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Knowing Their Story: The Experiences of Perinatal Nurses Who Care for Women Using Marijuana During Pregnancy

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ABSTRACT

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While remaining federally illegal, the use of both medical and recreational marijuana in the United States continues to rise as individual state laws become more permissive and its use more socially acceptable. Paralleling this trend, the use of marijuana during pregnancy is also increasing. However legally defined, marijuana use during pregnancy is discouraged and has been associated with serious health concerns for the mother and her infant. Its use during pregnancy is challenging for healthcare providers as it is not well researched and its effects are not clearly understood. While the experiences of perinatal nurses working with women affected by general substance use are well-documented, what is not well understood is how marijuana use by itself is viewed by these nurses. As no previous studies were identified exploring this phenomenon, the three-fold purpose of this study was to understand the experiences, perceptions, and beliefs of perinatal nurses who provided care for women who used marijuana during their pregnancies; to gain a deeper understanding of their beliefs, feelings, and how they perceived use of marijuana during pregnancy; and to understand the educational needs these nurses perceived regarding prenatal marijuana use. Thirteen nurses ($N = 13$) who practiced in the perinatal field from across the United States agreed to participate in this study and be audio and video recorded. Twelve interviews were conducted via Zoom and one was conducted in person. The interviews were recorded, transcribed, and interpreted for their meaning. Six themes were identified and

validated with participants through member checking. The following themes that emerged provided a glimpse into the experiences, perspectives, and beliefs of perinatal nurses who cares for women using marijuana during pregnancy: (a) mixed emotions, (b) more and more patients are positive, (c) forming a relationship, (d) effects on the baby, (e) the healthcare team needs to be on the same page, and (f) we need to know more. This study revealed a strong need for more knowledge and education regarding marijuana use during pregnancy and the development of strategies to improve communication skills for nurses who work with this population of women. Further, findings provided a foundation for the development of educational strategies and interventions targeted to enhance knowledge and communication skills for perinatal nurses and nursing students who might work with women who used marijuana during pregnancy.

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CHAPTER I

INTRODUCTION TO THE STUDY

In the current opioid crisis, substance use is often equated with opioid use but can be used when referring to various legal and illegal substances. Some substances are legal, such as tobacco and alcohol, while others such as heroin and methamphetamine are considered illicit. Others, such as marijuana, might have unclear or blurred definitions that vary depending on the geographic location and/or reason for which use occurred.

However legally defined, substance use is associated with serious health concerns and when substance use occurs during pregnancy, there are concerns for both the mother and her infant. Marijuana use during pregnancy is challenging at best for healthcare providers as it is not well researched and its effects not clearly understood. How nurses view this use is even less clear.

Background of the Problem

The use of substances in the United States continues to be problematic. Over the past 20 years, substance use has increased to levels resulting in a public health crisis (Cleveland et al., 2016). As the country became entrenched in battling the opioid epidemic, marijuana use, viewed as less problematic by most, was beginning to make its way into the mainstream of U.S. culture.

While popular in the 1960s among a distinct subset of the population, legislative acceptance of marijuana from states began to legalize its use first for medical purposes and, more recently, for recreational use. California was the first state to authorize medical use of marijuana in 1996 followed two years later in 1998 by Alaska, Oregon, and Washington (Hartman, 2021).

Recreational marijuana use took longer to become legally acceptable when in 2012 both Colorado and Washington approved full adult use of the substance (Hartman, 2021). Currently in the United States, many states are decriminalizing the use of marijuana and 36 states have legalized its use for medical purposes (Hartman, 2021). Furthermore, 17 states, two territories, and the District of Columbia have provisions for adult recreational use, driving marijuana use to increasingly higher numbers with four additional states passing legislation in the 2020 election (Hartman, 2021). Public support for legalization of marijuana use is at an all-time high with 68% of the American public reporting approval (Brenan, 2020).

While marijuana use has become more socially permissible and legally accessible in many states, its use often proves challenging for healthcare providers. Because of its unclear health benefits and the potential risks from use, many question its value and disapprove of its use, leaving those who do use it vulnerable to bias and stigma (Satterlund et al., 2015). Further, certain health conditions are not well treated by traditional medications. In these cases, medical marijuana has often been found to be effective in relieving symptoms related to pain, nausea, or seizures (U.S. Food and Drug Administration, 2020). Even so, the effectiveness of marijuana in health care has not been empirically proven (Satterlund et al., 2015), leaving opinions surrounding its use widely varied.

Substance Use, Marijuana, and Stigma

Much of what has been written regarding stigma evolved from the work of Erving Goffman (1963) who proposed three different types of stigmas: (a) stigma related to physical characteristics such as blindness, obesity, and deafness; (b) stigma based on perceived blemishes of character such as weak will, mental disorders, addiction, etc.; and (c) tribal stigma based on race, ethnicity, religious preference, and nationality. Since Goffman's seminal work examining

stigma was first introduced, additional research has been conducted exploring the concept of stigma as applied to individuals, groups, diseases, and conditions and how stigma negatively impacted those who were affected by it (Link & Phelan, 2001).

One of the areas where stigma has been studied is that of substance use. Studies conducted with college students in general education and health professions fields demonstrated the development of more negative, stigmatizing attitudes toward general substance use (Brown, 2015; Harling, 2017; McKenna et al., 2011; Nash et al., 2017). These findings were consistent with findings from similar studies. However, in Brown's (2015) study, marijuana use was found to be viewed less negatively than heroin. The substance of choice appeared to make a difference in degree of negativity.

Stigma has been described in many areas of health care. Research examining stigma surrounding mental health issues was abundant. Ottati et al. (2005) and Penn et al. (1994) both developed widely supported models to examine this stigma (Brown, 2015). Additionally, stigmas related to human immunodeficiency virus (HIV) and the acquired immunodeficiency syndrome (AIDS) epidemic have been well studied (Felker-Kantor et al., 2019). However, stigma surrounding substance use was often measured in concurrence with other co-morbidities, and relatively little has been written regarding the stigma surrounding substance use alone (Brown, 2011; van Boekel et al., 2013). Further, it was difficult to separate stigma from general substance use and that related to marijuana use by itself.

Some studies examined the stigma of marijuana use by itself. Roberts (2018) reported on the stigma medical marijuana patients were perceived by society. In this study, the method of use, inhalation versus ingestion, was identified as a factor in the level of stigmatization experienced by the patient. Patients who consumed marijuana orally were viewed more

favorably than patients who smoked it (Roberts, 2018). This finding was similar to Brown's (2015) study that demonstrated the substance used affected the level of stigma perceived.

Attitudes of Healthcare Professionals

Some studies explored the attitudes of healthcare professionals toward general substance use (Corse et al., 1995; Doleman et al., 2019; Fonti et al., 2016; Geraghty et al., 2018; Harling, 2017; Holland et al., 2016; Jenkins, 2013; McKenna et al., 2011; Miles et al., 2014; Raeside, 2003; Rassool et al., 2006; Seybold et al., 2014; Whitehead et al., 2019; Witkins, 2020) and the barriers negative attitudes created for substance users in seeking and receiving treatment. The entire continuum of care was affected when stigma from healthcare provides was perceived by those using substances (Wogen & Restrepo, 2020). van Boekel et al., (2013) described how nurses often used an avoidant approach when providing care for substance users by keeping their visits shorter and more task focused rather than engaging with the patient. The nurses' lack of engagement and empathy when providing care was viewed by their patients as substandard, thus influencing care outcomes.

However, only a few studies explored the attitudes of nurses as a standalone group (Coyne, 2020; Ford, 2011; Gerace et al., 1995; Ludwig et al., 1996; Maguire, 2014; McCall et al., in press; Neary, 2018; Selleck & Redding, 1998; Shaw et al., 2016). These studies surveyed nurses regarding their views of substance use in a variety of settings: neonatal intensive care unit (NICU)/newborn nursing (n = 3), perinatal nursing (n = 5), and general nursing (n = 2). Findings from these studies provided both qualitative and quantitative evidence demonstrating that nurses viewed substance use negatively in all settings. Substance use was viewed by most as a choice and many nurses expressed their frustration and distrust of these patients. In addition, Selleck and Redding (1998) reported nurses in their study had "limited knowledge about perinatal

substance abuse and held more punitive, negative attitudes than positive, supportive attitudes" (p. 74).

Even less still is known regarding the attitudes of our future nurses. This is problematic as student nurses go on to become licensed nurses and bring their values and beliefs with them into practice. In one study, Rassool et al. (2006) explored the concept of stigmatizing attitudes and determined that undergraduate nursing students in Brazil lacked the necessary knowledge to care for patients who used substances. Although lacking knowledge, students in this study had overall positive attitudes toward substance users (Rassool et al., 2006). Witkins's (2020) more recent study examined nursing students' attitudes toward prenatal marijuana use and found their attitudes to be mostly positive; however, they found students also lacked knowledge regarding its use during pregnancy. The findings from these studies highlighted the clear need for more research in this area.

Other findings began to identify how negative views of substance use could influence health outcomes of patients. In a systematic review, van Boekel et al. (2013) determined that when health professionals had negative attitudes toward persons who used substances, care outcomes might be negatively affected. FitzGerald and Hurst (2017) supported these findings with their own systematic review examining implicit bias and quality of care. When patients who used substances encountered stigma and bias from their care providers, they were much less likely to seek or continue vital healthcare treatment.

Some research has been conducted that explored the views of healthcare providers regarding marijuana use in palliative care, oncology, or acute care settings (Constantino et al., 2019; McCall et al., in press; McLennan et al., 2020). However, little is known about how nurses specifically viewed its use, especially during pregnancy. Because marijuana continues to be

classified as an illicit substance by the federal government, interpretation of its use is often cloudy and feelings toward it ambiguous. While substance use often invokes strong negative emotions from nurses caring for patients who use them, leaving the patient vulnerable to stigma (Satterlund et al., 2015), it is unknown if nurses have the same feelings toward patients who use marijuana.

Stigma is often driven by fear of the unknown, which in turn fosters negative attitudes, stereotypical beliefs, and discrimination that might potentially compromise care (Witte et al., 2018). Findings from the literature demonstrated that nurses, when compared with other professionals, displayed higher levels of stigma toward patients who used substances (Harling, 2017). When stigma enters the nurse-patient relationship, barriers are created that are difficult to overcome. These negative barriers or biases are damaging to the physical and mental health of the patient experiencing the perceived stigma (Satterlund et al., 2015). Patients who report experiencing stigma are less likely to be honest about their condition with their care providers and are less willing to utilize care services (Satterlund et al., 2015). Recognizing and understanding potential personal bias is vital in improving care outcomes for these patients.

It is well-known that nursing care and nursing interventions lead to improved patient care outcomes (Duffy & Hoskins, 2003; O'Nan et al., 2014). Nurses must be able to provide care for patients experiencing complex healthcare needs regardless of patients' habits or behaviors they might find morally objectionable. Nursing is a well-respected profession that is often thought to be above reproach, providing care to persons from all walks of life without regard to their circumstances. However, in a recent systematic review, FitzGerald and Hurst (2017) found healthcare providers, including nurses, experienced implicit bias and stigmatizing behaviors at the same rate as the general public. When patients perceive stigma from their nurses, negative

relationships might form that could compromise patient care and care quality, negatively affecting patients' health outcomes (FitzGerald & Hurst, 2017; Satterlund et al., 2015; van Boekel et al., 2013). Understanding the experiences, beliefs, and attitudes of nurses who care for patients who use substances such as marijuana, opioids, and methamphetamines is essential to improving not only the quality of care provided but also patient outcomes.

Pregnancy, Marijuana, and Stigma

Findings from the literature indicated that similar to the general public, pregnant women also used substances (Dickson et al., 2018; Stone, 2015). One report regarding past month substance use demonstrated an increase from 2015 to 2017 in most substances during pregnancy including alcohol (9.3-11.5%), marijuana (3.4-7.1%), opioids (0.8-1.4%), cocaine (<0.05-0.4%), and illicit drugs (4.7-8.5%; McCance-Katz, 2018). Notably, marijuana use more than doubled in this two-year period. Substances such as heroin, methamphetamine, and other illicit opioids are clearly understood to be harmful to the fetus; however, the effects of marijuana use during pregnancy were not as clear. Although less visible than its more dangerous counterparts, the increase in marijuana use during pregnancy has caused concern among healthcare workers and created questions about its safety and possible long-term implications for fetal and child development (Volkow et al., 2017). Uncertainty remains regarding the long-term effects marijuana use might have on childhood health outcomes (Ryan et al., 2018).

Authoritative bodies such as the American College of Obstetricians and Gynecologists (ACOG, 2017); the Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN, 2018); and the American Academy of Pediatrics (AAP; Ryan et al., 2018) have warned against marijuana use during pregnancy, citing concern for both the mother and the baby. Potential risks include long-term effects on neurodevelopment status, preterm birth, and low birthweight

(ACOG, 2017; AWHONN, 2018; Ryan et al., 2018). Even with these strong warnings over the last two decades, marijuana has been consistently described as the most frequently used illicit drug during pregnancy in the United States (Alshaarawy & Anthony, 2019; Substance Abuse and Mental Health Services Administration, 2020; Young-Wolff et al., 2017). From 2002 to 2017, an estimated 11% of pregnant women were reported to have used marijuana during the first month of their pregnancy with approximately 19% of those using it reportedly being dependent upon the substance (Alshaarawy & Anthony, 2019). In direct opposition to the recommendations of ACOG, AWHONN, and the AAP, its use was viewed by some as a safe, natural, and non-addictive substance that could be used without risk to mother or fetus (ACOG, 2017; Ishida et al., 2020).

Only recently have nurses been given guidance by the National Council of State Boards of Nursing (Russell et al., 2018) regarding the care of patients who use medical marijuana. However, these directions were focused on medical use in the general population and there was nothing specific to recreational use or use during pregnancy. Because the use is rising during pregnancy, there is a clear need for further direction in caring for obstetric patients who use marijuana (Holland et al., 2016).

Women who use substances during their pregnancies have reported feeling disapproval and judgment from their healthcare providers, resulting in perceived stigmatization (Cleveland & Bonugli, 2014; Cleveland et al., 2016). These feelings of disparagement could create significant barriers for women in receiving vital prenatal care. Law often requires that healthcare providers report maternal substance use to child protective services and law enforcement; thus, pregnant women's fear of judgment and potential legal consequences could lead to a failure in communication and a breakdown in prenatal care services (Holland et al., 2016). Women's fears

are not unfounded. The 2010 Child Abuse Prevention and Treatment Act (CAPTA) requires that healthcare providers report substance-exposed newborns to child protective services (Fanaroff, 2019). When newborns have been exposed to marijuana in utero, marijuana's illicit federal legal status requires providers follow state policies and procedures regarding the reporting of the mother's marijuana use. These policies vary by state without any type of standardization.

Nursing is widely described as a caring profession (Finnell et al., 2019) and compassion is an essential element of nursing care (Blomberg et al., 2016). Compassion and caring behaviors demonstrated by nurses during patient-nurse interactions are considered vital to improving patient outcomes for both the mother and the infant (Blomberg et al., 2016). Findings from the literature indicated nurses who cared for women using substances during their pregnancies often had negative views of these women (Seybold et al., 2014). These negative views were often sensed by the patient and barriers were created that might negatively impact health outcomes for mother and baby (Cleveland & Bonugli, 2014; Seybold et al., 2014).

In the following sections, an overview of the problem is discussed and the purpose of the study is provided. The theoretical perspective that guided the study is briefly presented followed by a discussion of the purpose of study and presentation of the research questions. Definitions of key terms used in this study are also provided. Finally, I provide a discussion of how findings from the study might add to the existing body of nursing knowledge.

Problem Statement

Recent changes in many state laws regarding marijuana use have made it more easily accessible and seemingly more socially acceptable for use in many populations. However, despite differing marijuana laws in individual states, as a federally illegal substance, marijuana continues to be classified as a Schedule I drug with "no currently accepted medical use…and a

high potential for abuse" (U.S. Department of Justice Drug Enforcement Administration, 2021, para. 10). Most generally, drugs derived from a Schedule I substance are placed in the same category as the parent substance; however, the FDA has approved certain marijuana derivatives for medical use under different schedules (Mead, 2019; U.S. Department of Justice Drug Enforcement Administration, 2021). To date, only one marijuana (cannabis) derived drug (Epidiolex [cannabidiol]) and three synthetic marijuana (cannabis) drugs (Marinol [dronabinol], Syndros [dronabinol], and Cesamet [nabilone]) have been approved by the U.S. Food and Drug Administration (2020) to treat certain epileptic seizure conditions, cancer-related nausea, and stimulate appetite. Notwithstanding its federal legal status, increasing public support for marijuana legalization at both the state and federal levels drives the potential for significant increase in use during pregnancy.

Social acceptability is often strongly based on what the majority population considers to be right or wrong (Bocian & Wojciszke, 2014; Seybold et al., 2014; Simmonds et al., 2013; Ugazio et al., 2012). Socially acceptable behavior or "social norms" are also deeply influenced by one's personal upbringing, cultural tendencies, and personal values (Larson, 2017; Parker, 1990; Uhlmann et al., 2015). Findings from the literature indicated society viewed any substance use during pregnancy harshly, perceiving the fetus as an innocent victim (Corse et al., 1995; Delker et al., 2020; Stone, 2015).

Additional studies reported strikingly similar findings in the attitudes of healthcare providers toward women who used substances during pregnancy (Adams et al., 1990; Fonti et al., 2016; Ford, 2011; Ludwig et al., 1996; McKenna et al., 2011; Raeside, 2003; Renbarger et al., 2020; Seybold et al., 2014; Shaw et al., 2016). Disproportionately, nurses have been described as the most critical group of healthcare providers with regard to pregnant substance

users (Seybold et al., 2014). In an extensive literature search, few studies were found that explored the views of healthcare providers toward marijuana use by itself during pregnancy and none were identified that specifically sought to understand the experience and perceptions of perinatal nurses regarding marijuana use in this patient population.

Research examining substance use often placed focus on illicit substances known to have harmful effects during pregnancy, specifically methamphetamine and opioids, and how healthcare providers perceived this use. Marijuana use is often overlooked in favor of these more dangerous substances or placed into the broad categories of substance use or polysubstance use (McCall et al., in press; Shaw et al., 2016). Findings from the literature demonstrated that research has been conducted exploring the views of physicians or healthcare providers as a group with little recognition given to the experiences of perinatal nurses who care for these patients. During pregnancy, perinatal nurses spend more time with these patients than any other healthcare provider. Understanding their experiences with this population and their perceptions of marijuana use during pregnancy is vital in developing therapeutic relationships and removing any barriers these women might experience in receiving compassionate, therapeutic care.

Perinatal nurses providing care for these women during this vulnerable time have the potential to positively affect care outcomes through compassion and person-centered care (Blomberg et al., 2016). While the experiences of perinatal nurses working with women affected by general substance use are well-documented, what was not well understood was how marijuana use by itself was viewed by these nurses. Understanding how perinatal nurses approach care for these women is essential in removing barriers to therapeutic care delivery. This study explored those experiences and provided a voice for the views of these perinatal nurses. Additionally, areas where further education and knowledge development were identified.

Findings from this study helped to fill an identified gap in the literature and added new evidence to the existing body of knowledge regarding the experiences of these nurses and their views on marijuana use during pregnancy.

Theoretical Perspective

Although Chapter II contains a comprehensive description of the theoretical perspective that guided this study, a brief overview is provided here. The theoretical foundation for this study was grounded in the epistemology of social constructionism, recognizing that meaning is socially created and not discovered (Walker, 2015). Humans create meaning as they engage in their world (Crotty, 2003). Findings from the literature indicated that substance use by women during pregnancy has historically been viewed negatively by nurses who care for them (McKenna et al., 2011; Seybold et al., 2014; Shaw et al., 2016). Constructionism provided a means to explore the subjective realities of these nurses and give voice to the meaning constructed from their experiences (Walker, 2015). Finding meaning in experience offers a structure for knowledge generation and provides societal significance through social interactions (Walker, 2015).

Purpose Statement

The purpose of this qualitative descriptive study was to understand the experiences, perceptions, and beliefs of perinatal nurses who provided care for women who used marijuana during their pregnancies and to gain a deeper understanding of their beliefs, feelings, and how they perceived use of marijuana during pregnancy. Understanding the attitudes nurses bring into the care setting and how they approach care for women who use marijuana prenatally is an important part of ensuring care delivery is unbiased and therapeutic (Blomberg et al., 2016; McKenna et al., 2011; Seybold et al., 2014). A secondary aim of the study was to determine what education, if any, perinatal nurses received regarding caring for women who used marijuana

during pregnancy. The final aim was to identify if further education would be of benefit to the work nurses do in the perinatal settings.

Research Questions

The following focused research questions guided this study:

Q1 What are the experiences, perceptions, and beliefs of perinatal nurses caring for women who use marijuana during their pregnancies?

Q2 What education, if any, have these nurses received about caring for women who use marijuana during their pregnancies and where did they receive it?

Q3 What are the educational needs, if any, identified by perinatal nurses to guide care for this population?

Definition of Terms

Cannabinoids

Although the *Cannabis sativa* plant contains over 100 different cannabinoids, cannabidiol (CBD) and tetrahydrocannabionol (THC) are the primary cannabinoids derived from the plant and both are classified as hallucinogens under the Controlled Substance Act (Mead, 2019). Unlike CBD, THC contains psychoactive properties that cause euphoria; thus, CBD is more widely available and can be sold in a variety of modalities (Mead, 2019).

Marijuana

Marijuana is a widely used social term for cannabis (Mead, 2019). The terms cannabis and marijuana are often used interchangeably and can be defined as any raw product from the *Cannabis sativa* plant (Mead, 2019). For the purpose of this study, the term marijuana is used to describe the substance of interest.

Medical Marijuana

Currently, both marijuana production and use remain illegal under federal law; however, some medical value has been identified (Whitcomb et al., 2020). Currently, 36 states and four

territories have legislated various forms of medical use in state managed medical marijuana programs. Eleven other states have provisions for the medical use of low THC, high CBD products (National Conference of State Legislatures, 2021). Patients experiencing persistent nausea, pain, seizures, loss of appetite, and anxiety have been found to experience benefit from medical marijuana use (National Conference of State Legislatures, 2021).

Perinatal Nurse

The perinatal nursing specialty can encompass a broad spectrum of care. Perinatal nursing can be defined as the care of women, infants, and families during the period of time between conception and the postpartum period. Further delineating the term, the World Health Organization (2021) defined the perinatal period from 22 weeks gestation to seven days postpartum. For this study, the term perinatal nurse was used to describe the nurse specializing in the care of women during the labor and delivery, recovery, and/or postpartum periods.

Recreational Marijuana

Recreational marijuana use is described as any use done for the pleasure of the mood-altering, intoxicating experience and not for medical reason (Sullivan & Austriaco, 2016). Seventeen states, two territories, and the District of Columbia have legislated adult recreational use of marijuana (National Conference of State Legislatures, 2021) and the public view of this use is thought to be similar to that of using other natural drug supplements with varying degrees of permissiveness (Bridgeman & Abazia, 2017).

Stigma

Goffman (1963) first defined stigma as an "attribute that is deeply discrediting" (p. 12). Link et al. (1987) focused on stigma as a product of labeling based on behaviors and diagnoses that evoke feelings of shame and exclusion. The definition of stigma has evolved to include other

negative connotations and types of stigmas. Structural stigma is projected by healthcare providers or professional groups toward those who fall outside normal behavior (Fonti et al., 2016; Livingston et al., 2011). Stigma has been described as a poor attitude and lack of empathy (McKenna et al., 2011) and as negative, prejudicing attitudes (Harling, 2017). Discrimination driven by blame, fear, and stereotyping is often included in the definition and could lead to marginalization of specific populations (Williams et al., 2015; Witte et al., 2018). For the purpose of this study, stigma was defined as the aggregate negative beliefs, feelings, and attitudes one holds toward someone who uses marijuana during pregnancy.

Substance Use

The WHO (2020) described substance use as harmful use of substances such as alcohol or illicit drugs. Thus, substance use can take many forms, both legal and illegal. Alcohol, tobacco, marijuana, prescription medications, illicit drugs such as heroin and methamphetamine, and inhalants are examples of commonly used substances. In this study, substance use was conceptualized as any legal or illegal substance a woman might use during pregnancy.

Significance of the Study and Potential Contribution to Nursing Knowledge

There is an identified gap in literature regarding the experiences of perinatal nurses and their perceptions of pregnant women who use marijuana. Some research was identified exploring views of healthcare providers who care for women who use substances during their pregnancies; however, none was identified that specifically examined the experiences or perceptions of perinatal nurses toward marijuana use as the single focus. As marijuana use continues to become legal in more states and more socially permissive in our society, nurses will potentially see growing numbers of pregnant women using this substance either recreationally or medicinally. Understanding the experiences of nurses caring for these women and the meaning constructed

from their experiences are important tools in addressing potential stigma and barriers to receiving perinatal care. Nurses have the potential to affect care outcomes and decrease treatment obstacles in this population; however, more research is needed to identify barriers and improve care outcomes. Further, by determining what perceived educational needs exist might potentially guide curricula development in both undergraduate programs and for practicing nurses.

Summary

Perinatal nurses will likely be caring for an increasing number of women who use marijuana during their pregnancies. Understanding their experiences would help provide a foundation from which to develop more patient-centered care strategies and positively affect care for these women. Compassion and patient-centered care could positively impact the obstetric experience and outcomes of this population. Results from this study added rich evidence to the existing knowledge base and helped to fill a distinct gap in the literature.

In Chapter II, I provide an explanation of the theoretical underpinnings of this study and a detailed review of the literature relating to the experiences of perinatal nurses who provide care for women who use marijuana during their pregnancies. I provide a description of my search strategies and key terms I used in my search. Key findings from the literature are presented and discussed demonstrating support for this study.

CHAPTER II

REVIEW OF THE LITERATURE

Chapter I presented an introduction and the background for this study. An overview of the theoretical perspective of constructionism that served as the base for the study was also introduced and key terms were defined. In this chapter, a literature review is presented that supports the need for this study.

Marijuana has been cited as the most frequently used illicit substance during pregnancy for almost three decades (Adams et al., 1990; Holland et al., 2016) with 3 to 34% of women using it at any point during pregnancy (Metz & Stickrath, 2015). With the increase in public support for full legalization, there is potential to see a significant increase in marijuana use during pregnancy. Women choose to use marijuana during their pregnancies for different reasons. Many consider it to be a natural, holistic substance on the same level as other herbs or supplements and not a drug—thus, safe for use during pregnancy (Volkow et al., 2017). Some choose to treat pregnancy-related nausea with marijuana (Volkow et al., 2017) and others use it as part of a larger pattern of substance abuse (French, 2013). Regardless of the reason for use, much remains unknown about long-term implications marijuana use might have on the fetus (Brooks et al., 2017; Holland et al., 2016; Mark & Terplan, 2017).

Although use of marijuana during pregnancy is discouraged by professional healthcare organizations (ACOG, 2017; AWHONN, 2018; Ryan et al., 2018), many healthcare providers are uncomfortable addressing its use with their pregnant patients because the effects of marijuana on the fetus are largely unproven (Brooks et al., 2017). Additionally, others reported

that marijuana use is not viewed as a priority when considering other more dangerous substances such as heroin or methamphetamine could be used (Holland et al., 2016).

While marijuana use is often explored as part of a larger pattern of drug use, its growing legal and social acceptance allows for wider exploration of it as the sole substance of use during pregnancy (Shaw et al., 2016). Statistics from a study where researchers surveyed women from eight different states who had recently given birth (N = 7,688) indicated a significant proportion of these women reported marijuana use prior to becoming pregnant, during pregnancy, and after delivery (9.8%, 4.2%, and 5.5, respectively; Ko et al., 2020). However, another study (Mark & Terplan, 2017) reported rates of marijuana use during pregnancy were more than twice as high as the findings of Ko et al. (2020) with 9.5% of pregnant women reporting use during the previous month. Additionally, pregnant women using marijuana were reported to have higher daily use rates (16.2%) than non-pregnant users (12.8%) with 18.1% of pregnant users meeting criteria for dependence or abuse (Ko et al., 2015; Mark & Terplan, 2017). These numbers, in addition to more permissive attitudes toward marijuana use, demonstrated the potential for significantly higher numbers of women using marijuana during pregnancy. As these numbers grow, so too will the number of perinatal nurses who care for these women.

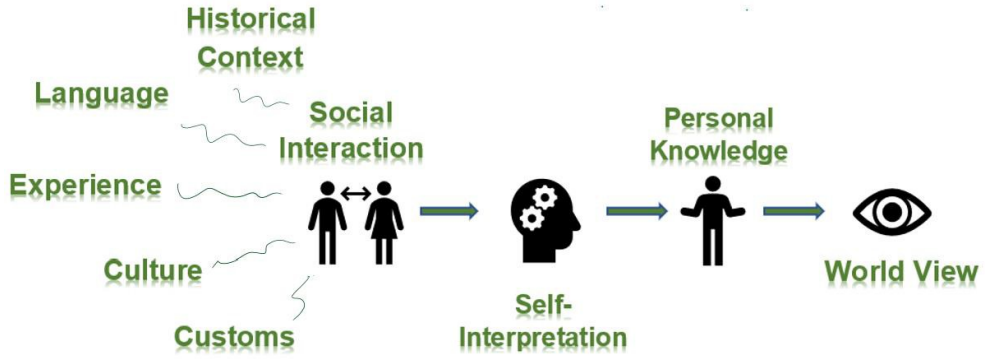
Theoretical Underpinnings of This Study

The theoretical base for this study was grounded in social constructionism. Social constructionism can be applied to both research and practice, making it an appropriate choice as the theoretical underpinning for this study. Meaning is constructed from the relational experience between perinatal nurses and their patients and then again between the researcher and the study participants. The language used to describe these relationships signifies the reality of the relationships, and focus is placed on the interactions in the relationships (Losantos et al., 2016).

The meaning one gives to experience is socially created, contextually bound, and not discovered (Walker, 2015). Figure 2.1 provides a visual representation of social constructionism.

Figure 2.1

Theoretical Underpinning: Social Constructionism



Findings from the literature demonstrated that substance use during pregnancy was often viewed negatively by perinatal nurses (McKenna et al., 2011; Seybold et al., 2014; Shaw et al., 2016). Viewing the phenomenon through a constructionist lens considered that the meaning made from experience was contextually underpinned by subjective realities (Walker, 2015). The experiences of these perinatal nurses were also bound in context and socially constructed through the relationships they formed with these women during the time spent providing care.

What is known about the world is constructed largely by social influence and observation of the world around us. Walker (2015) suggested that constructionism focuses on how knowledge emerges and how it comes to be significant to society as a whole. The relationship between a perinatal nurse and a woman in their care by nature has a strong social context. Pregnancy is a time of increased vulnerability for women and during labor and in the postpartum setting this vulnerability is magnified (Dalton et al., 2020). The relationship between the patient

and the nurse becomes a social contract that is built predominantly on trust. To have the utmost trust, the woman must believe the nurse performs care in her best interest (Dalton et al., 2020). This trust involves both vulnerability and risk as the patient relies on the nurse to guide her through labor progression, delivery, and the postpartum period. The nurse also provides support and uses expert assessment skills to intervene when necessary for both the mother and the baby. The relationship between the nurse and the woman is an intimate one with the woman trusting the nurse enough to allow access to her body and to her baby (Dalton et al., 2020). This critically important relationship helps empower women and their family members during a period of extreme vulnerability. The meaning constructed by the nurse based on the relationship has the power to affect the outcome of care.

Search Description

Using the databases PubMed, Cumulative Index of Nursing and Allied Health Literature (CINAHL), Medline, and ProQuest, an extensive review of the literature was conducted to explore the attitudes of perinatal nurses toward women who used marijuana during their pregnancies. The search was not time limited as marijuana use during pregnancy is not a new phenomenon and historic data might be relevant to the study. In forming the foundational question for this study, certain key words were identified as important to include in the search. The key terms utilized included the medical subject heading (MeSH) search terms and keywords of cannabis, medical marijuana, registered nurse, nurse attitude, substance use, illicit drugs, and pregnancy. Keywords were combined with the Boolean operator "AND" to maximize search results. In the initial search, Google Scholar was the only database to yield results with 157 articles. However, after reviewing each title and abstract, no articles were retained for review as

they did not meet the inclusion requirements of focusing on attitudes of perinatal nurses toward pregnant women who used marijuana during their pregnancies.

Because no studies were identified with the original search terms, cannabis and marijuana were removed from the search terms as this substance was commonly combined with other drugs when discussing substance use. The search terms were revised to include all substance use during pregnancy and the search was repeated in the original databases. As marijuana was often included in the concept of substance use, this was deemed an appropriate strategy. The terms used for this search included substance use, pregnancy, stigma OR attitude, and nurse OR health personnel. These terms were again combined with the Boolean operator "AND," which yielded 1,356 results. Many articles were not considered for review because they did not address substance use during pregnancy or reported on the perspective of the pregnant woman rather than the healthcare provider. After reviewing the abstracts for relevance and removing duplicate articles, 28 were considered relevant to the study and appropriate for review.

Substance Use and Stigma During Pregnancy

Multiple accounts of stigma toward women who used other substances during pregnancy were reported. The literature was filled with examples of perceived stigma and bias from healthcare providers toward these women with nurses described to have the harshest views (Seybold et al., 2014). The views of providers regarding marijuana use were discussed in some of these studies under the umbrella term of substance use but in few studies on its own as a substance of interest. Because nurses could impact patient care and health outcomes, it was vital that the experiences and beliefs of these nurses be explored. To date, no studies with registered nurses were identified that did this and only one unpublished study was found that explored the attitudes of nursing students toward prenatal marijuana use (Witkins, 2020).

Given the growing social and legal acceptance of marijuana, the reason for this lack of research is unknown; however, it was speculated by Holland et al. (2016) that providers were more concerned with illicit drugs that had known effects on the fetus and were not as concerned with the softer substances where less was known about potential effects. The lack of evidence identified in the literature regarding this phenomenon demonstrated the critical need for this study as the attitudes and beliefs nurses carry into practice have the potential to impact care and patient outcomes (Duffy, 2013; Duffy & Hoskins, 2003; FitzGerald & Hurst, 2017). The following section provides a review of the literature identified exploring the attitudes of nurses towards broad substance use by pregnant women.

Review of Research

Most studies identified in this review used the blanket term of "substance use" or "illicit drugs" to describe drug use by pregnant women and few specifically mentioned marijuana. Two studies primarily focused on cocaine use (Adams et al., 1990; Ludwig et al., 1996), one examined provider attitude toward opioid use (Shaw et al., 2016), and the remaining studies focused on general substance use patterns without identifying specific drugs. Substances such as heroin, methamphetamine, methadone, amphetamines, and benzodiazepines were mentioned as part of an overall pattern of polydrug use; however, marijuana was specifically discussed in only three studies (Adams et al., 1990; Corse et al., 1995; Witkins, 2020).

The following section discusses four significant themes identified in this review of the literature with regard to substance use during pregnancy. Strong feelings of emotion, acknowledging personal beliefs and biases, the need for more knowledge and education regarding this patient population, and, perhaps most notable, the idea that

compassionate, person-centered care could affect change in pregnant substance users. Each is discussed in detail in the following sections.

Strong Feelings of Emotion

Nursing is widely described as a profession with caring central to its core (O'Nan et al., 2014; Watson, 2008). Findings from the literature indicated that patients highly desired caring behaviors from their nurses, and these behaviors have been found to not only improve patient satisfaction but they also play an important role in improving patient health outcomes (O'Nan et al., 2014). The nurse-patient relationship is fraught with opportunity to harm or help the patient's overall health encounter. When a therapeutic relationship exists between the nurse and the patient, the patient is more likely to trust the nurse and divulge information such as marijuana use that might affect their care, while the perception of bias might lead to adversarial relationships with the patient failing to disclose vital information (Krening & Hanson, 2018).

Perinatal nurses or midwives working with pregnant women who use substances face distinct challenges and experience strong emotions while providing care. Feelings of anger, frustration, negativity, and judgment toward pregnant substance users were consistently identified throughout the review (Adams et al., 1990; Fonti et al., 2016; Ford, 2011; Ludwig et al., 1996; McKenna et al., 2011; Raeside, 2003; Selleck & Redding, 1998; Seybold et al., 2014; Shaw et al., 2016). While different healthcare groups were discussed, nurses were described as significantly harsher in their judgment of pregnant substance users than other groups (Seybold et al., 2014). While reasons for this were unclear, it might be that nurses spend the most time with patients at the bedside, thus seeing the effects of substance use on the maternal/infant dyad. In addition, nurses spend a significant amount of time caring for infants born to women who use substances during pregnancy and see the effects as the newborns experience withdrawal

symptoms. Furthermore, these harsh views might be related to the beliefs that substance use is considered a lifestyle choice rather than a disease and to the perceived or actual harm substance use inflicts on the fetus and newborn (McKenna et al., 2011).

Negative Views of Substance Use

Findings from the literature demonstrated that bias and stigma existed when women used substances during their pregnancies, providing an opportunity for negative attitudes to enter care. Strong feelings of emotion surround prenatal substance use. Care could be compromised when bias and stigma enter the nurse-patient relationship (FitzGerald & Hurst, 2017). Preexisting beliefs and feelings could have positive or negative effects on the care provided based on the ability of the nurse to manage those feelings during care (Corse et al., 1995; Ludwig et al., 1996).

Participants in one study voiced feelings of frustration and a lack of empathy for women using substances during pregnancy (Raeside, 2003). Other participants reported the belief that these women were irresponsible and felt they cared little for themselves or their fetuses (Ludwig et al., 1996; McKenna et al., 2011; Raeside, 2003). In one of the reviewed studies, pregnant women who used substances were perceived to be dishonest and were met with a lack of trust by the nurses who cared for them (Corse et al., 1995). Midwives in this study reported believing their patients attempted to hide and deny their substance use despite the attempts of the midwives to build trust. The common feeling expressed by these midwives was that “they lie to us!!” regarding substance use when asked which created barriers to providing effective treatment (Corse et al., 1995, p. 7). McKenna et al. (2011) described low levels of empathy toward these women among midwives. Midwives and other perinatal care providers in additional studies reported feeling angry toward these women (Jenkins, 2013; Raeside, 2003). This finding was

concerning because midwives traditionally have high levels of empathy toward their patients (McKenna et al., 2011).

Findings consistently demonstrated that nurses harbored feelings of negativity, anger, frustration, and judgment toward this population of pregnant women (Adams et al., 1990; Ford, 2011; Jenkins, 2013; Ludwig et al., 1996; Maguire, 2014; Raeside, 2003). The views of nurses in some studies also became more negative over time rather than improving. This might demonstrate aspects of burnout related to the moral or ethical dilemma of caring for an increasing number of women using illicit substances during their pregnancies (Ludwig et al., 1996; Raeside, 2003). Notwithstanding these negative feelings, nurses caring for these women reported that despite feeling negatively or judgmental toward this population of women, they were willing to provide care for them and, in fact, felt the care provided might make a difference in health outcomes for the woman and her fetus (Adams et al., 1990; Miles et al., 2014; Raeside, 2003).

Empathy, Compassion, and Support

Conversely, some studies reported that participants described feeling empathy and compassion toward these women (Doleman et al., 2019; Fonti et al., 2016; Geraghty et al., 2018; Whitehead et al., 2019) or, surprisingly, approval (Witkins, 2020). Most of these studies were completed with practicing midwives or midwifery students. Reported findings from Fonti et al. (2016), Geraghty et al. (2018), and Whitehead et al. (2019) were that nurse midwives had more overall positive or neutral attitudes toward women who used substances during pregnancy than negative views. In direct contrast to other study findings, midwives and midwifery students held more positive feelings toward this population of women and had high levels of empathy, with midwifery students displaying the most positive attitudes (Fonti et al., 2016). This might be

because midwives and those training to be midwives often approach care from a holistic lens and enter practice with a strong desire to engage in a person-centered relationship with their patients (Fonti et al., 2016). This conclusion was supported by Doleman et al. (2019) and Geraghty et al. in their respective studies. The holistic educational content of midwifery programs might be such that it guides students through complex issues such as substance use that complicate pregnancy, potentially leading to more positive attitudes.

Other studies with practicing nurses and nursing students reported similar findings regarding positive attitudes toward women who use substances during pregnancy. Neary (2018) explored factors that influenced therapeutic attitudes of perinatal nurses toward this population of women: knowledge of substance use during pregnancy, specialty area, practice setting, support from within the organization, and personal and professional experience with addictive substances. In this study, attitudes were determined to be mostly positive with improvement coming with experience and knowledge (Neary, 2018). Additionally, in the single study identified examining the perceptions of nursing students toward prenatal marijuana use, findings were positive. Students' attitudes and beliefs were compared to attitudes of the general public and while the views of the public were largely negative, the students' views of prenatal marijuana use were surprisingly positive (Witkins, 2020). This group of nursing students viewed marijuana use as appropriate and safe during pregnancy despite educational content instructing them differently (Witkins, 2020). However, while this study had a small number of participants and the results were not generalizable, these findings demonstrated that marijuana use during pregnancy and the women who used it might not be viewed as harshly as women who used more dangerous substances such as opioids or methamphetamine. Furthermore, the participants in this study were recent nursing students, which might indicate more general acceptance from those

belonging to the Millennial and Gen Z eras who demonstrated more overall acceptance of marijuana use in general (Miller, 2019). Because this study was conducted with future nurses, it was important to determine how practicing nurses viewed the use.

Effects of Marijuana Use on the Fetus

While the effects of marijuana use on the fetus are unclear, some studies reported significant complications related to its use during pregnancy. Preterm delivery, dysfunctional labor, low birth weight, stillbirth (Holland et al., 2016), and "an increased risk of neonatal morbidity" (Metz et al., 2017, p. 478.e1) were identified as possible consequences for the fetus from prenatal marijuana use. Nurses who are aware of these reported findings could have significant feelings of anger or disapproval toward women who chose to expose their unborn child to these potential risks.

Acknowledging Personal Values, Beliefs, and Biases

The second theme identified in these studies indicated strong support for acknowledging and understanding one's own values and beliefs to ensure compassionate care when caring for pregnant women who used substances (Adams et al., 1990; Corse et al., 1995; Fonti et al., 2016; Miles et al., 2014; Shaw et al., 2016). Lukose (2011) stated, "Nurses have a moral and ethical responsibility to be aware of their actions" (p. 29). When caring for patients who elicit feelings of negativity, identifying personal biases and placing those feelings aside is essential in providing effective, compassionate, non-judgmental care (Fonti et al., 2016; French, 2013; Miles et al., 2014; Raeside, 2003; Seybold et al., 2014). One study determined many nurses believed substance use, and subsequent addiction, was a choice rather than a disease (Coyne, 2020). This

can be problematic in care delivery if the nurse has difficulty setting those personal feelings aside.

Because a higher number of states have legalized marijuana use in one form or another and its use is widely accepted by society, it is important for nurses to understand it might not be viewed as an illicit substance by pregnant women. Often marijuana is viewed as a natural substance that would not cause harm to either the pregnancy or the fetus. Many people, including some healthcare providers, view marijuana use during pregnancy to be a safer alternative than other legal substances such as alcohol and tobacco because there are no specific identified risks to the fetus from its use (Holland et al., 2016). Use of other legal substances such as alcohol and tobacco use during pregnancy have widely known adverse effects on the fetus such as higher rates of miscarriage (Sundermann et al., 2019), fetal alcohol spectrum disorder (Centers for Disease Control and Prevention [CDC], 2020), and increased risk for placental abruption, fetal growth restriction, and higher perinatal mortality rates among others (ACOG, 2020). Most Americans view marijuana use as significantly less risky than alcohol (72%) and tobacco use (76%; National Center for Drug Abuse Statistics, 2019).

To achieve the most optimal outcomes for both the woman and her baby, nurses must be able to set aside personal biases or strong negative feelings they might experience related to substance use in any form and provide compassionate, respectful care (McKenna et al., 2011). Acknowledging that different values and beliefs are likely when caring for these patients is necessary to form caring patient centered relationships (Lukose, 2011). Since interaction with the perinatal nurse might be the only time compassion is demonstrated, personal biases must be set aside (French, 2013).

Need for More Knowledge, Education, and Training

One notable finding expressed by nurses and midwives in many of these studies was the need for more knowledge and education relating to maternal substance use (Alexander, 2017; Fonti et al., 2016; Ford, 2011; Maguire, 2014; Raeside, 2003; Selleck & Redding, 1998; Seybold et al., 2014; Shaw et al., 2016; Witkins, 2020). Women who used substances were reported to be more likely to experience stigma or bias than their male counterparts (Radcliffe, 2011). This becomes even more evident in an obstetric setting when state laws often require providers to report substance use to authorities (Radcliffe, 2011; Stone, 2015). Often, women who used substances did not seek prenatal care out of fear of justice system involvement and losing custody of their children (Stone, 2015). Further, the literature showed some groups of women were more vulnerable to this legal threat or stigma than others. For example, some women of color and those from disadvantaged socioeconomic backgrounds already experienced higher levels of social stigma or involvement from the criminal justice systems than others (Stone, 2015); avoiding health care was one way they might attempt to lessen negative interactions.

Educational interventions for healthcare workers have been successful in decreasing the stigma surrounding prenatal substance use and lessening negative views toward this population of women. This is important in improving care outcomes for the woman and her infant. Many of these studies were conducted with practicing midwives, midwifery students, and other healthcare providers (see Table 2.1). Sixteen were conducted with practicing nurses and one with nursing students; however, 7 of the 16 studies focused on neonatal nurses who provided care for the infant after delivery, three focused on generalist nurses, five examined all obstetric providers, and only one targeted perinatal nurses as a primary group of interest. This indicated a need for

more exploration in this area to determine what was taught regarding substance use during pregnancy and when the education occurred.

Table 2.1

Literature Review Study Participant Demographics by Specialty Area

Author	Midwives	Midwifery Students	Registered Nurses (RNs)	RN Students	MD	Medical Students	Social Workers
Adams et al. (1990)			X				
Alexander (2017)			X				
Brooks et al. (2017)			X		X		
Corse et al. (1995)			X				
Coyne (2020)	X						
Doleman et al. (2019)		X					
Finnell et al. (2019)			X				
Fonti et al. (2016)	X	X					
Ford (2011)			X				
French (2013)			X				
Gerace et al. (1995)			X				
Geraghty et al. (2018)	X						
Holland et al. (2016)					X		
Hooks (2019)		X					
Jenkins (2013)	X						
Ludwig et al. (1996)			X				
Maguire (2014)			X				
McKenna et al. (2011)		X					
Miles et al. (2014)	X						
Neary (2018)			X				
Radcliffe (2011)	X		X				
Raeside (2003)	X		X				
Ramirez-Cacho et al. (2007)						X	
Selleck & Redding (1998)							
Seybold et al. (2014)			X				
Shaw et al. (2016)			X		X		X
Whitehead et al. (2019)	X		X				
Witkins (2020)				X			

Education in Undergraduate Curricula

Historically, nurses have received an inadequate amount of content regarding substance use and addiction in their undergraduate curricula (Gerace et al., 1995; Witkins, 2020). Findings from the more recent study exploring the beliefs of 64 nursing students regarding prenatal marijuana use demonstrated that while some content regarding substance use had been provided

in a maternal child course, marijuana use was not perceived by these students to be harmful to the fetus (Witkins, 2020). Even after receiving educational content, 82.8% of the nursing students in this study reported the belief that marijuana use was "appropriate and safe during pregnancy" and had no effects on the fetus (76.6%; Witkins, 2020, p. 17). Providing additional educational content and opportunity for learning might be critical to ensuring students understand that marijuana use is not recommended for use during pregnancy and the safety of its use for the fetus is unclear (AWHONN, 2018; Committee on Obstetric Practice, 2017).

The stigma that exists around substance use can often be attributed to lack of knowledge and education. Hooks' (2019) study findings highlighted the need for more educational interventions regarding substance use to increase empathy and reduce stigma in midwifery students. In Hooks' study, the level of empathy participants exhibited toward women who used substances during pregnancy significantly improved after participating in an educational intervention. One study conducted with medical residents demonstrated that after working with pregnant women using substances in a clinical setting, residents' attitudes improved and comfort level with communication increased (Ramirez-Cacho et al., 2007). These findings have implications for how care outcomes could be affected by education that increases communication skills and knowledge levels of substance use.

Education for Student and Practicing Nurses

Additionally, while the use of marijuana is not recommended during pregnancy, caring for this population of women with inaccurate and inadequate knowledge regarding substance use could be counterproductive and might perpetuate stigmatization. Brooks et al. (2017) reported the need for marijuana-specific education for healthcare providers. Consistent findings in a handful of studies exploring physician's knowledge regarding medical marijuana use

demonstrated that overall knowledge of marijuana use and safety is lacking (Brooks et al., 2017; Michalec et al., 2015). Health education regarding patient marijuana use in any setting has not kept up with its growing legalization. Only recently have nurses been given guidelines for caring for patients who use medical marijuana (Russell et al., 2018), although no guidelines have been identified for nurses regarding the care of pregnant women who use marijuana either recreationally or medically. Additionally, not only are nurses expected to understand the implications of marijuana use on the patient's health but they must also understand the legal issues of its use to protect their own licensure (Russell et al., 2018).

In a study examining the experiences of midwives caring for women who used alcohol and other substances during their pregnancies, Whitehead et al. (2019) reported that midwives had largely positive attitudes regarding these women but found variability between knowledge and attitudes of substance use during pregnancy. Most of the midwives had high levels of knowledge of the potential risks of substance use during pregnancy but reported a lack of training on how to screen for substance use or provide appropriate substance use/avoidance education. They also identified that while the midwives were knowledgeable about substance use, the lack of training led them to believe it was not important to ask about substance or alcohol use during routine visits because women should know better than to use them during pregnancy. More importantly, while the midwives knew about interventions, they were not taught how to implement them, thus missing opportunities to adequately screen and counsel their clients. Interestingly, Jenkins (2013) reported that midwives who were less experienced but better educated had more positive views toward these women.

Studies of the effect of education on the attitudes toward substance use of patients had few clear answers. Findings from Neary's (2018) study indicated substance use education was

not enough to make a difference in the therapeutic attitudes of perinatal nurses; no difference was apparent for education provided in their pre-licensure program or as supplemental professional education in the workplace. Ford et al. (2008) reported that education received in the workplace was not enough to improve nursing attitudes toward patients using illicit substances, estimating that 80-90% of substance-focused education had no impact on the behavior of the nurse. However, other studies reported contrary findings. Selleck and Redding's study (1998) identified education as critical in improving attitudes of caregivers toward patients experiencing addiction. Further support for education was provided by Seybold et al. (2014). In their study of 70 healthcare personnel, bias toward pregnant women using substances in rural West Virginia counties decreased after participating in an educational workshop focused on improving the provider-patient relationship (Seybold et al., 2014). Additionally, Fonti et al. (2016) conducted a study with midwives and students of midwifery to determine participants' perceptions of substance use during pregnancy. Participants in this study demonstrated higher levels of empathy and compassion than other groups, thus potentially explaining at least in part the lack of documented need for more education regarding substance use. It is possible that in training to become a midwife a significant amount of advanced education had already occurred and empathy levels might have been higher to begin with in this group than others. In other studies, findings demonstrated that higher levels of nursing knowledge and education related to substance use correlated with more positive attitudes toward pregnant women who used substances (Corse et al., 1995; Finnell et al., 2019; Ludwig et al., 1996; Miles et al., 2014; Selleck & Redding, 1998; Seybold et al., 2014).

Implications of Education

Findings from several studies reported that as nurses and nursing students were provided an opportunity to engage in substance use education and training, their attitudes became less harsh and judgmental (Corse et al., 1995; Ludwig et al., 1996; Miles et al., 2014; Selleck & Redding, 1998; Seybold et al., 2014). Additionally, when nurses had more knowledge regarding substance use and its effects, satisfaction with the care provided improved for the patient and the nurse, which in turn, might lead to improved health outcomes (Finnell et al., 2019). Thus, having a broad understanding of the experiences of perinatal nurses and their knowledge of prenatal marijuana use has broad implications for improving care outcomes.

Caring Attitudes Could Bring About Behavior Change

The final theme identified in this review was when nurses developed caring relationships with patients, there was an opportunity for patients' behavior change to occur. However, there was often a lack of understanding of what the term "care" meant in nursing as multiple definitions could be used (Feo et al., 2018). Caring plays a multifaceted role in nursing that must be understood to envision how nursing care has such broad potential to impact patient outcomes. Both fundamental nursing care and the caring behaviors nurses exhibit are foundational to a therapeutic nurse-patient relationship, encompassing both physical and moral aspects of nursing (Feo et al., 2018).

Fundamentals of Nursing Care: The "What" of Nursing

Physical tasks nurses perform to promote healing and wellness in the nurse-patient relationship are the fundamental basis of nursing care. These can be described as the "what" of nursing. These tasks are a depiction of what nurses *do* in the nurse-patient relationship. Included,

but certainly not limited to, are assessing, providing safety needs, hygiene, nutrition, skin care, dressing changes, bowel and bladder care, mobility, rest and sleep, and medicating (Feo et al., 2018). The focus of these tasks is primarily on the physical needs of the patient and might range from simple to complex. This care is often what is thought of when the phrase "nursing care" is used (Feo et al., 2018). However, these tasks are only a part of the care the nurse provides.

Compassionate Care: The "How" of Nursing

Compassionate caring could ideally be described as the "how" of nursing. While Watson (2008) described caring as the essence of nursing, compassionate caring goes far beyond the physical needs of the patient. Further, it could be described as the moral nature of nursing and when done fully, it has the potential of improving quality outcomes when nurses create meaningful connections with patients (O'Nan et al., 2014). Compassionate caring is an intensely human practice that is essential to a holistic view of nursing. With caring and compassion underpinning the motivation for authentic practice, the stories, meanings, connections, and understanding that occur within a nurse/patient relationship have the potential to impact lives (Watson, 2012). Watson described caring as a "human-to-human relationship" (cited in Lukose, 2011, p. 29). Duffy and Hoskins (2003) developed the quality caring model. Regardless of the framework, person centered, relational care is a significant contributor to positive patient outcomes (Duffy & Hoskins, 2003; O'Nan et al., 2014; Watson, 2008). This holistic view of compassionate care is embodied in the practice of nursing.

Substance Use, Addressing Stigma, and Caring

Both modes of caring are essential when caring for women who use prenatal substances. "Human caring is required when curing is possible but especially when curing has failed"

(Fawcett & Desanto-Madeya, 2013, p. 415). Compassionate caring could be used as a foundation for making authentic connections and building relationships with women who use substances prenatally (Blasdell, 2017; Duffy & Hoskins, 2003; O'Nan et al., 2014) whether these substances are alcohol, tobacco, marijuana, or opioids. Nurses caring for pregnant women who use marijuana and other substances are a vital source of support and education.

In providing care to this vulnerable population of women, it is important that nurses identify personal biases and negative emotions and acknowledge they exist so caring relationships can be created. When care provided is given compassionately and without bias, the potential for behavior change increases (Corse et al., 1995; Fonti et al., 2016; Miles et al., 2014; Selleck & Redding, 1998; Seybold et al., 2014) as does the potential for positive health outcomes in this patient population (Duffy & Hoskins, 2003; O'Nan et al., 2014). Nurses who demonstrate caring behaviors are better able to provide support and comfort during stressful periods of time for vulnerable patients. Azizi-Fini et al. (2012) stated that "caring behaviors can improve the quality of care and thus, cause a sense of security, reduction of anxiety, and the consensus between caregiver and care recipient" (p. 37). Women who feel stigmatized or marginalized by society such as those who use any type of substance during their pregnancies might only seek care willingly during this time out of concern for their unborn child (Fonti et al., 2016). The relationship formed between the nurse and the patient might potentially be the only time these women feel truly cared for (French, 2013). When nurses set aside personal biases and are present with these women while practicing authentic caring, a therapeutic and healing relationship can occur (Cohen, 1991; Swanson, 1993).

Filling a Gap in the Literature

There was a significant gap in the literature exploring the experiences of perinatal nurses who cared for women who used marijuana during their pregnancies. Little is known about how nurses view these women or what their beliefs are about prenatal marijuana use. While some research has been conducted examining the attitudes and beliefs of physicians, midwives, and nursing students toward women who used a variety of substances during pregnancy, prior to this study, no research was identified examining the perceptions of perinatal nurses toward marijuana use during pregnancy. Marijuana use is continuing to become more accepted in U.S. society and, based on current trends in use (Volkow et al., 2017), nurses will potentially see increasing numbers of pregnant women using some form of marijuana. Further, depending on the state of residence, the use might be either legal or illegal, which further complicates the issue. Understanding the experiences of these nurses and the attitudes in which they approach care was an important tool in addressing potential stigma and reducing barriers to receiving perinatal care for these women. Nurses have the potential to significantly impact patient care outcomes; however, for that to happen, a deeper understanding of how this patient population is viewed was needed.

Conclusions

Undoubtedly, marijuana use during pregnancy is only one aspect of the larger issue of substance use. However, with more states legalizing the use of marijuana, there is considerable potential for increased use during pregnancy (Volkow et al., 2017). Perinatal nurses will almost certainly provide care at some point to a pregnant woman who uses marijuana, as did the nurses in this study, when they spend a significant amount of time at the bedside during care delivery. The attitudes and beliefs they bring into their care practices have the potential to significantly impact

the care they give (Adams et al., 1990; Alexander, 2017; Corse et al., 1995; FitzGerald & Hurst, 2017; Ford, 2011; Ludwig et al., 1996; Maguire, 2014; Seybold et al., 2014). Additional research is needed to explore the views and beliefs of these nurses to determine any potential barriers that might affect health outcomes of both the woman and her child. Providing compassionate, supportive care should be a central goal during each patient encounter and increased knowledge and understanding might potentially influence care and healthcare outcomes for the better (Duffy & Hoskins, 2003; O'Nan et al., 2014).

As nurses care for patients with substance use issues in nearly every healthcare setting, findings from this literature review demonstrated the vital need for further research examining what is taught in undergraduate curricula regarding substance use in every population and how nurses could facilitate more effective communication with their patients who use them. Clearly indicated by the results from these studies, nurses who care for pregnant women who use substances need more substance-focused education, and more specifically marijuana education, to augment their current knowledge. To better ensure this happens, undergraduate nursing programs should potentially review their curricula and determine how and where to introduce substance use education and communication strategies for students. Additionally, healthcare systems should consider providing continuing education not only for practicing nurses who work with the general patient population but also for nurses who work in specialty areas that provide care to vulnerable populations. Findings from this study provide a potential direction for much needed research in this area for both student nurses and practicing nurses. Because no research was identified in this comprehensive search of the literature exploring this concept, this research study helped to fill this identified gap.

This chapter contained a discussion of the theoretical underpinnings that guided this study and a comprehensive discussion of the literature reviewed in exploring the phenomenon that served as the background and drive for the study. Chapter III contains a discussion of the research methods and design used in this study. It also includes a thorough description of the methods used for recruitment, data collection and analysis, and ethical considerations I utilized for this study. I also provide a more detailed narrative of my personal background and my interest in this phenomenon.

CHAPTER III

METHODS

Chapter I discussed the background, research questions, aims, theoretical perspective, and implications for this study. Because no literature was identified regarding the phenomenon of interest, Chapter II presented a discussion of the theoretical perspective that underpins this study, a thorough literature review of how nurses perceive general substance use and summarized extant nursing literature, providing important background for this study. The information in this chapter provides an overview of the research methods and design used in this study. Also included are a discussion of the approach to recruitment, data collection, analysis, trustworthiness, and ethical considerations. Moreover, as this was a qualitative study, a more in-depth discussion of my background and stance is also provided.

Purpose of the Study

The purpose of this qualitative study was to explore the experiences of perinatal nurses who have provided care for women who used marijuana specifically during their pregnancies to gain a deeper understanding of their beliefs, feelings, and how they perceived use of marijuana during pregnancy. This study explored, described, and explained the meaning of these experiences as told by the nurse participants.

Research Questions

The following research questions guided this qualitative descriptive study:

Q1 What are the experiences, perceptions, and beliefs of perinatal nurses caring for women who use marijuana during their pregnancies?

Q2 What education, if any, have these nurses received about caring for women who use marijuana during their pregnancies and where did they receive it?

Q3 What are the educational needs, if any, identified by perinatal nurses to guide care for this population?

Qualitative Inquiry

Research methods are chosen to fit the problem of interest (Bloomberg & Volpe, 2019). The profession of nursing places great emphasis on experience and quality of care. Thus, when seeking to understand the meaning found in nursing experience, qualitative research is often chosen as the method of exploration (Kim et al., 2017). Qualitative research seeks to describe the "what" and the "how" of the experience and to provide context for the phenomenon (Bloomberg & Volpe, 2019) rather than defining "how much" or "how many" as seen in quantitative research (Merriam & Tisdell, 2016). Qualitative studies seek to provide a level of understanding for the reader that goes beyond cause and effect or the current conditions of a particular phenomenon and instead focus on the meaning made from the experience (Bloomberg & Volpe, 2019).

Qualitative research has long been used in anthropology and sociology to describe experiences of people or groups of people and to provide context for the way people view their world (Merriam & Tisdell, 2016). During the 1970s, qualitative research took hold in areas outside these fields as researchers began to use qualitative methods to explore worldviews in different settings (Merriam & Tisdell, 2016). The use of qualitative research grew significantly in healthcare research as it lent itself well to a holistic, person-centered approach to discovery (Holloway & Galvin, 2016). It has taken deep root in nursing research where much focus is placed on experience and feeling.

Findings from qualitative studies help one understand what an experience feels like to the participant (Miller, 2010). This perspective offers great knowledge and insight into what it

means to be human and offers a view into unique perceptions of reality (Holloway & Galvin, 2016). In nursing, one important consideration of qualitative research is it offers a deeper examination of factors that have the potential to impact the quality of care (Sandelowski, 2004). Qualitative research methods are often used in nursing to describe a phenomenon from the perspective of the one who is experiencing it (Colrafi & Evans, 2016). Denzin and Lincoln (2011) provided their definition of qualitative research: "Qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them" (p. 3).

Qualitative Descriptive Research to Answer the Questions

While there are many approaches to qualitative research, qualitative descriptive methods are used widely in nursing to provide deep insight into phenomena that are not well understood (Kim et al., 2017). Sometimes viewed as a lesser form of inquiry and unacknowledged in research, qualitative description allows researchers to capture the experience in terms of everyday context whereas other qualitative research methods such as phenomenology and ethnography require the researcher to "re-present events in other terms" (Sandelowski, 2000, p. 336). Qualitative descriptive research might combine elements from various forms of qualitative inquiry to answer research questions and relay a descriptive illustration of events from the participants' perspectives (Sandelowski, 2000).

A qualitative descriptive design is philosophic in tradition; yet, the scope is narrow enough to provide a rich description of the phenomenon (Magilvy & Thomas, 2009). It provides a "comprehensive summary of an event in the everyday terms of those events" (Sandelowski, 2000, p. 336). Using a qualitative descriptive research method in this study provided perinatal nurses an opportunity to view their practice and the patients they provided care to from a broader

lens. This method provided value to nursing as it allowed for a deeper understanding of events stemming from clinical practice and provided information that might be useful in developing new interventions (Magilvy & Thomas, 2009).

As little was found in the literature regarding the perspectives of perinatal nurses who provided care to women who used marijuana during their pregnancies, their point of view was not widely known and the phenomenon was largely unexplored. Thus, to best answer questions about their views and experiences in caring for these women, a qualitative descriptive design provides more rich in-depth data.

Background of the Researcher

A detailed view of my assumptions prior to beginning this study is given here. My clinical background is in perinatal nursing. The context for this study came from over 10 years of experience providing care to women, infants, and families from varying backgrounds in a perinatal setting. My personal experiences in providing care for women from a variety of backgrounds, circumstances, and life stories were the primary motivation for this research. In my years of practice, I witnessed a plethora of attitudes and perspectives regarding prenatal marijuana use from colleagues in this setting.

While marijuana use is legal in many states, at the time of this study, my state of residence allowed no legal use for marijuana other than U.S. Food and Drug Administration (2020) approved medications and CBD oil that contained less than 0% tetrahydrocannabinol (THC; Idaho Office of Drug Policy, n.d.). Because of this, prenatal marijuana use is treated similarly to other substances and law enforcement and child protective services are often involved in the perinatal care delivery model. Hospital social workers are brought into the birth experience when mandatory reporting of prenatal marijuana or other substances use occurs. This involvement might subsequently lead to notification of law enforcement and a hospital bedside

visit prior to discharge. The emotional toll of these visits for the woman and her family could be enormous. These punitive actions and the involvement of the justice system could create significant barriers in the nurse-patient relationship and have the potential to affect the healthcare outcomes of both mother and baby.

I brought several assumptions and preconceived notions into the study:

- In exploring the experiences of other perinatal nurses who provided care for women who used marijuana during their pregnancies, varying degrees of emotion would be encountered from participants.
- The majority of the emotions from participants would be largely indifferent or somewhat negative based on the premise that an innocent life is involved and exposed to a potentially harmful substance through the intentional act of the mother.
- Marijuana use would be perceived as a lifestyle choice that should be avoided during pregnancy.
- Care approached with a negative attitude could create significant barriers to care. Many women might choose to forego care rather than experience perceived stigma.
- There is a potential for women to experience stigmatization from their nurses related to their use of marijuana during pregnancy.
- Participants would have received little to no education in either their schooling or from their employers regarding prenatal marijuana use.
- Any knowledge of the effects of prenatal marijuana use would not be based on evidence but likely on speculation.
- Because marijuana laws are different in every state, it would be likely that confusion and a lack of understanding would be expressed by these nurses.

- Regardless of attitudes and beliefs of the nurses, there would be the potential for therapeutic, patient-centered care delivery.

Knowing that any negative attitudes by the nurse in care delivery could create significant barriers not easily overcome in receiving healthcare services, I strongly felt this phenomenon was something that needed to be further explored. In this study, I sought to find how nurses made meaning of their care experiences with these women and to learn from their perspectives. An additional desire was that areas identified in this study for future research might potentially lead to educational interventions that would improve care outcomes for these women and their infants.

Methods of Data Collection

Participants and Setting

Nurses might provide care for pregnant women in any number of healthcare settings; however, this study utilized a purposeful sampling of nurses who provided care to women in the perinatal setting. One main reason for focusing on this group of nurses was the care they provide to women during this vulnerable period is essential in ensuring safe and quality care during the birthing and post-birth periods to promote positive outcomes for mother and baby. Purposeful sampling provides information-rich insight into the phenomenon being studied when resources are limited (Bloomberg & Volpe, 2019).

Participants in this study were drawn from a homogeneous group; thus, purposeful sampling allowed me to focus on similarities between participants and "narrow the range of variation" (Palinkas et al., 2015, p. 534) that might be found if focus was placed on a more varied group of nurses. Purposeful sampling provided the opportunity for deep understanding of unique contextual factors that exist in a perinatal nursing setting (Bloomberg & Volpe, 2019).

This type of sampling aligned well with the focus of qualitative descriptive research in providing a powerful description of how perinatal nurses felt about this phenomenon or how they viewed it (Colrafi & Evans, 2016). Exploring the experiences of these nurses provided a rich narrative and allowed for an in-depth understanding of the phenomenon.

Inclusion criteria for participation in the study were as follows: (a) registered nurse; (b) current practice in a labor, delivery, recovery, or postpartum (LDRP) setting; (c) provided care to at least one woman who used marijuana (either medical or recreational) during pregnancy; and (d) willingness to participate in an audio-recorded and/or video-recorded interview. I screened potential participants prior to data collection to ensure the inclusion criteria were met.

Because of the qualitative nature of the study, the number of participants recommended for inclusion varied. Evidence demonstrated that smaller numbers of participants might yield a significant amount of rich data sufficient for the study or, conversely, the smaller number might not yield adequate data, thus requiring further participant interviews. In either case, the number should be flexible and based on data saturation rather than a specific set number of participants (Merriam & Tisdell, 2016). While the minimum number of participants expected to participate in this study was between 5 and 20, saturation of data was achieved with 13 participants.

Recruitment

To reach potential participants from diverse areas of the country and increase the likelihood of varying legal and social perspectives regarding marijuana use, recruitment was done via social media and through snowball sampling. Recruitment notices for individual, semi-structured in-depth interviews were posted on the social media platforms Facebook and LinkedIn. These notices were shared on my personal social media pages and to the pages of several professional nursing organizations such as the AWHONN—Idaho, American Nurses

Association—Idaho, Teachers Transforming Nursing Education, Nurse Leaders of Idaho, and Nurses with Cards. Those viewing the notice were asked to share it via their own personal pages or to others who might have an interest in participating in the study. The notices contained a description of the study and my email contact information (see Appendices A and B).

Participants were screened prior to being interviewed and chosen for participation in this study if they met the inclusion criteria and interviews were continued until saturation was achieved. All participants in the final sample (see Table 3.1) were registered nurses with current practice in LDRP settings; each had provided care to at least one woman who used marijuana during their pregnancy and were willing to have their interview audio and video recorded. All participants identified as female and had a broad range of experience in the perinatal setting. Participants also had a variety of educational levels. Each participant was given the opportunity to choose a pseudonym to protect their confidentiality for this study and the pseudonyms were used during the discussion of the findings.

Table 3.1

Demographic Characteristics of Participants

	Participants	
	n	%
Gender		
Female	13	100.0
Male	0	0.0
Unit of Practice		
Antepartum	0	0.0
Labor and Delivery	5	38.4
Labor, Delivery, Recovery, Postpartum	1	7.7
Mother-Baby	6	46.2
Postpartum	1	7.7
Years as Registered Nure		
<1	1	7.7
1-5	2	15.4
6-10	3	23.0
11-15	2	15.4
16-20	1	7.7
21-25	1	7.7
>25	3	23.0
Years in Perinatal Setting		
<1	1	7.7
1-5	2	15.3
6-10	4	31.0
11-15	2	15.3
16-20	1	7.7
21-25	2	15.3
>25	1	7.7
Highest Educational Level		
Associate Degree in Nursing	2	15.3
Bachelor of Science in Nursing	10	77.0
Master of Science in Nursing	1	7.7
Doctoral degree	0	0.0

Ethical Considerations

Conducting ethical research is not only a moral obligation of the researcher but also crucial in minimizing potential harm to participants and producing quality research (Bloomberg & Volpe, 2019). Prior to any recruiting or collection of data, approval from the Institutional Review Board (IRB, see Appendix C) at the University of Northern Colorado was obtained for the study. Potential ethical issues included in this study were informed consent, maintaining confidentiality of the participants, and risks of participation. I utilized several strategies to ensure ethical responsibility in the study.

Informed Consent

Prior to scheduling interviews and beginning data collection, informed consent (see Appendix D) was obtained from the participants. A brief description and purpose of the study was provided to participants electronically through the Qualtrics® platform. Informed consent and permission to both audio and video record the interviews was electronically obtained from each participant. Participants were instructed to make a copy of the consent for their records and one copy was kept for the research record in a secured drive. Once consent was obtained, I reviewed and screened the demographic forms and informed consent, and then scheduled the interviews with the participants. Before the interview, I gave participants the opportunity to ask any questions they might have had regarding the consent and/or the study. Only when all of their questions were answered did the interviews begin.

Confidentiality

Part of the ethical obligation of the researcher is to protect the participant's personal information and keep it safe from unauthorized access (Bloomberg & Volpe, 2019). Absolute anonymity cannot be guaranteed in any research study, especially when personal interviews are conducted (Bloomberg & Volpe, 2019). However, measures were taken to protect the identify of

participants in this study. Participants were informed their identities would be protected and remain confidential. They were asked to choose a pseudonym, if desired, to aid in confidentiality or if they had no preference, they were informed I would choose one for them for use within the study. No identifying information was used in the study to link the participant with her responses. Participant responses were aggregated to further minimize the chance of identification. Participants were informed they could withdraw from the study without any penalty or consequence. I also asked permission to contact participants for follow-up questions and to review themes developed from the interview.

Risk of Participation

The perceived risk of participation in this study was minimal. As demonstrated in findings from the literature, the use of substances during pregnancy could bring out strong feelings from society. Because the topic of interest in this study was controversial, participants might have felt uncomfortable in sharing their feelings or beliefs about it. Some participants might have experienced strong emotions based on personal experience with the topic. Participants were informed they could withdraw from the study and the interview at any point in the process without penalty and any questions they did not feel comfortable answering could be skipped. Finally, there was no cost to participants for inclusion in this study other than their time spent in the interview.

Benefits of Participation

While there were no direct benefits for participating in the study, participants were provided a $10 gift card (funded by me) as a token of appreciation of their time for participating in this study. Additionally, participants were informed their participation in the study might provide personal insight into their feelings, beliefs, and attitudes regarding prenatal marijuana

use and their personal behaviors. Additionally, participants might perceive an indirect benefit from participation knowing their time was spent in contributing to research that might potentially serve to improve patient care outcomes and educational opportunities for nurses.

Data Collection

The primary method of data collection for this study was semi-structured, in-depth individual interviews conducted face-to-face (n = 1) or via the Zoom video conferencing platform (n = 12). Interviews are commonly used in qualitative research because they elicit rich description of the phenomenon being studied (Bloomberg & Volpe, 2019). Further, they allow for an in-depth exploration of the attitudes, beliefs, and perceptions of the participant regarding their experiences (Bloomberg & Volpe, 2019), thus appropriate for a qualitative descriptive study. The Zoom video conferencing platform was used in part because of the geographical considerations and the coronavirus pandemic conditions present at the time of the study. The interviews were scheduled at a time most convenient for the participants.

After receiving informed consent and answering any questions the participant might have had about the consent and study, participants were asked to respond to basic demographic information (see Appendix E) such as the number of years they had been a registered nurse, the number of years they had practiced in a perinatal setting, gender, level of education, and specialty area where they primarily worked. The interviews were both audio and video recorded with the built-in recording function of the Zoom platform and a digital audio recorder to compensate for potential technology failure.

During the interviews, primarily open-ended questions were asked using an interview guide (see Appendix F) to help maintain consistency in the interview process. To ensure the questions I developed were valid for use in this study, two master's-prepared perinatal nurses

reviewed the interview questions and provided feedback prior to the IRB application. In addition, the questions were piloted with an experienced labor and delivery nurse and found to be appropriate for use. This semi-structured format allowed the interview to retain structure but also provided flexibility during the interview. It also allowed participants to share their perspectives without undue influence from me.

To discover "the who, what and where" of their experience (Sandelowski, 2000, p. 339), participants were asked to describe their feelings, attitudes, and beliefs about prenatal marijuana use and the women who used it during their pregnancies. Unscripted questions were asked for the purposes of follow-up or to clarify questions I might have had regarding participants' statements. They were also asked to share their thoughts on educational needs of perinatal nurses regarding this phenomenon, if they had any. I also took notes during the interviews to enhance my recall and provide context for analysis.

The interviews were concluded when participants' descriptions of their experiences were felt to be sufficient for the purposes of the study or when the participant indicated they had no more information to share. Each participant interview ranged from approximately 30 to 60 minutes. At the conclusion of each interview, participants were asked if they would be willing to review the themes developed from the study once completed to ensure accuracy and their agreement with the content. They were also given the opportunity to provide further information or clarify anything they felt might be necessary. Participant interviews were terminated once saturation was achieved and no new information was obtained.

Interviews were automatically transcribed via the Zoom platform and then I comprehensively reviewed them for accuracy. Once I completed and verified the interview transcription, the audio/video recordings were deleted from all recording devices. The transcripts

were saved in my office on a secure, password protected server only I had access to and shared only with my research advisor and doctoral committee as needed. Some additional questions surfaced during review of the transcripts and participants were emailed to provide clarification of their responses (see Appendix G).

Data Analysis

Data analysis began after the first interview was completed and continued with each interview as recommended by Bloomberg and Volpe (2019). This allowed me to recognize when saturation had been reached. This method of analysis is often used in qualitative research and included the following steps:

1. Review and explore the data to identify overarching ideas and gain a feel for the "story" and overall sense of the data.
2. Re-read and examine the data to determine if any patterns emerge.
3. Code the data into conceptual categories identifying themes and relationships that emerge.
4. Revise the coding scheme to add, eliminate, or collapse codes.
5. Formulate findings statements and provide pertinent participant quotations.
6. Key findings are summarized in rich descriptions of participant experiences.
7. The findings are validated through member checks with participants.

After transcription, conventional content analysis was used to analyze the individual words or phrases the participants used during the interview. This method of analysis was appropriate for this study as a limited amount of information was available regarding this phenomenon (Colrafi & Evans, 2016). The software program NVivo 12® was used to organize the data. This allowed the data to be stored, coded, and sorted within one database for analysis.

Further, the use of the NVivo 12 program allowed me to have a visual perspective of interrelated concepts and themes, which enabled the development of higher order structure (Bloomberg & Volpe, 2019).

Qualitative analysis is both a deductive and inductive process (Bloomberg & Volpe, 2019). Both processes allow for full immersion in the data to make sense of the phenomenon and reach a rich understanding of the experience. However, as little was known about this phenomenon, I had no preconceived ideas regarding themes that would develop from the interviews. Thus, inductive analysis was primarily used for coding in this study using the in vivo coding method described by Miles et al. (2020).

The interview data were uploaded into NVivo 12® and organized into meaningful data units or codes that were responsive to the research questions being asked (Merriam & Tisdell, 2016). To be deemed meaningful, these data units needed to be both heuristic and narrow enough to be interpretable without additional contextual information other than that of the study itself (Merriam & Tisdell, 2016). These data units were coded into conceptual themes initially derived from the theoretical and conceptual context of the study. However, as qualitative analysis is iterative by nature (Colrafi & Evans, 2016), new codes emerged from the context of the interviews. Once the initial coding was completed, codes that bore conceptual similarities were regrouped into codes that were mutually exclusive, exhaustive categories (Merriam & Tisdell, 2016). These categories were reviewed and refined, patterns were identified, and meaning was generated from the findings (Miles et al., 2020).

Trustworthiness

To influence practice or theory in any field, a research study must be rigorously conducted. The findings from the study must ring true for readers (Merriam & Tisdell, 2016). Often qualitative research lacks the necessary rigor to achieve the hallmarks of a high-quality

study (Miles et al., 2020). A primary goal of a qualitative study is to tell the story of real-world events in terms of how participants view the event and maintaining trustworthiness is paramount to credible research (Merriam & Tisdell, 2016). Because findings from qualitative research are based upon the researcher's assumptions about reality, conducting research ethically helps to ensure the validity and reliability of the results (Merriam & Tisdell, 2016). Conducting a study rigorously provides a foundation for future research to replicate the study and validate or support the data (Miles et al., 2020). Several strategies to attain rigor as suggested by Miles et al. (2020) were used as a basis to establish rigor or trustworthiness for this study analysis: objectivity, dependability, credibility, transferability, and application.

Objectivity

To ensure objectivity, I acknowledged my personal experiences and potential bias related to the phenomenon and attempted to maintain a neutral stance to prevent researcher bias from influencing the findings of the study. The methods and procedures used for data collection, analysis, and how conclusions were reached are provided. All points of view were considered during the analytic process. A research journal was kept with detailed notes of my thoughts during the analytic process, documenting my ideas relating to participants' significant statements and thematic development. My interpretation of the meaning derived from the themes was also noted in the journal. Further, the transcribed data from the study will be retained and available for future research as allowed by IRB regulations (Miles et al., 2020).

Dependability

To ensure the findings of this study were dependable and performed with "reasonable care" (Miles et al., 2020, p. 305), I made every attempt to conduct the study with integrity and consistency. Methods used to conduct the study were described in detail to provide an audit trail.

Steps taken during the data collection stage were also described and a template of the research questions and the questions asked in follow-up were provided, and the findings of the study were congruent with the research questions. Additionally, once themes were developed, four peer reviewers were enlisted to review the themes and significant statements and to offer input regarding the appropriateness of each to the study.

Credibility

Ensuring the findings of a study make sense or ring true to the reader is important in presenting an authentic view of the experiences of the participants (Miles et al., 2020). I attempted to present the findings in a meaningful way with rich, thick descriptions. All points of view from the participants were considered and discussed in detail and negative evidence was actively sought out. Participants were asked to review the themes as part of the member checking process to ensure they were accurate and reflective of their experiences and given the opportunity to offer additional information. None of the participants offered corrections or clarifications to the data and thus were concluded to be accurate. To further enhance credibility, themes were additionally reviewed by four doctorly-prepared researchers to ensure they made sense and were appropriate for the study.

Transferability

In any study, it is important to determine if the findings might be applied to broader settings or contexts (Miles et al., 2020). The findings were perceived by me to be logical, clearly documented, and fit well within the context of the study. A detailed overview of participant demographic information was provided to ensure transferability and fittingness were established (Miles et al., 2020). While the reader is most often the one who decides if findings are transferrable to other settings, I provided rich, thick description of the participants' experiences

that might allow the reader to transfer the findings to their own setting and context, thus increasing the trustworthiness of the study (Merriam & Tisdell, 2016; Miles et al., 2020).

Application

Finally, for a study to be viewed as having the utmost rigor, the findings must be action oriented and transferrable to clinical practice (Colrafi & Evans, 2016). Further, they should provide value to the reader when applied in practice (Colrafi & Evans, 2016; Miles et al., 2020). The rich, detailed description of the findings from this study have the potential to impact both patient care and patient outcomes when transferred to clinical practice in the perinatal setting through further research, policy development, and education (Colrafi & Evans, 2016).

Limitations and Delimitations

Limitations of the Study

Limitations are inherent to all research studies and this qualitative study was no different (Bloomberg & Volpe, 2019). One limitation was the small number of participants interviewed. In all, 13 participants were recruited for semi-structured interviews. Another limitation was the participants were self-selected. While the results are not transferable to the broader population of nurses, this study was meant to explore the experiences of a specific population of perinatal nurses and the findings potentially bring value to perinatal nursing (Anderson, 2010). Additionally, the findings were limited to the personal experiences of those interviewed and because of subjectivity and because my clinical background lies primarily in perinatal nursing, bias might have inadvertently been introduced into the study. Less credibility is given to qualitative studies than to traditional quantitative studies because of the nature of the research and small sample size. Finally, qualitative research is time intensive and the analysis and interpretation of the data are often difficult (Anderson, 2010).

Furthermore, marijuana use remains controversial and its legal standing is unclear, varying by state. Some participants might have had strong feelings regarding marijuana use during pregnancy on either side of the phenomenon, which might have influenced their choice to participate. There was also the risk that participants might have been hesitant to share their true feelings or responses to the questions knowing they were being audio and video recorded, although every attempt was made to ensure confidentiality. However, nursing is a profession that has strong roots in experience; thus, the findings from this qualitative study might provide value for improving the patient experience.

Delimitations of the Study

Qualitative research can complement findings of quantitative research by providing context and answering the foundational questions of "why," "how," and "what" for a phenomenon (Neergaard et al., 2009). It provides a unique perspective of experience and a richer understanding of contextual data. Delimitations refer to the characteristics of the study defined by the researcher that clarify conceptual boundaries (Bloomberg & Volpe, 2019). Focusing on the experiences of perinatal nurses provided a naturalistic opportunity for understanding specific situations they commonly navigated in practice. In seeking to understand the experiences, beliefs, and views of perinatal nurses who care for women using prenatal marijuana, using a qualitative descriptive method allowed for more in-depth examination of their experiences (Anderson, 2010). It further served to present an understanding of the meaning these nurses assigned to their experiences. This method also allowed for revision of study direction as new information emerged (Anderson, 2010). While the findings are not transferrable to the broader nursing population, understanding these experiences could provide a foundation for future research, transfer to specific perinatal settings, and help us understand what practicing as a

perinatal nurse is like (Miles et al., 2020). This study provided a view of unique perspectives and guided a deeper understanding of the meaning these nurses assigned to their experiences.

Summary

In this chapter, I provided an overview of the purpose of the study, the problem statement that was foundational for the study, and the research questions that guided the research process. Additionally, a discussion outlining the study design and qualitative research, specifically the qualitative descriptive research method, was provided. The procedures for data collection, participant selection, and ethical considerations were also discussed with rationale for these choices. An overview of the data analysis procedure was also detailed along with strategies used for establishing rigor in the study. Gaining a deeper understanding of the attitudes, beliefs, and views of perinatal nurses might potentially serve a deeper purpose in improving care and health outcomes for pregnant women who use prenatal marijuana.

Chapter IV presents the findings from the study. First, I present the themes and subthemes that emerged as I immersed myself in the data. I also present the basic demographic characteristics of the study participants. I then describe the results of this study in relation to the three major research questions by discussing each theme and subtheme using rich, detailed examples of participants' experiences and selected quotations that helped make the meaning of the experiences explicit.

CHAPTER IV

RESULTS

The purpose of the study was to explore the experiences of perinatal nurses who cared for women using marijuana during their pregnancies in an attempt to gain a deeper understanding of the beliefs, feelings, and perceptions of their experiences. The following research questions guided this study:

Q1 What are the experiences, perceptions, and beliefs of perinatal nurses caring for women who use marijuana during their pregnancies?

Q2 What education, if any, have these nurses received about caring for women who use marijuana during their pregnancies and where did they receive it?

Q3 What are the educational needs, if any, identified by perinatal nurses to guide care for this population?

For this study, the analysis involved making sense of the participants' experiences and identifying the meaning participants assigned to their experiences. This chapter provides an overview of the analytic process, demographic information for the study participants, and the detailed findings from the 13 in-depth interviews conducted with purposively selected volunteer participants. Each interview consisted of 12 scripted questions that were asked of each participant and six additional follow-up questions sent to participants for clarification after the initial interview.

Data Analysis

Following the steps outlined by Bloomberg and Volpe (2019) for qualitative descriptive data analysis, the first step in analyzing the data required the researcher to become immersed in the data. To accomplish this, I began my analysis at the conclusion of each interview as I

transcribed the data from the interview. Transcripts were uploaded into the NVivo 12 software program and I recursively read and re-read each to immerse myself in the data. During these readings, I gained a general impression of the experiences of the participants. Conventional content analysis was done with the assistance of NVivo 12 software. The primary goal of this analysis was to inductively extract words or short phrases from participant interviews and categorize them into meaningful themes that captured the essence of the experience of these participant nurses in everyday terms (Sandelowski, 2000). Because there was limited research related to the phenomenon available, inductive coding was utilized to extract significant words and phrases from the participant interviews (Colrafi & Evans, 2016).

First level coding was done to identify meaning units from the participants' statements (Bloomberg & Volpe, 2019; Colrafi & Evans, 2016). Visual patterns were also used to aid in identification of recurrent patterns of words using the capabilities of the NVivo 12 software. Significant statements that signified how the participants experienced the phenomenon were identified and noted by me. During second level coding, conceptually similar codes were then grouped into themes that were developed during the analytic process. The themes were reviewed and refined to convey the meaning placed on the experiences of the participants in terms of everyday language (Sandelowski, 2000). Each category was exhaustive, mutually exclusive, sensitive to the data, conceptually congruent, and answered the research questions (Merriam & Tisdell, 2016).

Findings

The findings of this study addressed the research questions asked regarding how perinatal nurses viewed prenatal marijuana use, what they knew about it, and what they felt might be important for nurses to know. Six themes describing participants' experiences caring for women

who used marijuana during their pregnancies emerged from the research along with several associated sub-themes (see Table 4.1). Many of the themes were generated directly from the words the participants used to describe their experiences of caring for women who used marijuana during their pregnancies and provided insight into those experiences. Each theme is descriptive of the unique perspectives of the participants regarding their care of women who used marijuana during their pregnancies. Everyday language was used to capture the essence of their experiences. During the interviews, participants were asked to reflect upon their nursing practice, both past and present, of caring for women who used marijuana while they were pregnant. Detailed descriptions of each theme along with supporting quotes from participants are presented as a framework for this chapter in the following sections.

Table 4.1

Themes and Sub-Themes of the Experiences of Perinatal Nurses

Theme Number	Theme	Sub-themes
1	Mixed emotions	
2	More and more patients are positive	Policy development Social services involvement
3	Forming a relationship	Learning to have difficult conversations and knowing their story Overcoming bias and judgment Evolving perspectives
4	Effects on the baby	
5	The healthcare team needs to be on the same page	
6	We need to know more	

Themes Identified in This Study

Theme One: Mixed Emotions

The first theme that emerged from the study, mixed emotions, was based in the ambiguous legal and ethical message that marijuana use presented for participants. Every participant in this study had cared for more than one woman who used marijuana during her pregnancy and each voiced a variety of opinions and views regarding the legality of use, prenatal use, medical use, and the gray areas that surround it. In the United States, the legal status of marijuana is not straightforward. The federal government currently classifies it as an illicit substance; however, individual states have authorized its use both medically and recreationally. Participants in the study practiced in states with a variety of differing marijuana legal levels. Notably, 10 participants currently practiced in a state where no legal use was authorized, one practiced in a state with medical authorization only, and two practiced in a state where full legal use was allowed (see Table 4.2). Of the 10 who currently practiced in a state with no legal use, two participants brought dual perspectives to the study having had prior practice experience in states with full legal use.

Table 4.2

Legal Status of Marijuana in Participants' States of Practice

States of Practice	Participants		Fully Legal Use		Medical Use Only		No Legal Use	
	n	%	Yes	No	Yes	No	Yes	No
Current State of Practice								
Florida	1	7.7		X	X			X
Idaho	10	77.0		X		X	X	
Michigan	2	15.3	X					X
Additional States of Prior Practice								
Oregon	2	15.3	X			X		X
California	1	7.7	X			X		X
Georgia	1	7.7		X	X[a]			X
Illinois	1	7.7	X			X		X

Note. Full legal use includes both medical and recreational use of marijuana. [a] Reflects limited medical use of Low THC oil only.

During the interviews, participants shared diverse views regarding prenatal marijuana use. Karen and Melinda were not opposed to any use and felt it might have benefits for the users. Karen began her perinatal practice in California first as a licensed vocational nurse working in newborn nursery and then later as a registered nurse caring for women and infants in labor and delivery, newborn nursery, and postpartum. She described how she cared for many women who legally used marijuana during their pregnancies and her views on the use. She shared she had no concerns with prenatal marijuana use or marijuana use in general, stating users might receive benefit from using it, often self-prescribing it as an alternative to traditional pharmaceuticals:

> I think of these people, as ones that if they didn't use marijuana, they would probably wind up having to be on antidepressants, or you know, other medications, they're essentially using it as medical marijuana. But they're self-prescribing, they kind of go by their own feel as to when they need it. They can do without it. They're just a little more stressed when they're…not using it.

She further described that in her experience there were "different types" of women who used marijuana during pregnancy. She described her belief that some people "use it to kind of help them maintain normalcy…some people need it." She shared that these women were generally very open about their use and "tend to be willing to talk about what's best for the baby."

Other participants did not have such clear-cut feelings about marijuana use during pregnancy, expressing feelings of uncertainty. Janet, a perinatal nurse with over 20 years of experience, shared her feelings of ambivalence toward these patients:

> It depends on why mom used, like because…I've certainly experienced recently kind of a gamut of reactions. There are some that use it recreationally, they did before they were pregnant, and then you know, they're pregnant and they used it for recreation, still [sighing]…then you have moms that came to marijuana for a different reason like they had profound nausea…and she didn't find relief with Phenergan or Zofran and she heard through the community that "this will help your nausea"…and so she comes to using marijuana.

However, most participants shared their feelings that marijuana should not be used during pregnancy under any circumstances regardless of its legal status or substance classification because of the potential for harm to the baby. Despite their views regarding marijuana use during pregnancy, all participants shared their belief that medical marijuana might have a place in health care for certain medical conditions. Annie had eight years of experience in women's health and postpartum nursing and had prior experience in medical/surgical nursing. When asked how she viewed general marijuana use, Annie stated, "To be honest with you…I don't support it personally. …I have, I guess a mixed feeing about it, but more so that I don't support it." However, highlighting the ambivalent nature marijuana use created for some nurses, Annie went

on to explain her reluctant support of marijuana used for medical purposes: “I think that’s part of the, the mixed emotions. ...I can see the benefits of medical marijuana…but because there is an infant involved…that is where it’s a little bit different for me.”

The legal status of marijuana was not viewed as a major factor in how its use was perceived during pregnancy. Only two participants shared the legal status of marijuana mattered to them when considering use during pregnancy. For Hannah, a young new nurse who had been in practice on a postpartum unit for less than a year, the legal status did matter. She stated, “I feel like I’m kind of black and white on that situation, it shouldn't be used just because it's not legal here.” Interestingly, she also shared that if marijuana were to become legal in her state of practice and proven to be safe during pregnancy, she would support its use, demonstrating that legality did play a part in her feelings toward its use.

Similar to Hannah’s views regarding marijuana’s legal status, Gina, who gained her perinatal experience in LDRP, shared her view that its legal standing was an important consideration for her in its use:

> We follow laws…that's kind of how I feel like with my nursing practice, that I'm not going to do anything that's going to jeopardize my license. …I feel like I do my best with patients, but adhering to the laws and stuff like that is an important to me because I feel like with any other thing, I mean, if it was another situation with another illegal drug, like, we wouldn't look the other way anyways, you know, so why would it be with this?

Not surprisingly, both Gina and Hannah practiced nursing in a state where legal use of marijuana in any form remained prohibited at the time of their interviews.

Janet described mixed feelings about the fully legalized use of marijuana in her state of practice. The permissiveness of its use helped her to overcome some of the negativity

surrounding marijuana use that had been ingrained in her since childhood. Specifically, she shared, “I grew up with…drugs are bad [emphasized]…so, it certainly helps me feel like you’re not sneaking it.” However, she reflected that other legal substances such as tobacco and alcohol had been proven to cause ill effects in infants and shared her view that marijuana potentially had similar effects: “Just because it’s legal doesn’t necessarily mean it’s okay.”

Most participants shared the same view that the legal status of marijuana was not a factor in their feelings about its use during pregnancy. Janet’s point that various other fully legal substances were known to cause harm to a fetus during pregnancy was a common one shared by several participants. Melinda explained how she chose to focus on care delivery rather than become entrenched in the legality of a substance:

> It doesn't affect it in my view, my role now is to try to help a woman be as healthy and safe as she can while she's pregnant so she can deliver a healthy baby. So, tobacco was legal. Alcohol is legal. …Diet Coke is legal. You know, there's all kinds of things that are legal that women still really shouldn't be putting in their body every day. …I personally don't care if it's legal or not.

For Teyana and Gina, the legal status of marijuana had less to do with their view of prenatal use than the fact that it was being used at all during pregnancy. Teyana explained, “I would feel no different whether they legalized it here or they didn't, I'd still probably feel the same way. …I guess I don't know if that's necessarily negative or more so just thinking, oh, not when you're pregnant!” Gina reported similar feelings:

> I kind of feel like until they change the laws, you adhere to that and, you know, I think even with pregnancy, I'm just like, my personal feelings on it is just, I mean you're pregnant for crying out loud. You know, like we eat healthier, we do healthier things, we

> make better choices because we're pregnant with children, you know, like yeah, I feel like that's kind of how it should be looked at.

However, medical use of marijuana, even during pregnancy, was viewed differently by participants than recreational use. The difficulty for most participants seemed to come from the fact that a baby was involved when marijuana was used during pregnancy. All participants in the study agreed marijuana had potential medical benefits for those who used it both during pregnancy and for other conditions. Some discussed family members or friends who were significantly helped by its use. Using marijuana for anxiety, coping, or nausea during pregnancy was shared by multiple participants as examples of conditions that might benefit from medical marijuana. Karen stated, "People who have a lot of trouble with hyperemesis tend to find that it calms their intestinal tract." Lisa shared similar views: "I do know that it sometimes does help with morning sickness, nausea, things like that…anxiety…it does have that more calming effect." However, many participants shared the use of more proven traditional pharmaceutical remedies during pregnancy would be more acceptable to them than the use of prenatal marijuana regardless of the benefit.

Many participants expressed their feelings of ambiguity toward medical use, stating they would likely not use it themselves but recognized there might be potential value in some cases. Annie shared her views:

> I don't support it personally. …I know that it's becoming more and more and more legal across the states. …I guess [I have] a mixed feeling about it, but more so that I don't support it. I think that's part of the, the mixed emotions. Yeah, I guess…I can see the benefits of medical marijuana.

Gina shared that she had cared for cancer patients who used marijuana while working on a med/surg unit prior to becoming a perinatal nurse. She described her perception about the differences in use in each of these settings:

> For some reason it feels different to me. I guess it's…a personal view on it, but I'm like, why would I care if they're using it for medical reasons but then I look at it from the OB side and I'm like, but there's a baby on board and it could affect them…one of them, it's just completely that person…with all the chemo and everything else we put into them, what is weed gonna do (laughing), you know? We're putting complete poison into them to try to fix this problem, but yet then you see someone who's pregnant and to me it's like a completely different situation. I think it's just because of the baby…they're not making a decision just for themselves. They're making a decision for both. I think that's part of the reason that it's kind of a catch-22. I know both of them may be used for medicinal things but it's that second person on board that just…warning flags go off.

Melinda shared similar feelings. Prior to working in the perinatal setting, Melinda practiced as a hospice and palliative care nurse. Marijuana has been used widely in the palliative care setting to effectively alleviate symptoms of pain and nausea at the end of life (Meuche, 2017). She discussed her feelings about caring for patients suffering from acquired immune deficiency syndrome in the 1980s and how it affected her view of marijuana use in other populations:

> I get the legitimacy of this as an intervention…when you work in end of life, every single minute matters and life is precious on every single level. And I also know what it's like when a human being has, is overcome with certain symptoms that keeps them from being present in the room with people that they love and if there is one small thing that will change that, that's natural, and let's face it, it is pretty frickin' natural right, it grows in

> the ground [laughing]. It allows human beings to stay connected and be more present for those life moments that really, really matter. I don't see that there's anything wrong with it, I don't see that there's any harm in that.

She also shared that through her life experience and practice in various clinical settings, her judgments of marijuana use in any patient population "don't exist in this realm like they did when I was younger."

Findings from the literature supported the views of mixed emotions expressed by participants in this study. Specifically, Raeside (2003) reported that nurses experienced feelings of frustration toward pregnant women who used substances during pregnancy. Ford (2011), Jenkins (2013), Maguire et al. (2012), Ludwig et al. (1996), and Selleck and Redding (1998) reported similar findings with nursing attitudes demonstrably negative toward substance using pregnant women. Other studies (Doleman et al., 2019; Fonti et al., Geraghty et al., 2018; Whitehead et al., 2019) reported compassion and empathy toward this population of women and one lone study (Witkins, 2020) with nursing students revealed general overall positivity from nursing students toward women using marijuana during their pregnancies. While serving to answer research question one in part, these findings demonstrated this was a complex issue with many layers to consider.

In summary, the theme of mixed emotions emphasized the array of feelings and beliefs participants experienced when considering their views on prenatal marijuana use. Legality had little bearing on how marijuana use was viewed during pregnancy. The larger consideration was another patient was involved in care: the baby. Most participants viewed use during pregnancy negatively in part due to the unknown effects it might have on the baby. A small minority of participants did not view prenatal marijuana use as a concern, citing its potential medical benefits

for the woman. Further, all participants reported a belief that medical marijuana had potential value to patients in a broader sense and should be further explored regardless of mixed emotions. This theme served to answer in part Research Question 1 regarding the experiences, perceptions, and beliefs of these perinatal nurses.

Theme Two: More and More Patients are Positive

Theme two revealed important social and practice issues resulting from a perceived increase in pregnant women using marijuana. Most of the participants reported seeing a dramatic increase in the number of pregnant women using marijuana in their workplaces while others described a steady flow. Several participants shared the common view that because of the increase, changes needed to be made in policy and practice. Most of the participants practiced in a state with no legal form of marijuana use, surrounded by states that all had some form of legalized use. This was viewed as a contributing factor to the influx of marijuana positive patients in their units. Terrie began her practice in orthopedics before moving to labor and delivery after two years. With over 10 years of experience in labor and delivery, she explained she had seen many changes and an increase in use over the years. She shared her perceptions of the effect of marijuana's increasing availability:

> When it legalized in Oregon, we saw a bump...but I think it's stayed pretty steady since then. I think just because it was easier to get because Oregon's only an hour away...we even have a lot of patients who live in Oregon...they deliver with us and then when they test positive and we have to report them [to social services], they're like shocked because it's legal where they live. So, we have seen quite a bit of that.

Gina who also resided in a state with no legal use of marijuana shared a similar experience: "It's legal all around us even though it's not here, so we're seeing more." Often

pregnant women living near the state border delivered their babies in this larger metropolitan area. Many participants shared that some of the pregnant women they had provided care for legally purchased and consumed marijuana in their home state and ultimately tested positive for the substance upon admission to the perinatal unit in the state of delivery. This, in addition to the general increase in use perceived by participants, presented a unique set of challenges. The dichotomy seen in states with no or limited legal use, as well as increasing numbers of patients who admitted prenatal marijuana use, drove the need for new policies. Policies in each of their clinical units required social services to be called when a drug screen came up positive for marijuana use, which introduced additional challenges. Two subthemes are discussed under this theme regarding complex issues that arose in a perinatal unit when an increase in marijuana positive patients was seen: policy development and social services involvement.

Policy Development

In a highly regulated industry where nurses are accustomed to having policies to fall back on when caring for patients using diverse substances, the increase in marijuana use raised questions for study participants in how to most effectively address the use. When marijuana was the sole substance being used and little was known about the effects, no specific policies were in place to address how to care for these patients and their babies. Terrie described her experiences in her decade of working in labor and delivery: “I don’t think I saw it that often at first, now I see it fairly frequently.” Similarly, Janet, who worked in a state with full legal use, described one effect the influx of these patients over the last few years had on her unit:

> When I started on the birth center in 2006, it was the rare exception that you would have a mother using anything in pregnancy and now that has shifted quite dramatically and it's

> far more frequent.... We've had to create a lot of new policies and the way we manage infants of mothers who use and pregnancy has shifted quite dramatically, too.

Teyana shared similar frustrations. Practicing in a state with no legal use of marijuana, Teyana discussed her perception of the increase she had seen during her almost decade of experience in perinatal nursing: "It's a lot more common now than it ever was before...especially with the amount of usage, I think more people are using now." In her role as a charge nurse, part of her responsibilities included triaging patients as they came to labor and delivery prior to being admitted for delivery. Included in this responsibility was screening of patients for substance use. Because of the increasing social acceptance and accessibility of marijuana, and the view of many that marijuana is not a drug, Teyana shared that she changed the way she asked these questions:

> I specifically say, *including marijuana* [emphasis added], as many people sometimes don't include that in the illegal substances category .... I think because we're seeing it so frequently, especially in our community, that there needs to be something on like, for instance, do we need a protocol?

As policies were developed for the units, they most often included various methods of screening for marijuana: urine drug screening for both mother and infant, infant meconium collection, cord sample testing, and then almost always social service involvement.

Social Service Involvement

The involvement of social services in the care of women using marijuana prenatally was described by all participants. This process was similar in each state of practice regardless of marijuana legality. Erin who practiced in a state with no legal use described the procedure nurses on her unit took when a woman admitted marijuana use at delivery: "The R-Drug [random drug test] is done on the mom and baby, and the cord is sent for the baby .....there's an automatic

social service consult in place for the couplet and then there's an automatic, CPS [child protective services] is involved because it's Idaho."

Melinda expanded on this procedure by sharing that CPS involvement often included notification of and involvement of law enforcement at the discretion of the CPS worker. Depending on the day, workload, and discretionary power of the CPS authority, law enforcement often made an appearance at the patient bedside while she was still at the hospital. This same process was described by several of the participants as the majority practiced in this state. Even in states with full legal use, the process was described similarly. Annie shared that drug testing was completed for any woman who admitted to using marijuana during their pregnancy and a social service referral was made for those testing positive. Interestingly, even with full legality, she reported that in some cases CPS was routinely involved in the process for prenatal marijuana use.

Many participants described their experiences with the involvement of CPS in intrapartum and postpartum care with mixed feelings. Terrie shared her perception of the process stating, "I see sometimes with the marijuana use [that] Health and Welfare or CPS will get involved and sometimes I think it's a little over the top." For Erin, the situation was described as uncomfortable. She explained that she preferred to be honest with her patients about their care and hospital policies. She described one situation in which she was instructed to keep from her patient that CPS would be coming to talk with her while in hospital care because it would potentially create a flight risk situation. She shared her discomfort with this scenario: "I like to kind of inform my patients if CPS is coming but I was told that I should not do so.... I don't think there would be any CPS involvement on our unit if marijuana was legal." She further shared her discomfort when working with CPS:

> The parents are a little bit shamed, even if it was like early in pregnancy or during pregnancy because it's illegal in Idaho .... anytime that there's CPS involvement, right, it's kind of scary, especially for new parents.. they're just going through this like amazing moment in their lives ....I think it would kind of impact that moment for them a lot.

A common thread described by participants was the concern from their patients that social services and CPS would remove their infant from their care. In her role as the triage nurse admitting patients to the labor unit, Teyana often experienced this scenario. She shared her approach to this concern, explaining to her patients that the CPS workers were not "out to get" the patient and they simply wanted to support the mother by ensuring she and her baby had all the resources they needed and the baby would be safe once discharged. Other participants voiced similar strategies to approaching this concern, sharing that in their experience infants were not removed from the mother's care for solely using marijuana.

To summarize, the theme of more and more patients being positive also served to answer the research question exploring the experiences and perceptions of these nurses. Moreover, the theme was strongly supported by the literature. The experiences these participants shared regarding caring for increasing numbers of patients who tested positive for marijuana was reflected the literature with an estimated 3 to 34% of pregnant women using it at some point during pregnancy (Metz & Stickrath, 2015). As the most frequently used drug during pregnancy (Alshaarawy & Anthony, 2019; Substance Abuse and Mental Health Services Administration, 2020; Young-Wolff et al., 2017) and its increasing social and legal acceptance, it is likely these numbers will increase.

Theme Three: Forming a Relationship

One of the predominant findings from this study was that forming a relationship with their patients helped participants have a deeper understanding of them and their life circumstances. Most participants relayed their belief that providing excellent care for their patients was their primary responsibility as a nurse—not passing judgement or finding fault with the choices the women made in life. Forming this meaningful relationship with their patients was perceived by participants as a priority strategy in providing the best care they could give. Knowing how to talk with patients about their marijuana use and gaining a deeper understanding of their story and why they were using marijuana was perceived as vitally important. Participants shared how they did their best to be supportive and overcome personal beliefs and bias surrounding marijuana use during pregnancy to care for their patients. Participants also discussed their views regarding how they were successful in forming relationships with their patients. Finally, participants shared with me how their perspectives had changed over time or why they might not have changed. These concepts are discussed in-depth in the following three sub-categories under this theme: learning to have difficult conversations and knowing their story, overcoming bias and judgment, and evolving perspectives.

Learning to Have Difficult Conversations and Knowing their Story

Some participants shared that talking with patients about their use of marijuana during pregnancy was often uncomfortable and they felt ill-prepared to engage in the discussion. Because the use of marijuana, especially during pregnancy, remains controversial regardless of legal status, initiating the discussion about its use was described as challenging. Having been a perinatal nurse for most of her decade-long career, part of Annie's role as a staff nurse was

providing education to her patients. She shared her love of her job and working in the role of an educator. She was often paired as a preceptor with unit orientees and leadership students from local colleges, teaching them the ropes on her unit. Communication was a large part of this role, both with the student and with the patient. However, even though both recreational and medical marijuana were legal in her state of practice, Annie described her feelings of discomfort about having conversations regarding marijuana use with her patients:

> Honestly, it's taken me, it's taken me a little while to get a little bit more comfortable with it. I'm still not as comfortable as I would like to be. Maybe, sometimes I'll stumble over my words, but at the same time, I just want to make sure that I'm completely honest and transparent with her.

Jenny shared similar views. Where she initially began practicing as a nurse, marijuana use was not legal in any form and testing was done on every patient who was suspected of using it. Jenny conveyed that in her unit, the use of marijuana during pregnancy was not only a large concern but was also described as "taboo." After a few years of practice, Jenny moved to her current place of residence and found starkly contrasting views. In her state of practice, medical use of marijuana was legal but full recreational use was not. However, the use of marijuana by pregnant women in this state was treated very nonchalantly because the practice was so common. She shared that she struggled to talk with her patients about their use in this environment:

> I don't know that I sit down directly or have time to really even talk to them about their illegal drug use that we know harms their baby. …it's hard to broach any of those kinds of topics, because you're not going to solve their problem…in a 12-hour shift.

Several participants identified specific needs they felt would be helpful in facilitating more effective, therapeutic relationships with patients who admitted to using marijuana during

their pregnancies. Learning how to effectively talk to these patients about their substance use and becoming comfortable in asking the hard questions were identified as the primary needs to perform their job effectively and compassionately. A few participants specifically identified scripting or having specific training in how to have these difficult conversations. Teyana shared that in her role as a charge nurse that often, other nurses would come to her with concerns: "Being with other nurses, one of their main complaints or issues is not knowing how to speak to these patients, and coming to me with, I don't want to be judgmental. How do I approach this?" In her role as a charge nurse, Carrie similarly shared that she worked with several new nurses who did not have the necessary knowledge to have these difficult conversations:

> It's that whole not being judgmental, making sure you're putting that into a box so your patients don't see it, to…support their other needs, because again, if you close them down in one area, they're not going to open up in another area with you and you're still their nurse, and I think just being taught how to do that respectfully, to do that confidentially. We have a lot of new nurses who are very uncomfortable about even collecting urine for a drug screen. You know, they weren't taught how you correctly do that.

Further supporting Teyana's views of nurses needing additional instruction in how to have these conversations, Annie discussed her own thoughts on what would make her more effective in her role:

> I would like some scripting on how to talk to the patient about this. You know, when they come to our floor, they've, they've already delivered two hours ago. …I would like some scripting on how to educate the woman about, "Well, this is important. This is why we're testing. Testing the baby's meconium because it is important because it could have

> affected your baby." And so just, if I could have some scripting on how to have a quality conversation with the patient.

Annie, along with several participants, shared that they believed this education would best be introduced while students are learning to be nurses in their undergraduate education and included in their orientation to the unit when they begin practice.

Others voiced concern over presenting legal implications to their patients. As a staff nurse practicing in a state with no legal use, Hannah described her desire to have a better understanding of how to talk with her marijuana-positive patients to not only provide them with the best information but also to protect her nursing license. She explained what she felt she needed to be successful:

> How to kind of present that information in the best way possible, because everything is legal in the health healthcare system too, making sure that you're using the right terms, explaining it the right way to protect yourself in the hospital. I mean, yeah, just some, at least some general guidelines, and usually the doctor presents all that information,

Carrie expressed similar views, sharing that often learning the way to approach patients came from the experience of other nurses rather than from any formal education:

> We have the questions we have to ask in the triage form…but some people feel uncomfortable…asking those questions especially if there's other people in the room because you don't want to just make assumptions as well, even though a lot of times we go off of assumptions, um and so I think that's a whole different aspect and just knowing how to do that correctly how to do that legally, I don't even remember being taught that, it's just something you developed over the years and people have passed down and said, "Nope do it this way."

Supporting evidence for these needs was identified in the literature. Clear guidelines from the National Council of State Boards of Nursing (Russell et al., 2018) stated that nurses must understand the legal implications of marijuana use as well as the physical to protect their licenses. In the experience of these participants, these things had not yet occurred at sufficient levels.

Other participants shared they did not experience the same discomfort in having these conversations that other participants expressed. Terrie shared that some of her family members have struggled with addiction: “I have a heart for addicts. …I’ve seen how it works. I think a lot of nurses, or people in general have a preconceived notion about what addiction is. …I try really hard to…see the person.” She expressed she was able to approach these conversations more comfortably because of her views: “When I work with nurses who get really uncomfortable when they take care of drug use and addiction issues…it’s just kind of funny to me. …it's not a secret to them that their addicts, or that they're using.” She shared that her personal approach to these discussions was to always be “very straightforward” to minimize any miscommunication that might occur.

Teyana shared how in addition to her work in perinatal nursing she had also volunteered her time as a foster parent, caring for several infants over the past few years. Many of these infants were born to women with a history of substance use and addiction issues. She credited these experiences with helping her to become comfortable in her role as a nurse in talking with mothers about their marijuana use:

> It may just be due to my history of working with CPS, foster care, drug exposed babies. So, because I've worked in the field and around this topic, it's comfortable for me. I

> usually can build a pretty good rapport with my patients, so it's never been an issue. That might be just because it's something I'm comfortable with discussing with the patients.

A majority of participants shared their views that knowing some of the patient's back story helped provide deeper understanding of why they chose to use marijuana during their pregnancy and helped them to understand their patient's life circumstances. Carrie shared that in her experience, patients who used marijuana during their pregnancies had a myriad of social issues that impacted their overall health status:

> I have found there are more women that are long term users on marijuana have a whole social dynamic of issues around them, they're usually lower income class, a lot of times they're not just doing marijuana, you know, they're on meth as well or they have eating issues, we've had patients…completely underweight, and they get in that visceral cycle, that hyper, marijuana hyperemesis even when they're not pregnant. You know, that's kind of their routine.

For Teyana, understanding that her patients more often used marijuana during their pregnancies to cope with the stress of daily life helped her to view them with more compassion.

> It could be abusive situations…they left home at age 15, and they've been on their own …so that's how they cope. …that's what they're finding is helpful and beneficial. …sitting down and talking to them and just hearing that that's the only thing that they have that keeps them going and able to do the tasks that they need. …it's just really very, very fascinating, this specific drug.

Other participants expressed similar views of the social dynamics they had witnessed with their patients who used marijuana. Lisa described her perspective: "I think a lot of them have some unhealthy…lifestyles, honestly." Understanding the reasons why their patients used marijuana

helped to provide important context for difficult or uncomfortable conversations and made the discussion easier. Melinda explained her views:

> And so, for me it's, it's always about a person's, a woman's personal story. …I look at any substance, whether it's THC or anything else that is somehow altering our minds, my question always goes to that what's happening inside this woman's life that she thinks this is her best choice…when you approach a patient with curiosity and openness and you help, you know you ask them questions like, "help me understand how, you know, how does smoking a joint in the morning, add to your quality of life for the day?"

Most participants described that in having a meaningful conversation with their patients, they found the underlying reason for their use of marijuana was often from a perceived medical need such as nausea, stress, anxiety, and coping. While a few participants did share they had cared for patients who used marijuana recreationally, they explained that in their experiences, this type of use was often the exception rather than the rule. Terrie shared:

> I see that quite a bit that the patients that are using marijuana will tell me that it's for nausea throughout the pregnancy. Sometimes for anxiety…or just recreational. Most of the times, though, we see it during pregnancy it's not recreational…they're using it for a reason, like it's not that they're out partying and using marijuana.

Participants shared that often their patients had misconceptions about using marijuana during pregnancy. Gina shared that in one experience she provided care to a young 20 something patient who admitted "Well, I smoked weed my entire pregnancy" for nausea control because in trying to be as healthy as possible for her child she "didn't want to take any…prescription meds." Lisa shared similar stories where patients did not see the harm in using marijuana because it was a natural substance. She described how knowing why her patients used marijuana

might help her to provide better education to them regarding the use. This false perspective by patients that marijuana use is a recommended drug during pregnancy was one shared by other participants and supported by data identified in the literature. In Witkins' (2020) study, nursing students viewed the use of marijuana during pregnancy as better for the fetus than prescription medications because it was a more natural substance. Current recommendations for use of marijuana during pregnancy from AWHONN (2018), ACOG (2017), and the AAP (Ryan et al., 2018) were it should not be used. Almost all nurses interviewed in this study agreed with current recommendations and many expressed the desire to be able to speak more in depth as to why it was not recommended.

Several participants shared their views that no one learns how to have these difficult conversations while in nursing school. Learning most often occurred from doing it in practice or from watching other, more experienced nurses as they engaged in the conversations with their patients. Many participants shared their feelings that learning how to do this in nursing school as part of their undergraduate education would be the most ideal time for learning to occur. The literature supported these findings when examining the experiences of nurses caring for patients who used substance. Nurses historically reported a lack of training in how to have these difficult conversations (Gerace et al., 1995; Witkins, 2020). Evidence supported that when nurses were provided with tools to help them communicate effectively and given educational information regarding substance use, attitudes toward care and comfort with communication increased (Ramirez-Cacho et al., 2007).

Overcoming Bias and Judgment

Almost all participants in this study viewed prenatal marijuana use negatively, sharing they would not make the same choice for themselves during pregnancy. Most shared the same

view that the baby was an innocent in the situation and the choice to be exposed to this substance was made for them by their mother. Many shared they had witnessed bias and stigma in practice from fellow nurses or from their interdisciplinary colleagues. With over 25 years of experience in perinatal nursing caring for patients using marijuana in both legal and illegal contexts, Lisa shared her view of how judgment toward women using marijuana might potentially affect patient care outcomes:

> I've seen some patients get scared, more so in [XXX, city in Oregon] which is so funny because it's legal there, but I think we got so tired of seeing it there because it was so prevalent, that a lot of the nursing staff was very…just judgmental and kind of rude to the patients when they found out and not very helpful and understanding. …there are a lot of judgments I think that are placed on patients that do use marijuana. Sometimes I think the way that some of us approach…them in the whole educational process and just kind of asking them that question…do they use any drugs? And if they do, …I feel like we need to kind of remove that judgment a little bit more if we can, just because I think it affects their ability to be honest and fully accept help from us and social services.

Other participants shared similar experiences. Melinda had witnessed judgment and bias toward women using marijuana during their pregnancies by her colleagues. She described her frustration with her fellow nurses who were not willing to set aside their personal feelings when caring for these women:

> I hear shaming language. I hear, "You know your baby will (emphasis on will) have developmental problems because of this . . ." there isn't a language of exploring her coping mechanisms or who is she, as a person, they get so zeroed in on this, in their mind, this flaw. That they can't see past that.

Still other participants shared they had experienced some of these feelings themselves. Janet shared she experienced an internal struggle when she provided care for these patients. She was very honest when she shared her frustration with their marijuana use: “I get a little huffy in my mind (laughing).” She reflected on her feelings:

> This part isn’t easy for me to say. Part of the struggle I face is that I feel it isn’t fair to potentially compromise an innocent child who had no say in how their mother’s choices impacted them. To some extent, I feel it’s a selfish choice on a mother’s part to use marijuana during pregnancy. If it’s to manage symptoms, there are other medications that have a known positive effect on symptoms while not compromising the development of the fetus. I’d rather a mother choose those over marijuana, as it seems to be a safer choice.

Other participants described how they felt a significant amount of judgment toward these patients as new nurses just coming into perinatal nursing. Both Gina and Carrie shared their experiences of becoming more accepting as they gained experience as nurses. Carrie explained that as a new nurse in labor and delivery, she often felt judgment toward these women. She described how, over time, she changed her approach to providing care and developing relationships:

> because I was younger in the beginning, I was more naïve when I’d find out a patient was smoking marijuana, and…just because I was taught that recreational use is a big no-no . . . in the beginning I was kind of off with those patients, I would have to kind of do a self-check on myself before entering those rooms, but where it has become so common and I would say myself being older, and learning how to not let my judgment come out on a patient has evolved and has changed. …these patient are usually our…frequent fliers so

> you develop a bond with them throughout their pregnancy because they come in so often …for medication or IV therapy and if you give them that stigma in the very beginning then they close off everything else to you…so I decided to be very open minded, try and put my personal beliefs to the side and still be able to show compassion and not let that affect my patient care as much as it's hard not to.

Gina described having similar experiences as a new nurse and experience shaping her current views. For Gina, as a new nurse caring for a patient using marijuana, she viewed them as "the worst person ever!" She explained that as she has continued to learn and grow in her practice, she had become much less judgmental: "…the longer I've been in nursing, the less I judge. …you just meet people exactly where they're at…because you don't know where they've been. You're here to try and make a difference from where they're at right now."

However, while acknowledging that judgment and stigma occurred in nursing practice, all participants in this study unanimously agreed that providing unbiased care for the woman and forming a relationship with her regardless of their personal views were vitally important in their role as a nurse. Several participants shared their views on how they try to achieve this. Carrie explained:

> As a nurse it's never our job to judge them, to judge a patient you don't ever want to come across as that. You're supposed to be there as a support system. …I really have to take out my…my soapbox and put them away when I deal with these patients just so they don't feel judged so that they know that I'm there to support them, just because it is more common now with our patients.

Janet agreed, sharing that even although she often felt frustration with women who used marijuana while pregnant, she tried to approach each of her patients with an open mind and meet

them where they were at knowing most people do not set out to cause deliberate harm to their babies: “If I focus on use only, I risk compromising her individuality and becoming judgmental. . . my role is to care for her, not pass judgment on her choices. This allows me to remain more objective and my personal views tend to be more removed.”

Many participants expressed the view that being supportive of their patients regardless of how they personally felt about their marijuana use was important to form connections. Further, participants expressed their personal beliefs did not affect the quality of care they provided to their patients. Annie explained, “I may not agree with all of their choices, but I like to think that does not impact the quality of nursing care that they receive from me.” She shared her insight into how she had been able to provide unbiased care in her practice:

> I set my own personal thoughts and beliefs aside when I care for all of my patients. I believe that is the beauty of nursing. We can take care of anyone despite our own thoughts, values, or beliefs that may be contrary to our patient's thoughts, values, or beliefs. In fact, my faith teaches me to love everyone and to treat others as I would want to be treated. I also like to imagine that each of my patients are my own family members. I treat them as I not only would hope my family member would be treated, but how I expect them to be treated. And that is to receive excellent and compassionate care. …I respect them and attempt to build up trust with them by having honest and friendly conversations with them. I ask them about their own lives and try to find some sort of common thread with my life. I also try to have good communication with my patients.

Terrie shared a similar belief that as a nurse she was taught to set aside her personal feelings to provide the best care for her patients. She explained, “My goal as a nurse is to always care for the patient where they are at, be it physically, emotionally, or spiritually.”

These findings were well supported by the literature. Several studies (Fonti et al., 2016; French, 2013; Miles et al., 2014; Raeside, 2003; Seybold et al., 2014) identified that while nurses expressed feelings of frustration or even anger toward women who used substances during pregnancy, they believed they were effectively able to set their personal biases and feelings aside to provide compassionate, non-judgmental care to the women in their charge. Findings from the literature also indicated that when nurses received more education and training regarding substance use, the way they viewed their patients tended to become more positive (Gerace et al., 1995; Hooks, 2019; Ramirez-Cacho et al., 2007).

Evolving Perspectives

Many participants shared that early in their career they viewed prenatal marijuana use much differently that they did now. Karen shared that when she first began her nursing career almost 40 years ago, she approached caring for women using marijuana much differently than she currently did: "Early on in my career I was very negative towards any drug use during pregnancy. …I've become much more tolerant of people being different." Much of this change in perspective she attributed to her own life experience in caring for patients from different backgrounds and in understanding that not everyone has the same experiences. Part of her understanding came from her experience with the adoption of her children. She shared that both of her children were born exposed to various substances including marijuana. She further explained that they both had come to use marijuana as adults.

Other participants shared similar perspectives and spoke of how their upbringing affected their views of marijuana use. Teyana described how she grew up in a very religious family without exposure to substance use of any type. She explained how when she first began

practicing as a nurse, she was not as understanding as she had come to be and how her views had changed:

> I wasn't raised around this, so you shouldn't do it either…over time and working with these moms, I'm finding out more what is behind the reason that patients do use. I've learned to have a different perspective in maybe understanding where patients are coming from versus "This is my way and it's right." …I feel like it's evolved in that sense. Maybe more of an understanding, maybe more patient focused.

Gina explained she felt much more tolerant in her current practice than she was when she first started. She began her nursing career in the emergency department before moving to obstetrics. She described her feelings when she encountered patients using marijuana:

> The longer I've been in nursing, the more I've gotten to see kind of a whole lot of different walks of life. …I think the judgment has gone down a lot, the more experience I've gotten. …You come out of school with like, (laughing) such a different perspective on things and then the longer you're in the profession…you just start seeing people exactly as they are instead of what you interpret them to be…or what you think they should be. …it's definitely a different perspective from when I started nursing, that's for sure.

While most participants shared their views had evolved over time, other participants shared theirs had not changed during their time in practice. Erin explained she continued to believe marijuana should not be used during pregnancy and she continued to view it with disapproval. When asked if her perspective had changed in her years of practice, she stated, "I don't really think it's changed a lot." However, she acknowledged she felt like the level of alarm regarding marijuana use had decreased for her: "I remember in the teenage years [thinking]…oh

my God, pot, that's illegal!!!" Several participants agreed, explaining that while their beliefs had always been that marijuana should not be used during pregnancy because of the potential effects on the baby, they had a better understanding of why their patients might choose to use it. For Lisa, her feelings about prenatal marijuana use had remained constant. She explained:

> I've always felt like it's not okay to use marijuana during pregnancy. I still feel that way, just because I don't feel like we know enough about it during pregnancy. I would say though, that I've become a little bit more understanding of the patients that do use if they're just using marijuana. I don't feel like there's enough education, even in our patient population as to marijuana use and even the effects it has on young people and the development of their brain and all of that. And I think a lot of people, especially in Oregon because it's legalized, they don't feel like it's a big deal, it's just like taking any other prescribed substance, because it's legalized, they don't think that it's a drug.

The views participants expressed were supported by the literature. Neary (2018) found nurses' attitudes toward their patients who used substances became more positive, improving over time as they gained experience and knowledge. The experiences of the participants in this study were similar. Most reported the longer they had been in practice, the more accepting and tolerant toward these patients they became. While the vast majority continued to disapprove of prenatal marijuana use, they were more understanding of their patients.

In summary, in the theme of forming a relationship*,* three subthemes were discussed: learning to have difficult conversations and knowing their story, overcoming bias and judgment, and evolving perspectives. This theme provided answers to each of the research questions asked in this study. It discussed the experiences of these nurses in providing care for this population of women, described their educational needs foundation for providing this care, and identified

potential education needs these nurses felt would help them be successful in providing more effective care to this population.

Theme Four: Effects on the Baby

The fourth identified theme encompassed participants' views on the potential effects of marijuana on the baby both during pregnancy and after delivery. These views were conflicting with some participants sharing they had seen a definite effect in babies whose mothers had used marijuana prenatally and others stating they saw no effects at all. Because the effects have largely been unproven, most shared the view that erring on the side of caution by not using marijuana during pregnancy was warranted. Finally, even with cautious views, most participants felt marijuana was the least concerning of substances that could be used during pregnancy.

Most participants in this study voiced concerns over what happened to a baby in utero when the mother used marijuana during pregnancy. Because the effects of marijuana on the fetus are largely unknown, most participants shared similar thoughts about its use. For example, Christine who had worked in the perinatal world for more than two decades in labor and delivery, postpartum, nursery, and as a lactation consultant, shared her feelings: "I'm just not okay with it." She shared many of her experiences in caring for women who used marijuana during their pregnancies and was adamant as she described her views:

> It has to have an effect on the baby. …how can you deny it affects…the baby, how can you say it doesn't affect the baby? Look at the baby! [shouting] I've always felt that anything you put into your body is going to affect your baby. And, and like I said it could be cake [said with emphasis], it can be chocolate cake, it could be sugar…so anything that is considered extracurricular activity I really do think is affecting the baby. …just from personal experience, I'm seeing an effect. And again, it could have been mom's

> behaviors because maybe she didn't feed the kid very well and so he didn't gain weight very fast, he was sickly because she was on marijuana.

Carrie began her practice in postpartum and well nursery before moving to the labor and delivery unit. With over 12 years of experience in this setting, Carrie compared the effects of marijuana use during pregnancy to smoking tobacco: “It’s shown to cause these harms in babies, these possible effects. …why not opt out during your pregnancy.” Participant Jenny, who had over seven years of experience in the perinatal setting, shared similar views. She had practiced as a nurse in two different states, one where use was legal and the other where it was not, and had seen many women use marijuana during their pregnancies in both settings. She shared her perception of the use:

> I'd be concerned about the effects it could have on a baby. …I mean, it concerns me, I think just because we don't know…the effects. We know that if you're using it before your brain fully develops…younger, it can harm it and a lot of people move on to stronger things.

Other participants could not provide specific examples of the effects of marijuana on the baby in their experience but voiced their concern over its use. Annie described what she perceived to be the risks of its use: “It can make the baby have a low birth weight…that's what we see mostly. …I think they can have trouble feeding, if I remember correctly, but the thing that stands out to me most is the low birth weight and maybe a preterm birth as well.” Similarly, Lisa shared, “It does cross over to baby, I do know that, but I don't really know what, what effects it has on baby in utero.”

However, over half of the participants shared similar views in that effects on a newborn from marijuana use were not commonly seen and did not largely concern them. Melinda laughed

as she shared, “THC is low hanging fruit, like, no biggie.” Terrie, while not so casual in her statement, shared: “I think with the marijuana use at least, I don't know if it's because, it's not researched, but we don't see as much like birth issues with that, either birth defects or withdrawal symptoms with the marijuana.” She further shared her frustration about the lack of knowledge about marijuana use: “I try to educate them about the dangers of substance abuse during pregnancy, but it is difficult to find any evidence-based information about marijuana use in pregnancy.” Agreeing with both Melinda and Terrie, Karen discussed her many experiences of caring for women who used marijuana during their pregnancy and her view of the use. While she acknowledged the substance does cross the placenta and reach the fetus, she described how she had seen no effects in the infant from maternal marijuana use:

> I don't have a problem with it. I mean, I have not seen any physical or long-term effects on the babies for people who have used it. So, I think it's a moot point. I think it's safe during pregnancy. I don't think it's something that I have, not in in my almost 40 years of experience, seeing any baby that had any visible problem with just marijuana. …babies don’t tend to go through marijuana withdrawal.

Hannah, with approximately a year of experience in the perinatal setting noted she had not cared for many women who used marijuana during pregnancy. However, in those she had provided care for, she discussed her beliefs that the infants did not exhibit any ill effects from maternal marijuana use: “Those kiddos don't have any issues…that I’ve noticed, they're just like normal babies.”

One common theme heard from many participants were questions surrounding marijuana use and breastfeeding. While some participants shared their hesitancy to support marijuana use during breastfeeding, several cited the documented benefits breastmilk held for infants.

Notwithstanding the lack of evidence available, Janet shared that she had seen definite effects related to feeding in infants:

> We see babies who will have like, term babies who have this super dis-coordinated suck or kind of like a myriad of really vague symptoms and we go, I bet you dollars to doughnuts that mom used. And then it kind of makes me go, well, could we not have found another way to manage your symptoms because we are kind of anecdotally seeing results. And I don't think that's fair to your baby. …I would love you to tell me first of all that people are aware that we're starting to see an effect in babies, like I want to not be the only person that is noticing this. I want one to be validated and that others are noticing this.

For some participants, the issue was not as clear cut. Several explained that the positive effects of breastmilk outweighed any negative effects that might be associated with its use. Teyana was one who voiced her support of breastfeeding even though the effects of maternal marijuana use on the infant were unclear. She shared, "There's still the benefits of breastfeeding and so there's just a lot of little factors. I don't know enough to say a hard stop that no, mother should not [breastfeed]." Annie shared the same ambiguity. While acknowledging she believed infants might have trouble with feedings due to effects of maternal marijuana use, she was still supportive of breastfeeding:

> It's not recommended to breastfeed…if you have marijuana in your system, and if you're using marijuana, so that's kind of been the trickiest thing for me. …I do want to support these mothers who do want to breastfeed…so at the end of the day if she wants to breastfeed, I'm going to help her latch the baby on.

Interestingly, other participants reported seeing no effects at all in the infants in their care and were in strong support of breastfeeding regardless of marijuana usage. Melinda shared that in her role as lactation consultant, she diligently sought out empirical evidence to either support or discourage breastfeeding by these mothers. She described her difficulty in finding any credible evidence and eventual acceptance of the use:

> I did a lot of research when I became a lactation consultant, because you know I'm considered…an expert around breastfeeding and lactation and breastmilk. …what I think about now with these women it's like "okay, she smokes some pot. Big deal." This breast milk is a whole lot better for this baby than formula is, it's loaded with corn syrup. I want in a perfect world, this baby to get nothing but this mom's milk for six months, that brain is going to get every single thing that it needs. …Do I think that breastmilk should be withheld from this innocent infant because mom smokes or eats THC a couple times a week or every day? No, I don't. when I look at risk versus benefit, the benefit of breastmilk far outweighs that.

Even though most participants shared the view that marijuana should not be used during pregnancy, all shared the view that it was likely the least harmful illicit substance a woman could use while pregnant. Knowing that substances like heroin or methamphetamine could cause significant problems for infants, marijuana was not viewed with the same concern as likely causing minimal harm. Christine shared her perspective:

> I understand it's probably the least harmful of the things that people are doing, but at the same time…so that's where I'm having a hard time because I'm kind of on the fence with that stuff. Yes, I want moms to breastfeed, but I'd like them to stop doing drugs. You know, any drugs. I don't even like moms to take narcotics because if they're sleepy,

> baby's sleepy…minimize marijuana…minimize your caffeine…minimize those things so that both of you can kind of clean your system out.

Terrie expressed a similar perspective regarding minimizing the use of any substances during pregnancy. In her view, all substance use should be eliminated for the health of the baby. She explained she grouped cigarettes and alcohol and illicit drug use together. When discussing her views of marijuana specifically, she shared:

> I think we see so many other things that when I see marijuana use, I'm just like, like it's a poor choice, but it ranks kind of at the bottom of things that worry me when it comes to pregnancy and fetal health. …caffeine use, marijuana use, like all those are kind of on the same level for me. So, I think it's probably less harmful than some things, like I think alcohol is more harmful, and methamphetamines, of course heroin. We see a lot of those things, but I think it's better if you don't use anything during your pregnancy. I feel like it's less harmful than some things they could be using.

Findings in this theme were supported by the literature. Holland et al. (2016) identified preterm delivery, dysfunctional labor, low birth weight, and still birth as possible consequences of prenatal marijuana use. Many participants cited these effects in their concern for the baby when a mother used prenatal marijuana. Many participants expressed negative views of marijuana use during pregnancy and their desire for women to either stop using it entirely or pause use until after delivery. Similar negative views were identified in several studies in the literature regarding general substance use during pregnancy. Raeside (2003) reported that nurses experienced feelings of frustration when caring for women using substances during their pregnancies. Corse et al. (1995) reported similar findings. Other studies reported that nurses felt women using substances were irresponsible and cared little for the health of their fetuses

(Ludwig et al., 1996; McKenna et al., 2011). However, findings from the literature were with regard to general substance use and not specifically marijuana, as limited evidence was identified.

Theme four (effects on the baby) served to answer Research Question 1 regarding the experiences, perceptions, and beliefs of perinatal nurses regarding women using marijuana during their pregnancies. The findings revealed that prenatal marijuana use was often viewed negatively by perinatal nurses in terms of how it might potentially affect the baby. Some participants shared the effects they had seen in their practice while others denied having seen any effects. Breastfeeding was a source of confusion for nurses. Without evidence that it was harmful to a baby, many nurses expressed their support of allowing mothers to breastfeed. Finally, almost all participants agreed that in light of more harmful substances, marijuana was likely the least harmful substance a woman could choose to use during pregnancy.

Theme Five: The Healthcare Team Needs to be on the Same Page

Many of the participants described a clear need for congruency among the healthcare team members in addressing marijuana use during pregnancy. Participants shared their frustrations regarding the discrepancy in how providers approached marijuana use by their patients and in their communication with each other. Several explained that communication among obstetricians, pediatricians, social workers, and nurses had not generally been consistent in providing the same message to each other and their patients. Melinda shared her frustrations: "We can't even all get on the same page with how we're going to treat a woman making it difficult to communicate effectively and credibly."

The inconsistency in communication and treatment standards reported by participants was particularly evident regarding breastfeeding. Participants shared that many providers and

hospital unit policy allowed their patients to breastfeed, while other hospitals had policies against it, and still other physicians or practitioners had no consensus even within their own practice group. Teyana discussed her frustrations with these inconsistencies. She shared that in her experience she had seen a whole gamut of approaches from healthcare providers and hospital policies regarding mothers who wanted to breastfeed their infants after admitting prenatal marijuana use. She explained, “We had mixed things with hospitals, some of them were saying “Nope, they can’t,” some of them were saying, “Yes, they can.” Some of them were saying “Okay, maybe we sign a waiver.” She further shared that even within practice groups the consensus was not uniform. The final decision to allow the mother to breastfeed or not was left up to the specific provider and their personal views. Melinda explained a similar frustration:

> There were pediatricians who were very conservative about that and wouldn't let moms breastfeed, and there were other pediatricians who really didn't care. There were some OB doctors who would screen, screen, screen, other doctors “okay you smoke some pot. Here's a pamphlet. Try not to do that.”

Lisa compared the practices of her current labor and delivery unit with her former place of employment: “We do not [allow our positive moms to breastfeed]. They [physicians] do not. They did in in [XXX, city in Oregon] though interestingly enough.” This vital communication between healthcare providers must be consistent for the most effective care to occur for the mother and the baby.

Participants further shared that many obstetric providers held differing views regarding marijuana use—some were very strict and others were more lenient. Some providers routinely drug tested all of their patients with risk factors for marijuana use and others did not test unless the patient admitted use because the perceived risk was low. Often the views of the pediatricians

contradicted those of the obstetrician in either sense. This lack of congruency left Gina frustrated and advocating for more transparent communication between physicians and nurses:

> I think having docs on the same page as nurses would be good because I think some OB docs are really strict. Same with pediatricians, some are like really strict they have any inclination, you know, and they want everything done and then others are like, "We're not going to test. They've told me about it their entire pregnancy, I don't care," you know, kind of a thing. It's like, "Oh, okay." So, I think it'd be nice to kind of have everyone on the same page."

Many participants shared similar frustration that as nurses they were left in the difficult position of having to explain to the patient why one provider approved of breastfeeding while another did not. Janet shared her views as she explained her experience with the lack of communication consistency:

> The OB perspective and the peds perspective, sometimes don't jive. And the OBs are like "Yah, life's great! Go ahead!" And the peds are like, "And!! Just so you know…[indicating that the woman would not be allowed to breastfeed]." There's this whole other piece, I would love to see. I would love to know that both perspectives are talking to each other that are really informing best care for our patients. So that we. . . don't have to suddenly show up and be like, "Hi. …no, you can't breastfeed your baby like you've been dreaming about for the last five years of your life."

Some participants expressed their views that nurses did not know what providers had communicated to patients prior to admission, thus contradicting information given to the patient by the nurse. Carrie shared she was frustrated that as a nurse in the hospital she was left in the dark regarding the conversation physicians had with patients in the office before being admitted

to the labor and delivery unit. She explained that nurses were left providing education that was often not the same as what the patient had been told by the provider: “I don’t know how much physicians go over that and a lot of times especially with our frequent fliers we see them more routinely and we’re the ones doing a lot of the education.” Terrie shared similar concerns stating that she is often viewed as “the bad guy” when she was the one to explain to the patient that social services would be notified of the marijuana use when this should have been a conversation between the physician and the patient long before delivery:

> It may be a communication gap between the doctor and the patient…so the first time we see them is when they come to deliver at the hospital. So, and it probably never crosses their mind that they're in Idaho instead of Oregon or Washington and that they legally cannot use marijuana.

Melinda shared that the inconsistency in communication between providers in her community created a lack of trust among the nurse, the healthcare system, and the patient. This lack of trust resulted in the perception of stigma for the patient from healthcare members in the hospital:

> I felt like I was always on a slippery slope. It depended on the provider, depended on what day of the week it was, it depended on if it was night shift of the day shift. Is it a full moon. . . it was really chaotic and then it also made sense to me that because there wasn't a clear cut protocol in the community or in the doctors’ offices or in the hospital that it was just easier for women to not be honest. So, they're there for 24 hours…we throw down the hammer. “Shame on you. You bad girl, you can't breastfeed your baby, this terrible, terrible thing you’ve been doing.” You go to your next pediatrician, right, your pediatrician who you've chosen, the next day. And they're like, “Hey, no problem.

> Probably shouldn't be smoking any pot. But you know what, breast milk is really good for your baby." Okay. So now, do we still really not look like a fool, [hospital-based providers] like really? …we have to have clarity…we all have to be on the same page with some of these bigger things.

Consistent, congruent communication between healthcare team members is vitally important to prevent the possibility of stigmatizing, traumatizing experiences for mothers and their infants.

In this theme (the healthcare team needed to be on the same page), the desire for clear and consistent messaging about prenatal marijuana use was clearly expressed by many participants. Having all members of the healthcare team on the same page is vital for effective communication. With this type of collaboration, decision-making could be done more effectively as each discipline works for the good of the patient (O'Daniel & Rosenstein, 2008). The patient benefits because communication is easier when the team is cohesive and sends consistent messaging rather than with individual providers who do not know what others are doing to manage patient care (O'Daniel & Rosenstein, 2008).

Theme Six: We Need to Know More

While some participants did not view marijuana use during pregnancy negatively, participants unanimously agreed more research was needed exploring the effects marijuana use had on a baby during pregnancy. Participants shared their frustration with the lack of scientific knowledge regarding the effects of prenatal marijuana use. Most participants agreed that marijuana use during pregnancy was probably not ideal but shared the perspective that because there was a distinct lack of evidence regarding the effects, if any existed, much more information and research were needed to better educate and support mothers who used it. One participant shared she knew very little about marijuana use in general let alone the effects it might have on a

fetus. Erin described her perspective: “I know nothing about marijuana. I’m so naïve about it [laughing]. I just know it’s illegal.” Others also disclosed they knew very little about how marijuana affected pregnancy and shared that what they did know was not based in fact but rather on conjecture. Christine described her view:

> There's not enough research, we have no proof of anything, and so, these guys go along the lines of their quasi proof of “Oh well, my grandpa smoked it for this long and he looks great and his kids are great,” you know. How are you gonna argue with that? They don't, they don't have, they have just as much scientific proof as we do, none. It's all hearsay, so [laughing]…

Some participants reported they had sought out evidence to have a better understanding of the effects of marijuana on the baby. These participants shared the common view that little evidence was available and what they did find was not consistent or even credible. Teyana described her experience with a recently attended perinatal leadership conference where prenatal marijuana use was a topic of interest. She described her frustration with the lack of research available to guide nursing practice: “They have a couple of studies, but they're not the greatest. …I think when you think of research, you want to have multiple, different, a plush amount of research to really make an informed decision. So, it sounded like that there's not a ton of research.” Additionally, a few participants, Melinda and Christine in particular, shared their skepticism of available research based on the complexity of the issue that surrounds marijuana use. Both shared similar views that environmental and/or social issues might be more at fault in problems with the baby than the marijuana use itself. Melinda described her view regarding these complex issues:

> As a clinician, I've looked in all kinds of places to get information and at the end of the day, I sit back and I'm like, I'm skeptical about it. And so of course a mom is skeptical, skeptical, when I come in as an expert and I try to tout some of this research, because even I'm skeptical about the research…if in states where it's legitimately legal, and then women at least don't run the risk, the fear of getting thrown in the slammer right, for saying, "I am using this every day," is if there really were studies done that showed what, what is it that makes someone choose that. Is it a medical reason? Is it a mental health reason? Is it a, you know, just a long term behavior, habit, you know? It's really doesn't have a medical or a psychosocial anything, it's just their lifestyle, then for there to really be a study that along right, a longitudinal study that shows is it true that these kids really have cognitive deficits. …I've worked in the projects, and I've worked in places with poverty, there's also a lack of good food. And so, if I'm a pregnant woman and I'm not eating really good food, maybe that's the reason why my kid's brain is not growing right, it's not because I'm smoking weed. And so, I think that's the other reason why some of those studies are hard to do because it's complicated. There's lots of layers to this because it's a social thing.

While acknowledging the challenges of conducting research with a pregnant woman, Melinda, Gina, and Hannah each suggested longitudinal studies be conducted in states where marijuana is legal to determine what potential effects prenatal marijuana use might have on babies. Hannah shared, "We don't necessarily know the extent of the, like what happens to the fetus in utero when using marijuana. Because obviously we don't test on pregnant women." Similarly, Gina shared:

> I don't know if they've done enough research on what the long-term effects could be on your child, things like that. It would be nice to know if we have any long term studies of moms that have admitted that they used while they were pregnant and then we follow babies and see if they're more prone to asthma or you know, or anything along those, you know, developmental things if they're hitting developmental milestones on time, like things like that would be really informed, like good information to be able to like give back to parents and be like hey look, these choices…these are your consequences, like these are real things that you can look at, you know, like things that we can connect it to versus just saying, like, hey, we know you're not supposed to but we don't really know why.

Without knowing the effects, some participants shared it was difficult to defend the education they provided to their patients instructing them not to use it. Janet shared her frustration that she had nothing based in evidence she could provide to her patients when she was educating them on why they should not use marijuana while pregnant or breastfeeding. She described her views:

> I would love you to tell me that there's research being done about it. We've got to focus on that first. I want to know that it's important enough to other people that we're researching and getting some concrete data to our nurses at the bedside so that we're not just going off of a mix of what we learned in nursing school and our own perceptions. Like there's actual scientific data that I can use to help back me up.

Others expressed interest in knowing the medical value of using marijuana during pregnancy as an alternate form of treatment versus traditional pharmaceutical interventions. Hannah shared her thoughts:

> I'd be curious to see like, especially for our moms that are chronic opioid users for things like back pain, or just like injuries, and we know that coming in that their babies probably going to withdraw, if marijuana would be a better substance for them. Like, little things, but obviously you're never gonna find out, unless you live in a state where someone's willing to try that.

Participant Lisa shared similar views regarding the efficacy of marijuana use for replacing traditional pharmaceuticals, supporting the need for more research:

> I don't know a lot, honestly, I do know that…it sometimes does help with morning sickness, nausea, things like that but yeah, I don't, I don't know that that it helps any better than medications that are approved to use during pregnancy, I don't know that for sure.

The perinatal nurses interviewed for this study shared almost unanimously that their knowledge of marijuana use during pregnancy and its effects on both mother and baby were very limited in scope. All but one participant shared they learned nothing about how to provide care for these women in their undergraduate education. Karen shared, "When I went to nursing school back in the 1980s, they didn't talk about it at all. They talked about, you know, withdrawing, you know withdrawal of babies, but that was mostly heroin, methadone, and cocaine." Gina was the sole participant who expressed she might have received instruction in nursing school but even that was not particularly memorable for her: "I know we got information in nursing school but that's been quite a while ago."

Often in health care, employers offer educational courses for their nurses on topics considered to be important. When asked to reflect on if they had received specific information on caring for women using marijuana during their pregnancies, most participants shared that other

than marijuana-specific policies regarding screening and testing, no extended learning had been offered. Annie shared,

> To be honest, it's kind of, we learn as we go. And you learn from your preceptor, and you learn the…I mean, we have policies about it. So, I guess that was given to us, which we can refer to. But other than that, when I started, I just kind of learned from my preceptor and "Okay, Mom tested positive for marijuana. Let me make sure I have a social work consultation."

Four participants—Carrie, Christine, Holly, and Melinda—shared they had informally been provided information regarding the use from physicians who practiced on their units. Christine explained:

> Dr. Jones…actually started a program [outside the hospital] for moms on marijuana and stuff, and…she was a big advocate for those parents and for babies and helped us to learn a lot about signs and symptoms and [NAS] scoring and things like that before we had never done anything like that, before. And they were NICU babies and we just send them off and they do their thing…but when Dr. Jones was there, and we started kind of looking at things like that, and it was kind of interesting because it kind of opened your eyes, with "Oh, these things are happening, and this is, no, this is their normal life."

Most participants reported having self-sought information regarding prenatal marijuana use and how to care for women using it because it was not offered in either their educational experience or by their employer. Karen shared that what she knew came from "personal experience" in caring for this population of women. Carrie and Teyana both reflected that they had attended the same perinatal conference that offered marijuana-specific information a few years ago, and Janet explained that she sought out continuing education units specifically

targeting substance use during pregnancy. Lisa shared that her only knowledge of prenatal marijuana use was what she had found: “It’s all been just kind of things I’ve…looked at on my own.” For Christine and Melinda, who both worked extensively in assisting new mothers with breastfeeding, much of their knowledge came from reading books from lactation experts to determine how best to instruct these women in safely feeding their infants.

These findings were supported in the literature regarding general substance use. Nurses have historically received little training regarding how to care for and communicate with patients using substances of any type (Gerace et al., 1995; Witkins, 2020). In a perinatal-specific setting, Whitehead et al. (2019) reported that while midwives knew about the risks of substances to a pregnancy, they were not instructed in how to screen for them or implement interventions to counsel clients. This lack of knowledge and understanding could be a difficult barrier to overcome in the nurse-patient relationship and might perpetuate stigmatization. The need for education and training for nurses and nursing students regarding prenatal marijuana use and communication techniques is vitally important in de-stigmatizing its use and ensuring appropriate, relational care is provided. Nurses and nursing students who had received educational instruction in substance use training and education had less harsh attitudes toward their patients who used them (Corse et al., 1995; Ludwig et al., 1996; Miles et al., 2014; Selleck & Redding, 1998; Seybold et al., 2014), demonstrating the clear need for more knowledge regarding prenatal marijuana use and communication strategies for nurses.

To summarize, theme six (we need to know more) revealed the strong need for more knowledge and research regarding prenatal marijuana use and the effects it might have on a fetus. Most of the participants in this study learned what they knew regarding prenatal marijuana use through their own research or from attending conferences. Very little information was gained

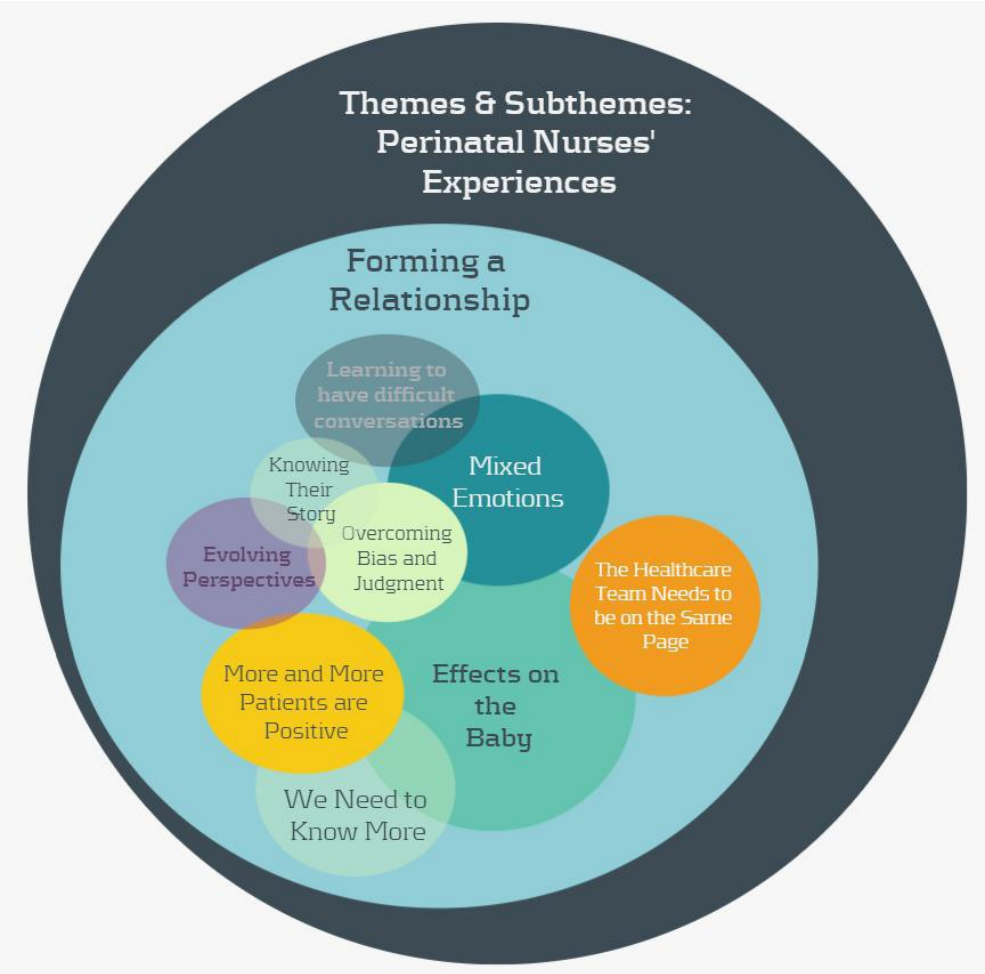
from either undergraduate nursing education or from employers. This theme directly answered Research Questions 2 and 3 regarding what nurses knew and what they felt they needed to know about marijuana use during pregnancy and demonstrated that what was currently being taught to students or provided to practicing nurses was likely not sufficient. Further, it supported the need for empirical research on a broad level examining the potential effects marijuana might have for medical conditions.

Summary of Findings

In summary, six themes developed from this study were strongly supported by existing literature. Figure 4.1 demonstrates the relationship between the themes. Theme one, mixed emotions, described the range of emotions nurses experienced when caring for women using marijuana while they are pregnant, Theme two, more and more patients are positive, provided a narrative of the experience of caring for an increasing number of marijuana positive patients in terms of policy development and social services involvement. Theme three, forming a relationship, described the various factors involved in developing a relationship with a patient who used marijuana during pregnancy—learning to have difficult conversations, knowing their story, and overcoming bias and judgment—and discussed how perspectives changed over time. In theme four, effects on the baby, perspectives regarding how marijuana use might impact the developing baby was discussed along with the view that while marijuana use during pregnancy was not ideal, it was likely one of the least harmful substances a woman could use. Theme five, the healthcare team needs to be on the same page, described the desire expressed by participants for all members of the healthcare team to be consistent in their approach to treatment of women using marijuana during their pregnancies. Finally, in theme six, we need to know more, participants described the need for more research regarding the effects of prenatal marijuana use.

Figure 4.1

Themes and Subthemes: Perinatal Nurses' Experiences



The experiences of these perinatal nurses, even though they were located in different areas of the country and had practiced in a variety of states, were strikingly similar in several aspects. As marijuana use has become more common in the United States, participants have seen increasing numbers of using it in all states of practice. For most effective care to occur, almost all participants expressed the importance of forming a relationship with their patients. Taking time to listen to their patients and understanding their story were viewed as vital for the relationship to form. The need for nursing students and practicing nurses alike to learn how to

communicate effectively with their patients was identified as a high priority. Participants shared their views that more education and guidance in both communication techniques and knowledge regarding marijuana use were vital for students and nurses in practice to be more effective in their care of this population of women.

Additionally, participants shared the desire for members of the healthcare team, obstetricians, pediatricians, nurse practitioners, social workers, and nurses, to all approach care in a similar way to avoid miscommunication and distrust from patients. Finally, nurse participants shared their strong desire for more research to be conducted to explore the effects marijuana might have on a pregnancy. Many expressed the desire for research to be done examining the efficacy of marijuana as an alternative to traditional pharmaceutical medications during pregnancy.

In this study, participants expressed the need to see better communication and increased knowledge of their nursing role. The detailed descriptions of the experiences and perceptions of these nurses have several implications for nursing and nursing education. These implications are discussed in detail in the next chapter.

CHAPTER V

DISCUSSION AND CONCLUSIONS

The three-fold purpose of this qualitative descriptive study was (a) to understand the experiences, perceptions, and beliefs of perinatal nurses who provided care for women who used marijuana during their pregnancies; (b) to gain a deeper understanding of their beliefs, feelings, and how they perceived use of marijuana during pregnancy, and (c) to understand the educational needs these nurses perceived regarding prenatal marijuana use. In the previous chapters, an introduction to the study was provided, a comprehensive review of the literature was discussed, the methods used to conduct this study were presented, and the findings of the study were discussed in detail. This final chapter further discusses the research findings of this study and the potential implications these findings hold for both nursing and nursing education. The stories of these nurses' experiences in caring for this population of women provided a deeper understanding of the phenomenon. The stories also served to provide insight and valuable knowledge regarding the perceived needs of these nurses to be more effective caregivers in complex situations. The limitations of the study are also considered and discussed and, finally, future research directions that might further increase our understanding of the experience of perinatal nurses who care for this population of women are presented.

Discussion of Research Findings and Implications

The Participants

The 13 participants in this study came from three different states across the country with varying degrees of legality for marijuana usage. Five of them had practiced in more than one

state during their careers. At the time of this study, most participants (n = 10) practiced in a state with no legal use of marijuana (Idaho), two practiced in a state with full legal use (Michigan), and one practiced in a state with medical use only (Florida). Several participants had experience practicing in multiple care settings with all recent practice being in the perinatal setting. All participants in this study identified their gender as female, which closely mirrored the population of nurses practicing in the perinatal setting and was typical of other participants in studies found in the literature examining similar perinatal phenomena. The length of practice for participants ranged from one year to more than 25. All participants had provided care to women who used marijuana during their pregnancies.

Themes Identified in This Study

The findings of this research study suggested nurses in the perinatal setting caring for women who used marijuana during their pregnancies experienced a gamut of emotions related to this use, had little formal education in how to most effectively work and communicate with this population, and had a strong desire for more knowledge for themselves and in nursing education. This study gave these nurses a forum in which to share their thoughts and perspectives regarding their experiences with patients using marijuana prenatally. As they shared their stories, six themes (see Table 4.1) emerged that were common to each participant. Many of these themes were consistent with findings from the literature regarding nursing's perception of substance use during pregnancy. The experiences shared by perinatal nurses in this study offered valuable insight to both nursing and nursing education.

Theme One: Mixed Emotions

The first theme identified in this study revealed that participants experienced a gamut of emotions as they provided care for women using marijuana during their pregnancies. The

emotions described by participants regarding prenatal marijuana use ranged from confusion regarding legal status, indifference to use, and frank disapproval. Many participants shared they were confused by the varying degrees of legality of marijuana at the state and federal levels. One participant shared she was not sure whether medical marijuana was legal in her state and some worked in states with different degrees of legality for medical use, causing confusion.

One participant was firmly against the use solely because of its status as an illegal drug in her state of practice. She explained that the issue of use was black and white for her; as long as the substance was illegal, she would not support its use regardless of any potential benefit. Another participant shared that while she did not approve of prenatal marijuana use, the legalization of the substance in her state of practice made the use less unseemly. She discussed how before marijuana was legalized in her state, she felt women were hiding their use and after legalization they became more open and honest with her because they no longer feared involvement of the justice system.

However, most participants shared the drug's legal status played very little part in their feeling toward its use during pregnancy and expressed their stark disapproval of its use. Those nurses voicing disapproval toward prenatal marijuana use expressed their beliefs that marijuana use was a choice that should be paused during pregnancy because of the potential harm to the fetus. Because there was little evidence of how marijuana affected a fetus, most of these participants shared the view that stopping use was safest for the baby and should be done regardless of reason for use. Some expressed their frustration with women who continued to use marijuana during their pregnancies for any reason, sharing similar beliefs that in women who were self-medicating, traditional pharmaceuticals would be a more a more acceptable method to treat symptoms the women experienced. The feelings of frustration described by these

participants was comparable in nature to those of nurses in other studies exploring their attitudes toward general substance use during pregnancy (Ford, 2011; Jenkins, 2013; Ludwig et al., 1996; Maguire et al., 2012; Raeside, 2003; Selleck & Redding, 1998). Findings from these studies demonstrated that nurses experienced frustration and even anger toward women using substances during their pregnancies. While participants in this study did not express anger regarding marijuana use, frustration was a common thread.

One interesting finding from the study was the candid belief shared by two participants that marijuana might be beneficial during pregnancy for some women who experienced anxiety, nausea, or had overall poor coping skills. Both participants shared beliefs that the benefit to these women from marijuana use far outweighed any potential risk there might be to the fetus. Both had more than 25 years of experience in perinatal nursing and shared similar stories of women using the substance to self-medicate during pregnancy for symptoms of nausea or anxiety. Both expressed that the women they had provided care to might not have been able to function normally on a day-to-day basis without their marijuana use. Interestingly, both participants discussed how in their many years of practice they had witnessed no ill effects on newborns related to maternal prenatal marijuana use. Findings from the literature (Ford et al., 2008) indicated that as nurses gained more experience in working with specific patient populations using substances, their views became more positive. While the Ford et al. (2008) study was conducted with generalist nurses, the results mirrored the findings of this dissertation. This might partially explain why these two nurses with long-standing practice experience in perinatal nursing viewed the use of marijuana during pregnancy more positively than did other participants. Additionally, the beliefs of these participants were similar to Witkins' (2020) findings in her study with nursing students. Witkins determined that most students in the cohort

held the belief that marijuana use during pregnancy was safe and could be effectively used to treat symptoms women might experience during pregnancy despite being taught contrary information by their instructors.

Based on the information provided by participants in this study, there is a clear need to better define the legal implications of marijuana use for perinatal nurses. The NCSBN (Russell et al., 2018) declared that nurses must understand the legal as well as physical implications of marijuana use for their patients. This lack of clarity in the legal status of marijuana caused in part by the differences not only at the state and federal level but also with the different degree of legality in each state is difficult for nurses to navigate effectively. More clear definition is needed to address this difference.

Theme Two: More and More Patients Are Positive

Almost all participants in this study shared that they had seen a glaring increase in their practice in the number of women using marijuana during their pregnancies. This finding was strongly supported by the literature and public opinion. As approval for use in this country continues to climb, so does the number of women using marijuana during their pregnancies. The majority of participants (n = 10) practiced in Idaho where there was no legal use of marijuana allowed at the time of this study. While these participants lived in various locales within the state, they all shared the belief that the small distances to bordering states where use of marijuana is legal in some form contributed to the rise in number of women using it. Idaho is bordered by states on every side with either full legal use and/or at least some form of medical use whether it be comprehensive medical use or low THC programs (National Conference of State Legislatures, 2021). Two participants in the only state where marijuana use was fully legal (Michigan) shared the same belief that use had increased significantly over the last several years, especially since

their state's full legalization occurred in 2018. The final participant had recent experience practicing in two different states: one with a comprehensive medical marijuana program (Florida) and one with a CBD/low THC program (Georgia). She shared that she saw rising use in both states but her perception of her colleagues' views regarding use was vastly different. In the state with CBD/low THC use only, the use was viewed as "taboo" and meconium testing was done on all infants whose mothers were suspected of or admitted use of marijuana during their pregnancies. She shared that in the state with a comprehensive medical use program, testing was done less often and the use was viewed with "a different attitude."

One frustration from most participants in this study was their view that women were using marijuana more frequently because it *was* legal in other states. They shared similar stories of women justifying their more frequent use because they felt marijuana was a more holistic and safer alternative to traditional pharmaceuticals to use during pregnancy.

Several participants shared that women who admitted use often lived in bordering states but chose to deliver in their hospital. Participants explained that as the number of pregnant women using marijuana increased on their units, the challenges they experienced created by the influx of patients also increased. Participants described the need for new policies related to prenatal marijuana use and increased fetal exposure. Many units had only a general substance use policy in place prior to either legalization or increase in the use of marijuana. Prior to the increase in use and legalization in some states, women using marijuana were treated under the blanket substance use policy and not allowed to breastfeed their infants. Additionally, many reported that urine drug screening, cord testing or meconium sampling, and social service consults were routine practices prior to legalization.

With no new policies in place, these screening, testing, and reporting practices varied by location; participants reported that some of these practices continued such as urine drug screening but involvement of social services and subsequently CPS were done at the discretion of the nurse and the social worker. In the state where use is still considered illegal, marijuana use continues to fall under the general substance use policy and is classified as an illicit substance. The need for new policies to address marijuana use as distinct from other substance use in their units was described by many participants. One described the involvement of social services and CPS solely for marijuana use as "overkill" but hospital policy continued to dictate their involvement. Other participants described the involvement of social services, CPS, and law enforcement as "scary" and unnecessary, causing the women to be shamed. Other participants viewed social service involvement positively, sharing that they only wanted to ensure these women and their babies had everything they needed to be safe and healthy at home.

Findings from this study indicated a clear need for marijuana-specific policies in perinatal nursing. One participant shared that during triage when asking her patients about their substance use, she specifically had to ask about their marijuana use because regardless of its illegal status in Idaho, many no longer considered it to be an "illicit" substance. Because the substance is legal in some form in so many states (n = 47), policies must be developed to address the use separate and apart from harsher substances such as heroin, cocaine, and methamphetamine.

Theme Three: Forming a Relationship

This theme was consistently described in the literature as vital to providing quality patient care. When a therapeutic relationship is formed between the nurse and patient, not only does patient satisfaction increase but health outcomes are also improved (O'Nan et al., 2014). Similar to findings from the literature, participants in this study overarchingly viewed the

relationship between themselves and their patients as highly important in their nursing practice. Many participants described that while they did not approve of marijuana use during pregnancy, they felt it was important to them personally as well as professionally to be supportive and non-judgmental of their patients who used marijuana during their pregnancies. Some participants described how they formed bonds with their patients over time as they visited the labor and delivery triage unit multiple times before delivery. Being able to communicate effectively and engage in difficult conversations with patients were described as key in forming these relations.

Participants shared that talking to patients about difficult topics such as their substance use was often uncomfortable and learning how to do this was not formally taught in school or in practice. Many participants shared they learned by doing or from observing other nurses and described a clear need for more training in how to engage in these difficult conversations more effectively. One common request from participants was for scripting or specific training in communication techniques in both nursing school and in practice.

These findings were well supported in the literature. Gerace et al. (1995) and Witkins (2020) both reported that education for nurses regarding substance use has long been inadequate, which might lead to communication breakdown and stigmatization in patients who used substances. Whitehead et al. (2019) additionally found that knowledge of screening techniques was lacking. Screening for substance use, marijuana included, is routinely done in perinatal nursing and education should be provided for nurses and nursing students in how to do this effectively and non-judgmentally.

Another commonality that emerged from the study was the need to understand the patient's story and their reason for using marijuana during their pregnancy. Participants explained that when they took the time to listen to their patient and learn more about their

backstory, they gained a deeper understanding of not only the patient but also the reasons behind the marijuana use. Some participants reported they became more compassionate to the patient when the reason for use was the patient's life stress or physical symptoms of illness instead of recreational use. Other participants felt that knowing their patient's story made them more effective in offering resources for their care. Additionally, some participants explained they were able to talk to their patients about misconceptions surrounding prenatal marijuana use and provide better education when they engaged with their patients in a deeper conversation.

Many participants discussed their perceptions that patients using marijuana during their pregnancies were stigmatized and judged for their choices. Findings from the literature suggested women who used any substances were likely to experience stigma (Radcliffe, 2011) and some groups of women are more vulnerable to this stigma than others (Seybold et al., 2014; Stone, 2015). The literature supported the notion that when patients perceived stigma from their nurses, communication shuts down and care might be compromised (FitzGerald & Hurst, 2017; Satterlund et al., 2015; van Boekel et al., 2013). While some participants in this study acknowledged they did not approve of marijuana use during pregnancy, all participants shared they worked hard to avoid perpetuating the stigma and bias in their own practice. Removing judgment from the care provided, regardless of their personal beliefs, was described as not only necessary but vital to improving patient care outcomes and building relationships.

Another interesting finding that emerged from this theme was the perception from participants that their perspectives toward women using marijuana during their pregnancies had evolved over time. Many shared that when they first began their nursing practice, their feelings were much more negative toward these women. As they gained experience in both practice and in life, their perspectives evolved. Most participants continued to disapprove of the marijuana

use during pregnancy but their feelings toward the women they cared for changed. Similar to evidence from earlier studies, the greater the amount of time nurses spent in practice, the more accepting and tolerant of the *person* [patient] they became, finding it easier to separate the person from the habit (Neary, 2018). This might be attributed in part to the additional experience gained with this population of patients or more education and knowledge accumulated. Education by itself might provide an important key in reducing stigma and bias in this setting. Education and educational interventions have proven to be successful in helping nurses overcome negative attitudes toward substance use (Jenkins, 2013; Selleck & Redding, 1998; Seybold et al., 2014). Providing nursing students with a basic understanding of both the physical and legal implications of marijuana use and teaching them to engage in difficult conversations before they enter practice might better prepare nurses to care for and educate this population of patients.

Theme Four: Effects on the Baby

Most participants in this study shared a common concern about how marijuana use during pregnancy might affect the baby. The baby was viewed as an innocent who had no choice in its prenatal exposure to the substance by most participants. Many participants held the same view that the use was a lifestyle choice and the mother should abstain from using marijuana during pregnancy to ensure the pregnancy and the baby were as healthy as possible. Ample evidence in the literature supported the views of these participants. While limited studies examined marijuana use by itself, findings from other studies exploring general substance use demonstrated that much of the concern felt by nurses was focused on the potential and/or actual health problems that occurred in the infant directly related to exposure and subsequent withdrawal from the substance or injury. The literature demonstrated that concern for the baby caused nurses to feel frustration and anger when the mother introduced unnecessary substances

into the pregnancy that might potentially harm the fetus. In previous studies, substance use was described as a choice (McKenna et al., 2011) and participants in this study agreed.

While limited evidence was available that could directly attribute harm to a baby from maternal marijuana use, reports from studies that have been done were conflicting. Potential adverse effects such as preterm delivery, low birth weight, and still birth were reported in some studies (Holland et al., 2016; Metz et al., 2017) while another systematic review reported contradictory findings. Zhang et al. (2017) stated no effect from maternal marijuana use was identified in the included studies but at the same time, they recommended women be counseled regarding potential adverse effects on their pregnancy. The views of participants in this study reflected the uncertainty the evidence presented. Some participants in this study were adamant in their views that they had witnessed effects of prenatal marijuana use in the newborns of women they had provided care for while others had seen no effects at all. The findings from this study emphasized the clear need for more research to determine if there are indeed effects to the infant and if the concern is warranted.

Theme Five: The Healthcare Team Needs to be on the Same Page

Findings from this theme regarding prenatal marijuana use were not specifically identified in the literature. However, participants shared that approaches to care of women who used marijuana during their pregnancy varied among nursing, obstetric providers, pediatricians, and even social services, causing frustration among team members. When the plan of care is not clearly understood between providers, care could be compromised. Ratna (2019) discussed the vital need for the healthcare team to engage in effective communication with not only the patient but with each other. For most optimal care to be delivered during healthcare interactions, care must be “patient-centered, timely, efficient, evidence-based, safe, and coordinated” (Ratna, 2019,

p. 2). Coordination of care and clear communication between members of the healthcare team is crucial to preventing errors and improving patient outcomes. There is a clear need for all members of the healthcare team to engage in collaborative communication to be able to present a consistent message to their mutual patients. When communication between team members is inconsistent and even contradictory, patients care suffers, satisfaction rates decrease, and, ultimately, patient care outcomes might be compromised (Burgener, 2020). In this study, participants shared the common perspective that there was inconsistent messaging surrounding breastfeeding for women who had used marijuana during pregnancy or those who would continue to use marijuana after birth. Collaborative teamwork and coordination of care could potentially help decrease the frustration experienced by the nurses and present a more consistent message to patients.

Theme Six: We Need to Know More

Every nurse interviewed in this study identified the clear need to know more about marijuana use during pregnancy and its effects on a baby. Because the substance has for decades been considered an illicit substance and remains federally illegal, research was limited and not easy to conduct. Several barriers hinder research progress. The federal government continues to enforce restrictive policies and regulations for research examining potential harm or benefit that might be related to marijuana use (National Academies of Sciences, Engineering, and Medicine, [NASEM], 2017). The approval process to perform any marijuana-focused research is long and arduous and researchers must obtain authorization from several different governing agencies. Once approval is received, the only approved supply of marijuana comes from the University of Mississippi (NASEM, 2017). This supply is often lower quality and less potent than strains available legally at dispensaries in other states (NASEM, 2017). Concern surrounding regulation

of marijuana potency and difference in strain quality was noted by study participants. Additionally, IRB approval for research studies involving pregnant women is also difficult to attain because of the potential harm to the fetus from marijuana exposure. Retrospective studies might offer the best opportunity to determine harm or benefit to the fetus.

Further, most nurses in this study shared they had only a minimal, at best, knowledge of how marijuana use might affect their patients and what the implications for care might be. In 2018, the NCSBN (Russell et al., 2018) provided guidelines for caring for patients using medical marijuana. These guidelines stated that nurses have the obligation to understand not only the physical implications of marijuana use by their patients but must also understand the legal implications. As previously mentioned, the desire to know more about its safety, the effects it has on a woman and her baby, implications for breastfeeding, and legal considerations were expressed by many participants. Many participants shared they provided care for patients who lived in states other than the one in which patients delivered. Full legal use of marijuana was recognized in these states while no legal use was allowed in the state of delivery. This presented challenges for these nurses as they were not sure what legal implications marijuana use might have for these patients. Notably, while most participants in this study (n = 10) were from a state where marijuana use was completely illegal, marijuana legislation (National Conference of State Legislatures, 2021) was presented to legalize some form of medical use. The legislation was struck down but this demonstrated the quickly changing landscape of marijuana laws in the states and the challenges perinatal nurses have in keeping up with current laws as well as implications for their practice.

Limitations of the Study

When conducting research, it is important to recognize that all studies have inherent limitations associated with them (Bloomberg & Volpe, 2019). This study was conducted with 13 participants who specialized in perinatal nursing using semi-structured interviews. While the use of this format allowed the flow of the interview to be controlled by the participant and her individual story to be heard, I was responsible for interpreting the findings, identifying commonalities between participant stories, and uncovering deeper meanings that emerged from the interviews. While every attempt was made at neutrality as I have an extensive background in perinatal nursing, some of my own preconceived notions and experiences might have influenced the way findings were interpreted.

Qualitative research engages smaller numbers of participants than does quantitative research and is experience driven, both of which are viewed as less credible or trustworthy by some researchers. Additionally, as participants were self-selected, the findings of this study were limited to the experiences of the nurses who chose to participate. While the findings from this qualitative study might be viewed by some as non-generalizable to a broader population of nurses, the aim of this study was to explore the experiences of perinatal nurses and provide a rich, detailed description of the experiences of this specific sample of nurses. The findings from this study have the potential to bring value to perinatal nursing and nursing education on a larger level.

All 13 participants in this study identified as female, which left out important perspectives of nurses who identified otherwise. Historically, nurses in the perinatal nursing specialty have largely been female with statistics reporting that less than 1% of nurses in maternal-newborn nursing identified as male (DeMayo, 2018). This also left out the perspectives

of non-binary or transgender nurses. Furthermore, neither race, ethnicity, nor age demographic responses were elicited from participants. Having more knowledge about those demographics of the participants might have provided additional valuable context for their perspectives. In future work, recruitment efforts should focus on including a broader, more diverse group of participants. Additionally, while recruitment efforts were meant to reach nurses from a wide geographical range, only nurses from three states responded to my inquiry and the majority of respondents (n = 10) were from one single state. While this was a limitation, the three states each represented different degrees of state marijuana laws and several participants had practiced in multiple states, bringing differing perspectives and experiences to the study.

Implications for Future Research

This research study provided rich, detailed information regarding the experiences of perinatal nurses who provided care to women who used marijuana during their pregnancies. Because this phenomenon was largely unexplored prior to this study, this dissertation provided a foundation for future research. Qualitative research explores experience and allows participants to share their personal stories. Including males and participants from more diverse geographical areas in the sample population in future research would allow additional perspectives to be heard and included. Additionally, because quantitative methods allow researchers to reach larger numbers of participants, further research might employ this method and target perinatal nurses using an attitudinal scale to determine if anonymity might provide different results.

An overarching theme from this research focused on building relationships. Future research in this area could examine the effect of targeted educational interventions and resources focused on promoting effective communication skills in undergraduate programs and with practicing nurses to determine first, if interventions were effective in increasing comfort level

and skill with difficult conversations, and second, if patient outcomes were enhanced by improved communication skills. Participants in this study described their need for better communication tools. Many shared they would like to have scripting to help them better communicate with this specific population of patients. Future research could examine what type of scripting or tool might be most effective in facilitating therapeutic communication and how best to offer this educational intervention.

Research examining therapeutic or harmful effects of marijuana was limited. Participants in this study all expressed their need to know more about the effects of marijuana on women using it as well as on their babies. The desire to know if marijuana is harmful or more helpful than traditional pharmaceuticals in alleviating symptoms of anxiety or nausea during pregnancy was discussed by several participants. Retrospectives studies examining the effects marijuana use has on pregnant women and their infants might help to answer these questions. Studies involving marijuana are difficult to do and take long periods of time as it remains federally illegal and state legality has such wide variation. However, research examining marijuana use during pregnancy is being done retrospectively. Notably, one recent study conducted by Haight et al. (2021) examined data from the Pregnancy Risk Assessment Monitoring System (PRAMS) assessing the prevalence of adverse infant outcomes born to mothers using marijuana during pregnancy "stratified by cigarette smoking" (p. 2). At some point in the future, more research might be done to examine the efficacy of marijuana as an alternative treatment for common conditions in pregnancy. Findings from studies such as these would help to answer important questions regarding prenatal marijuana use not only for perinatal nurses but also for physicians, their patients, and the general public.

Recommendations for Nursing Education

The challenge of learning how to talk to patients in difficult situations and form therapeutic relationships was described by many participants in this study. Students need to learn how to truly listen to their patients. As beginning nurses are typically very task focused, these softer skills are often ignored. To better support the needs of both students and practicing nurses and potentially enhance patient outcomes, how to best teach these skills to students while students are still in nursing school should be explored. Providing this education before students enter practice might potentially help them become more comfortable and skilled in interacting with patients in complex situations. Simulation might be an effective tool to teach this and could be used throughout the curriculum to reinforce skills and as a periodic refresher for practicing nurses. Additionally, there is a further need to understand the role nurse educators play in supporting students and practicing nurses as they learn these important skills.

It is important to note that marijuana use is increasing in this country and has some form of legal use allowed in 47 states, the District of Columbia, and four territories (National Conference of State Legislatures, 2021). One of the primary responsibilities that nurses have is to provide education to their patients. As more people use the substance, it will be important for nurses to understand the implications of its use to effectively provide this education to their patients. Because participants in this study shared they knew very little about the effects of marijuana on a woman, a pregnancy, and ultimately her baby, providing quality education is difficult, if not impossible. As indicated by the NCSBN (Russell et al., 2018), nurses are responsible to understand the implications of marijuana use in general populations but there is also a need for perinatal nurses to have an increased understanding of its use during pregnancy to better support patients. While knowledge of these effects is currently limited, what is known

must be understood by nurses. This type of education is not taught in nursing school and was not provided in practice to participants of this study. As evidence continues to emerge, marijuana education should be integrated into nursing courses in undergraduate curricula and into continuing education for practicing nurses.

Contributions of This Study to Nursing and Nursing Education

Perinatal nurses provide care for women during very vulnerable periods of time in their lives. The attitudes in which nurses approach care have been shown to affect healthcare outcomes of patients they care for. This study provided a rich, detailed view of how perinatal nurses perceived marijuana use in this population of women. It has implications for both nursing practice and nursing education because it provided a foundational understanding of the experiences of perinatal nurses who cared for women who used marijuana during their pregnancies and how they perceived the use. Many of the themes identified in this study were well supported by findings from the literature. The themes of mixed emotions, forming a relationship, effects on the baby, and we need to know more were found in previous studies examining how nurses viewed substance use during pregnancy. The findings revealed that while nurses experienced a range of emotions toward these women, both because of marijuana's potential effects on the baby and the lack of knowledge surrounding its use, forming a relationship was considered to be vitally important to care outcomes. As no other studies, either qualitative or quantitative, were identified examining this particular phenomenon, this study served to fill an important gap in the literature and provided a base for future research.

Conclusion

This qualitative research study revealed that perinatal nurses caring for women who used marijuana during their pregnancies placed high importance on building nurse/patient

relationships. Despite a general disapproval of use, forming relationships with their patients was viewed as integral to care. Some findings from this study were similar to those of other studies regarding how nurses felt about general substance use. Findings indicated most nurses did not view any substance use during pregnancy in a positive light and marijuana was no different. While marijuana has been viewed as one of the least harmful substances a pregnant woman could use, more education is warranted in both nursing education and practice to better support nurses as they work with this patient population. This study revealed a strong need for more knowledge and education regarding marijuana use during pregnancy and development of strategies to improve communication skills for nurses who work with this population of women. This study provided a foundation for development of educational strategies and interventions to enhance knowledge and communication skills for nurses. Future research should focus on the development and evaluation of these strategies to improve the nurse/patient relationship and quality outcomes in patient care.

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APPENDIX A

RECRUITMENT NOTICE

ARE YOU A PERINATAL NURSE?

I'm an RN and a PhD student working on my dissertation and I need the help of my nursing colleagues.

If you work in OB, Antepartum, L&D, LDRP, Mother/Baby, or Postpartum Nursing, you are invited to participate in a brief interview (45-60 minutes) about your experiences and perceptions of caring for women who use marijuana during their pregnancies.

Interviews will be conducted at a time that is convenient for you and will be done via Zoom or in person if circumstances allow. To compensate for your time, you will get a $10 gift card for participating.

(If you're not a nurse in one of these areas, please help me with my research by sharing this notice with your nurse friends!)

To participate or for more information, please contact:

Darci McCall, MSN, RNC-OB, C-EFM
University of Northern Colorado
mcca5326@bears.unco.edu

Thank you!

*This research is conducted under the direction of Dr. Kathie Records, Professor, School of Nursing, College of Natural and Health Sciences, University of Northern Colorado, Greeley, CO

APPENDIX B

RECRUITMENT FLYER

ARE YOU A PERINATAL NURSE?

VOLUNTEERS NEEDED FOR A RESEARCH STUDY

If you are not a nurse, please help me with my research by sharing this with your nurse friends!

To participate or for more information, please contact:

Darci McCall, MSN, RNC-OB, C-EFM
Location: Boise, Idaho
University of Northern Colorado, Nursing PhD Student
mcca5326@bears.unco.edu

Thank you!

This research is conducted under the direction of Dr. Kathie Records, Professor, School of Nursing, College of Natural and Health Sciences, University of Northern Colorado, Greeley, CO

HOW DO YOU FEEL ABOUT MARIJUANA USE DURING PREGNANCY?

I am a Nursing PhD student working on my dissertation and I need the help of my nursing colleagues!

- **If you work in OB,** Antepartum, L&D, LDRP, Mother/Baby, or Postpartum Nursing, you are invited to participate in a **brief interview** (45-60 minutes).
- Tell me about your experiences of caring for women who use marijuana during their pregnancies.
- Confidential interviews will be conducted when it is convenient for you by Zoom (or in person if we can).
- Any information you give is confidential, your identity will be protected.
- I'll give you a $10 gift card to thank you for participating at the end of the interview.

UNIVERSITY OF NORTHERN COLORADO

APPENDIX C

INSTITUTIONAL REVIEW BOARD APPROVAL

UNIVERSITY OF
NORTHERN COLORADO

Institutional Review Board

Date: 01/06/2021

Principal Investigator: Darci Mccall

Committee Action: **IRB EXEMPT DETERMINATION – New Protocol**

Action Date: 01/06/2021

Protocol Number: 2012017749

Protocol Title: Perinatal Nurses' Perceptions, Attitudes, and Beliefs About Women Who UseMarijuana During Pregnancy

Expiration Date:

The University of Northern Colorado Institutional Review Board has reviewed your protocol anddetermined your project to be exempt under 45 CFR 46.104(d)(702) for research involving

Category 2 (2018): EDUCATIONAL TESTS, SURVEYS, INTERVIEWS, OR OBSERVATIONS OF PUBLIC BEHAVIOR. Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: (i) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects; (ii) Any disclosure of the human subjects' responses outside the research would not reasonably place the subjects at risk of criminal or civil liability or be damaging to the subjects' financial standing, employability,educational advancement, or reputation; or (iii) The information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by 45 CFR 46.111(a)(7).

You may begin conducting your research as outlined in your protocol. Your study does not require furtherreview from the IRB, unless changes need to be made to your approved protocol.

As the Principal Investigator (PI), you are still responsible for contacting the UNC IRB office if andwhen:

UNIVERSITY OF
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Institutional Review Board

- You wish to deviate from the described protocol and would like to formally submit a modification request. Prior IRB approval must be obtained before any changes can be implemented (except toeliminate an immediate hazard to research participants).
- You make changes to the research personnel working on this study (add or drop research staff on thisprotocol).
- At the end of the study or before you leave The University of Northern Colorado and are no longer a student or employee, to request your protocol be closed. *You cannot continue to reference UNC on any documents (including the informed consent form) or conduct the study under the auspices of UNCif you are no longer a student/employee of this university.
- You have received or have been made aware of any complaints, problems, or adverse events that arerelated or possibly related to participation in the research.

If you have any questions, please contact the Research Compliance Manager, Nicole Morse, at 970-351-1910 or via e-mail at nicole.morse@unco.edu. Additional information concerning the requirements for the protection of human subjects may be found at the Office of Human Research Protection website - http://hhs.gov/ohrp/ and https://www.unco.edu/research/research-integrity-and-compliance/institutional-review-board/.

Sincerely,

Nicole Morse
Research Compliance Manager

University of Northern Colorado: FWA0000078

APPENDIX D

INFORMED CONSENT

CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Perinatal Nurses' Perceptions, Attitudes, and Beliefs About Women Who Use Marijuana During Pregnancy

Researcher: Darci McCall, MSN, RNC, Doctoral Student, University of Northern Colorado, Greeley, CO
e-mail: mcca5326@bears.unco.edu

Advisor: Kathryn Records, Professor, School of Nursing, College of Natural and Health Sciences, University of Northern Colorado, Greeley, CO
Phone Number: (480)246-5554 e-mail: kathryn.records@unco.edu

PURPOSE AND DESCRIPTION
You are invited to participate in a study being conducted by Darci McCall. I am a perinatal RN and am currently enrolled in the PhD in Nursing Education program at University of Northern Colorado. The purpose of my study is to explore the perceptions, attitudes, and beliefs of perinatal nurses who provide care to women who use marijuana during their pregnancies.

As a participant in this study, you will be asked to:

- Take part in an individual interview with me and answer both structured and open-ended questions about your experiences as a perinatal nurse in caring for women who use marijuana during their pregnancies. While your responses will be confidential, I will collect basic demographic information such as the number of years you've been a registered nurse, the number of years you've practiced in a perinatal setting, your age, level of education, specialty area, and your state of residence.
- The interview will be audio recorded if held in person, and both audio and video recorded if held on Zoom.
- Your answers will be transcribed and analyzed to develop core themes describing the experience of caring for women using marijuana during their pregnancies.
- Participation in the interview will take approximately 45-60 minutes. You will also be contacted by email following the transcription of your interview by the researcher for further clarification to your initial interview responses if needed, and to ensure my interpretations are accurate. You will also be offered the opportunity to review your interview transcripts if you would like.

RISKS AND BENEFITS
Foreseeable risks from participation in this study to you are minimal. However, at times, discussion of controversial topics can trigger unwanted emotional responses. You are free to withdraw from the study at any point without penalty. There is no cost to participating in this study other than your time required for the interview.

There is no compensation for being in this study other than a $10 gift card in recognition and appreciation of your time. You will receive no direct benefits from participating in this study. However, your

responses may help me learn more about the experiences of perinatal nurses who care for women who use marijuana during their pregnancies and may help guide future research examining care and educational practices. Participation in the study may provide personal insight into your beliefs and views of marijuana use during pregnancy.

CONFIDENTIALITY
I will take every precaution to maintain confidentiality of the data. However, absolute confidentiality cannot be guaranteed. You can choose a pseudonym for data analysis and reporting purposes if you so desire.

Audio or audio/video recordings will be kept in a locked area with access limited only to me. The recordings will be destroyed within two weeks after they are transcribed and verified for accuracy. All data will be stored in a password protected electronic format will be destroyed after three years. Reports of the study findings will not contain any identifying information. The consent forms will be kept in a locked or password protected file in the Research Advisor's office for three years. The results of this study will be used for scholarly and research purposes only.

If you have any questions about the study, you may contact me or my research advisor by the email or the phone numbers listed above.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Please take your time to read the above, thoroughly review this document, and after having had an opportunity to ask any questions, please sign below if you would like to participate in this research. A copy of this form will be given to you to retain for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Nicole Morse, Office of Research & Sponsored Programs, University of Northern Colorado Greeley, CO, (970)351-1910, or Nicole.morse@unco.edu

If you agree to participate in this survey, clicking on "yes" below will indicate your consent. Your email address will be collected to demonstrate consent to participate. If you do not consent, simply click "no," and your dissent will be noted, and the interview will not continue.

Remember to print or save a copy of this consent for your records.

Thank you!
Darci

I give my consent to participate in this study.

Yes ◯

No ◯

APPENDIX E

DEMOGRAPHIC INFORMATION

Demographic Questions

1. Do you identify as a:
   A. Female
   B. Male
   C. Non-binary
   D. Questioning
   E. My identity is not listed (please fill in the blank) _____
   D. Prefer not to say

2. How many years have you been a registered nurse?
   A. Less than 1
   B. 1-5
   C. 6-10
   D. 11-15
   E. 16-20
   F. 21-25
   G. More than 25

3. How many years have you practiced in the perinatal setting?
A. Less than 1
   B. 1-5
   C. 6-10
   D. 11-15
   E. 16-20
   F. 21-25
   G. More than 25

4. On which unit do you spend most of your time in practice? (Please choose the unit where you estimate you work 70% or more of the time)
   A. Antepartum
   B. Labor and Delivery
   C. LDRP
   D. Mother-Baby
   E. Post-partum

5. Which role best describes your current role in perinatal nursing?
   A. Staff nurse
   B. Charge nurse
   C. Nurse manager
   D. Nurse Educator
   E. Travel Nurse
   F. Advance Practice Nurse
   G. Midwife
   H. I am not a registered nurse

6. What is your highest level of education?
   A. ADN
   B. BSN
   C. MS, MSN
   D. Doctoral Degree

7. What is the legal status of marijuana in the state in which you practice?
   A. Fully legal (both medical and recreational use is legal)
   B. Medical use only
   C. No legal use

8. What is your state of residence?
   _____

9. Have you provided care to a woman who used marijuana during her pregnancy?
   A. Yes
   B. No

10. In what state did you live when you provided care to a woman who used marijuana during her pregnancy? _____

APPENDIX F

INTERVIEW GUIDE

Interview Questions

These questions are broad in nature by design. More focused, specific questions may be used to gather further information from participants.

1. Please, tell me about your nursing practice.
2. Think about a time when you cared for a woman who used marijuana while she was pregnant. Can you tell me about your experience with that?
3. What comes to your mind when you think about marijuana use during pregnancy?
4. What do you know about marijuana use during pregnancy?
5. Where did you get your information about prenatal marijuana use?
6. How do you feel about marijuana use in general?
7. How do you feel about marijuana use during pregnancy?
8. How does the legal status of marijuana affect what you think or feel about it?
9. How has your perspective about marijuana use during pregnancy changed or evolved? If it has, why?
10. What were you taught about prenatal marijuana use in your nursing education or by your employer?
11. What kind of information do you feel would be helpful for you to know regarding prenatal marijuana use?
12. Is there anything else you would like me to know or add to our conversation?

APPENDIX G

FOLLOW UP INTERVIEW QUESTIONS

Follow Up Questions

1. Can you describe *how* you set your own personal views aside when providing care?

2. What does that look like for you?

3. Do you experience a moral dilemma or an internal struggle with these patients? If so, can you please explain?

4. *How* do you assess if you are doing it well?

5. What does it look like to you if it is ***not*** done well (this can be your personal experience or in something you've seen from another caregiver)?

6. What do you think is the difference between someone who does it well and someone who does not?

7. What are your thoughts on how, when, or where we can teach nurses (students or practicing nurses) to better set aside their personal views when caring for these patients? Where do we fit this in?