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### Nurse Practitioners' Knowledge and Perceptions Regarding Substance Use

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**Nurse Practitioners' Knowledge and Perceptions  
Regarding Substance Use**

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 speech Language Pathology  
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Graduate Committee Approval

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## **Dedication**

We wish to dedicate our research to our families. Thank you for allowing us to accomplish long-awaited personal and professional goals. Thank you to our families for the encouragement to never give up and for understanding when we spent hours at our computers or were exhausted from assignments and clinical. Thank you to our children and spouses who have been right alongside us in this difficult journey and been patient with us as our focus and time spent has been on school. Thank you to our classmates who have been shoulders to lean on and listening ears to vent frustrations.

We want to also dedicate our research to Dr. Phelon. You have been there for us the entire way and answered our numerous questions. You have taken four novice researchers and helped us complete a master's research project about which we are passionate and proud. Without prayers, God's guidance, and His grace we would have never been able to complete this journey and accomplish our dream of obtaining our master's degree.

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### **Abstract**

Substance use disorder (SUD) is an illness impacting many people today and continues to not be truly understood, even by providers. To gain a greater understanding of this issue in relation to nurse practitioners, the researchers surveyed nurse practitioners in the Southeastern United States. The goal of the study was to identify knowledge and perceptions of nurse practitioners regarding substance use and misuse. Watson's Theory of Caring was used to guide the study. The research questions that guided this study were 1. Do nurse practitioners have a bias toward patients with substance use disorder, and 2. Do nurse practitioners believe substance use is a brain disease or a personal choice? A questionnaire was developed to collect demographic data and to evaluate nurse practitioner knowledge and perception of substance use. A SurveyMonkey link was used to distribute the questionnaire using a convenience sample of nurse practitioners in the Southeastern United States. A total of 221 nurse practitioners completed the survey through email or social media links. The data was analyzed, and overall, nurse practitioners had adequate knowledge and little bias toward individuals with substance use. There was some bias in certain areas. The results, implications, and recommendations indicate replication of the study and more continuing education on this topic is needed.

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## **Nurse Practitioners' Knowledge and Perceptions Regarding Substance Use**

### **Chapter I: Dimensions of the Problem**

Substance use disorder (SUD) is a very present illness that is undertreated in many areas of healthcare (Frank & Nagel, 2017). Substance use disorder can be viewed differently among healthcare providers. Some individuals view the disorder as a brain disease requiring medical help through recovery. Others view substance use disorder as a behavior choice, which places the burden of recovery on the individual to choose the option to seek recovery or assistance (Frank & Nagel, 2017). In this study, the nurse practitioners' knowledge and perceptions of substance use were evaluated and discussed.

Substance use disorder, previously known as addiction, is a chronic disease (Mississippi State Department of Health [MSDH], 2020). The disease is not curable, but there is treatment available. Contributing factors for substance use disorder include pleasure-seeking behaviors, self-medication of untreated mental health conditions, growing economic despair, and widespread social isolation (MSDH, 2020). This study sought to understand how nurse practitioners in the Southeastern United States perceive substance use and the providers' knowledge of the topic.

#### **Background Information**

Substance use disorder is often viewed as a brain disease, a behavioral choice, or possibly a developmental issue (Murney et al., 2020). Nurse practitioners influence the public's beliefs and understanding of substance use and addiction (Heather, 2017). Many individuals suffering from substance use disorder do not receive adequate healthcare and are less likely to be referred to or seek care from a specialist due to the stigma associated with substance use (Murney et al., 2020).

General information collected about Mississippi substance use problems reflects the significant impact SUD causes the state of Mississippi. During 2018, there were 315 drug overdose deaths reported in Mississippi. Although this was 31 fewer deaths when compared to 2017, these were only reported drug overdose deaths. This slight decrease is unknown but could potentially be due to more treatment and medical care available. The various drugs that caused overdoses were opioids, including prescription opioids, fentanyl, heroin, and methadone, in 177 (56.2%) cases; benzodiazepines in 57 (18.1%) cases; psychostimulants, such as methamphetamine or prescription amphetamine-related drugs, in 99 (34.1%) cases; and cocaine in 30 (9.5%) cases (MSDH, 2020).

The understanding and knowledge of SUD has a large impact on an individual's beliefs and attitudes toward persons with the disorder. There are many medical providers practicing today that still do not consider SUD to be a true medical illness (MSDH, 2020). This current research study was performed to evaluate knowledge and perceptions of nurse practitioners in the Southeastern United States regarding substance use.

### **Purpose of the Research Project**

In the state of Mississippi, there is a significant substance use problem. Substance use disorder not only affects individuals with the disorder, but also greatly impacts the community and healthcare system (MSDH, 2020). This study assessed the knowledge and perceptions of nurse practitioners regarding substance use and misuse. The researchers developed a substance use questionnaire to evaluate knowledge and perceptions related to substance use of those completing the questionnaire. The National Institute on Drug Abuse (2020) defines addiction as a chronic, relapsing brain disease characterized by compulsive drug seeking and use despite harmful consequences. The

researchers surveyed nurse practitioners working with individuals who have a substance use disorder.

The purpose of this study was to identify knowledge and perceptions of nurse practitioners regarding substance use and misuse. The researchers sought specifically to answer the following questions: 1. Do nurse practitioners have a bias toward patients with substance use, and 2. Do nurse practitioners believe substance use is a brain disease or a personal choice?

### **Significance of Research**

In 2017, there were over 7,605 admissions into substance abuse treatment facilities (MSDH, 2020). This number is a small fraction of the 190,000 Mississippi residents in need of drug and alcohol services and one reason this research was evaluated by Mississippi practitioners. The goal of this research was to assess knowledge and perceptions of nurse practitioners regarding substance use. The benefit was to understand knowledge and perceptions of nurse practitioners regarding substance use. This information could be used to plan educational activities to improve nurse practitioners' knowledge and practice in the future.

### **Conceptual Framework**

Substance use disorder is defined as excessive and repeated use of a substance despite negative outcomes (Frank & Nagel, 2017). Watson's Transpersonal Caring Theory, also referred to as Caring Theory, guided this study. The theory has ten main concepts (Alligood, 2014). The Caring Theory calls for nurses to go beyond what is done in a practice setting, such as procedures, tasks, and techniques, and use a holistic approach to patient care. Watson encourages an environment that is supportive and says

developing a trusting relationship is key. Focusing on basic human needs is a vital component of this theory (Gonzalo, 2019). Watson encourages nurses to make the environment a caring one that accepts each individual. Watson refers to a human as a valued being and states trust is important in the nurse/patient relationship (Gonzalo, 2019).

### **Research Questions**

1. Do nurse practitioners have a bias toward patients with substance use disorder?
2. Do nurse practitioners believe substance use is a brain disease or a personal choice?

### **Definition of Terms**

The theoretical and operational definitions of terms used for this study have been defined.

#### ***Bias***

**Theoretical.** Bias is an unreasoned judgement or prejudice (Merriam-Webster, 2020a).

**Operational.** Personal negative or positive feelings of providers toward patients with substance use disorder.

#### ***Nurse Practitioner***

**Theoretical.** A nurse practitioner is an advanced practice nurse who has completed an accredited graduate level education program, passed a national nurse practitioner certification examination, and is licensed to practice providing health care (Merriam-Webster, 2020d).

**Operational.** Any nurse practitioner in the Southern United States willing to take the survey.

### *Substance Use*

**Theoretical.** Substance use is excessive use of a drug (Merriam-Webster, 2020e).

**Operational.** Substance use is a person abusing or misusing any harmful substance regardless of its consequences. Using a substance so frequently that he/she must enter treatment to stop using the substance.

### *Brain Disease*

**Theoretical.** A condition of the living animal or plant body or of one of its parts that impairs normal functioning and is typically manifested by distinguishing signs and symptoms (Merriam-Webster, 2020c).

**Operational.** A disease affecting the normal function of any part of the brain and is not a personal choice.

### *Personal Choice*

**Theoretical.** A personal choice is an act of choosing (Merriam-Webster, 2020b).

**Operational.** A personal choice is the acting of making an individual choice without the intervention of another.

### **Assumptions**

For this study, the following assumptions were made:

1. The researchers assumed nurse practitioners have a bias toward individuals with substance use.
2. The researchers assumed nurse practitioners did not have adequate knowledge about substance use.

3. The researchers assumed nurse practitioners would be honest when completing the survey questionnaire.

### **Summary**

This research study aimed to evaluate the knowledge and perceptions of nurse practitioners regarding substance use disorder. The research questions guiding this study were 1. Do nurse practitioners have a bias toward patients with substance use, and 2. Do nurse practitioners believe substance use is a brain disease or a personal choice?

Watson's Transpersonal Theory of Caring was used to guide the study. The goal of the research was to assess the knowledge and perceptions of nurse practitioners in relation to substance use and determine if nurse practitioners had a bias toward patients with substance use disorder.

## **Chapter II: Literature Review**

Substance use disorder is a worldwide issue that does not discriminate. Substance use disorder, in general, is not fully understood and is viewed as a brain disease by some people who believe the individual with SUD will need to seek medical help to aid in recovery (Frank & Nagel, 2017). Some view substance use as a behavior or choice, with recovery being the affected individual's responsibility. Stigma affects all people in SUD treatment. Those who are married, single, divorced, male, or female may benefit from interventions that address stigma. The association of low social support with poorer mental health and ongoing substance use indicates that treatment could focus more on this area (Frank & Nagel, 2017). In Chapter II, a review of the literature regarding substance use and the literature about the conceptual framework for this study will be presented.

The researchers used academic databases, including CINAHL, as well as other sources to find a pertinent literature base for this study. The researchers used the keywords stigma, substance use, brain disease, health care providers, perceptions, and attitudes to obtain relevant articles. The following research focused on nurse practitioners' beliefs, attitudes, and knowledge on substance use disorder. The review of the literature will discuss pertinent topics, such as the theoretical framework of Watson's Transpersonal Caring Theory, Human Caring Theory, and reviews of literature that will highlight information other researchers had discovered in relation to the study and identify gaps in the areas in which little or no research has been conducted.

## **Conceptual Framework**

Watson's Transpersonal Caring Theory, also referred to as Caring Theory, guided this study. The theory has ten main concepts (Wei & Watson, 2019). The theory focused on a special kind of human care relationship, with high regard for the whole person. Watson's theory calls for nurses to go above and beyond procedures, tasks, and techniques and believed that nursing consisted of knowledge, values, commitment, and passion. The theory encourages nurses to address the core of nursing and the aspects of the nurse-patient relationship that result in a therapeutic outcome. Watson's work included that humans cannot be treated as objects and must be cared for and respected. The theory of caring is crucial to ending the stigma associated with addiction. Nurses using Watson's theory are to care for patients regardless of past mistakes or poor choices that may have caused the patient's current illness or ailment. The theory also puts care science at the starting point of nursing as a discipline, offering a foundation for the profession and care based on metaphysical, philosophical, and moral paradigms, respecting the significance of humans and individuality and also includes the person's mind, body, spirit, and wholeness (Wei & Watson, 2019). Using Watson's Transpersonal Caring Theory is one way to ensure caring is the central theme in all patient care.

## **Study Related to Substance Use Being Mental, Behavioral, or Self Control**

Romer Thomsen et al. (2018) examined male patients with substance use disorder, the patient's behaviors, and other issues. The researchers performed a study about the association between the UPPS-P impulsivity model (self-report of urgency, premeditation, perseverance, sensation seeking, and positive urgency that is used to measure five distinct dimensions of impulse behaviors in adolescents and adults aged 12

years and older), traits, and indicators of multiple substances and non-substance addiction-related behaviors in youth (Romer Thomsen et al., 2018). The UPPS-P model captured the multidimensional nature of impulsivity. The study shows good discriminant and convergent validity and has proven useful in characterizing disorders involving impulsive behavior, such as SUD. Impulsivity is a common behavior of individuals with SUD and a risk factor in the development of problematic substance use and SUD (Romer Thomsen et al., 2018).

The research demonstrated the associations between impulsivity traits and indicators of substance and non-substance addiction-related behaviors (Romer Thomsen et al., 2018). The study examined youth with varying involvement in such behaviors as using alcohol, cannabis, and other drugs. Non-substance refers to internet gaming, pornography, and eating. The hypothesis was negative urgency and positive urgency would be positively associated with problematic substance use (Romer Thomsen et al., 2018).

Externalizing and internalizing problems were measured with YouthMap12, a 12-item questionnaire with six items identifying externalizing problems and internalizing problems (Romer Thomsen et al., 2018). Externalizing behavior problems have been consistently shown to increase the risk of problematic substance use among both genders and have been strongly associated with problematic substance use among youth across the country. The participants were from a nationally representative survey with 3,064 randomly selected youth aged 15 year to 25 years. The population included 109 individuals aged 16 years to 26 years. Participants were further divided by no externalizing problems ( $n = 34$ ), minimal externalizing problems ( $n = 19$ ), moderate

externalizing problems ( $n = 25$ ), severe externalizing problems ( $n = 31$ ), and minimal (0 to 2) internalizing problems. Participants were included if they had no current major psychiatric disorder and did not take any medication affecting the brain. Participants were instructed to not use any substances (other than tobacco) at least 24 hours before participation. Data collection was a standardized questionnaire taken on a computer. Alcohol abuse and problematic alcohol was measured using the Alcohol Use Disorder Identification Test. Cannabis use was measured using the Cannabis Use Disorder Identification Test. The use of drugs other than cannabis was measured using the Drug Use Disorder Identification Test (Romer Thomsen et al., 2018).

The most important finding of the study indicated the traits within the model were urgency and lack of perseverance, as one or both of the traits were associated with all the addiction-related behaviors in the fully-adjusted models (Romer Thomsen et al., 2018). Like the hypothesis, the urgency was positively associated with problematic use of alcohol, cannabis, and other drugs. The findings stressed the role of urgency and lack of perseverance in the development of substance and non-substance addiction-related behaviors. The associations of substance and non-substance addiction-related behaviors suggests the increased levels of impulsivity do not result from toxic effects of substances alone (Romer Thomsen et al., 2018) The researchers examined the illness of abuse and if SUD is a brain illness or self-control issue (Romer Thomsen et al., 2018).

Avery et al. (2020) conducted a study to determine evidence of attorneys' and physicians' beliefs regarding the Brain Disease Model of Addiction. The model explained that substance use disorders are chronic, relapsing brain diseases. The belief that addiction is a brain disease is popular, but many scholars still disagree with the Brain

Disease Model of Addiction. The study assessed the beliefs of both attorneys and physicians regarding the model (Avery et al., 2020).

The researchers discovered SUD is caused by multiple factors, including behavioral, developmental, and biological matters (Avery et al., 2020). The authors grouped the individuals into four categories. Group one fully accepted the brain model. Group two believed the choices were less constrained than in the full brain model. The third group fundamentally attributed addiction to failures of self-control. The fourth group believed individuals with SUD possessed failures in morality. Groups three and four frame addiction as a failure of personal and moral responsibility. Some researchers consider the model to be related to addiction stigma. Addiction stigma is defined as a negative attitude toward individuals with SUDs. The research focused on understanding the beliefs of SUDs by key providers, such as criminal defense attorneys and physicians (Avery et al., 2020).

Participants included 301 physicians and 483 attorneys from 49 different U.S. states who completed the survey form (Avery et al., 2020). The majority of the participants' responses embraced some form of the brain disease model of addiction. Few of the participants conceptualized addiction as a lack of self-control or moral lapse. Attorneys were more likely to believe individuals with SUDs had no choice. Physicians were more likely to believe the individuals had a genuine choice. Decreasing stigma and encouraging proper referral and treatment engagement may be tied to conceptions of addictions (Avery et al., 2020). Understanding that addiction is a chronic, relapsing brain disease is key to treatment success and patient well-being.

A study by Murney et al. (2020) examined the stigma and discrimination from healthcare providers and workers toward individuals with mental health and substance use issues. Using a qualitative method, the study was part of a larger, mixed-method project and explored the stigma and discrimination of people with mental health substance use (MHSU) issues within the primary health care setting in Toronto, Ontario, Canada. The study also separated information on the design of an effective and portable intervention to address stigma and discrimination (Murney et al., 2020)

In the study, both the experiences of the health care provider's encounter with MHSU individuals and the meaning the health care provider associated with these encounters were uncovered (Murney et al., 2020). The study was carried out with 23 staff members. The participants were chosen via purposive sampling. Three focus groups consisted of health care providers who worked directly with clients. Ten to 12 people attended each group. Participants represent an array of different staff roles. Qualitative data was gathered through interviews and focus groups. The focus was on the stigma and discrimination of people with MHSU issues by primary health care providers (Murney et al., 2020).

The interview and focus group questions were to determine the providers' understanding of the problem and the providers' ideas of an intervention (Murney et al., 2020). More in-depth information was needed to know the main mental health or substance use problems the client's population suffered. Another question was to determine factors other than MHSU problems, operating at the community level, which might affect experiences of stigma. The study was reviewed and approved by the

Research and Ethics Board at the Centre for Addiction and Mental Health. Informed consent was obtained from all participants (Murney et al., 2020).

The findings of the study revealed multiple, interconnecting forms of stigma and discrimination encountered in primary health care settings by a diverse clientele contending with issues related to MHSU (Murney et al., 2020). The narratives revealed the themes affecting the study included sociocultural beliefs, differences in stigma and discrimination experienced with mental health versus substance use, alienation in the primary health care setting, and issues around communication. The focus was also on the various ways participants responded to MHSU-related stigma and discrimination and ideas for interventions in primary health care settings. Some clients were referred to as indigenous people, immigrants and refugees, street-involved youth, and transgender people. Some client disorders were related to mental health, substance abuse, and other health problems. Clients suffered from depression, anxiety, bipolar disorder, schizophrenia, post-traumatic stress disorder, and attention deficit disorders. Some clients use substances such as crack cocaine, opiates (mostly heroin, methadone, morphine, Dilaudid, and OxyContin), methamphetamine, ketamine, cannabis, and alcohol. The social determinants included poverty, housing status, lack of food security and poor nutrition, gender bias, age bias, racism, ethnocentrism, language barriers, access to training and jobs, and types of work (Murney et al., 2020).

Researchers made a point to differentiate between mental health and substance abuse (Murney et al., 2020). The distinction was based on the idea of intention. With the substance user, the popular belief was the individual was “choosing” an unhealthy, dangerous lifestyle as part of an irresponsible decision-making process. A person with a

mental health illness is regarded as a victim of circumstance. Enmity is often directed at substance users, even by individuals who claim to support the disease model of addiction. Differences in attitude can be summarized as pity versus hostility and judgment. Many key factors play a role in the stigma of a substance abuser. Some abusers can be violent if the individuals need or want a substance. Aggressive behaviors can wear out the health care provider and can lead to high burnout rates (Murney et al., 2020).

In addition to the various stigmas, findings grouped men and women (Murney et al., 2020). Women have more to lose, such as custody of children. Also, women are attached to the idea females may provide sexual behaviors for such things as crack cocaine. Men have more of a stigma that using and dealing drugs is more of a business, and the individuals are making money. Males are thought of as income earners and are not as looked down upon as women. Another subject referring to stigma was how the MHSU individuals were “talked about” and the language used to refer to the abusers. The ones who were not being referred to as “clean,” as in not using drugs, implied the ones who were actively using are the definition of “dirty” (Murney et al., 2020).

Not many studies have focused on designing and implementing interventions aimed at reducing stigma and discrimination among health care providers toward substance abusers (Murney et al., 2020). One study limitation was the focus group participants and workers were suggested by liaison representatives, which was purposive sampling. Purposive sampling can cause a selection bias and does not need to be done in research if possible. There was also a lack of funding and time for intensive data collection (Murney et al., 2020).

The study reported stigma and discrimination have wide-ranging effects, both within and outside the health care setting (Murney et al., 2020). The phenomenological approach allowed interpretation by health care providers who witness stigma and discrimination while also seeking to address the issues. Responding to the issues by creating effective anti-stigma and anti-discrimination capacity-building programs is important. The authors hoped the study would help design future training and health initiatives that included stigma, discrimination, and MHSU issues (Murney et al., 2020).

### **Stigma Associated With Seeking Treatment for Substance Abuse**

Cockroft et al. (2019) performed a study to see how the stigma of addiction affects women when seeking medical care. The issue of trust was also examined (Cockroft et al., 2019). The purpose of the study was to identify factors influencing trust in the health care system for women seeking substance abuse treatment and how the client's trust in the health care system influences engagement. In previous studies, mutual mistrust in health care providers and individuals with SUD was examined. Women seeking treatment constitute a vulnerable population. Women in the category often have a high incidence of chronic health problems, communicable diseases, and psychiatric disorders. Additionally, women with SUD have higher rates of physical, emotional, and sexual trauma (Cockroft et al., 2019).

Cockroft et al. (2019) did not clearly state research questions and hypotheses in the body of the article, but research questions were found throughout the article. The research questions were what factors affect women who have a substance abuse disorder from seeking care (Cockroft et al., 2019). The study used an inductive-deductive methodology. A qualitative design was used along with focused groups. The study was

conducted at an urban community agency providing substance abuse treatment for women. The participants in the study were commonly homeless and previously incarcerated women. A total of 30 clients aged 19 years through 58 years were put into focused groups. Topics discussed in the groups were the personal trust and trust of health care providers. Past personal experiences helped mold trust. Some experiences included prior experience with the stigma of addiction and the healthcare system's role in causing and enabling the substance abuse disorder. There was one provider focus group. Administrators had to have been employed at the treatment facility for more than one year. Inclusion criteria for the health care professionals required at least 20% of time spent providing direct client care. The client-focused groups required the women to be at least 18 years of age and be enrolled in the abuse treatment program (Cockroft et al., 2019).

The outcome of the study revealed general distrust of the health care system by the sample of women who participated in the focus groups (Cockroft et al., 2019). The mistrust was predominantly caused by prior negative experiences with the health care system. Clients felt providers over prescribed opioids, thereby, leading to substance abuse. Other problems identified were inadequate payment for services needed and lack of confidentiality. Future research indicated trying to assess what interventions could be done to help foster trust in the health care system and ensure a sense of safety and confidentiality. As health care providers, the goal should always be how to help more clients feel a sense of trust and confidentiality when seeking treatment for a disorder (Cockroft et al., 2019).

Singh et al. (2018) conducted a study that examined the stigma associated with seeking and providing treatment for substance abuse. The study examined the description of opioid use disorder affecting around 26 million to 36 million people worldwide (Singh et al., 2018). The ease of access and synthetic substances, such as heroin, have led to an epidemic. Substance use disorders are chronic and negatively affect a patient's physical and mental health. Substance use disorders are associated with devaluing, rejection, and significant social disapproval. The study assesses the quality of life of addicts and the perceived stigma of patients seeking treatment. A limited number of studies have assessed the quality of life of addicted individuals and the studies that have are all in Western society (Singh et al., 2018).

The hypothesis was not clearly stated (Singh et al., 2018). The research question in the study involved stigma and questioned whether or not a higher perceived stigma was associated with greater delay in treatment and poor treatment adherence. The study was aimed at the stigma and treatment of opioid use disorder in India. Researchers questioned how much stigma affected addicts and how stigma affected the quality of life regarding physical and mental health (Singh et al., 2018).

The exploratory study, using a cross-sectional design, was conducted at a publicly funded tertiary center in India (Singh et al., 2018). Patients were aged 18 years to 65 years and had to have a clinical diagnosis of opioid use disorder for one year. Patients with moderate to severe withdrawal symptoms were excluded from the study so the results were not influenced by acute withdrawal (Singh et al., 2018).

The outcomes of the study indicated that perceived stigma affected physical, psychological, and environments of quality of life (Singh et al., 2018). Perceived stigma

was a potential influencing factor in the quality of life. The perceived stigma was associated with shame and self-concealing behavior, and impaired physical and psychological health, including the environmental domains of quality of life. Perceived stigma affects individuals with substance use disorder and delays seeking treatment for the problem (Singh et al., 2018).

### **Prescription Drug Monitoring Program Highlighting Stigma**

Allen et al. (2019) conducted a study that explored the implementation of mandatory prescription drug monitoring program technology in primary care practice and the effects on the treatment of people with possible substance use disorders. Findings were based on 53 in-depth interviews with primary care providers in New York City, collected shortly following the passage of legislation mandating the use of a prescription drug monitoring program by health care providers in New York State (Allen et al., 2019). Findings suggest use of the prescription drug monitoring programs highlighted tensions between provider stigma toward substance use disorders and the clinical care of people who use drugs, challenging stereotypes and biases. The parallel clinical and law enforcement purposes of the prescription drug monitoring programs placed providers in dual roles as clinicians and enforcers and encouraged the punitive treatment of patients. Finally, the prescription drug monitoring program technology standardized the clinical assessment process toward a diagnosis-first approach, consistent with prior scholarship in the implementation of emerging medical technologies. (Allen et al., 2019).

The study aimed to augment the existing literature on prescription drug monitoring program utilization, healthcare technology implementation, and medical provider stigma examining the introduction of the New York state prescription drug

monitoring program in primary care settings (Allen et al., 2019). The data represented primary care physicians in New York City, both in private and institutional practices, with direct experience using the prescription drug monitoring program. Acknowledging the climate of pharmacovigilance serves as a productive point of entry for the investigation, and by exploring primary care providers' experiences with patients who use drugs through the frame of the prescription drug monitoring program surveillance as an operationalized form of stigma power, researchers sought to identify and articulate key points of tension between the use of stigma and clinical care (Allen et al., 2019).

The study was conducted between May 2015 and December 2015; 53 in-depth interviews were conducted with primary care physicians in New York City to better understand experiences using the mandated NYC prescription drug monitoring program (Allen et al., 2019). Participants were recruited by telephone from a list of all licensed primary care physicians in NYC provided by the New York City Department of Health and Mental Hygiene, Primary Care Information Project (PCIP). The authors generated a random sample from the PCIP master list of providers, and telephone calls were placed at two points to 531 individuals, generating a 10% response rate. All eligible participants specialized in internal or family medicine and reported writing at least one opioid analgesic prescription per month during the six months before the interview. Participants underwent an informed consent procedure, including a detailed review of the study protocol, risks and benefits of participation, and the right to terminate involvement at any time (Allen et al., 2019).

The study was the first qualitative investigation into the clinical implementation of prescription drug monitoring programs in a jurisdiction with mandatory prescriber

utilization (Allen et al., 2019). Findings expand understanding of substance use stigma among primary care physicians and the mediating effect of new clinical technology on patient care, situated within the ongoing opioid overdose epidemic and concomitant climate of pharmacovigilance. Emerging findings suggest a need for widespread education in both the treatment of substance use disorders and non-punitive use of prescription drug monitoring programs to ensure effective and patient-centered implementation of the technology (Allen et al., 2019).

Researchers found use of the prescription drug monitoring program shifted providers in clinical roles following the implementation of the prescription drug monitoring program, with an increased emphasis on patient surveillance to identify individuals receiving multiple or aberrant prescriptions for scheduled medications (Allen et al., 2019). The shift in role highlighted the complex nature of opioid medications at holding therapeutic and addictive potentials (Allen et al., 2019).

### **Summary**

The review of the literature expressed increased stigma and discrimination toward people with substance use disorder, which affected patient health care. Studies indicated affected individuals who often seek medical help are discriminated against and not provided the proper care at times. Substance use as a brain disease or personal choice was found to be controversial in the literature among providers. One study's results indicated the brain disease model of addiction proved substance use as a brain disease. Overall the review of the literature provided in this section established a solid basis for the current research study.

### **Chapter III: Design and Methodology**

The purpose of this study was to determine if nurse practitioners have a bias toward patients with substance use disorder. More specifically the questions 1. Do nurse practitioners have a bias toward patients with substance use disorder, and 2. Do nurse practitioners believe substance use is a brain disease or a personal choice were evaluated? Permission to conduct the study was obtained from the Institutional Review Board (IRB) at Mississippi University for Women. A questionnaire consisting of 20 questions was developed to evaluate the research questions. The design, setting, population, sample, methods of data collection, and analysis of the study will be discussed in this chapter.

#### **Design of the Study**

This descriptive, quantitative, non-experimental study used a researcher-developed questionnaire to survey participants. The researchers developed the questionnaire to evaluate nurse practitioners' knowledge and perceptions of substance use. The questionnaire consisted of 20 questions, with seven questions collecting participant demographic information and 13 questions evaluating knowledge and perceptions through a Likert scale. Data was collected using this questionnaire through a convenience sample obtained through SurveyMonkey. The quantitative, descriptive study design was chosen due to the objective nature and usefulness in describing a population.

#### **Setting for the Research Project**

The target population was nurse practitioners in the Southeastern United States. The questionnaire developed by the researchers was delivered via SurveyMonkey through various social media and email platforms. The SurveyMonkey link was posted in

various social media groups and delivered by email to members of nurse practitioner professional groups.

### **Population and Sample**

A quantitative study was used to obtain data for the current research. The questionnaire was posted to various groups and sent by email to nurse practitioners in the Southeastern United States. To be included in the study, participants had to be nurse practitioners with access to social media. The goal was to survey 1000 nurse practitioners in the Southeastern United States regarding personal knowledge and perceptions of substance use. A total of 221 nurse practitioners completed the researchers' questionnaire, resulting in a convenience sample. Consent was assumed by voluntary completion of the survey.

### **Method of Data Collection**

The researchers developed a questionnaire to collect demographic data and measure knowledge and perceptions of substance use disorder. After IRB approval was obtained, the questionnaire was posted through a SurveyMonkey link to various social media sites and sent in email to nurse practitioners through professional organizations. The questionnaire was 20 questions, including seven demographic questions and 13 questions regarding nurse practitioners' knowledge and perception of substance use disorder. The survey was available for 30 days. A total of 221 nurse practitioners completed the survey. Responses were collected anonymously by SurveyMonkey and results were compiled and sent to a statistician for analysis.

### **Method of Data Analysis**

Data from the surveys was analyzed by a statistician using Statistical Package for the Social Sciences (SPSS) 27. Tables of demographic variables and frequency tables for knowledge and perceptions of nurse practitioners regarding SUD were created.

Responses to bias related questions were collected at the ordinal level using a Likert scale. Responses to evaluate knowledge were collected at the nominal level using true or false questions. Frequency tables of scores were created along with descriptive statistics of the participants. The data was analyzed to determine if nurse practitioners have a bias toward patients with SUD and if nurse practitioners believe substance use is a brain disease or a personal choice.

### **Summary**

The purpose of this study was to assess nurse practitioners' knowledge and perceptions regarding substance use and misuse, as well as evaluate nurse practitioner bias toward patients with substance use disorder. In this chapter, the design, setting, population, methods for data collection, and data analysis were discussed. A 20 item questionnaire to collect participant demographic data and evaluate knowledge and perceptions regarding substance use was developed. After IRB approval, a convenience sample using a SurveyMonkey link to distribute the questionnaire was obtained.

## Chapter IV: Results

The study was designed to evaluate knowledge and perceptions of nurse practitioners regarding substance use and misuse. Substance use disorder is a significant problem in the state of Mississippi, affecting individuals as well as the community. Substance use disorder is an illness that is undertreated and misunderstood (Substance Abuse and Mental Health Services Administration [SAMHSA], 2019). Some believe SUD is a brain disease, and others view SUD as a behavior choice. These are just two of the many views and beliefs of the disorder. The different views lead to different treatment plans, or in some cases, no treatment at all (Frank & Nagel, 2017). The researchers sought specifically to answer the following questions: 1. Do nurse practitioners have a bias toward patients with substance use, and 2. Do nurse practitioners believe substance use is a brain disease or a personal choice?

The methodology for this study was a questionnaire developed to evaluate nurse practitioners' substance use knowledge and perception in the Southeastern United States. The questionnaire was designed to detect bias or negative attitudes toward individuals with SUD. The questionnaire was sent anonymously through a SurveyMonkey link by professional groups and through private social media groups. The questionnaire was developed by the researchers and designed to obtain data from nurse practitioners regarding knowledge of SUD, perceptions of substance use, and demographics. The survey consisted of 20 questions, and each question was analyzed separately. The rest of this chapter provides the demographics of the respondents and a summary of the statistical results of data collected.

## **Profile of Study Participants**

A quantitative study was used to obtain data for the current research. The survey questionnaire was designed to evaluate nurse practitioners' understanding and perception of SUD. The questionnaire was sent to nurse practitioners in the Southeastern United States via SurveyMonkey link. Demographic data obtained included age, gender, race, years of experience, work setting, location, and nurse practitioner certifications.

The participants accessed the survey link, which was shared through nurse practitioner Facebook groups or emailed by the SurveyMonkey link. The survey was available for one month, and a total of 221 nurse practitioners completed the questionnaire. Demographics, including race, age, and gender, were collected. Of the 221 participants, 96.8% were 41 to 60 years of age. There was a much greater number of female participants than male, with females comprising 96.8% of respondents. The majority of respondents were Caucasian and certified family nurse practitioners working in rural primary care clinics. Demographics regarding nurse practitioner experience, work setting, practice locations, and certifications were also asked of the participants.

## **Statistical Results**

### ***Do Nurse Practitioners Have a Bias Toward Patients With Substance Use Disorder?***

The first research question examined attitudes and perceptions; the items were measured using a Likert scale and aggregated into a variable. In theory, the variable would range from a score of seven, for highly negative views on SUD, to 35, reflecting highly positive perceptions of SUD. The frequency table below displays the distribution of scores. The overall attitudes of nurse practitioners were more positive. The theoretical

range of possible scores was seven to 35 with a mean/median of 17.5. In this sample, the range was 14 to 32, with a mean of 24.6 and a median of 25.

**Table 1**

*Likert Scale Survey Statistics*

Score	Frequency	Percent	Statistic	Value
14	1	.5		
16	1	.5		
18	2	.9		
19	8	3.6		
20	8	3.6		
21	12	5.4		
22	24	10.9		
23	25	11.3		
24	24	10.9	<i>N</i>	Valid 221 Missing 0
25	25	11.3	Mean	24.5611
26	33	14.9	Median	25
27	21	9.5	Mode	26
28	14	6.3	Standard Deviation	3.00486
29	16	7.2	Minimum	14
30	5	2.3	Maximum	32
31	1	.5		25 22
32	1	.5	Percentiles	50 25 75 27
Total	221	100		

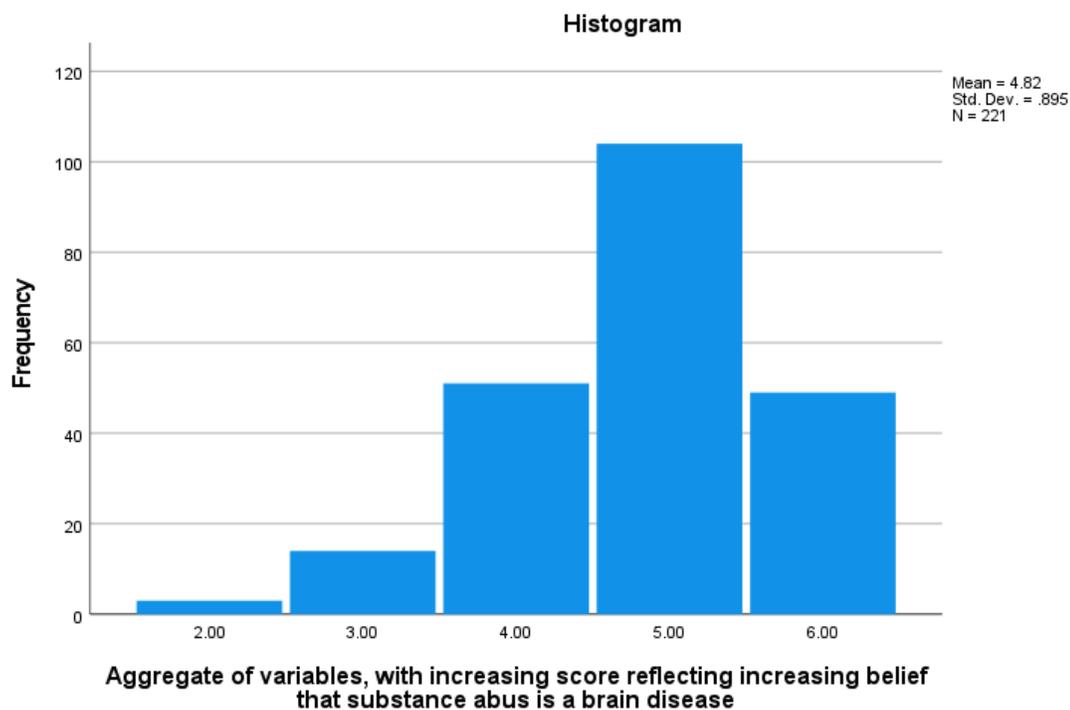
*Do Nurse Practitioners Believe Substance Use is a Brain Disease or a Personal Choice?*

For research question two, the analysis focused on true/false variables. Variables were recorded so higher scores reflect an increasing belief that substance abuse is a brain disease rather than a personal choice. As scored, the variable hypothetically ranges from zero to six. Figure 1 provides results regarding research question two. Overall,

participants in the sample viewed substance abuse as a disease. The theoretical range of possible scores is from zero to six, and the theoretical median/mean is three. This sample range was two to six, and the mean was 4.82 and the median 5.0.

**Figure 1**

***Results of Increasing Belief Substance Use is a Brain Disease***

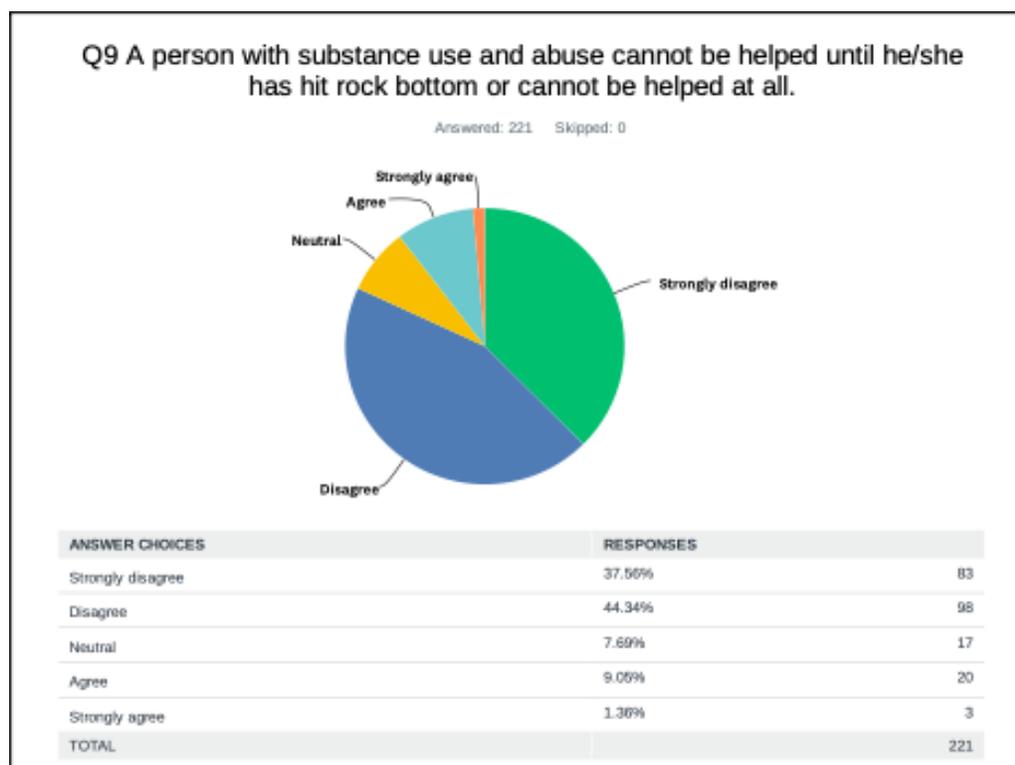


Statistical results of the questionnaire are reported with responses to the knowledge and perception questions regarding substance use disorder. The items on the questionnaire were developed to assess knowledge, attitudes, and perceptions of nurse practitioners. See Appendix C for the complete questionnaire. There were 51.6% of respondents who disagreed that substance abuse was associated with weakness, laziness, and low morals. Only 0.9% of those surveyed strongly agreed with the statement. As shown in Figure 2, 81.9% percent disagreed that a person with SUD cannot be helped

until the person hits rock bottom. However, 1.4% of participants strongly agreed with the statement. The question asking if pregnant women using alcohol or other drugs should be punished by jail time or should have children taken by child protective services had a range of answers. The highest percentage, 29%, were neutral on the subject, with 26.7% agreeing, and 27.6% disagreeing.

## Figure 2

### *Results of Survey Question Nine*



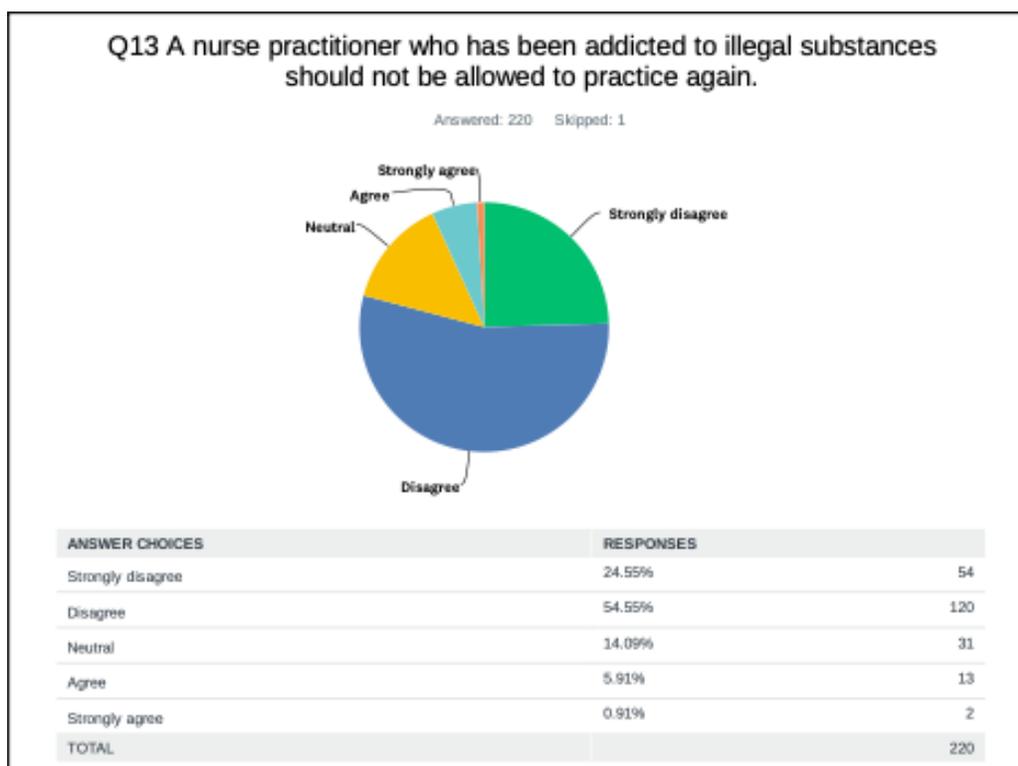
*Note.* 44.3% of nurse practitioners who participated in the survey disagree with the statement that a person with SUD cannot be helped until the individual has hit rock bottom or cannot be helped at all. Only 1.4% strongly agree with the statement.

One question asked if coercive pressure, such as a threat or punishment, was useful in getting resistant patients to accept treatment was split with 42.1% strongly agreeing and 42.5% disagreeing. Another question asked if nurse practitioners felt individuals addicted to heroin were unable to recover. The results demonstrated 40.7% of

respondents agreed with the statement, and only 1.8% of respondents disagreed. The majority, 57.5%, of nurse practitioners had neutral beliefs on the topic. One question evaluated nurse practitioners' beliefs about colleagues and whether or not providers should be able to practice after being addicted to an illegal substance. There were 54.3% who disagreed that providers should never practice again if the individual had a SUD. Only 5.9% agreed providers should not practice again after being addicted to an illegal substance.

### Figure 3

#### *Results of Survey Question 13*



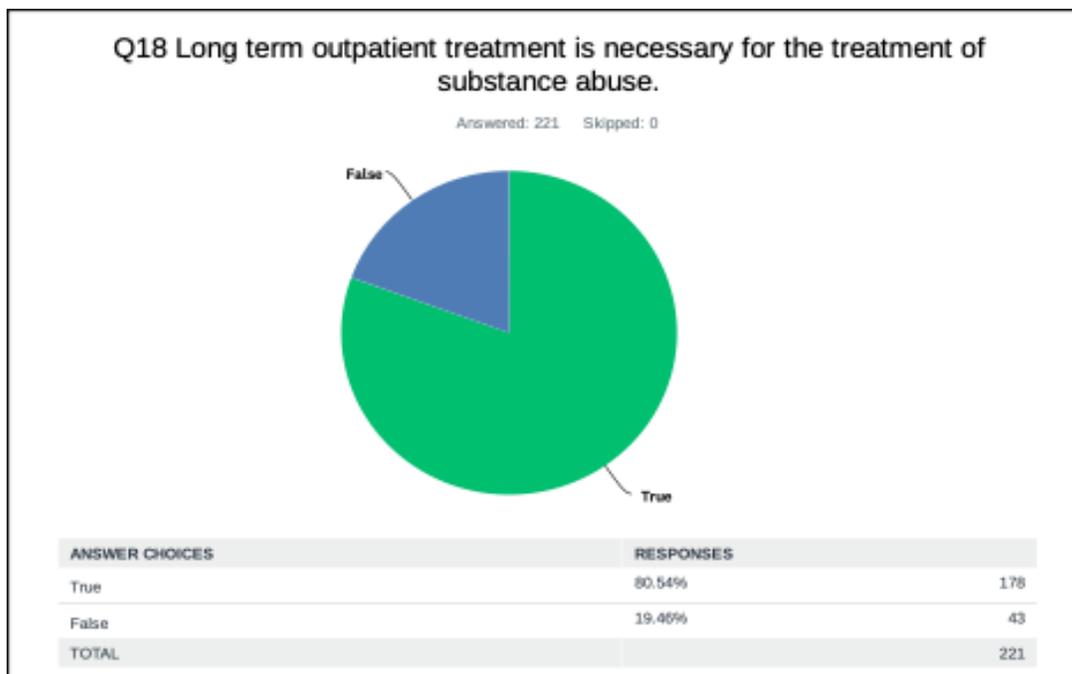
*Note.* 54.3% of nurse practitioners disagreed with the statement that nurse practitioners who have been addicted to illegal substances should not be allowed to practice again. Only 0.9% strongly agree with the statement.

The researchers found 49.8% of nurse practitioners disagree that substance abuse is associated with weak will. In addition, 74.2% answered false to the statement, “daily

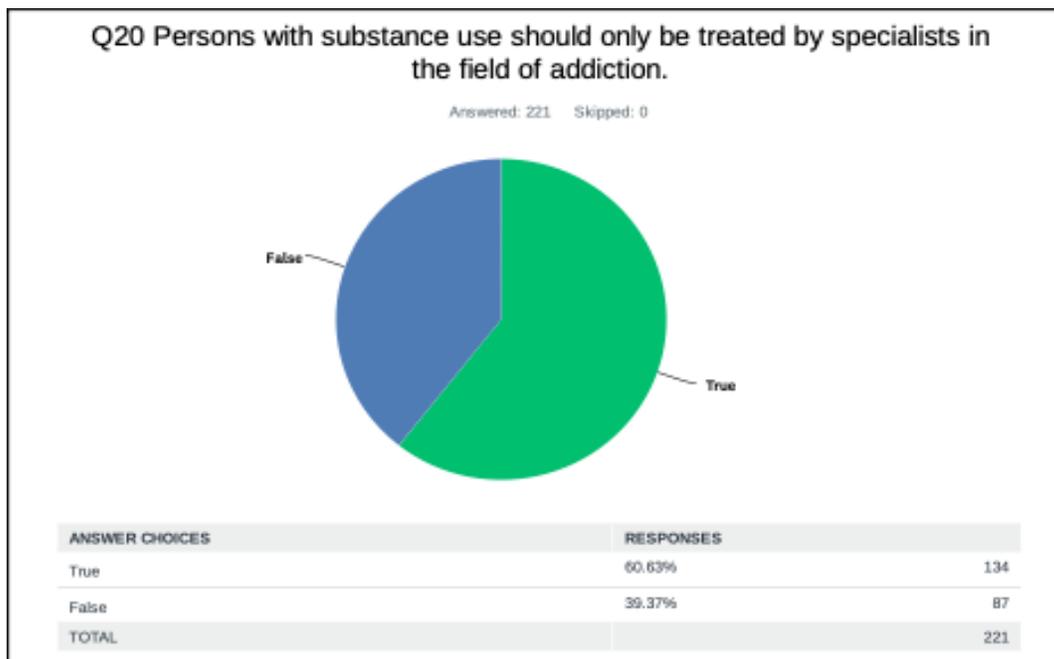
use of marijuana cigarettes is not necessarily harmful.” There were 96.4% who believed urine drug screening can be an important part of substance use treatment and early detection. Another 92.8% answered false to the question concerning if a person has had multiple relapses is the individual no longer responsive to help. As illustrated in Figure 4, 80.5% of participants believed long-term treatment is necessary for the treatment of substance abuse. The largest answer percentage reported was from the statement that substance abuse is treatable and individuals can be sober for life with 99% answering true. Figure 5 illustrates 60.6% of nurse practitioners reported persons with substance abuse should only be treated by specialists in the field of addiction.

**Figure 4**

*Results of Survey Question 18*



*Note.* 80.5% of nurse practitioners answered “true” to the question asking if long term outpatient treatment is necessary for the treatment of substance use.

**Figure 5*****Results of Survey Question 20***

*Note.* 60.6% of nurse practitioners answered “true” to the question about whether persons with substance abuse should only be treated by specialists in the field.

## Chapter V: Implications

Substance use disorder is an undertreated illness (Murney et al., 2020). People with SUD often do not seek treatment, perhaps due to perceived bias. Some believe SUD is a disease that affects the brain and needs to be medically treated while others view SUD as a behavior driven by personal choice. Substance use disorder is a very present illness viewed differently among healthcare providers. Individuals who believe substance use is a brain disease often help individuals through facilitating recovery, while others who view SUD as a behavioral choice put the burden on the individual to seek recovery. Substance use disorder, previously known as addiction, is a chronic disease and is not curable, but is treatable (Murney et al., 2020).

The purpose of this study was to determine if the nurse practitioners viewed SUD as a brain disease or a personal choice. This project evaluated nurse practitioners' knowledge and perceptions regarding substance use. The findings indicated overall positive attitudes of nurse practitioners' regarding patients with substance use issues, but there were also gaps in knowledge and some possible bias issues.

Watson's Theory of Caring model was utilized as the conceptual framework for the research study. The theory calls for nurses to go beyond what is done in a practice setting, such as procedures, tasks, and techniques (Gonzalo, 2019). Watson used a holistic approach to patient care and stated the environment should be supportive and focused on basic human needs. Watson encourages nurses to make the environment a caring setting that accepts people. Watson refers to a human as a valued being and trust is important in the nurse/patient relationship. One part of Watson's transpersonal nursing is

caring for the sick and providing a caring environment that accepts the person fully (Gonzalo, 2019).

The study aimed to answer the following questions:

1. Do nurse practitioners have a bias toward patients with substance use disorder?
2. Do nurse practitioners believe substance use is a brain disease or a personal choice?

A comprehensive review of the literature regarding substance abuse and the literature about the conceptual framework for this study was presented. The researchers used academic databases, including CINAHL, as well as other sources to find a pertinent literature base for the study. The research evaluated nurse practitioners' beliefs, attitudes, and knowledge on SUD, as well as whether or not SUD is viewed as a brain disease or a personal choice. A questionnaire was delivered to participants through SurveyMonkey to obtain information from nurse practitioners regarding knowledge and perceptions of substance use. The setting was the Southeastern United States and the population was nurse practitioners. The questionnaire was sent anonymously by a SurveyMonkey link to nurse practitioners in the Southeastern United States. Researchers assessed nurse practitioners' knowledge and perceptions of SUD. The current research study focused on how nurse practitioners in the Southeastern United States perceive substance use and knowledge of the topic. The goal for the number of respondents was 1000; however, only 221 respondents completed the survey.

This chapter will present a narrative of important findings of the study and provide a discussion of findings, including a comparison of results from this study to the

studies in the literature review. The chapter will address limitations, implications, and further recommendations.

### **Summary of the Findings**

There were 51.6% of nurse practitioners who disagreed with the first question, which evaluated if substance abuse was associated with weakness, laziness, and low morals. A total of 81.9% of respondents disagreed with the second question that evaluated whether a person with SUD can be helped before hitting rock bottom. The third question, which asked if pregnant women using alcohol or other drugs should be punished by jail time or have children taken by child protective services, had a range of answers. There were 29% of respondents neutral on the topic, 26.7% agreed, and 27.6% disagreed. The fourth question evaluating beliefs regarding coercive pressure, such as a threat or punishment, and whether or not the tactic was useful in getting resistant patients to accept treatment was even. Results showed 42.1% strongly agreed and 42.5% disagreed.

The next question evaluated perceptions of heroin addiction and if affected individuals can recover or not with 40.7% of respondents agreeing and 1.8% disagreeing. The majority, 57.5%, had neutral beliefs about the topic. The sixth question evaluated whether or not nurse practitioner colleagues should be able to practice after being addicted to an illegal substance. There were 54.3% of respondents who disagreed that a nurse practitioner should never practice again if the individual had SUD. Only 5.9% agreed that nurse practitioners should not practice again after having addiction issues.

The seventh question evaluated whether or not respondents thought substance abuse was associated with weak will. A total of 49.8% disagreed. There were 74.2% who

answered “false” to the statement, “Daily use of marijuana cigarettes is not necessarily harmful.” The ninth question had 96.4% answer yes to the question, “Do you believe urine drug screening can be an important part of substance use treatment and early detection?” For the tenth question, 92.8% of respondents answered “false” to the statement, “If a person has had multiple relapses, they can no longer be helped.” The eleventh question had 80.5% of participants answer they believed that long-term treatment is necessary for the treatment of substance abuse. There were 99.1% who felt substance abuse was treatable and individuals can be sober for life. There were 60.6% of nurse practitioners who felt persons with substance abuse should only be treated by specialists in the field of addiction.

### **Discussion of the Findings**

The researchers did not meet the goal of 1000 respondents. A total of 221 respondents participated in the study. Upon evaluation of the results, the researchers found the results correlated with overall adequate knowledge and positive perceptions regarding substance use. Nurse practitioners indicated regardless of age, race, certification, and years of experience, the majority had positive perceptions regarding substance use, which indicates nurse practitioners will most likely provide better care for current and future patients. The study had positive results, possibly due to the small number of respondents who were perhaps more engaged and professionally responsible. In addition, working in a primary care clinic may have increased the number of respondents who had exposure to a variety of patients. Another reason for the positive findings could be due to the years of experience and the maturity of respondents ranging from 31 years to 40 years of age with the majority being women.

Comparing the findings with the studies presented in the review of the literature did support some of the results, and outcomes were similar to the studies used. One of the questions asked in the study was, “Do nurse practitioners believe substance use is a brain disease or a choice?” In the study, the overall beliefs viewed substance abuse as a disease. The findings correlate with the study performed by Avery et al. (2020) that was conducted to evaluate evidence of attorney and physician beliefs regarding the Brain Disease Model of Addiction. The model stated SUDs are chronic, relapsing brain diseases. The results of the research stated first understanding that addiction is a chronic, relapsing brain disease is the key to treatment success and patient well-being (Avery et al., 2020).

Another finding in the study that did not correlate with the review of the literature was the research question, what is the overall attitude and perception of nurse practitioners regarding substance use disorder? The overall attitudes in the sample answered more positively with less stigma toward patients with SUD. The study performed by Murney et al. (2020) looked at the stigma and discrimination from healthcare providers toward individuals with mental health and substance use issues. Murney et al. (2020) performed qualitative research to broaden the understanding of the stigma of healthcare providers toward mental health and substance users (MHSU) in the primary healthcare setting. The study reported stigma and discrimination have wide-ranging effects, both within and outside the health care setting. One reason for conflicting findings might have been the location of the study compared to the area of the respondents of the current study. There could be fewer people abusing substances in the

area compared to the Murney et al. (2020) study, which could possibly lead to burnout of healthcare providers and cause an increase in stigma.

### **Limitations**

The sample size was a limitation due to only 221 nurse practitioners completing the questionnaire. The goal sample size was 1000. The questionnaire used in the research may have lacked validity and did not gather all knowledge. The questionnaire was only completed by nurse practitioners in the Southeastern United States, which could cause some limitations. The questionnaire was a digital, online survey link, and not able to be answered on paper, which could have caused some nurse practitioners not to be able to answer the questionnaire.

The following limitations of the research design and methods of data analysis were identified at the conclusion of the study:

- Only nurse practitioners in the Southeastern United States were surveyed, which could be a poor representation of all nurse practitioners.
- Limitations to the study included a low number of participants, only 221, which could not be a true representation of nurse practitioners' knowledge and attitudes.
- The survey could have also been limited due to only being digital and not able to be answered on paper. The limited sample size diminished some of the reliability of the research.
- Most respondents were Caucasian, females in primary care clinics, which limited the generalizability of the survey for the research. The goal of 1000 participants was not met, and only 221 results were obtained.

- Researchers also questioned if participants of the study were being honest when answering the questionnaire due to the majority of the sample leaning more toward being positive, although previous research indicated a stigma toward individuals seeking treatment. The majority viewed SUD as a brain disease although the survey shows 110 believe coercive pressure, such as threats and punishment, is useful in getting patients to accept treatment.

### **Conclusions**

The goal of the research study was to evaluate nurse practitioners' knowledge and perceptions regarding substance use. There were 219 of 221 nurse practitioners who believe SUD is treatable and individuals with substance use issues can be sober for life. However, only 134 out of 221 nurse practitioners believe people suffering from SUD should only be treated by specialists. Also, 205 nurse practitioners out of 221 think persons with SUD who have relapsed several times can still be treated. The researchers identified several positive factors, such as the majority of nurse practitioners believe people with SUD can be sober for life and that it is a false belief that people who have relapsed cannot be helped. Overall, this sample of nurse practitioners viewed SUD as a disease.

### **Implications**

Several implications were discovered following the study. This study identified almost half of nurse practitioners participating in the study believe heroin addicts cannot recover. The negative attitude could defeat the outcome before treatment starts. Education on heroin addiction could be useful in changing the negative attitude.

Regardless of what nurse practitioners feel about the subject, providers must deliver the highest care to each individual regardless of any bias that may exist. Many medical professionals are not properly educated on substance use while in training, so there are also implications regarding the need to educate healthcare providers. The results of this study indicate primary care providers need more education on substance use disorder statistics, recovery rates, and treatment options including rehabilitation.

The results of this study can be used to guide future research in terms of substance use knowledge deficits. The replication of the current research using a larger, more diverse sample should be done to determine whether knowledge deficits regarding substance use are the same in other populations. The setting could be changed to a strictly clinical setting to further provide implications for healthcare providers. More in-depth questionnaires could be composed or the current questionnaire validated by nurse practitioners who are experts in the field of addiction. More extensive education should be given to nurse practitioner students and nurse practitioners regarding management of SUD and the healthiest avenues of treatment.

The study was guided by Watson's Caring Theory, which focused on the human being as valuable and stated a trusting relationship is key to providing treatment (Gonzalo, 2019). Watson also used a holistic approach. Watson's theory was useful and appropriate for the study. Nurse practitioners should use the theory to guide care for patients, especially regarding the stigma of SUD (Gonzalo, 2019).

### **Recommendations**

Based on the outcomes of this study, the following recommendations should improve nursing practice and education:

- Increase education on SUD by encouraging yearly continuing education units regarding prevention, treatment, and long-term management of SUD.
- Encourage more education in the curriculum of nurse practitioner graduate level courses regarding prevention, treatment, and long-term management of SUD.
- Repeat the study on a larger scale and in a different or larger geographical region.
- Encourage continuing education classes on stereotyping of patients, understanding the psychology of bias, and interacting with socially dissimilar patients.
- Include primary care nurse practitioners on mental health boards or boards of community mental health centers offering substance use treatment.

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**Appendix A****Letter of Approval from Institutional Review Board**

March 3, 2021

Dr. Shonda Phelon  
[jspheleon@muw.edu](mailto:jspheleon@muw.edu)

Dear Dr. Phelon:

I am pleased to inform you that the members of the Institutional Review Board (IRB) have reviewed the following proposed research and have approved it as submitted:

Name of Study: Nurse Practitioners' Knowledge and Perceptions  
Regarding Substance Use

Research Faculty/Advisor: Shonda Phelon

Investigators: MSN Research Group

I wish you much success in your research.

Sincerely,

Scott Tollison, Ph.D.

Provost and Vice President for Academic Affairs

ST/tc

pc: Irene Pintado, Institutional Review Board Chairman

## Appendix B

### Participant Letter

Dear Potential Participant,

We are a group of graduate students from Mississippi University for Women. As part of our Master's of Science in Nursing Degree we are required to complete a research project. Our topic is Knowledge and Perceptions of Nurse Practitioners Regarding Substance Use.

We would like to invite you to complete a questionnaire to assist us in completing our study. It will take approximately 10-15 minutes to complete. The information will be collected on SurveyMonkey and all answers will be anonymous. The answers will be compiled into group data, and no individual will be able to be identified. Your participation is vital to this study and helping us understand issues related to substance use.

You may choose not to complete the study at any point by simply not opening the link, logging out of the link, or not submitting the survey. Your willingness to complete the questionnaire will serve as implied consent for your participation in this study.

A benefit is that your participation will help the researchers better understand nurse practitioner knowledge and perceptions related to substance use. The plan is to use the results to help plan educational programs in the future.

The only risk is that there is a possibility that you may feel anxious or uncomfortable when answering the questions. If this occurs you may stop the questionnaire at any time and delete the email.

Thank you in advance for your consideration to participate in our research.

Sincerely,

Paden Dawkins, Lead Investigator, Graduate Student

Katie Bailey, Graduate Student

Amber Hankins, Graduate Student

Erin McKinney, Graduate Student

## Appendix C

### Substance Use Questionnaire

Please choose the best answer

1. Please select your age group.

- a. 23-35 years old
- b. 36-45 years old
- c. 46-55 years old
- d. 56-65 years old
- e. 65 or older

2. Please select your gender.

- a. Male
- b. Female
- c. Transgender
- d. Prefer not to say

3. Please select your race.

- a. African American
- b. Caucasian
- c. Asian
- d. Hispanic
- e. Multiracial
- f. Prefer not to say

4. Select your years of NP experience.
  - a. 1-5 years
  - b. 6-10 years
  - c. 11-15 years
  - d. 16-20 years
  - e. Greater than 20 years.
  
5. Select your primary work setting.
  - a. Rural
  - b. Urban
  
6. Select your primary practice location
  - a. Primary care clinic
  - b. Hospital
  - c. Long-term care
  - d. Corrections
  - e. Urgent care clinic
  - f. Specialty Clinic
  - g. other
  
7. What is your NP Certification? May select more than one.
  - a. FNP
  - b. ANP/GNP

- c. AGNP
- d. PNP
- e. PMHNP
- f. WHNP
- g. Other

8. Substance use is associated with a weak will, laziness or low moral compass.

- 1. Strongly disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly agree

9. A person with substance use cannot be helped until he/she has hit rock bottom or cannot be helped at all.

- 1. Strongly disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly agree

10. Pregnant women who use alcohol or other drugs should be punished by jail time or have their children taken by CPS

- 1. Strongly disagree
- 2. Disagree
- 3. Neutral
- 4. Agree
- 5. Strongly agree

11. Coercive Pressure, such as a threat or punishment, is useful in getting resistant patients to accept treatment for substance use.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

12. Heroin is so addicting that no one can really recover once he/she becomes an addict and providers should not try to help them recover,

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

13. A nurse practitioner who has been addicted to illegal substances should not be allowed to practice again.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

14. Substance abuse is associated with a weak will.

1. Strongly disagree
2. Disagree
3. Neutral
4. Agree
5. Strongly agree

15. Daily use of 1 marijuana cigarette is not necessarily harmful.

1. True
2. False

16. Using urine drug screening can be an important part of substance use treatment in early detection.

1. True
2. False

17. Persons with substance use who have relapsed several times probably cannot be treated.

1. True
2. False

18. Long term outpatient treatment is necessary for the treatment of substance abuse

1. True
2. False

19. Substance abuse is a treatable disease and people can be sober for life.

1. True
2. False

20. Persons with substance use should only be treated negatively by specialists in the field.

1. True
2. False