

## Maternal Substance Use Disorder: A Look at Provider Stigma, Attitudes, and Beliefs

Kristin Trainor

**Abstract:** *Pregnant women with substance use disorder (SUD) can face varying degrees of negative interactions with healthcare providers, including judgment of the individual's value and involvement in their infant's care. This research explored potential stigma and attitudes among medical providers within a maternal/fetal healthcare setting towards women with maternal SUD. An electronic survey was administered to 117 health care providers, including social workers, who work with pregnant women in an urban, Midwest, healthcare facility. Attitudes and stigma differed significantly based on the health care providers' discipline. Healthcare providers who viewed SUD as a disease had a more positive perception of mothers with SUD. By building professional awareness, creating policy change, increasing education, and continuing research regarding maternal SUD, social workers have an opportunity to develop responsive support programs for healthcare workers and promote overall change within the healthcare setting.*

**Keywords:** *Stigma, NAS, drug use, pregnancy, attitudes*

Women of all ages, socioeconomic status, and race are impacted by substance use disorder (SUD; Prasad, 2014; Substance Abuse and Mental Health Services Administration [SAMHSA], 2016; Stein, 2002). In 2014, over 32,000 babies in the United States (U.S.) experienced prenatal illicit opioid exposure (National Institute on Drug Abuse [NIDA], 2019). This number did not include other substances like methamphetamine, alcohol, or cocaine – thus, the overall number of women experiencing SUD was likely much higher. When looking at all substances, it is estimated that more than 5% of all births in the U.S. involve exposure to illicit prenatal substances (NIDA, 2017). Overall, the incidence of maternal SUD may be substantially higher, as substance use is often underreported when not using biomarkers (Chiandetti et al., 2017; Garg et al., 2016). However, pregnancy can be a prime motivator for SUD treatment, thus healthcare providers have a unique opportunity to support, build trust, and positively impact a woman experiencing maternal SUD (Crawford et al., 2015; Marangoni & Felix de Oliveria, 2015; Mitchell et al., 2008; Stein, 2002). Thus, to maximize beneficial outcomes for babies and mothers, it is necessary to understand the potential stigma that healthcare providers may, intentionally or unintentionally, be imposing on families impacted by SUD. Increasing self-awareness among practitioners can lead to greater self-management and improved practice skills (Sukhera et al., 2018; Winstone & Gervis, 2006), thus enhancing opportunities for a more positive health situation for mother and baby.

**Barriers to Healthcare.** Women with maternal SUD attend fewer prenatal visits on average than women without a SUD (Little et al., 2005; Renbarger et al., 2019; Whiteman et al., 2014) due to a host of factors. Barriers to prenatal care include limited access to health insurance, limited childcare, inadequate transportation, homelessness, negative

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provider interaction, low socio-economic status, limited support, general fear and mistrust, and fear of legal implications and Child Protective Services (CPS) involvement (Howell & Chasnoff, 1999; Marangoni & Felix de Oliveria, 2015; Paris et al., 2020; Roberts & Pies, 2010).

Emotionally, women with SUD may shut down, avoid recognizing the pregnancy or become overwhelmed with the process of obtaining care, and thus avoid seeking help (Latuskie et al., 2019; Roberts & Pies, 2010). Women can become isolated (Stone, 2015), as informing their family or healthcare provider of the pregnancy along with their SUD may increase fear of rejection (Roberts & Pies, 2010) or prosecution (Paris et al., 2020; Stone, 2015). If the woman's partner or social circle is also experiencing SUD, the woman can be forced to choose between abstinence or treatment and her perceived support group (Meurk et al., 2014). This can again be isolating if the woman chooses to abstain from substances or can act as a deterrent to prenatal care if the partner is not supportive of treatment (Crawford et al., 2015; Mburu et al., 2020). High levels of negative self-image, low self-esteem and paranoia accompanying the belief that others are cognizant of the SUD (Bowie, 2005; Prasad, 2014; Sun, 2004) can each act as a deterrent to seeking care. When mixed with limited social support, the opportunity for prenatal care greatly diminishes (Roberts & Pies, 2010; Sun, 2004). Limited prenatal care not only decreases the opportunity to support women with maternal/fetal medicine but also decreases access to services for SUDs, mental health, and general health (Prasad, 2014; Roberts & Pies, 2010).

**Neonatal Abstinence Syndrome (NAS) and Staff Implications.** NAS is a medical diagnosis, under ICD-10-CM P96.1, and requires the presence of certain symptoms to make a diagnosis. The Finnegan Score, a tool used to capture NAS symptoms, quantifies a baby's level of drug exposure (Busenbark, 2016). Typically, NAS symptoms will manifest within three days post-delivery, though, in some cases, symptoms may not surface for seven days (Bhuvaneshwar et al., 2008; Logan et al., 2013; Mangat et al., 2019). The symptoms may include increased muscle tone, extreme irritability, high pitched cry, poor sleep patterns, and diarrhea (Dryden et al., 2009; Hudak & Tan, 2012; Logan et al., 2013; NIDA, 2020b). From a long-term perspective, prenatal drug exposure can impact growth, behavior, cognitive functioning, language, and general achievement (Logan et al., 2013; NIDA, 2020b; Patrick et al., 2012; Stein, 2002).

There are several non-pharmacological treatment options for babies experiencing NAS, which include a low stress, quiet environment; skin-to-skin contact; baby massage; dietary changes; and encouragement of breast feeding (Busenbark, 2016; Dryden et al., 2009; Mangat et al., 2019; McQueen & Murphy-Oikonen, 2016). Specifically, skin-to-skin contact creates a two-fold benefit. It decreases symptoms and improves the baby's overall well-being (Busenbark, 2016; Dryden et al., 2009; McGlothen-Bell et al., 2021; Vogel, 2018). While the baby is able to be comforted via skin-to-skin, the parent can begin the bonding process and learn the individual needs of their baby (McGlothen-Bell et al., 2021; Vogel, 2018).

If the mother does not positively bond with the baby, there can be additional psychosocial stressors including depression, frustration, guilt, and increased substance use for the mother (De Bortoli et al., 2014). However, with increased parental visitation, the

hospital staff can assist the mother in recognizing the baby's irritability as a sign of withdrawal rather than the baby's lack of attachment to the mother (Sun, 2004). Some hospitals allow for parental rooming in, which affords the parent time to bond, interact, and become more fully engaged while the baby receives consistent, soothing care (Busenbark, 2016; MacVicar & Kelly, 2019). When healthcare providers encourage visitation, teach skills, and empower the new mother to parent, increased bonding and comprehension of the baby's medical needs can occur (Vogel, 2018) while simultaneously increasing the trust and relationship between staff and caregiver (Busenbark, 2016).

### **Understanding Maternal Substance Use**

Working with women who have a SUD during pregnancy can be challenging, thus, providers must be educated regarding best practices in care for the parents and their children (SAMHSA, 2016; Stein, 2002; Woods & Conley, 2022; Worley, 2014). Two contrasting models have evolved to explain the causes of SUD: the Moral Model of Addiction and the Disease Model. The underpinnings of each model funnel into key concepts of potentially increasing or decreasing stigma.

The Moral Model of Addiction focuses on the individual's weakness and subsequent character flaws as the factor leading to substance use (Lawrence et al., 2013; NIDA, 2014; Schaler, 1991; Van Wormer & Davis, 2018). The Moral Model legitimizes a punishment focus, like that evidenced by the War on Drugs, which criminalizes drug use over rehabilitation and promotes long prison sentences (Frank & Nagel, 2017; Lemaitre, 2011; Van Wormer & Davis, 2018). State-directed punitive approaches towards addiction are also observed as 23 states identify substance use in pregnancy as child abuse and 3 states allow for civil commitment (Gutmacher Institute, 2021). However, only 17 states offer priority treatment programs for pregnant women (Gutmacher Institute, 2021). The Moral Model appeals to emotion (Pickard, 2017); however, this view of substance use fails to recognize the complexities or to explain the sociological and physiological effects of substance use (Crawford et al., 2015; Koppel, 2016; Lawrence et al., 2013; Stein, 2002; Whiteman et al., 2014). Attributes of the Moral Model remain within the healthcare setting. Raeside's (2003) quantitative study examined midwives and nursing staff working with substance-using mothers and found 76% reported anger towards the mother (Raeside, 2003). Additionally, in Lawrence et al.'s (2013) quantitative study of physician beliefs regarding addiction, 14% attributed the cause of addiction to a moral failing. When healthcare workers and the community operate under the belief that substance use is pleasure-seeking instead of a disease, a punitive and criminal approach takes effect (Stein, 2002). However, punitive approaches lead women to avoid prenatal care, withhold medical information, and isolate themselves out of fear (Lollar, 2017; Stone, 2015; Wolfson et al., 2021).

In contrast to the Moral Model, the Disease Model of Addiction views substance use as a medical condition (Horvath et al., n.d.; Schaler, 1991; Van Wormer & Davis, 2018). According to this conception, SUD alters the brain, thus causing the individual to crave the drug, creating a biochemical cycle. Among individuals with SUD, 40-60% will relapse (NIDA, 2011). Witnessing an individual relapse can be devastating. Thus, recognizing that

relapse may occur is important (NIDA, 2020a; Stein, 2002). Bland et al. (2001) reviewed medical students' beliefs towards maternal substance use. The results indicate a positive change in medical student beliefs after education regarding SUD was presented (Bland et al., 2001). Reframing substance use as a disease may also help providers view a mother with substance use as a person with a health condition, as perceptions towards disease and treatment have been shown to impact provider decision-making (Shadowen et al., 2021).

Hospitals around the country are beginning to reassess the treatment of NAS and have found promising results by humanizing the mother. In a Tennessee hospital, the mother/baby NAS program functions under the paradigm of addiction as a disease (Busenbark, 2016). By decreasing providers' disapproval and subsequent anger toward the mother's substance use, providers are better able to support the baby and parent (Busenbark, 2016). Such changes in the treatment of NAS lowered the hospital length of stay (LOS) from 34 to 23 days (Busenbark, 2016). The decrease in LOS is attributed to staff and community education and a shift in the beliefs about addiction (Busenbark, 2016). Similarly, the Yale-New Haven Children's Hospital is changing the underlying belief system of maternal SUD and placing parents in the center of the treatment/care process for the baby (Busenbark, 2016). The parents are included in the treatment plan to help administer the non-pharmacological support. The hospital team empowers new mothers to become the healing component which helps to increase the trust and relationship between staff and caregiver (Busenbark, 2016). After two years of implementing this approach, Yale-New Haven Children's Hospital experienced a decrease in length of hospitalization from 27.5 to 7.5 days (Busenbark, 2016).

## **Stigma**

Health-related stigma is a "sociocultural process in which social groups are devalued, rejected, and excluded on the basis of a socially discredited health condition" (Livingston et al., 2012, p. 39). SUDs are a leading stigmatized health condition among institutions and the community (Livingston et al., 2012). Additionally, when a SUD co-occurs with pregnancy, the potential for stigmatization increases (Sun, 2004). Healthcare providers can inadvertently perpetuate health disparities due to their own perceptions and stigma (Chapman et al., 2013). Stigma can lead to additional isolation due to fear of provider reaction and rejection (Hatzenbuehler et al., 2013; Marangoni & Felix de Oliveria, 2015), which may lead to poor maternal and fetal care, poor hospital visitation post-birth, or lack of attentiveness during hospital visitation.

There are multiple types of stigma: self, social, and structural (Livingston et al., 2012). Self-stigma can be conceptualized as negative thoughts and feelings regarding one's self, acceptance of a negative narrative about the self, and the expectation of negative attitude/reactions of others due to status or health condition (Livingston & Boyd, 2010). Self-stigma can lead to self-destructive behaviors and may contribute to poor health outcomes (Hatzenbuehler et al., 2013). A vicious cycle ensues. Individuals believe the negative attributes that are assigned, which causes continued maladaptive emotional coping strategies (Hatzenbuehler et al., 2013). Social stigma occurs when a large group engages in stereotyping and negative actions against an already stigmatized group (Corrigan et al.,

2005a). Stigma also increases within health care settings when providers view the individual as refusing to cease their substance use (Corrigan et al., 2009). For individuals with SUD, their actions can be viewed as disingenuous by providers, which can lead to women underreporting their substance use (Paris et al., 2020).

Structural stigma broadly encompasses the policies and the culture within an institution which promote negative attitudes towards a group, either directly or indirectly (Corrigan et al., 2005a, 2005b; Link & Hatzenbuehler, 2016). This type of stigma suppresses opportunities for the stigmatized group, promotes a loss of status, labeling, discrimination, and stereotyping (Corrigan et al., 2005a, 2005b; Link & Hatzenbuehler, 2016). A policy which criminalizes maternal SUD operationalizes structural stigma. For example, in 2014, Tennessee passed Public Chapter 820, or “The Fetal Assault Law” which allows for legal prosecution of women who use illicit substances during pregnancy, if linked to harm to the baby (Darlington et al., 2021; Lollar, 2017). However, research has shown that such a law is detrimental to both mother and baby, as seeking prenatal care is greatly diminished, and home births increase as a result of fear of prosecution (Burke, 2016; Darlington et al., 2021; Lollar, 2017). The medical community opposed the bill (Burke, 2016), and due to ramifications including a greater number of home births, lower rates of prenatal care, and lack of available SUD services, the law was suspended in 2016 (Burke, 2016; Darlington et al., 2021; Lollar, 2017).

While Tennessee is the only state to have a specific statute outlining the criminal offense, other states are creating similar policies (Boone & McMichael, 2021). This emerging national trend toward punitive measures appears ineffective to improve outcomes. Faherty et al.’s (2019) study found that states with increased punitive laws and sanctions did not see a decrease in NAS, while states with less punitive measures saw improved NAS occurrences. Enhanced criminalization measures are also disproportionately impacting women of color (Haffajee et al., 2021). The U.S. has a high rate of maternal mortality, 17.2 per 100,000 live births, with women of color having much higher rates, 43.5 per 100,000 live births (Melillo, 2020). It is estimated that 60% of maternal deaths are preventable (Centers for Disease Control and Prevention, 2019) with accidental overdose a prevalent factor in maternal mortality (Collier & Molina, 2019; Indiana Department of Health, 2020). Measures need to be adopted to diminish, rather than escalate, maternal mortality rates.

A punitive and stigmatizing approach to maternal SUD is counterproductive to improved mortality rates and leads to even greater health concerns for both mother and baby (Faherty et al., 2019; Goodman et al., 2019). Healthcare flourishes when the provider has access to all pertinent data regarding the patient in order to formulate the best plan of care. When a patient realizes that honest communication may result in the loss of her own personal freedom or the loss of contact with her child, the integrity of the system dissolves. A system in which the mother cannot openly share her medical information with her provider, for fear of legal implications, creates fractured and dangerous practices (Criminal Law, 2020).

Regardless of type (self, social, or structural), stigma is detrimental to health outcomes (Hall et al., 2015; Hatzenbuehler, 2016). By increasing provider awareness of

the negative consequences of stigma, change can occur at the individual, institutional, and cultural level within the healthcare system (Carnes et al., 2012; Pope et al., 2018; Sukhera et al., 2018). Research shows that building awareness can lead to initial change in one's behavior, attitudes, and/or beliefs, creating a snowball effect: a person becomes aware, which triggers change, then becomes a role model to shape new culture (Sukhera et al., 2018). Thus, understanding and recognizing stigma can positively influence the care and outcomes for women with SUD.

### **Study Rationale**

Although robust research documents NAS and addiction, there is a dearth of research regarding healthcare provider attitudes (across disciplines) and stigma attached to maternal SUD (Fonti et al., 2016). Additionally, no studies were found that assessed the attitudes of the multi-disciplinary team of healthcare workers who are involved in the care of women with maternal SUD. Selleck and Redding's study from the mid-1990s examined the attitudes towards maternal SUD of 392 nurses. The results indicated that more than half of nursing staff reported negative or punitive attitudes towards their patients with SUD. However, staff with greater education on addiction had more positive attitudes (Selleck & Redding, 1998). The study included only nursing staff, a limitation given that different disciplines are involved in the care of both mother and baby. Similarly, Fonti et al.'s (2016) survey of nurses indicated neutral to slightly positive overall attitudes towards maternal SUD, though this survey again had a limited professional focus. Hospital-based care for both pregnant women and babies is provided by medical doctors and nurses, and augmented by ancillary staff, including social workers, chaplains, supportive care workers, case managers, ultrasound technicians, dietitians, physical therapists, speech therapists, occupational therapists, managerial nurses, lactation consultants, and volunteers. Each group may have a different understanding or belief about maternal SUD which can negatively or positively affect the outcome of a mother's medical experience and health outcomes. Thus, the goal of this cross-sectional study was to examine providers' stigma, attitudes, and beliefs of causation associated with women who have maternal SUD, across multiple disciplines within a healthcare system.

**Survey Review.** At the time of this study, there were no specific measures available to examine healthcare provider attitudes (across disciplines) and stigma regarding maternal SUD. Thus, the researcher developed a new measure to assess belief of causation of SUD, stigma, and attitudes toward maternal SUD based upon the work of multiple contributors (Raeside, 2003; Silins et al., 2007; Stringer et al., 2016). Silins et al. (2007) used an adapted Alcohol and Alcohol Problems Perception Questionnaire (AAPPQ) to assess medical student attitudes towards SUD. Reliability and validity were not reported. Written documentation allowing for the use and modification of the AAPQ was obtained. Additional items were developed based upon previously available research by Raeside (2003) and Stringer et al. (2016). Raeside's (2003) survey measured the attitudes of nurses working with mothers experiencing SUD. The full survey, including reported reliability and validity, was not available in the public domain and attempts made to obtain the full survey were unsuccessful. Stringer and colleague's 2016 survey focused on healthcare provider stigma related to HIV. While direct questions were not used from this tool, the

modified “Measuring HIV Stigma and Discrimination among Health Facility Staff” survey, it did influence the survey design (Cronbach's alpha= .818) given the efforts to measure stigma.

Due to the new survey instrument, this study had multiple levels of review. The first was a review from a dissertation committee, who provided essential feedback on the instrument. Additionally, an outside doctoral- level professional reviewed the survey and offered vital feedback. In addition to the committee review, eight professionals in the healthcare field, including social work, nursing, nutrition/dietetics, and speech therapy, completed the survey. The modified pilot test allowed for review of the survey scales. The scales for Attitudes, Stigma, and Causation of SUD were tested for internal consistency using Cronbach’s Alpha coefficient. The Attitudes Scale ( $\alpha=.89$ ), Stigma Scale ( $\alpha=.79$ ), and Causation of SUD Scale ( $\alpha=.80$ ), met the parameters for appropriate internal consistency at the acceptable to high range.

**Sample size.** To determine an appropriate sample size, multiple factors, including type of statistical test, the significance level, the expected effect size, the targeted value of power, and the estimated response rate for the survey were assessed. Thus, the survey required a target sample of 91 participants. Initially 135 individuals opened the survey link, 127 individuals started the survey, and 117 completed it.

**Study participants.** The group under investigation were healthcare practitioners within a maternal/fetal and prenatal healthcare setting. All medical practitioners, regardless of discipline within the maternal fetal setting, were ideal for the study, because these practitioners were most likely to be delivering clinical intervention and were at risk of perpetuating stigma. The main inclusion criterion for this sample was active practice in the maternal, neonatal, or pediatric healthcare field (employed either part-time or full-time) at the time of data collection. Participants also were required to be able to read English.

**Recruitment.** The hospital system selected to recruit healthcare providers was the largest pediatric hospital offering the highest level of care (level IV) in the state. The researcher contacted medical directors and department managers directly to offer an opportunity to participate in the study. The medical directors and managers were asked to send the survey to their staff via the Internet through a participant recruitment e-mail written by the researcher. Respondents had the opportunity to enter a drawing to win a \$10 Amazon gift card. Individuals were encouraged to participate to help increase understanding of healthcare providers’ attitudes and perceptions of maternal SUD.

**Measures.** The key variables in this study included healthcare provider attitudes of maternal SUD, stigma, and causation of SUD. Practitioner’s discipline was a predictor variable of particular interest, as little to no research is available on this factor.

The measure contained 35-items, categorized into three scales measuring attitudes, stigma, and causation of SUD. Each of the items, which included statements such as “I am uncomfortable working with pregnant cocaine users” and “I believe more punitive measures should be taken against a mother with pregnancy drug misuse,” was rated on a 5-point Likert scale (1 = *strongly agree* to 5 = *strongly disagree*). Six items were reverse-coded. Lower scores indicated more negative attitudes and greater stigma related to

maternal substance use. Items used to assess provider stigma included “I prefer not to work with pregnant women with SUD,” “Hospitals should impose greater sanctions on a mother with SUD during pregnancy,” “Women should be regularly drug tested,” “I am not comfortable leaving a child in a room with their substance misusing parent,” and “An infant should never discharge with the mother if she misused substances.”

**Control variables.** Demographic items inquired about respondents’ education level, work status (full or part-time), professional licensure status, race, ethnicity, age, practice location, length of time in practice, and gender. For specific survey questions refer to Appendix 1.

## Results

**Demographics.** The sample was a non-representative, convenience sample of healthcare professionals ( $n= 117$ ) in an urban, Midwest state in the U.S. The sample was overwhelmingly female (94%) and Caucasian (92%). Participant ages ranged from 21 to 73 years. Of the 24 employment disciplines listed, the most common positions reported were direct care nurse (41%), medical doctor (13%), nurse practitioner (14%), or social worker (13%). The employee discipline affiliations were condensed to yield a higher sample size for each group. The groups were reconfigured to include medical doctor, nurse practitioner/physician assistant, direct care nurse, social work, administration, and support staff. In terms of employment status, more than 94% of respondents were actively practicing in a maternal, fetal, or pediatric setting and 86% were working with a mother or baby affected by NAS. Most respondents reported they were full-time (73%) employees, and 50% reported spending more than 51% of their work week in direct contact with mothers experiencing a SUD.

**MANOVA.** Factorial MANOVA was used as it allows for testing mean differences between levels of two independent variables with two dependent variables (French et al., n.d.) and reduces the Type 1 error rate (Murphy, 2021). The conventional social science alpha level of .05 was used; thus, there was a 5% chance that false significance, or type 1 error, would occur (Olejnik, 1984). The results of the factorial MANOVA showed an overall significant difference between an employee’s attitudes and stigma levels among different disciplines (Pillai’s Trace= .28,  $F_{(10, 198)}=3.24$ ,  $p=.001$  with a power of 0.99. The Post hoc pairwise comparisons between subjects indicate attitudes ( $F_{(10,198)}=4.63$ ,  $p=.001$ ,  $\eta^2=0.12$ ) and stigma levels ( $F_{(6,198)}=2.64$ ,  $p < .05$ ,  $\eta^2=0.19$ ) differed significantly based on providers’ discipline (see Table 1). The discipline accounts for 12% of the variance in attitudes ( $\eta^2=0.12$ ) and 19% of the variance in stigma ( $\eta^2=0.19$ ).

Table 1. *Post Hoc Pairwise Analysis Test for Factorial MANOVA*

		Attitude			Stigma		
Current Employment Discipline		Mean Diff.	SD	p	Mean Diff.	SD	p
Medical Doctor	Administration	-.70	7.777	1.00	3.47	2.676	.787
	Direct Care Nurse	9.80	4.078	.165	3.73	1.403	.093
	Nurse Practitioner/PA	-.14	4.895	1.00	-.18	1.685	1.00
	Social Worker	-4.58	4.967	.940	.28	1.709	1.00
	Support Staff	8.61	4.967	-.513	.53	1.709	1.00
Administration	Medical Doctor	.70	7.777	1.00	-3.47	2.676	.787
	Direct Care Nurse	10.50	7.186	.690	.27	2.473	1.00
	Nurse Practitioner/ PA	.56	7.680	1.00	-3.65	2.643	.739
	Social Worker	-3.88	7.725	.996	-3.19	2.658	.836
	Support Staff	9.31	7.725	.833	-2.94	2.658	.878
Direct Care Nurse	Medical Doctor	-9.80	4.078	.165	-3.73	1.403	.098
	Administration	-10.50	7.186	.690	-.27	2.473	1.00
	Nurse Practitioner/ PA	-9.94	3.890	.118	-3.91	1.339	.048*
	Social Worker	-14.37	3.979	.006*	-3.45	1.369	.128
	Support Staff	-1.19	3.979	1.00	-3.20	1.369	.189
Nurse Practitioner/ PA	Medical Doctor	.14	4.895	1.00	.18	1.685	1.00
	Administration	-.56	7.680	1.00	3.65	2.643	.739
	Direct Care Nurse	9.94	3.890	.268	3.91	1.339	.048*
	Social Worker	-4.43	4.814	.973	.46	1.656	1.00
	Support Staff	8.75	4.814	.654	.71	1.656	.998
Social Worker	Medical Doctor	4.58	4.967	.973	-.28	1.709	1.00
	Administration	3.88	7.725	.988	3.19	2.658	.836
	Direct Care Nurse	14.37	3.979	.029*	3.45	1.369	.128
	Nurse Practitioner/ PA	4.43	4.814	.973	-.46	1.656	1.00
	Support Staff	13.19	4.866	.211	.25	1.681	1.00
Support Staff	Medical Doctor	-8.61	4.967	.699	-.53	1.709	1.00
	Administration	-9.31	7.725	.917	2.94	2.658	.878
	Direct Care Nurse	1.19	3.979	1.00	3.20	1.369	.189
	Nurse Practitioner/ PA	-8.75	4.814	.654	-.71	1.656	.998
	Social Worker	-13.19	4.886	.211	-.25	-.25	1.00

*p*<0.05\*

**Assumption testing.** A series of tests were completed to ensure the assumptions for the MANOVA analysis were met. Tests completed were the Pearson’s Correlation ( $r=0.602$ ,  $p<.01$ ), Box’s M value of 44.63( $p=.688$ ), Levene’s F Test, and Mahalanobis distance. Across the dependent variables, the measure of skewness and kurtosis, histograms, and normal Q-Q plots were examined. All assumptions were met, thus rendering MANOVA an appropriate statistical analysis.

Additionally, correlations were calculated for the perceived Causation of SUD Scale and Attitude Scale of maternal SUD. Refer to Table 2 for the inter-item correlation matrix.

Table 2. *Inter-Item Correlation Causation Matrix*

	1	2	3	4	5
Believe addiction is a medical condition	1.000	.357	.346	.280	.466
Believe addiction is caused by a moral flaw		1.000	.391	.397	.467
Believe addiction is selfish			1.000	.508	.527
Person could quit illicit drug use if they really wanted to				1.000	.641
Person who uses illicit drugs during pregnancy cares more about drugs than the baby					1.000

The initial research question sought to explore not only the respondents' attitudes, causation beliefs, and provider stigma, but whether these beliefs differed by healthcare discipline. It was unknown whether the various employment positions might reflect different results because of varying education, training, or experience. The dependent variables, Attitudes and Stigma, were treated as continuous variables. The Attitude Scale was created by using the sum score of questions Attitude 1-Attitude 18. Attitude 18 was reverse-coded. The sum numbers were divided into 5 groups: Extremely Negative Attitudes (18-32), Negative Attitudes (33- 47), Neutral Attitudes (48-62), Positive Attitudes (63-77), and Extremely Positive Attitudes (78+). Higher scores represent more positive attitudes. The Structural Stigma Scale was created by using the sum score of Stigma items 1-11. Stigma 2, 3, and 9 were reverse-coded. The sum numbers were divided into 5 groups: Extremely High Stigma (11-19), High Stigma (20-28), Neutral (29-37), Low Stigma (38-46), and Extremely Low Stigma (47-55). Higher scores represent decreased stigma.

Results show significant differences in attitudes and stigma by discipline. As a group, the respondents report an overall neutral attitude ( $M=60$ ) toward women with SUD, and neutral levels of stigma ( $M=34.7$ ). Direct care nurses had significantly lower scores for attitude ( $M=55$ ) and increased stigma scores compared to their counterparts: nurse practitioners ( $M=64.76$ ), medical doctors ( $M=64.8$ ), and social workers ( $M=69.3$ ). Additionally, direct care nurses on average report having an overall neutral to negative attitude towards women with maternal SUD, while medical doctors, social workers, and nurse practitioners report an overall neutral to positive attitude.

Stigma attached to women with SUD was shown by 32% of respondents, who reported that the hospital provided better non-medical care to babies than their mothers provided. Further, 25% of respondents reported that mothers deserve less privacy. These findings demonstrate informal and formal levels of stigma, which broadly encompass the policies and the culture within the institution, potentially impacting the mother's ability to utilize all resources/supports (Corrigan et al., 2004, 2005b). Overall stigma levels by discipline are found in Table 3.

Table 3. *Overall Stigma Level by Discipline*

Position	n	Negative	Neutral	Positive
MD-direct	14		9 (64.3%)	5 (35.7%)
MD-admin	1		1 (100%)	
Direct care nursing	49	11 (22.5%)	31 (63.3%)	7 (14.3%)
NP/PA	17	1 (5.9%)	8 (47.1)	8 (47.1%)
Case manager	4	1 (25.0%)	2 (50.0%)	1 (25.0%)
Nursing management	3	1 (33.3%)	2 (66.7%)	
Social work	16		12 (75.0%)	4 (25.0%)
Respiratory therapist	5	1 (20.0%)	3 (60.0%)	1 (20.0%)
Music therapist	1			1 (100%)
Lactation consultant	2		2 (100%)	
Nursing educator	1			1 (100%)
Pharmacy	1			1 (100%)
Non clinical	3		1 (33.3%)	2 (66.7%)
Total	117	15 (12.8%)	71 (60.7%)	31 (26.5%)

Beliefs about the cause of maternal SUD were also examined. There were strong correlations ( $r=0.61$ ) between the perceived cause of SUD and one's attitude towards maternal SUD. Results indicated that 10% of respondents viewed SUD as a moral flaw, while 41% were unsure if it is a moral flaw (see Table 4). Nearly 50% of respondents did not view SUD as a medical issue. In fact, 44% of staff reported more punitive measures should be taken against a mother with SUD, with an additional 28% unsure. Of the respondents, 37% reported believing a mother with SUD cares more about drugs than her baby, while 16% of respondents were unsure. Additionally, 36% believed a mother could quit her substance use if she wanted to, while another 22% reported uncertainty as to a mother's ability to quit. Only 43% of respondents believed hospitals provide a supportive place for mothers with SUD. Refer to Table 5 for a complete list of general beliefs and attitudes.

Table 4. *Causation of SUD by Employment Discipline*

Position	n	Negative	Neutral	Positive
MD-All	15		4 (26.7%)	8 (73.3%)
Administration	4	1 (25.0%)	1 (25.0%)	2 (50.0%)
Direct Care Nursing	49	8 (16.3%)	28 (57.1%)	13 (26.53%)
NP/PA	17	1 (5.9%)	4 (23.5%)	12 (70.6%)
Social Work	16		1 (6.3%)	15 (93.8%)
Support Staff	16	2 (12.5%)	10 (62.5%)	4 (25.0%)
Total	117	12 (10.3%)	48 (41.0%)	57 (51.7%)

*Table 5. General Beliefs and Attitudes (n=117)*

Question	Strongly Agree/ Agree	Undecided	Strongly Disagree/ Disagree
Believe hospital staff can provide better, non-medical care	38 (32.4%)	44(37.6%)	35 (29.9%)
State should impose greater sanctions on a mother with substance misuse during pregnancy	58 (49.6%)	33 (28.2%)	16 (22.2%)
Schooling prepared me to discuss health risk behaviors with patients	80 (67.2%)	13 (10.9%)	26 (21.9%)
Satisfied with the level of communication between disciplines	86 (72.2%)	14 (11.8%)	19 (16.0%)
Organization provides a supportive environment for mothers	52 (43.7%)	41 (34.5%)	26 (21.8%)
Believe more punitive measures should be taken against	51 (43.6%)	33 (28.2%)	33 (28.2%)
Burned out working with mothers and babies with drug use/exposure	10 (8.6%)	11 (9.4%)	96 (82.1%)
Person could quit illicit drug use if they really wanted to	42 (35.9%)	26 (22.2%)	49 (41.9%)
Person who uses illicit drugs during pregnancy cares more about drugs than the baby	43 (36.8%)	19 (16.2%)	55 (47.0%)
Empathy for a pregnant/post-partum woman with substance misuse	82 (70.1%)	25 (21.4%)	10 (8.5%)

### Discussion

Although there are some positive attitudes towards mothers with SUD, negative stigma exists across several disciplines. The pervasive non-adherence to the disease model (51%) of SUD may, in part, be responsible for this situation. This can cause concern because when hospitals adapt a humanistic approach, supported through a disease model of SUD, improved outcomes for the baby are more likely to occur (Busenbark, 2016; Vogel, 2018). There is also an indication that the healthcare provider’s discipline may influence their attitudes and levels of stigma. This may, in part, be due to the type of discipline and specific teachings within each area, as well as to the potential effects of working directly with the population.

These results do not necessarily reflect the realities of professional practice. Often direct care nurses spend more direct time working in day to-day contact with mothers and babies affected by maternal SUD, which may lead to a more stressful work environment or greater levels of burnout, as providers feel they are ineffective in a mother’s SUD (Stein, 2002). This may reflect a need for greater education and support, especially at the direct care nursing level. Additional factors that may influence a provider are the perceived levels of support and the hospital system cohesiveness. It is promising that 87% of respondents report receiving positive supervision. Supervision is powerful when the relationship is viewed by the supervisee as supportive (Frimpong et al., 2011). Thus, although surveyed healthcare practitioners felt supported by their institutions, it is unknown whether the institutions promote a positive or negative climate towards women with maternal SUD.

**Limitations.** The research study has several limitations. The sample was a non-representative, convenience sample with limited sample size of ancillary departments, and data were collected at only one hospital system. The sample was disproportionately white and female. Additionally, specific data were not available on the demographics of the women accessing the hospital system services. Thus, the survey cannot identify or remark on potential bias masked as SUD stigma.

There was limited literature available directly reflecting stigma, attitudes, and causation of SUD towards pregnant women. This impacts not only foundational literature but the access and availability of valid and reliable survey instruments. Consequently, a new instrument was created due to the lack of an available survey instrument. The survey was created based on available literature stemming from other stigmatized groups, specifically HIV and alcohol use disorder. The survey underwent multiple levels of review, though it should be noted that the modified pretest cannot determine generalizability as only eight healthcare professionals participated in the pretest. While reliability of the Stigma Scale (Cronbach alpha = .72) and Attitude Scale (Cronbach alpha = .96) were at least at an acceptable degree of reliability, additional testing and scale adaptations may yield greater reliability. The single survey items addressing burnout and supervision satisfaction may not account for the full scope of other variables that impact attitudes and stigma levels. Additionally, the effect size for employment disciplines (0.142) was small, which poses a challenge in estimating the true relationship between variables. However, the power for provider discipline (.987) was well within the appropriate range. Additionally, as the research continues to grow surrounding attitudes, causal beliefs, and stigma towards pregnant women with SUD, the instrument developed for this study would benefit from further analysis.

The study focused on the global stigma and attitudes towards SUD and did not extrapolate individualized substance use. Further research will benefit from not only looking at the general stigma around maternal SUD, but specific substances (e.g., marijuana, alcohol, methamphetamine, opioids, and barbiturates). Additionally, response bias among participants may have impacted the study results. The study did not identify if an individual was already aware of their own stigma and attitudes yet chose to continue with said behaviors, as the study examined the general causation beliefs, attitudes, and provider stigma related to maternal SUD. Further research is necessary to increase understanding and consequences of provider stigma, beliefs around causation, and attitudes towards maternal SUD.

**Implications for Social Work.** The social work professional can play a pivotal role in creating supportive change to decrease provider SUD stigma and improve care for mothers with SUD. The National Association of Social Workers (NASW, 2017) Code of Ethics values the “dignity and worth of the person” (para. 4). To support this guiding principle, social work practice and policy development can promote and support systemic change within the healthcare field. To assist in improving the attitudes and stigma levels of providers within a hospital environment, policy recommendations and an action protocol were derived from this research. The objective of such an education protocol is to promote a hospital culture of support and education for employees across disciplines working with NAS and mothers with SUD. Increased education could focus on the causes of SUD, the

supports available to mothers, and understanding the ramifications of one's own attitudes and stigma towards a mother with SUD.

The importance of human relationships is a core value of the social work profession (NASW, 2017). To support the growth of human relationship between the mother, baby and staff, more inclusive service protocols may provide positive benefit. The objective for a service protocol is to promote an inclusive, supportive, and safe environment for mothers and caregivers with babies experiencing NAS.

Overall, further research is necessary to better understand how families who experience SUD view the healthcare system and their experiences within the maternal/fetal care setting. By recognizing this unique experience, practitioners can identify specific needs and concerns. Creating policy change, increasing education, and continuing research regarding maternal SUD will offer social workers an opportunity to develop responsive support programs for healthcare workers and promote overall change within the healthcare setting.

### **Conclusion**

Maternal SUD is a public health concern in the U.S. (Stone, 2015) with more than 5% of births involving prenatal substances (NIDA, 2017). The emerging trend toward increased punitive measures toward mothers is especially devastating as research evolves to reflect better outcomes when the mothers are more involved in the healthcare process. Enhancing the mother's experience, rather than utilizing perceived private and privileged patient/ provider conversations to exact punitive measures against the mother, should be the focus to allow for better mother and child outcomes.

One aspect of improving the mother's experience is to minimize the negative perceptions of those involved in her care. Although emerging research is available on stigma, it remains in the early stages of understanding and development (Link & Hatzenbuehler, 2016). This study provides an initial glimpse of healthcare practitioners' attitudes and levels of stigma within the maternal/fetal healthcare setting. Further study of stigma, particularly in the maternal/fetal domain, will enhance the understanding of health outcomes exacerbated by stigma and increase successful interventions (Hatzenbuehler, 2016).

Social workers are on the frontlines to support and advocate for humanistic treatment for all individuals, regardless of substance use. Social workers can create an inclusive environment by advocating for policy changes within hospital systems, including but not limited to policies which allow and encourage the mother to "room-in" and provide non-medical care to their infants. This change in policy may lead to a culture shift as staff members are able to build relationships with the mother given her increased presence within the hospital. Going beyond formal policy change, social workers must also champion mothers by speaking up when a staff member perpetuates stigma and negative attitudes towards a mother with SUD. This may be implicitly or explicitly at the bedside, in team meetings, documentation, or general conversation. Social workers can and should play a vital role in providing ongoing and evidenced-based educational support to

colleagues, including those outside of social work. Mothers, babies, and communities deserve efforts towards decreasing stigma and making healthcare a positive experience.

### References

- Bhuvanewar, C., Chang, G., Epstein, L., & Stern, T. (2008). Cocaine and opioid use during pregnancy: Prevalence and management. *Psychiatrist Today*, 10(1), 59-65. <https://doi.org/10.4088/PCC.v10n0110>
- Bland, E., Oppenheimer, L., Brisson-Carroll, G., Morel, C., Holmes, P., & Gruslin, A. (2001). Influence of an education program on medical students' attitudes to substance use disorder in pregnancy. *American Journal of Drug and Alcohol Abuse*, 27(3), 483-490. <https://doi.org/10.1081/ADA-100104513>
- Boone, M., & McMichael, B. (2021). State-created fetal harm. *The Georgetown Law Journal*, 109(3), 475-522. [https://www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2021/03/Boone\\_McMichael\\_State-Created-Fetal-Harm.pdf](https://www.law.georgetown.edu/georgetown-law-journal/wp-content/uploads/sites/26/2021/03/Boone_McMichael_State-Created-Fetal-Harm.pdf)
- Bowie, B. (2005). Intervention to improve interactions between drug-abusing mothers and their drug-exposed infants: A review of the research literature. *Journal of Addictions Nursing*, 15, 153-161. <https://doi.org/10.1080/10884600490888349>
- Burke, S. (2016). Doctors applaud the end of Tennessee's Fetal Assault Law. Associated press. <https://apnews.com/08ce8448799148bf852babadc33d1aef>
- Busenbark, M. (2016). Strategies to care for babies born drug dependent. *Children's Hospital Today*, Children's Hospital Association. <https://www.childrenshospitals.org/Newsroom/Childrens-Hospitals-Today/Issue-Archive/Issues/Spring-2016/Articles/Caring-for-Babies-Born-Drug-Dependent>
- Carnes, M., Devine, P. G., Isaac, C., Manwell, L. B., Ford, C. E., Byars-Winston, A., Fine, E., & Sheridan, J. (2012). Promoting institutional change through bias literacy. *Journal of Diversity in Higher Education*, 5(2), 63-77. <https://doi.org/10.1037/a0028128>
- Centers for Disease Control and Prevention. (2019). *Pregnancy-related deaths: Saving women's lives before, during, and after pregnancy*. [Pregnancy-related Deaths | VitalSigns | CDC](https://www.cdc.gov/pregnancy-related-deaths/)
- Chapman, E. N., Kaatz, A., & Carnes, M. (2013). Physicians and implicit bias: How doctors may unwittingly perpetuate health care disparities. *Journal of General Internal Medicine*, 28(11), 1504-1510. <https://doi.org/10.1007/s11606-013-2441-1>
- Chiandetti, A., Hernandez, G., Mercadal-Hally, M., Alvarez., Andreu-Fernandez, V., Navarro-Tapia, E., Bastons-Compta, A., & Garcia-Algar, O. (2017). Prevalence of prenatal exposure to substances of abuse: Questionnaire versus biomarkers. *Reproductive Health*, 14, 1-12. <https://doi.org/10.1186/s12978-017-0385-3>

- Collier, A. Y., & Molina, R. L. (2019). Maternal mortality in the United States: Updates on trends, causes, and solutions. *NeoReviews*, 20(10), e561-e574. <https://doi.org/10.1542/neo.20-10-e561>
- Corrigan, P., Kerr, A., & Knudsen, L. (2005a). The stigma of mental illness: Explanatory models and methods for change. *Applied & Preventative Psychology*, 11, 179-199. <https://doi.org/10.1016/j.appsy.2005.07.001>
- Corrigan, P., Kuwabara, S. A., & O'Shaughnessy, J. (2009). The public stigma of mental illness and drug addiction: Findings from a stratified random sample. *Journal of Social Work*, 9, 139-147. <https://doi.org/10.1177/1468017308101818>
- Corrigan, P., Markowitz, F., & Watson, A. (2004). Structural levels of mental illness stigma and discrimination. *Schizophrenia Bulletin*, 30(3), 481-489. <https://doi.org/10.1093/oxfordjournals.schbul.a007096>
- Corrigan, P., Watson, A., Heyman, M., Warpinski, A., Garcia, G., Slopen, N., & Hall, L. (2005b). Structural stigma in the state legislature. *Psychiatric Services*, 56(5), 557-563. <https://doi.org/10.1176/appi.ps.56.5.557>
- Crawford, C., Sias, L., & Goodwin, L. (2015). Treating pregnant women with substance abuse issues in an obgyn clinic: Barriers to treatment. *Vistas*, 2015, 1-8. [https://www.counseling.org/docs/default-source/vistas/treating-pregnant-women-with-substance-abuse-issues-in-an-obgyn-clinic-barriers-to-treatment.pdf?sfvrsn=a417f2c\\_8](https://www.counseling.org/docs/default-source/vistas/treating-pregnant-women-with-substance-abuse-issues-in-an-obgyn-clinic-barriers-to-treatment.pdf?sfvrsn=a417f2c_8)
- Criminal Law. (2020). Criminalization of pregnancy - eighth circuit upholds manslaughter charge against pregnant woman for death of baby based on prenatal drug use. *Harvard Law Review*, 133(3), 1087-1094. [https://harvardlawreview.org/wp-content/uploads/2020/01/1087-1094\\_Online.pdf](https://harvardlawreview.org/wp-content/uploads/2020/01/1087-1094_Online.pdf)
- Darlington, C. K., Compton, P. A., & Hutson, S. P. (2021). Revisiting the Fetal Assault Law in Tennessee: Implications and the way forward. *Policy, Politics & Nursing Practice*, 22(2), 93-104. <https://doi.org/10.1177/1527154421989994>
- De Bortoli, L., Coles, J., & Dolan, M. (2014). Linking illicit substance misuse during pregnancy and child abuse: What is the quality of the evidence? *Child and Family Social Work*, 19, 136-148. <https://doi.org/10.1111/cfs.12002>
- Dryden, C., Young, D., Hepburn, M., & Mactier, H. (2009). Maternal methadone use in pregnancy: Factors associated with the development of neonatal abstinence syndrome and implications for healthcare resources. *Obstetrics and Gynecology*, 116(5), 665-671. <https://doi.org/10.1111/j.1471-0528.2008.02073.x>
- Dau Wei Ling, C. (2011). MANOVA: Type 1 error rate analysis. *Digital Commons, California Polytechnic State University*. <https://digitalcommons.calpoly.edu/statsp/19/>
- Faherty, L. J., Kranz, A. M., Russell-Fritch, J., Patrick, S. W., Cantor, J., & Stein, B. D. (2019). Association of punitive and reporting state policies related to substance use in

- pregnancy with rates of neonatal abstinence syndrome. *JAMA Network Open*, 2(11), 1-12. <https://doi.org/10.1001/jamanetworkopen.2019.14078>
- Fonti, S., Davis, D., & Ferguson, S. (2016). The attitudes of health care professionals towards women using illicit substances in pregnancy: A cross-sectional study. *Women Birth*, 4, 1-6. <https://doi.org/10.1016/j.wombi.2016.01.001>
- Frank, L. E., & Nagel, S. K. (2017). Addiction and moralization: The role of the underlying model of addiction. *Neuroethics*, 10(1), 129-139. <https://doi.org/10.1007/s12152-017-9307-x>
- French, A., Macedo, M., Poulsen, J., Waterson, T. & Yu, A. (n.d.). Multivariate analysis of variance. [https://utah.instructure.com/files/7975618/download?download\\_frd=1](https://utah.instructure.com/files/7975618/download?download_frd=1)
- Frimpong, J. A., Hellinginger, S., Awoonor-Williams, J. K., Yeji, F., & Phillips, J. F. (2011). Does supervision improve health worker productivity? Evidence from the upper east region of Ghana. *Tropical Medicine & International Health*, 16(10), 1225-1233. <https://doi.org/10.1111/j.1365-3156.2011.02824.x>
- Garg, M., Garrison, L., Leeman, L., Hamidovic, A., Borrego, M., Rayburn, W., & Bakhireva, L. (2016). Validity of self-reported drug use information among pregnant women. *Maternal and Child Health Journal*, 20(1), 41-47. <https://doi.org/10.1007/s10995-015-1799-6>
- Goodman, D., Whalen, B., & Hodder, L. C. (2019). It's time to support, rather than punish, pregnant women with substance use disorder. *JAMA Network Open*, 2(11), 1-3. <https://doi.org/10.1001/jamanetworkopen.2019.14135>
- Gutmacher Institute. (2021, December 2). *Substance use during pregnancy*. <https://www.gutmacher.org/state-policy/explore/substance-use-during-pregnancy>.
- Haffajee, R. L., Faherty, L. J., & Zivin, K. (2021). Pregnant women with substance use disorders: The harm associated with punitive approaches. *New England Journal of Medicine*, 384(25), 2364-2367. <https://doi.org/10.1056/NEJMp2101051>
- Hall, W. J., Chapman, M. V., Lee, K. M., Merino, Y. M., Thomas, T. W., Payne, B. K., Eng, E., Day, S. H., & Coyne-Beasley, T. (2015). Implicit racial/ethnic bias among health care professionals and its influence on health care outcomes: A systematic review. *American Journal of Public Health*, 105(12), e60–e76. <https://doi.org/10.2105/AJPH.2015.302903>
- Hatzenbuehler, M. (2016). Structural stigma: Research evidence and implications for psychological science. *American Psychologist*, 71(8), 742-751. <https://doi.org/10.1037/amp0000068>
- Hatzenbuehler, M., Phelan, J., & Link, B. (2013). Stigma as a fundamental cause of population health inequalities. *American Journal of Public Health*, 103(5), 813-821. <https://doi.org/10.2105/AJPH.2012.301069>

- Horvath, T., Misra, K., & Epner, A. (n.d.). Disease model of addiction and recovery implications. AMHC. <https://www.gracepointwellness.org/1408-addictions/article/48343-disease-model-of-addiction-and-recovery-implications>
- Howell, E. M., & Chasnoff, I. J. (1999). Perinatal substance abuse treatment: Findings from focus groups with clients and providers. *Journal of Substance Abuse Treatment*, 17(1-2), 139-148. [https://doi.org/10.1016/S0740-5472\(98\)00069-5](https://doi.org/10.1016/S0740-5472(98)00069-5)
- Hudak, M. L., Tan, R. C., (2012). Committee on drugs, committee on fetus and newborn, & American Academy of Pediatrics. Neonatal drug withdrawal. *Pediatrics*, 129(2), e540–e560. <https://doi.org/10.1542/peds.2011-3212>
- Indiana Department of Health. (2020). *Indiana Maternal Mortality Review Committee: 2020 annual report*. [https://www.in.gov/health/cfr/files/Maternal-Mortality-Report\\_December-2020-Final.pdf](https://www.in.gov/health/cfr/files/Maternal-Mortality-Report_December-2020-Final.pdf)
- Koppel, S (2016). Evidence-based drug crime policy: Moving beyond the moral/medical dichotomy to a multi-level model of addiction. *Journal of Civil Legal Science*, 5(175), 1-5. <https://doi.org/10.4172/2169-0170.1000175>
- Latuskie, K. A., Andrews, N. C., Motz, M., Leibson, T., Austin, Z., Ito, S., & Pepler, D. J. (2019). Reasons for substance use continuation and discontinuation during pregnancy: A qualitative study. *Women and Birth*, 32(1), e57-e64. <https://doi.org/10.1016/j.wombi.2018.04.001>
- Lawrence, R., Rasinski, K., Yoon, J., & Curlin, F. (2013). Physicians' belief about the nature of addiction: A survey of primary care physicians and psychiatrists. *American Journal on Addictions*, 2, 255-260. <https://doi.org/10.1111/j.1521-0391.2012.00332.x>
- Lemaitre, R. (2011, December 5). Obama drug policy: Reforming the criminal justice system [Blog]. Office of National Drug Council and Policy. <https://obamawhitehouse.archives.gov/blog/2011/12/05/obama-drug-policy-reforming-criminal-justice-system>
- Link, B., & Hatzenbuehler, M. L. (2016). Stigma as an unrecognized determinant of population health: Research and policy implications. *Journal of Health Politics, Policy & Law*, 41(4), 653-673. <https://doi.org/10.1215/03616878-3620869>
- Little, M., Shah, R., Vermeulen, M., Gorman, A., Dzendoletas, D., Ray, J. G. (2005). Adverse perinatal outcomes associated with homelessness and substance use in pregnancy. *Canadian Medical Association Journal*, 173(6), 615-618. <https://doi.org/10.1503/cmaj.050406>
- Livingston, J. D., & Boyd, J. E. (2010). Correlates and consequences of internalized stigma for people living with mental illness: A systemic review and meta-analysis. *Social Science & Medicine*, 71, 2150-2161. <https://doi.org/10.1016/j.socscimed.2010.09.030>
- Livingston, J. D., Milne, T., Fang, M., & Amari, E. (2012). The effectiveness of interventions for reducing stigma related to substance use disorder: A systemic review. *Addiction*, 107, 39-50. <https://doi.org/10.1111/j.1360-0443.2011.03601.x>

- Logan, B., Brown, M., & Hayes, M. (2013). Neonatal abstinence syndrome: Treatment and pediatric outcomes. *Clinical Obstetrics & Gynecology*, 56(1), 186-192. <https://doi.org/10.1097/GRF.0b013e31827f6ea4>
- Lollar, C. E. (2017). Criminalizing pregnancy. *Indiana Law Journal*, 92(3), 947-1005. <https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=11252&context=ilj>
- MacVicar, S., & Kelly, L. (2019). Systemic mixed- study review of nonpharmacological management of neonatal abstinence syndrome. *Birth*, 46(3), 428-438. <https://doi.org/10.1111/birt.12427>
- Marangoni, S., & Felix de Oliveria, M. (2015). Women users of drug abuse during pregnancy: Characterization of a series of cases. *Acta Scientiarum; Health Sciences*, 37(1), 53-61. <https://doi.org/10.4025/actascihealthsci.v37i1.16754>
- Mburu, G., Ayon, S., Mahinda, S., Khoshnood, K. (2020). Determinants of women's drug use during pregnancy: Perspectives from a qualitative study. *Maternal Child Health Journal*, 24, 1170-1178. <https://doi.org/10.1007/s10995-020-02910-w>
- McGlothen-Bell, K., Recto, P., McGrath, J. M., Brownell, E., & Cleveland, L. M. (2021). Recovering together: Mothers' experiences providing skin-to-skin care for their infants with NAS. *Advances in Neonatal Care: Official Journal of the National Association of Neonatal Nurses*, 21(1), 16-22. <https://doi.org/10.1097/ANC.0000000000000819>
- McQueen, K., & Murphy-Oikonen, J. (2016). Neonatal abstinence syndrome. *New England Journal of Medicine*, 375, 2468-2479. <https://doi.org/10.1056/NEJMra1600879>
- Melillo, G. (2020, June 13). *Racial disparities persist in maternal morbidity, mortality and infant health*. American Diabetes Association Scientific Sessions. <https://www.ajmc.com/view/racial-disparities-persist-in-maternal-morbidity-mortality-and-infant-health>
- Meurk, C.S., Broom, A., Adams, J., Hall, W., & Lucke, J. (2014). Factors influencing women's decisions to drink alcohol during pregnancy: Findings of a qualitative study with implications for health communication. *BioMed Central Pregnancy Childbirth*, 14, 1-9. <https://doi.org/10.1186/1471-2393-14-246>
- Mitchell, M. M., Severtson, S. G., & Latimer, W. W. (2008). Pregnancy and race/ethnicity as predictors of motivation for drug treatment. *American Journal Drug and Alcohol Abuse*, 34(4), 397-404. <https://doi.org/10.1080/00952990802082172>
- Murphy, T. (2021). *Statistical design and analysis of experiments with R*. Bookdown, Atlanta. <https://tjmurphy.github.io/jabstb/>
- National Association of Social Workers. (2017). *Code of ethics*. <https://www.socialworkers.org/About/Ethics/Code-of-Ethics/Code-of-Ethics-English>

- National Institute on Drug Abuse [NIDA]. (2011). Prenatal exposure to drugs of abuse—May 2011. [https://radarcart.boisestate.edu/library/files/2017/07/prenatal\\_exposure\\_May-2011.pdf](https://radarcart.boisestate.edu/library/files/2017/07/prenatal_exposure_May-2011.pdf).
- NIDA. (2014). Mental health. <https://www.drugabuse.gov/related-topics/mental-health>
- NIDA. (2017). Dramatic increases in maternal opioid use and neonatal abstinence syndrome. <https://archives.drugabuse.gov/trends-statistics/dramatic-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>.
- NIDA. (2019). Dramatic increases in maternal opioid use and neonatal abstinence syndrome. <https://www.drugabuse.gov/drug-topics/trends-statistics/infographics/dramatic-increases-in-maternal-opioid-use-neonatal-abstinence-syndrome>
- NIDA. (2020a). How effective is drug addiction treatment?. <https://nida.nih.gov/publications/principles-drug-addiction-treatment-research-based-guide-third-edition/frequently-asked-questions/how-effective-drug-addiction-treatment>
- NIDA. (2020b). Substance use while pregnant and breastfeeding. <https://www.drugabuse.gov/publications/research-reports/substance-use-in-women/substance-use-while-pregnant-breastfeeding>
- Olejnik, S.F. (1984). Planning educational research: Determining the necessary sample size. *Journal of Experimental Education*, 53 (1), 40-48.
- Paris, R., Herriott, A. L., Maru, M., Hacking, S. E., & Sommer, A. R. (2020). Secrecy versus disclosure: Women with substance use disorders share experiences in help seeking during pregnancy. *Maternal Child Health Journal*, 24, 1396-1403. <https://doi.org/10.1007/s10995-020-03006-1>
- Patrick, S., Schumacher, R., Benneyworth, B. D., Krans, E. E., McAllister, J. M., & Davis, M. M. (2012). Neonatal Abstinence Syndrome and associated health care expenditures: United States 2000-2009. *American Medical Association*, 307(18), 1934-1940. <https://doi.org/10.1001/jama.2012.3951>
- Pickard H. (2017). Responsibility without blame for addiction. *Neuroethics*, 10(1), 169–180. <https://doi.org/10.1007/s12152-016-9295-2>
- Pope, D. G., Price, J., & Wolfers, J. (2018). Awareness reduces racial bias. *Management Science*, 64(11), 4988-4995. <https://doi.org/10.1287/mnsc.2017.2901>
- Prasad, M. (2014). When opiate abuse complicates pregnancy. *Contemporary OB/GYN*, 58(5), 28-37. <https://www.contemporaryobgyn.net/view/when-opiate-abuse-complicates-pregnancy>
- Raeside, L. (2003). Attitudes of staff towards mothers affected by substance abuse. *British Journal of Nursing*, 12(5), 302-310. <https://doi.org/10.12968/bjon.2003.12.5.11176>

- Renbarger, K. M., Shieh, C., Moorman, M., Latham-Mintus, K., & Draucker, C. (2019). Health care encounters of pregnant and postpartum women with substance use disorders. *Western Journal of Nursing Research*, 42(8), 612-628. <https://doi.org/10.1177/0193945919893372>
- Roberts, S., & Pies, C. (2010). Complex calculations: How drug use during pregnancy becomes a barrier to prenatal care. *Journal of Maternal Child Health*, 15, 333-341. <https://doi.org/10.1007/s10995-010-0594-7>
- Schaler, J. A. (1991). Drugs and free will. *Society*, 28, 42-49. <https://doi.org/10.1007/BF02695758>
- Selleck, C., & Redding, B. (1998). Knowledge and attitudes of registered nurses toward perinatal substance abuse. *Journal of Obstetrics, Gynecology and Neonatal Nursing*, 27(1), 70-77. <https://doi.org/10.1111/j.1552-6909.1998.tb02593.x>
- Shadowen, C., Wheeler, R., & Terplan, M. (2021). Patient and provider knowledge of and attitudes toward medical conditions and medication during pregnancy. *Addiction Science & Clinical Practice*, 16(1), 22-22. <https://doi.org/10.1186/s13722-021-00228-8>
- Silins, E., Conigrave, K. M., Rakvin, C., Dobbins, T., & Curry, K. (2007). The influence of structured education and clinical experience on the attitudes of medical students towards substance misusers. *Drug and Alcohol Review*, 26, 191-200. <https://doi.org/10.1080/09595230601184661>
- Stein, J. (2002). *Manual for primary care providers: Effectively caring for active substance users*. New York Academy of Pediatrics.
- Stone, R. (2015). Pregnant women and substance use: Fear, stigma, and barriers to care. *Health and Justice*, 3(2), 1-15. <https://doi.org/10.1186/s40352-015-0015-5>
- Stringer, K., Turan, B., McCormick, L., Durojaiye, M., Nyblade, L., Kempf, M., Lichenstein, B., & Turan, J. (2016). HIV-related stigma among health care providers in the Deep South. *AIDS & Behavior*, 20(1), 115-125. <https://doi.org/10.1007/s10461-015-1256-y>
- Substance Abuse and Mental Health Services Administration (SAMHSA) (2016). *A collaborative approach to the treatment of pregnant women with opioid use disorders*. HHS Publication No. (SMA) 16-4978. Rockville, MD: Substance Abuse and Mental Health Services Administration. [https://ncsacw.samhsa.gov/files/Collaborative\\_Approach\\_508.pdf](https://ncsacw.samhsa.gov/files/Collaborative_Approach_508.pdf)
- Sukhera, J., Milne, A., Teunissen, P. W., Lingard, L., & Watling, C. (2018). Adaptive reinventing: implicit bias and the co-construction of social change. *Advances in Health Sciences Education: Theory and Practice*, 23(3), 587-599. <https://doi.org/10.1007/s10459-018-9816-3>

- Sun, A. (2004). Principles for practice with substance-abusing pregnant women: A framework based on the five social work intervention roles. *Social Work, 49*(3), 383-394. <https://doi.org/10.1093/sw/49.3.383>
- VanWormer, K. & Davis, D. (2018). *Addiction treatment: A strengths assessment* (4th ed.). Cengage.
- Vogel, L. (2018). Newborns exposed to opioids need mothers more than NICU, say pediatricians. *Canadian Medical Association Journal, 190*(4), E123-E124. <https://doi.org/10.1503/cmaj.109-5550>
- Whiteman, V., Salemi, J., Mulubrhan, Cain, M., Muktar, A., & Salihu, H. (2014). Maternal opioid drug use during pregnancy and its impact on perinatal morbidity, mortality, and the costs of medical care in the United States. *Journal of Pregnancy, 2014*, 1-8. <https://doi.org/10.1155/2014/906723>
- Winstone, W., & Gervis, M. (2006). Countertransference and the self-aware sport psychologist: Attitudes and patterns of professional practice. *Sport Psychologist, 20*(4), 495-511. <https://doi.org/10.1123/tsp.20.4.495>
- Wolfson, L., Schmidt, R. A., Stinson, J., & Poole, N. (2021). Examining barriers to harm reduction and child welfare services for pregnant women and mothers who use substances using a stigma action framework. *Health & Social Care in the Community, 29*(3), 589-601. <https://doi.org/10.1111/hsc.13335>
- Woods, L. M., & Connelly, C. D. (2022). Opioid use treatment and recovery services during pregnancy. *Journal of the American Psychiatric Nurses Association, 28*(1), 58-67. <https://doi.org/10.1177/10783903211033033>
- Worley, J. (2014). Identification and management of prescription drug abuse in pregnancy. *Journal of Perinatal and Neonatal Nursing, 28*(30), 196-203. <https://doi.org/10.1097/JPN.0000000000000039>
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Appendix

A. **BACKGROUND INFORMATION Please check the most accurate response.**

1. I currently practice in a maternal, fetal, or pediatric setting?  Yes  No
  
2. I hold the following degree/licensure: **Please check the highest level of degree attained.**

High School:	<input type="checkbox"/> <i>Diploma</i>	<input type="checkbox"/> <i>GED</i>		
College:	<input type="checkbox"/> <i>Associates</i>	<input type="checkbox"/> <i>B.A./B.S.</i>	<input type="checkbox"/> <i>B.S.W. (Social Work)</i>	
Masters:	<input type="checkbox"/> <i>MSW</i>	<input type="checkbox"/> <i>MBA</i>	<input type="checkbox"/> <i>MPH</i>	<input type="checkbox"/> <i>MHA</i>
Nursing:	<input type="checkbox"/> <i>L.P.N</i>	<input type="checkbox"/> <i>R.N.</i>	<input type="checkbox"/> <i>B.S.N.</i>	<input type="checkbox"/> <i>N.P.</i>
Physicians:	<input type="checkbox"/> <i>M.D.</i>	<input type="checkbox"/> <i>D.O</i>		
Advanced Training:	<input type="checkbox"/> <i>OB/GYN</i>	<input type="checkbox"/> <i>Neonatology</i>	<input type="checkbox"/> <i>Other</i>	
Other:	<input type="checkbox"/> <i>Physical Therapist (P.T.)</i>	<input type="checkbox"/> <i>Occupational Therapist (OTR/L)</i>		
	<input type="checkbox"/> <i>Pharmacist (Pharm D)</i>	<input type="checkbox"/> <i>Registered Dietician (RD)</i>		
	<input type="checkbox"/> <i>Speech/Language Pathologist (SLP)</i>	<input type="checkbox"/> <i>Other (Please specify: ___)</i>		
  
3. My current area of practice is: **Please check the most appropriate response.**

<input type="checkbox"/> <i>NICU</i>	<input type="checkbox"/> <i>PICU</i>	<input type="checkbox"/> <i>High Risk Obstetrics</i>	<input type="checkbox"/> <i>Pediatrics</i>	<input type="checkbox"/> <i>CCN</i>
<input type="checkbox"/> <i>Family Care</i>	<input type="checkbox"/> <i>Outpatient Clinic</i>	<input type="checkbox"/> <i>Other (specify _____)</i>		
  
4. My current employment role is: **Please check the most appropriate response.**

<input type="checkbox"/> <i>Medical Doctor-Direct Care</i>	<input type="checkbox"/> <i>Medical Doctor-Administration only</i>	
<input type="checkbox"/> <i>Direct Care Nurse</i>	<input type="checkbox"/> <i>Nurse Practitioner</i>	<input type="checkbox"/> <i>Case Manager</i>
<input type="checkbox"/> <i>Lactation Consultant</i>	<input type="checkbox"/> <i>Nursing Management</i>	<input type="checkbox"/> <i>Nursing Educator</i>
<input type="checkbox"/> <i>Social Worker</i>	<input type="checkbox"/> <i>Pharmacy</i>	<input type="checkbox"/> <i>Child Life</i>
<input type="checkbox"/> <i>Chaplain</i>	<input type="checkbox"/> <i>Dietary</i>	<input type="checkbox"/> <i>Radiology/Imaging</i>
<input type="checkbox"/> <i>Language/Interpretive Services</i>	<input type="checkbox"/> <i>Speech Therapist</i>	
<input type="checkbox"/> <i>Respiratory Therapist</i>	<input type="checkbox"/> <i>Occupational Therapist</i>	<input type="checkbox"/> <i>Physical Therapist</i>
<input type="checkbox"/> <i>Music Therapist</i>	<input type="checkbox"/> <i>Unit Representative</i>	<input type="checkbox"/> <i>Environmental Services</i>
<input type="checkbox"/> <i>Administration</i>	<input type="checkbox"/> <i>Other (Specify: _____)</i>	
  
5. In my current position, I spend the following percentage of my work week in direct contact (face to face or on the phone) with maternal/fetal or pediatric clients with pregnancy drug use or exposure:

<input type="checkbox"/> 0 – 25%	<input type="checkbox"/> 26 – 50%	<input type="checkbox"/> 51 – 75%	<input type="checkbox"/> 76 – 100%
----------------------------------	-----------------------------------	-----------------------------------	------------------------------------
  
6. My current position is:  *Full-time*     *Part-time*     *Other (Please specify \_\_\_)*
  
7. My race is:  *American Indian/Alaska Native*     *Black/African American*     *Asian*  
 *Native Hawaiian/Other Pacific Islander*     *White*     *Multi-racial*  
 *Other (Please specify \_\_\_\_\_)*
  
8. My ethnicity is:     *Hispanic or Latino*     *Not Hispanic or Latino*
  
9. I identify as:  *Female*     *Male*     *Other*
  
- Please provide the most appropriate response.**
10. My age is: \_\_\_\_\_
  
11. I have practiced in the health care field for:

<input type="checkbox"/> 0-4 years	<input type="checkbox"/> 5-9 years
<input type="checkbox"/> 10-14 years	<input type="checkbox"/> 15-19 years
<input type="checkbox"/> 20-24 years	<input type="checkbox"/> 25+ years

<b>B. Please mark the circle that most accurately represents your response</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Undecided</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
<b>Drug Use in Pregnancy</b>						
1.	In general, I find it hard to like pregnant cigarette smokers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	I am uncomfortable working with pregnant cigarette smokers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	In general, I find it hard to like pregnant heroin users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	I am uncomfortable working with pregnant heroin users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	In general, I find it hard to like pregnant cocaine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	I am uncomfortable working with pregnant cocaine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	In general, I find it hard to like pregnant marijuana users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	I am uncomfortable working with pregnant marijuana users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	In general, I find it hard to like pregnant methamphetamine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	I am uncomfortable working with pregnant methamphetamine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	In general, I find it hard to like pregnant opioid users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13.	I am uncomfortable working with pregnant opioid users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.	In general, I find it hard to like pregnant subxone/subutex/methadone/ buphernorphine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.	I am uncomfortable working with pregnant subxone/subutex/methadone/buphernorphine users.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Employment Support</b>						
16.	My schooling has prepared me to discuss health risk behaviors with patients.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17.	I receive adequate education and training, on the job, for my current position.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18.	I am satisfied with the level of professional supervision I receive in my current position.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19.	I am satisfied with the level of communication between disciplines (social workers, nursing, doctors, etc.).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20.	My organization provides a supportive environment for mothers with prenatal substance abuse within the organization by having and promoting workplace policies that address issues of women and infants with substance abuse/exposure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
<b>Drug Use Outcomes</b>						
21.	I am satisfied with the level of community support for pregnant addicts.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
22.	I am comfortable with the discharge plan for a mother with addiction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
23.	I am comfortable with the discharge plan for a child with drug exposure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
24.	I believe more punitive measures should be taken against a mother with pregnancy drug misuse.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
25.	I believe hospital staff can provide better, non-medical care for a drug exposed infant than the mother.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
26.	I believe mothers with pregnancy drug use should place the child for adoption.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
27.	I have become burned out working with mothers and babies with drug use/exposure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
28.	I believe addiction is a medical condition.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
29.	I believe addiction is caused by a moral flaw.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
30.	I believe addiction is selfish.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
31.	I believe a person could quit illicit drug use if they really wanted to.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
32.	I believe a person who uses illicit drugs during pregnancy cares more about drugs than the baby.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
33.	I believe women who use illicit drugs during pregnancy deserve less privacy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
34.	I have empathy for a pregnant/post-partum woman with addiction.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
35.	I believe a drug exposed infant should never discharge with the mother.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
36.	I believe a mother with illicit drug use should be regularly drug tested.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
37.	I am not comfortable leaving a child in a room with their addicted parent.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
38.	I believe the hospital should impose greater sanctions on a mother with illicit drug use during pregnancy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
39.	I believe the state should impose greater sanctions on a mother with drug use during pregnancy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
40.	I would go out of my way to work with a mother or baby with drug use/exposure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
41.	I prefer not to work with babies with drug exposure.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
42.	I prefer not to work with pregnant women with addictions.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
43.	Lastly, what other information would you like this researcher to know about prenatal substance misuse or the effects on health care providers.	None: _____ Response _____				