little to generate a truly collaborative environment. Rather, they ultimately divert care away from traditionally underserved areas, curtail consumer choice, and place unnecessary restrictions and financial burdens on an entire class of advanced providers. In light of these results, states should redouble their efforts to ensure critical healthcare services tailored to the needs of their residents remain widely accessible” (Martin & Alexander, 2019).

The researchers were exceptionally well at identifying how CPA rules set by individual states greatly and unnecessarily impede access to medical care in underserved areas.

Summary

In reviewing the related literature, the researchers agreed that there is a lack of consistency in the scopes of practice of nurse practitioners in the United States. 27 states have been granted full practice authority while the other states are reduced or restricted. Health care providers and patients have a lack of understanding of the role of full practice authority of nurse practitioners. Researchers in the studies defined full practice authority as the absence of regulatory requirements for physician collaboration agreements and supervision. Physician collaborative agreements do little to generate a truly collaborative environment. Comparative review demonstrated the states with full practice authority had lower healthcare costs, improved healthcare accessibility, and improved patient outcomes. The studies have significance for aiding in development of new policies to promote nurse practitioners in all states to practice to the full scope of their education and training. Studies reviewed agreed that full practice authority is a key factor in job

satisfaction and in retaining nurse practitioners in the states where they practice. This review of literature justified the need for future research in full practice authority of nurse practitioners to obtain increased access to consistent quality health care for all patients in the United States.

Chapter III: Design and Methodology

Nurse practitioners' autonomy in Mississippi is reduced by state practicing laws, thus restricting the ability of NPs to adequately utilize their acquired knowledge, expertise, and skills in caring for patient populations. The purpose of this study was to determine both the facilitators and the setbacks of full practice authority of nurse practitioners in Mississippi and its effects. The effects that were considered were decreased patient utilization of healthcare, decreased patient outcomes, and increased emergent care visits. This chapter will discuss the researchers' methodical design of the study, data conduction and analysis, and evaluation of the study.

Design of the Study

The researchers used a descriptive, quantitative study to assess the facilitators and barriers of independent practice of nurse practitioners and the presumed effects on patient healthcare in central and northeastern Mississippi. The survey included fifteen questions that focused on the sample population's demographic data, knowledge, and utilization of the collaborating agreement, established patient base, and assumed wait times, adequate clinic support staff, and NP job satisfaction. The survey was distributed to the accessible sampling by the research group by emails and hand-deliveries. Surveys were distributed via link and QR code, and 160 were completed, returned, and statistically analyzed. The chosen descriptive quantitative based research was required due to the study's time

restraints of one year to complete the researcher's objective.

Setting for the Research Project

The research questionnaires were distributed to primary care clinics throughout central and northeastern Mississippi. Researchers also distributed surveys to various healthcare facilities by email and hand-delivered copies to specific clinics near their hometown.

Population and Sample

The research group had a target population of all MDs, DOs, and NPs in the state of Mississippi. The accessible sample population included MDs, DOs, and NPs that practice at selected clinical sites surveys were distributed and emailed to. There was a diverse population of primary care providers that completed the provided questionnaire. A total of 14 physicians (MDs and DOs) and 146 nurse practitioners responded to the survey. Their surveys were utilized due to meeting all requirements, completing the questionnaire in full, and promptly returning by set deadline.

Methods of Data Collection

The research was implemented through development of a proposal and questionnaire approved by the Institutional Review Board (IRB) at Mississippi University for Women. After approval, the study proposal was presented to selected healthcare facilities and their providers for approval of distribution and participation. The survey was dispersed to those participating primary care providers throughout central and northeastern Mississippi via email and hand-delivery to specific clinics.

Instrumentation

The questionnaire consisted of questions pertaining to demographic data, knowledge, and utilization of the collaborating agreement, established patient base, and assumed wait times, adequate clinic support staff, and NP job satisfaction. The survey was directed only to healthcare providers in primary care who qualified as a physician (M.D. or D.O.) or nurse practitioner. There were no identifying questions such as name, date of birth, or locations asked of the providers or their patients. The closed-ended questions differed between dichotomous and multiple-choice questions. The survey included an exclusion statement stating "please complete the survey in full. If the survey is not completed in full and returned by March 1, 2023., it will be excluded from the study." Surveyors were required to be 21 years or older and an MD, DO, or NP practicing primary care in the state of Mississippi.

Methods of Data Analysis

Once surveys were completed and turned in, results were entered into an Excel spreadsheet and sent to a statistician.

Other

Copies of the finalized statistical results along with a thank you note for participation were sent to the healthcare facilities and providers involved. No form of enticement was used in order to receive cooperation from participating healthcare facilities or providers.

Chapter IV: Results

Currently in Mississippi, nurse practitioners are regulated by reduced practice laws. In this quantitative study, the researchers evaluated the facilitators and barriers to full practice authority (FPA) of NPs in the state of Mississippi. These included physician's understanding of the nurse practitioner role, job satisfaction and support, limitations of practice, decreased patient outcomes, and patient access to healthcare. Understanding the importance of full practice authority for nurse practitioners directly correlates to patient outcomes, cost of healthcare, and access to care. Data was sampled in rural, urban, and suburban primary care health clinics in Mississippi via separate surveys for NPs and MDs/DOs. Throughout the remainder of Chapter IV, the results by statistical analysis will be discussed and broken down in depth.

Profile of Study Participants

Data was collected by 3 researchers using digital surveys distributed by QR code or URL link. The surveys were completed by primary healthcare providers including NPs, MDs, and DOs in the state of Mississippi. The survey was completed by 146 NPs and 13 physicians, over the age of 18, and licensed in the state of Mississippi. In regard to gender of the NP participants, 93.8% were female, 5.5% were male, and 0.7% preferred not to say. As for physician participants, 69.2% were male and 30.8% were female. A description of the clinical years of experience and type of practice of both NP and physician participants are listed in Figures 1 through 4. Subsequent data analyses were performed using IBM SPSS statistical software, version 28.

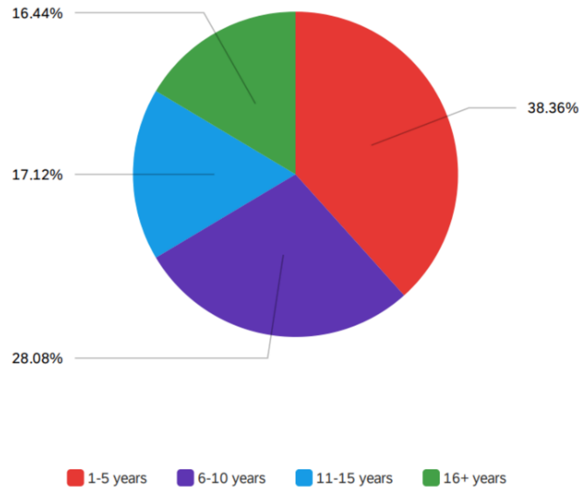

Figure 1. *Years of experience of NP participants.*

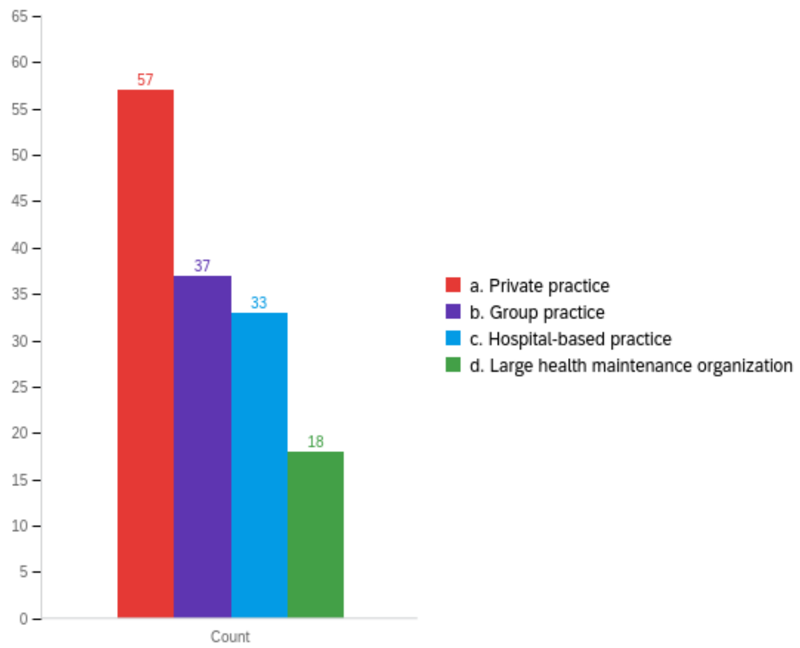

Figure 2. *Type of practice of NP participants.*

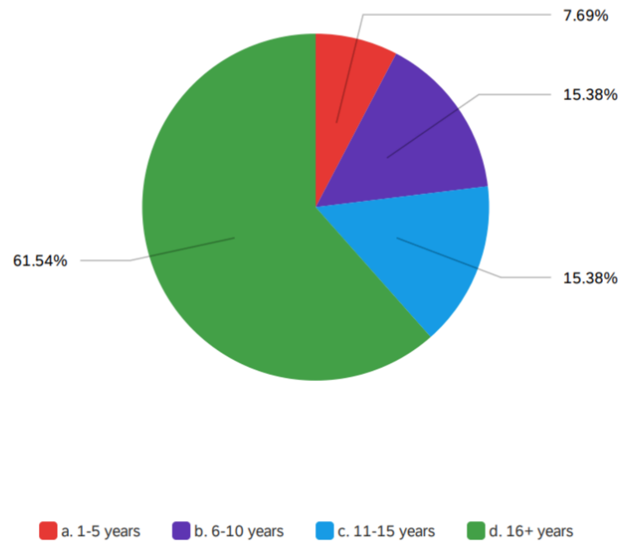

Figure 3. *Years of experience of physician participants.*

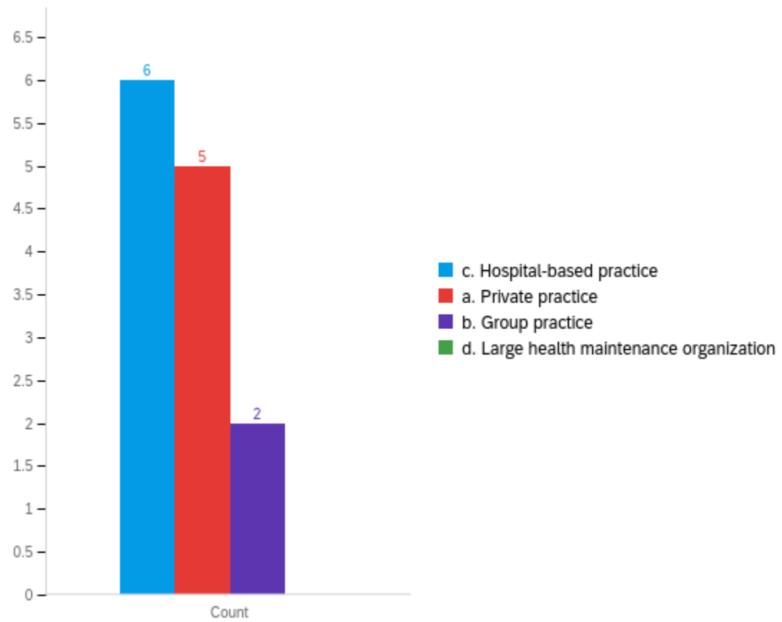

Figure 4. *Type of practice of physician participants.*

Statistical Results

Research Question 1: Is the required collaborative practice agreement between physicians and nurse practitioners utilized in practices in Mississippi?

The results indicated that collaborative practice agreements are being utilized. Research revealed that 97.9% of nurse practitioners and 76.9% of physicians who completed the surveys reported using the collaborative agreement. A total of 76.7% (n=112) reported having no problems finding a collaborating physician, while 21.2% (n=31) reported the process of finding a collaborating physician taking longer than expected (Figure 5). Of the 13 physicians who took the survey, 69.2% (n=9) reported being in a current collaborative practice agreement with a nurse practitioner, 7.7% (n=1) reported being in a collaborative agreement with a nurse practitioner previously, and 23.1% (n=3) reported never participating in a collaborative agreement with a nurse practitioner (Figure 6).

The required collaborating practice agreement was evaluated by the responses of the 146 nurse practitioners and 13 physicians who completed the survey. In Figure 5, NPs were asked if they found it difficult to find a collaborating physician. As the chart depicts, most nurse practitioners (76.71%) had no difficulty finding a collaborating MD or DO. Physicians were questioned if they currently, previously, or never participated in a collaborating practice agreement and answers are exhibited in Figure 6. Most physicians (69.23%) reported participating in a collaborating agreement with at least 1 nurse practitioner.

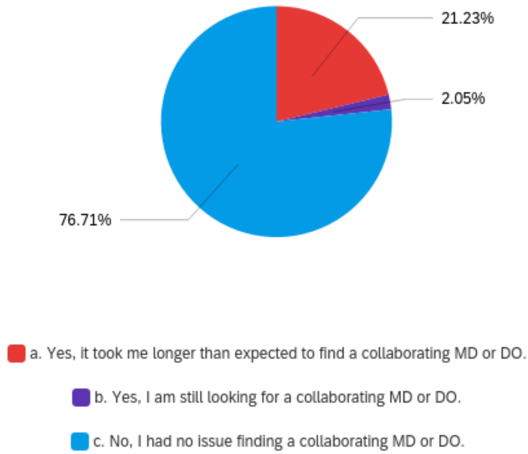

Figure 5. *NP responses regarding difficulty finding collaborating physician.*

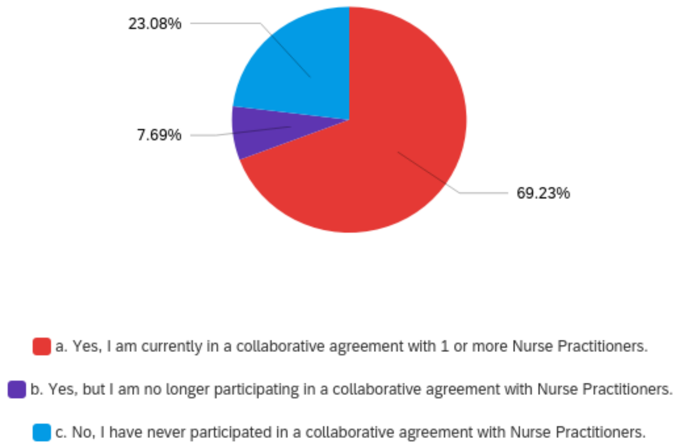

Figure 6. *Physician responses regarding participation in a collaborating practice agreement.*

The following question for both nurse practitioners and physicians examined how often their collaborating practice agreement was utilized. Of the 146 nurse practitioners, 71 stated they 'rarely (<1 time/month)' consulted with their collaborating physician (Figure 7). Of the physicians who are currently in a collaborating practice agreement with a NP, 5 report that the NP consulted with their collaborator 'often (1-2 times/week)' (Figure 8).

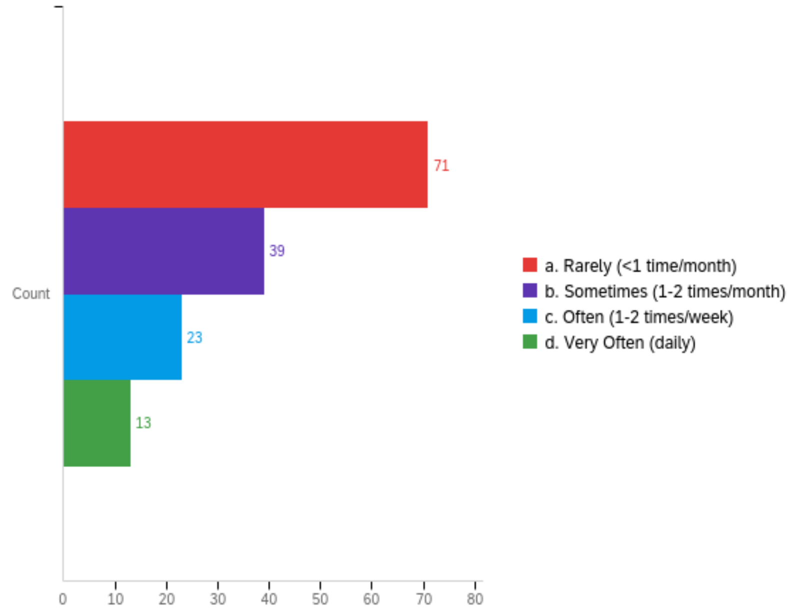

Figure 7. *NP responses of how often they consulted with their collaborating physician.*

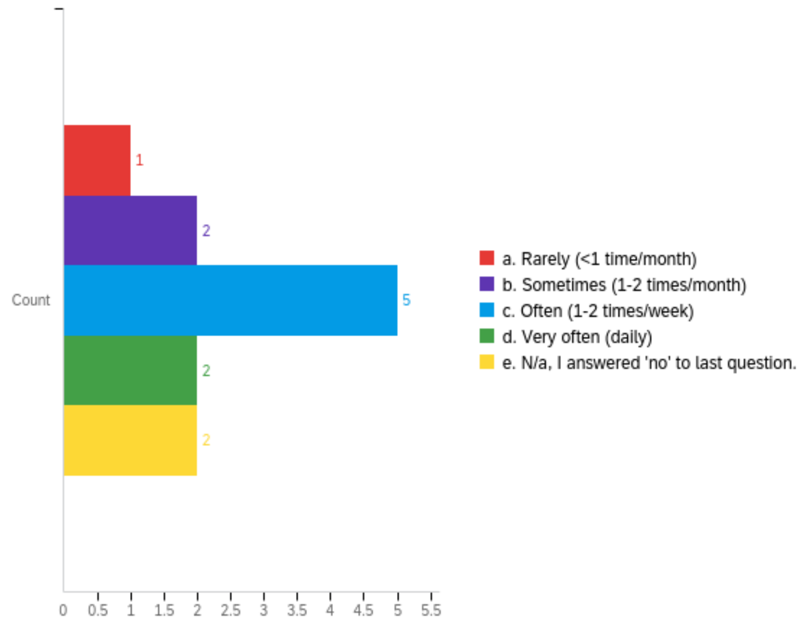

Figure 8. *Physician responses of how often the NP consults with them.*

Research Question 2: Does reduced practice authority in Mississippi affect nurse practitioner retainment and job satisfaction?

A total of 45.2% (n=66) nurse practitioners reported considering relocating due to state restrictions, and 43.8% (n=64) nurse practitioners reported considering leaving the profession (Figure 9). When asked for the reason why they considered leaving Mississippi or leaving the profession, reasons selected were *Under Compensation* (31.5%), *Lack of Acceptance of NP Role* (13.7%), *Strenuous Work* (10.3%), and *Difficulty Securing an NP Position* (5.5%).

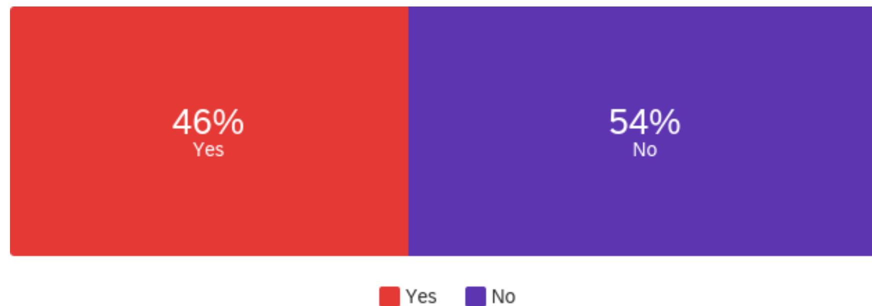

Figure 9. *NPs responses to considering relocation to FPA state.*

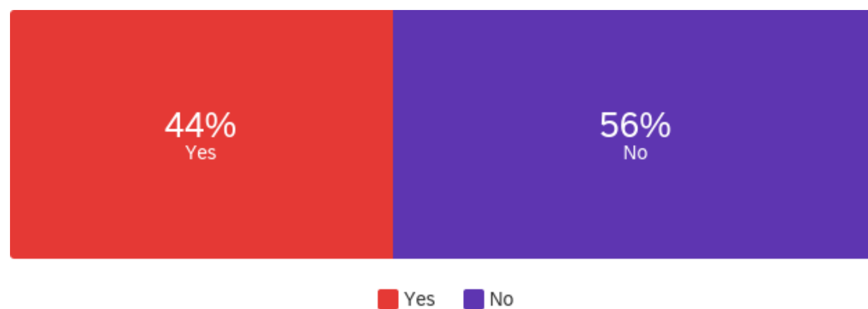

Figure 10. *NPs responses to leaving the profession.*

There was a statistically significant difference in consideration to relocate due to state restrictions (Figure 9) based on difficulty in finding a collaborating physician (Figure 5) ($\chi^2(2,N=145)=8.247$, $p=0.016$). Those who had difficulty finding a collaborating physician were significantly more likely to consider relocation. The percentage of respondents who reported considering relocation in relation to difficulty finding a collaborating physician is shown in the list below:

- Yes, it took me longer than expected to find a collaborating MD or DO: 61.3%

- Yes, I am still looking for a collaborating MD or DO: 100.0%
- No, I had no issue finding a collaborating MD or DO: 39.6%

There was a statistically significant difference in consideration to relocate due to state restrictions (Figure 9) based on the frequency of consulting with a collaborative physician (Figure 5) ($\chi^2(3, N=145)=18.978$, $p<0.001$). The NPs who collaborated rarely with their collaborative physician were significantly more likely to consider relocation. The percentage of respondents who reported considering relocation based on the frequency with which they consulted their collaborating physician is shown in the list below:

- Rarely: 63.4%
- Sometimes: 34.2%
- Often: 21.7%
- Very often: 23.1%

There was a statistically significant difference in consideration to leave the field of nurse practitioner (question 12, Table 1) based on the clinic setting having appropriate resources (question 8, Table 2) ($\chi^2(1, N=146)=6.837$, $p=0.009$). Only 38.3% of NPs who reported having appropriate support staff at their clinic considered leaving the field of NP, whereas 64.5% who reported *not* having appropriate support staff at their clinic have considered leaving the field of NP.

Q12. Have you considered leaving the field of nurse practitioner?	
Yes	43.8%
No	56.2%

Table 1. *NPs consideration of leaving the career field.*

Q8. Does your clinic setting have the appropriate amount of support staff for care of your patients? (i.e., obtaining VS, collecting labs, rooming patients)	
Yes	78.8%
No	21.2%

Table 2. *NPs response regarding clinic staff support.*

Research Question 3: Do physicians believe NPs are qualified with combined experience and education to provide primary patient care?

In reviewing question 10 (Figure 11), physicians do not believe that NPs with 3 or more years of clinical experience would be qualified to provide effective primary care management regulated by the Mississippi Board of Nursing (MSBON). However, only 15.4% (n=2) of physicians reported that NPs with 3 or more years clinical NP experience would be qualified to provide effective primary care management and 0.0% reported that NPs should be granted full practice authority in Mississippi.

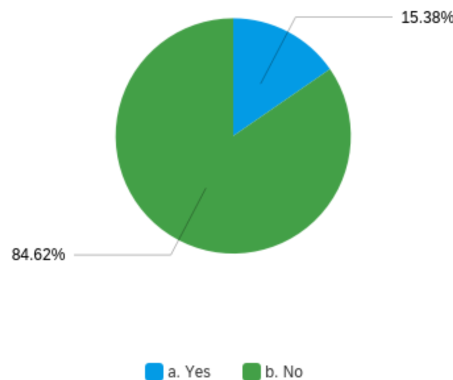

Figure 11. *Physicians' responses regarding NPs qualification to provide effective primary care regulated by MSBON.*

Reviewing data along with the comments, it appears that physicians do not believe that nurse practitioners have sufficient training and clinical experience to provide safe effective primary care or be granted full practice authority. Some representative comments include:

- *"Experience" is a nebulous term that does not equate with the necessary knowledge and exposure that would be required to be solely responsible for the medical care of patients.*
- *Clinical experience doesn't equal effective primary care. How about training in primary care? They could have worked at the urology clinic.*
- *I think they can provide effective care BUT need direct Physician [sic] supervision*
- *They are not adequately trained, and it is unnecessary with collaborative supervising physicians.*

Figure 12. *NP participant responses to nurse practitioners being granted FPA following 3 years of clinical experience.*

The text entries explaining why respondents answered "yes" or "no" to question 14 (Figure 12) are shown in Tables 3 and 4, due to the long list of responses.

Table 3. *Nurse Practitioner Text Responses*

Q12. Do you feel nurse practitioners with 3 or more years of clinical NP experience, should be granted full practice authority in Mississippi? - Yes; why?
Based on Board of Nursing Rules/Regulations - education requirements met; certification exam completed; experience requirements met = accountable/responsible for providing care at highest level, governed by MS BON rules/regulations=ability to practice based on those rules!!!
Finding quality care is difficult enough, but with collaborative guidelines and difficulty finding an MD in addition to the astronomical cost, it's making access to healthcare even worse.
Full practice authority should be granted due to the availability of MD's. Most doctors in this area have several NPs under their collaboration. Is that really beneficial to the NP? Are the MD's really maintaining "watch" over the NP's? I feel like they are being paid a lot of money when after three years or maybe even five, the NP should have full freedom.
I feel that we need greater access to care for patients and there is a lot of unnecessary costs for NPs to have oversight that is literally having a physician put their initials on a chart and have no clue about that patient or the care that the NP provides.
I know that I consult with or refer to appropriate specialists and I have established relationships with these specialists. I can call on them anytime. I do collaborate with my consulting physician often because we share an office. We are partners. He often consults me regarding areas of practice in which I have more or equal experience.
NPs will never stop collaborating. But securing a collaborating physician shouldn't be as expensive as I've heard some say. It is difficult to find them. Our entire state is underserved medically.
Patients choose who provides their healthcare in the outpatient setting. NPs are afforded education to prepare them for their role in the healthcare model. NPs have demonstrated that they can help improve healthcare access and improve patient outcomes. By granting FPA, we are helping our state and helping patient outcomes in

our state. Ultimately if a patient does not want to see a NP, they can simply go elsewhere.
To meet the needs of an underserved population that physicians are not available to meet. APRN's should be able to practice to the full extent of their training and education.
We have a serious access to care crisis in Mississippi and nurse practitioners are able and available to meet this need. Research shows states who have passed FPA have improved access to primary care especially in rural areas and reduction of severity of social determinants of health related to systemic and structural racism.

Table 4. *Nurse Practitioner Text Responses, continued*

Q12. Do you feel nurse practitioners with 3 or more years of clinical NP experience, should be granted full practice authority in Mississippi? - No; why? – Text
I am concerned the educational standards are not high enough with too much independent learning. Students I precept now do not have the same level of knowledge students 10 years ago had, not the clinical experience.
I feel NPs should have a minimum of 5 years' experience to be considered eligible for FPA
I think it needs to be longer at least 5 years and 2 of those should be in an independent role.
The patients we see often have complex health problems and having a physician to collaborate with helps insure safe and quality care. There are also some in our profession that continue to practice outside of their scope which a collaborating physician should help with that problem.

Physician text responses to questions 12, in regard to the role of NP, and question 13, in regard to FPA of the NP, are listed below in Tables 5 and 6, due to the long length of responses.

Table 5. *Physician Text Responses*

Q12. What is your understanding of the role of nurse practitioners in patient care? - a. Manage acute episodic care, b. Provide both chronic and acute care, c. Reserved for primary care only, d. Should practice in specialized healthcare areas only, e. Other, list below:
Can practice in a variety of environments with supervision
My NP friends do all 4 in different specialties, so I don't think there is one right answer to this question
My understanding is they do whatever they want to in healthcare. They can train to whatever they choose
Provide quality care to patients in collaboration with a physician
Work alongside MD
Work in a collaborating setting where they have TRUE collaboration with physicians not just quarterly chart reviews.

Table 6. *Physician Text Responses, continued*

Q13. Do you feel nurse practitioners with 3 or more years of clinical NP experience, should be granted full practice authority in Mississippi? - b. No; why? – Text
I do not feel they have the same training as physicians and need to have supervision
I don't believe this is enough experience for independent practice
Not enough time or quality training
Not with our current collaborative agreement. Physicians are who have completed a full four years of residency are not allowed independent practice until after completion of a residency which is a rigorous process.
They are not adequately trained, and it is unnecessary with collaborative supervising physicians.
They should train with doctors. I don't have a problem with nurses transitioning to the provider role, but they aren't currently being trained to perform that role by most of

the for-profit NP schools. So, I want them trained by doctors with doctors; that's the best way to become doctors.

Summary

The purpose of this study was to evaluate the facilitators and barriers of NPs full practice authority in primary care in Mississippi. After examining the statistical analysis and narrative responses from this quantitative study, the researchers determined the facilitators of full practice authority include increased accessible quality healthcare, improved patient outcomes, and decreased cost of healthcare. Many NP participants responded that NPs with 3 years of full-time clinical experience should be granted FPA, but some felt the minimum requirement should be set at 5 years. The rigorous educational and clinical requirements by the Mississippi Board of Nursing combined with the consultation that occur between nurse practitioners, physicians, and specialists outside of a collaborative agreement, support the pursuance of full practice authority in Mississippi. Most of the participating NPs felt the collaborative agreement is one of the barriers to full practice authority due to the unnecessary expensive cost and lack of consistent actual utilization of the collaborative agreement with their collaborating physician. Other barriers include physicians' lack of understanding of the NP role, NP job satisfaction and support, limitations of practice, and difficulty finding a collaborating physician.

Regarding the first research question, the collaborative practice agreements are being utilized by 97.9% of nurse practitioners and 76.9% of physicians who completed the surveys. Of the 146 nurse practitioners, 21.2% reported the process of finding a

collaborating physician took longer than expected. Of the 13 physicians who took the survey, 69.2% reported being in a current collaborative agreement with a nurse practitioner, 7.7% reported being in a collaborative agreement with a nurse practitioner previously, and 23.1 % reported never participating in a collaborative agreement with a nurse practitioner.

Regarding research question two, reduced practice authority in Mississippi does affect nurse practitioner retainment and job satisfaction. A total of 45.2% of nurse practitioners reported considering relocating due to state restrictions, and 43.8% nurse practitioners reported considering leaving the profession. The reasons they considered leaving Mississippi or leaving the profession included: Under compensation (31.5%), Lack of acceptance of NP Role (13.7%), Strenuous work (10.3%), and Difficulty securing a NP position (5.5%). Those who had difficulty finding a collaborating physician were significantly more likely to consider relocation. The NPs who collaborated rarely with their collaborative physician were significantly more likely to consider relocation.

Analysis of the results regarding question three, do physicians believe NPs are qualified with combined experience and education to provide primary patient care, revealed that physicians find NPs qualified to provide primary care. However, only 15.4% of physicians reported that NPs with 3 or more years clinical NP experience would be qualified to provide effective primary care management and 0.0% reported that NPs should be granted full practice authority in Mississippi. Physicians who participated in this survey do not believe that nurse practitioners have sufficient training and clinical experience to be granted full practice authority. Overall, statistics from the data collected

revealed there is much more education and research using evidence-based practice to be performed to inform providers on the nurse practitioner scope of practice policies, regulations, and requirements. Nurse practitioners should unite to accomplish this important goal for full practice authority of nurse practitioners in Mississippi, just as 27 other states around the United States have successfully attained.

Chapter V: Implications

NPs in the state of Mississippi are currently unable to practice to the extent of their training and licensure. This limitation to full practice authority not only causes lack of health care in areas that are already underserved, but also causes worsening patient outcomes and increased medical costs. Research has proven that NPs provide quality and safe patient care in the primary setting with high patient satisfaction rates and lower medical costs. Currently, 24 states in the United States are allowing NPs to practice without a collaborative practice agreement with an MD or DO. Considering that the education and licensure for NPs is the same nationally, the need for varying restrictions across the country seems unwarranted.

The purpose of this study was to identify the facilitators and barriers to nurse practitioners full practice authority in primary care in Mississippi by asking the following questions:

- Is the required collaborative practice agreement between physicians and nurse practitioners utilized in practices in Mississippi?
- Does reduced practice authority in Mississippi affect nurse practitioner retainment and job satisfaction?

- Do physicians believe NPs are qualified with combined experience and education to provide primary patient care?

Patricia Benner’s “From Novice to Expert” model was the theoretical framework used to guide this study. Once the framework was determined, a survey of questions was formed and distributed to MDs, DOs, and NPs practicing in the state of Mississippi. A summary of the study findings, result implications, and future research recommendations are presented in this chapter.

Discussion of Findings

The quantitative study conducted by the researchers' compiled data from digital surveys completed by 146 NPs and 13 physicians, over the age of 18, and licensed in the state of Mississippi. Statistics from the data revealed several similarities between the current study and previous studies that have been done regarding the facilitators and barriers to nurse practitioners full practice authority. In the study conducted by Martin & Alexander (2019), it was found that NPs are more likely to practice in underserved populations. Mississippi, like most states, consists of many rural areas that currently have limited access to medical care, and restrictions to full practice authority for NPs cause an increase in these barriers to care. The findings of the current researchers were similar to that of Martin & Alexander (2019) in that the current research shows a total of 45.2% (n=66) nurse practitioners reported considering relocating due to state restrictions, and 43.8% (n=64) nurse practitioners reported considering leaving the NP profession. Mississippi is already facing a provider shortage, with a projected decrease of primary care providers in the next few years. Losing NPs who are trained and licensed to provide

medical care due to relocation or changing of profession would be detrimental to our communities and negligent to our population.

The study done by Martin & Alexander (2019) also showed that collaborative agreements between NPs and physicians do not ensure regular communication or medical record reviewing, nor does it improve patient safety. Rather, they often obstruct access to care in areas that need it the most and place unnecessary practice restrictions and financial burdens on an entire class of advanced providers who, if utilized to the extent of their training and licensure, could lessen the healthcare deficit. Their study findings revealed that only half of their respondents communicated with their collaborating physician at least once per month. Likewise, our study showed that of the 146 nurse practitioners, 71 stated they ‘rarely (<1 time/month)’ consulted with their collaborating physician. Martin & Alexander (2019) identified that collaborating physician agreement fees were very strong barriers to NPs being able to practice independently.

Currently, there is no cap on the amount that a physician can charge an NP to be their collaborator. Some of the responses that were received from our current study align with these findings as well: “Finding quality care is difficult enough, but with collaborative guidelines and difficulty finding an MD in addition to the astronomical cost, it’s making access to healthcare even worse", "I feel that we need greater access to care for patients and there is a lot of unnecessary costs for NPs to have oversight that is literally having a physician put their initials on a chart and have no clue about that patient or the care that the NP provides”. Likewise, responses to the current study about reasons for considering leaving the state of Mississippi or the profession all together, under compensation was one of the top reasons (31.5%). If NPs were allowed to practice

without collaborative agreements and their fees, compensation would increase along with the ability to increase funding for clinic supplies and other overhead costs.

Limitations

Throughout this project, multiple limitations to research were found that contributed to decreased accuracy of results. First, the data retrieved were from MDs, DOs, and NPs practicing in the state of Mississippi, which does not include the general population. A larger research study including multiple states would offer a vast variety of results. Second, there was limited research on barriers and facilitators to full practice authority for nurse practitioners in primary care within the last 5 years. Another limitation was the limited amount of physician responses that were received. Finally, the amount of time to complete the research project (one year) hindered the results that we were able to obtain.

Conclusions

The purpose of this study was to examine the facilitators and barriers to nurse practitioners' full practice authority in primary care in Mississippi. The research results revealed that the majority of the NPs (66.4%) who responded to the survey practiced in rural Mississippi with 54.8% seeing approximately 20 patients per day. This plays a tremendous role in helping to fill the gap in accessing primary care in rural areas where such a shortage has been projected to occur. Survey results also revealed that almost half of the NPs who responded (43.8%) have considered leaving the field of nurse practitioner, and 45.2% have considered relocating to a full practice authority state due to state restrictions in Mississippi. This would cause a dramatic increase in the number of patients lacking primary care in the state of Mississippi.

Implications

The study of the literature regarding facilitators and barriers to nurse practitioners' full practice authority in primary care resulted in implications focused on nursing theory, nursing research, advanced nursing practice, nurse practitioner education, and health policy. Each of these areas will be reviewed in this section.

Nursing theory is an important tool for explaining, predicting, forming questions, and allowing logical examination of events. The theoretical foundation for this study was Benner's (2001) From Novice to Expert: excellence and power in clinical nursing practice. This theory provided the framework to investigate the literature regarding facilitators and barriers to nurse practitioners' full practice authority.

Nursing research to validate theory and nursing practice is required for advancement of nurse practitioners' full practice authority. Many physicians have limited knowledge of NPs educational, clinical and certification requirements. There is an urgency for further research to assist in obtaining full practice authority in Mississippi. Mississippi needs to retain their NPs to meet the healthcare demands of providing quality evidence-based healthcare to all citizens. This will have a positive effect on the health care system and improve patient care.

The relationship between practice and education is essential for the development of nurse practitioners as a profession. Benner (2001) addressed excellence in nursing and determined that experience, in addition to formal education, is required for expert practice. The results from the NPs who participated in our survey showed the majority in

support of full practice authority without the need for a collaborative agreement with a physician.

Advanced practice nurses accept personal accountability, require experienced clinical skills, obtain critical thinking ability, and have thorough decision-making skills. Full practice authority of advanced practice nurses is one of the major changes that will improve the healthcare delivery system.

As a result of managed care, it is essential for healthcare providers to be cost-effective, using evidence-based practice with quality strategies in providing patient care. The nurse practitioner should be informed on legislation and policy changes and become involved in the local, state, and national nurse practitioner organizations.

The significance of this study was to provide insight on the reasons and implications of state laws that limit and restrict nurse practitioners in Mississippi from their full scope of practice. Restricting NPs in Mississippi has decreased access to quality healthcare, especially in rural communities. Other implications of nurse practitioners not having full practice authority in Mississippi include increased patient wait times, increased ER visits, increased healthcare costs, and decreased job satisfaction.

Recommendations

Upon completion of the study, there were multiple recommendations for future researchers to consider. The current study was confined to a small population sample size of MDs, DOs, and NPs that practice in the state of Mississippi. The study did not include Physician Assistants or any health care provider outside of the state of Mississippi. A recommendation for future research includes a study with a larger sample size involving

more primary care providers across multiple states and regions. This would provide much greater insight on the facilitators and barriers to full practice authority for NPs.

Another future study consideration would be for researchers to inquire more about the actual understanding MDs and DOs possess regarding the educational model for NPs and required training and years of experience that NPs must obtain prior to becoming a board-certified nurse practitioner.

Summary

This chapter presented the evidence-based conclusions, implications, and recommendations that were acquired through review of the obtained information and research. Implications and recommendations for nursing theory, nursing research, advanced nursing practice, nurse practitioner education, and health policy were obtained as well as were limitations of the research and interpretation of the findings.

The purpose of the research project was to identify facilitators and barriers of nurse practitioners' full practice authority in primary care in Mississippi. The research questions included:(1) Is the required collaborative practice agreement between physicians and nurse practitioners utilized in practice in Mississippi? (2) Does reduced practice authority in Mississippi affect nurse practitioner retainment and satisfaction? And (3) Do physicians believe NPs are qualified with combined experience and education to provide primary patient care?

Benner's *From Novice to Expert* (2001) served as the theoretical foundation for this research and supported the discussion that NPs are experienced in their field and can provide safe and quality healthcare to patients in the practice setting without the oversight

of a collaborating physician. It has been argued that nurse practitioners may not have enough education to care for patients without physician supervision. One could mistakenly assume that NPs are considered novice to the role of primary care. With the NP's years of clinical experience, continuing education, and clinical hour requirements with an accomplished nurse practitioner or MD while obtaining their education, they should be qualified for the expert category.

The recommendations emphasized the necessity for future research which should include a larger sample size and involve more primary care providers across multiple states and regions. A supportive study which focused on all healthcare providers' understanding of the NPs' required education, training, and years of experience before becoming board certified would also be beneficial. Increased research is critical for the nurse practitioners in Mississippi to obtain full practice authority.

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Appendix A

Institutional Review Board Approval

To: Brittany Bowen, Clare Burnett, Katie Robertson, and Dr. Sueanne Davidson

From: Irene Pintado, IRB Chair I.P

Date: 02/21/2023

Project: Facilitators and barriers of nurse practitioners full practice authority in primary care in Mississippi

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The Mississippi University for Women IRB committee has determined that your project, Facilitators and barriers of nurse practitioners full practice authority in primary care in Mississippi, is exempt under 45 CFR 46.101 (b)(4). This project does not involve minors and does not collect information on protected health information. The survey research is voluntary, anonymous, and asks questions from professional about professional practices.

If any changes are made to the study, the Committee must be notified. If the project is still running twelve months after the date of this memo, please be advised that we will need an update for our files.

Good luck with your work!

Appendix B

Letter to Survey Participants

Dear Potential Participants,

We are graduate students from Mississippi University for Women. We are reaching out to you for assistance with our research project regarding facilitators and barriers of nurse practitioners independently practicing in primary care. It would be of utmost importance if you could please provide us with a moment of your time to complete the attached survey. All responses and participants will remain anonymous. It will take approximately 5 minutes or less to complete the survey. There is no *right* or *wrong* answer. Please respond to each question/statement. If you have any questions regarding the survey or our research, please contact our Principal Investigator, Brittany Bowen (662-329-7323) or Dr. Sueanne Davidson, Chair (205-399-1433). Thank you for your participation.

Sincerely,

Brittany Bowen, Principal Investigator, Graduate Student

Clare Burnett, Investigator, Graduate Student

Katie Robertson, Investigator, Graduate Student

Appendix C

Physician Survey

Facilitators and Barriers of NP's Full Practice Authority in Primary Care in MS - Physician Survey

Scan the QR code below with your phone's camera to complete the survey online:

Completion and submission of this survey implies your consent to participate in this study. You may choose to withdraw from the study at any time prior to submission of the survey. All submissions are anonymous; therefore, we ask you do not enter any personal identifiers.

Physicians only

Q1 What type of area do you currently practice?

a. Rural

b. Urban

c. Suburban

Q2 How many years of experience do you have as a primary care provider?

a. 1-5 years

b. 6-10 years

c. 11-15 years

d. 16+ years

Q3 What field of practice do you currently provide care?

a. Private practice

b. Group practice

c. Hospital-based practice

d. Large health maintenance organization

Q4 What is your medical licensure?

a. MD

b. DO

Q5 What gender do you identify with the most?

a. Male

b. Female

c. Non-binary / third gender

d. Prefer not to say

Q6 How many patients do you see on an average daily basis?

a. ≤ 10 patients

b. 11-20 patients

c. 21-30 patients

d. > 30 patients

Q7 How many established patients do you currently have in your practice?

a. ≤ 25 patients

b. 26-50 patients

c. 51-75 patients

d. > 75 patients

Q8 Are you or have you ever been a collaborative physician?

a. Yes, I am currently in a collaborative agreement with 1 or more Nurse Practitioners.

b. Yes, but I am no longer participating in a collaborative agreement with Nurse Practitioners.

c. No, I have never participated in a collaborative agreement with Nurse Practitioners.

Q9 If 'yes' to last question, how often does the NP consult the physician on patient care decisions?

a. Rarely (<1 time/month)

b. Sometimes (1-2 times/month)

c. Often (1-2 times/weekly)

d. Very Often (daily)

e. N/A, I answered 'no' to last question.

Q10 Do you believe nurse practitioners with 3 or more years of clinical NP experience, would be qualified to provide effective primary care management regulated by the Mississippi Board of Nursing?

a. Yes

b. No

Q11 If ‘no’ to the last question, what is the reasoning?

____

____

____

____

Q12 What is your understanding of the role of nurse practitioners in patient care?

a. Manage acute episodic care

b. Provide both chronic and acute care

c. Reserved for primary care only

d. Should practice in specialized healthcare areas only

e. Other, list below:

____

Q13 Do you feel nurse practitioners with 3 or more years of clinical NP experience, should be granted full practice authority in Mississippi?

a. Yes, why?

____

____

b. No, why?

____

____

Appendix D

NP Survey

Facilitators and Barriers of NP's Full Practice Authority in Primary Care in MS - NP Survey

Scan the QR code below with your phone's camera to complete the survey online:

Completion and submission of this survey implies your consent to participate in this study. You may choose to withdraw from the study at any time prior to submission of the survey. All submissions are anonymous; therefore, we ask you do not enter any personal identifiers.

Nurse practitioners only

Q1 What type of area do you currently practice?

a. Rural

b. Urban

c. Suburban

Q2 How many years of experience do you have as a primary care provider?

a. 1-5 years

b. 6-10 years

c. 11-15 years

d. 16+ years

Q3 What field of practice do you currently provide care?

a. Private practice

b. Group practice

c. Hospital-based practice

d. Large health maintenance organization

Q4 What is your nursing licensure?

a. FNP

b. AGNP

c. ANP

d. Other, list below:

____

Q5 What gender do you identify with the most?

a. Male

b. Female

c. Non-binary / third gender

d. Prefer not to say

Q6 How many patients do you see on an average daily basis?

a. ≤ 10 patients

b. 11-20 patients

c. 21-30 patients

d. > 30 patients

Q7 How many established patients do you currently have in your practice?

a. ≤ 25 patients

b. 26-50 patients

c. 51-75 patients

d. > 75 patients

Q8 Does your clinic setting have the appropriate amount of support staff for care of your patients? (i.e., obtaining VS, collecting labs, rooming patients)

a. Yes

b. No

Q9 Did you have difficulty finding a collaborating physician?

a. Yes, it took me longer than expected to find a collaborating MD or DO.

b. Yes, I am still looking for a collaborating MD or DO.

c. No, I had no issue finding a collaborating MD or DO.

Q10 How often do you consult with your collaborative physician regarding patient care?

a. Rarely (<1 time/month)

b. Sometimes (1-2 times/month)

c. Often (1-2 times/weekly)

d. Other

Q11 Have you considered relocating to a full practice authority state due to state restrictions in Mississippi?

a. Yes

b. No

Q12 Have you considered leaving the field of nurse practitioner?

a. Yes

b. No

Q13 If 'yes' to one of the last two questions, which of the following would be considered reason for leaving? Select all that apply:

a. Difficulty securing an NP position

b. Under compensation for job demands

c. Strenuous work duties/hours

d. Lack of acceptance of NP role

e. N/A, I answered 'No' to the last question.

Q14 Do you feel nurse practitioners with 3 or more years of clinical NP experience, should be granted full practice authority in Mississippi?

a. Yes, why?

____

____

b. No, why?

____

____