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Views of Substance Use During Pregnancy: Social Responses to the Issue

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ABSTRACT

Ever since the emergence of the crack cocaine epidemic and "crack babies", our society has been concerned with women using substances during their pregnancy. The most appropriate response to this social issue has been heavily debated. Some think that the use of criminal justice initiatives and criminalization is the most effective method in deterring women from using while pregnant, and some promote utilizing public health methods to rehabilitate addicted women. There is a wealth of research and literature around this debate, however, there has not yet been any research examining public opinion on the most appropriate ways to handle this issue. This study explores the views of University of South Carolina students regarding social responses to substance use during pregnancy. This study hypothesizes that student views will be different based on several demographic categories. These hypotheses are investigated using t-tests and ANOVA. The results of this study suggest that students support a combination of criminal justice and public health initiatives to substance use during pregnancy. Policy implications, study limitations and future research are discussed.

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CHAPTER 1

INTRODUCTION

In 1971, President Nixon officially declared a “war on drugs” and identified illegal drug use as “public enemy number one”. Drug policy after this declaration was primarily focused on treatment rather than incarceration or punishment. However, when the Reagan administration took over in the 1980’s, Nancy Reagan’s “Just Say No” campaign was launched, which classified drug use as a morally wrong choice rather than the manifestation of a disease (Lenox, 2011). States were encouraged to adopt more punitive anti-drug measures and arrests for all drug offenses more than doubled. Arrests for drug possession alone increased by more than 800 percent between 1980 and 1989 and the conviction rate of drug offenders more than doubled (Beckett, 1995; Gomez, 1997). For instance, the total number of individuals convicted of a federal drug offense between 1980 and 1986 increased from 5,244 to 12,285 (Sacco, 2014).

Substance use became known as more of a social issue or problem. Within a six-month period in 1986, substance use went from being considered America’s most serious problem for 2 percent of the population to being viewed that way by 13 percent of the population. As the war on drugs became more of a war against substance users, issues of race and class became apparent (Gomez, 1997). African Americans and Latinos were disproportionately associated with substance use in media imagery, which of course, led to the archetype of the average substance user being seen as a member of the urban underclass (Beckett, 1995; Gomez, 1997).

One influential driving force of the war on drugs was the crack cocaine epidemic that was exploding throughout the United States. Crack cocaine is a hardened, smokeable form of cocaine and it was suggested by initial reports that this form of cocaine had unique pharmacological effects. These effects were said to include greater addictiveness than powder cocaine or other hard drugs (Gomez, 1997). Crack cocaine and its effects were overblown in the media. Journalists wrote that crack cocaine was a drug like no other that has previously been on the streets and that it was more likely to lead its users to engage in violence and crime (Logan, 1999). It was later concluded in the 1990's that there was no difference in effect between the two forms of the drug (Gomez, 1997).

Not long after the appearance of crack cocaine in the United States, medical personnel, media members and others observed an increase in premature babies with serious health problems. These newborn infants were labeled "crack babies" (Gomez, 1997). The "crack baby" problem and the effect of crack cocaine on pregnant women and their babies were grossly exaggerated in the media. It was reported that crack cocaine could destroy maternal instinct in women that used it. This idea created a negative portrait of mothers on crack as utterly irresponsible, incompetent, and incapable of taking care of their children. Addicted mothers were even considered inhumane threats to the social order who were willingly torturing their helpless fetuses (Gomez, 1997; Logan, 1999).

Logan (1999) details the false and fabricated effects of crack cocaine use on babies born to addicted mothers as illustrated by the media at the time. These babies were said to be doomed to a life of suboptimal intelligence, uncontrollable behavior, and criminal tendencies. They were reported to shake relentlessly and stare "bug-eyed" into space for hours (Logan, 1999, p. 247). The medical conditions these babies were supposed to suffer were numerous, including cerebral hemorrhaging and intercranial lesions, prematurity, birth defects, genitourinary and cardiac abnormalities, prenatal strokes, heart attacks or death, fine motor disorders, low birth weight, and neonatal growth retardation (Logan, 1999). Some reports and articles described these babies as being less than human, with one such report stating, “in crack-babies the part of the brain that makes us a human being, capable of discussion or reflection has been wiped out” (Logan, 1999, p. 248).

Substance use during pregnancy became a highly discussed social issue. The reports and imagery put forth by the media of the effects of crack cocaine, specifically regarding the children of pregnant addicts, gained the attention of the general public and lawmakers. As a result, the country then bore witness to the emergence of a new and unprecedented legal solution to the problem: criminal prosecution of pregnant drug addicts (Lenox, 2011; Logan, 1999; Logli, 1990). Justification for this response was also motivated by the fetal rights movement, which seeks to define the fetus as a person, while holding the mother legally liable for its well-being. This places women and their developing children in an adversarial relationship as opposed to a symbiotic relationship. Furthermore, this argument rests on the idea that the developing fetus is a separate person, possessing rights that conflict with those of the mother (Beckett, 1995). During this time, scholars noticed that the needs of the mother were being treated as an impediment to the more legitimate needs of the fetus (Logan, 1999).

By the mid to late 1980s there was a substantial increase in policies targeting the use of drugs during pregnancy (Thomas, Treffers, Berglas, Drabble & Roberts, 2018).

This increase in punitive policies put in place to target drug use during pregnancy was due to public fear of drug users and the alleged effect of drug use on developing fetuses. The public was fearful of drug use in general due to the imagery of a typical drug user as violent and dangerous. It also portrayed pregnant women using substances as cruel, indifferent, and cold and the effects of substance use on their children to be immense. The public began to perceive substance use during pregnancy as a significant problem that required drastic and immediate action (Logan, 1999).

However, despite various policies put in place, rates of substance use during pregnancy over time have not seen the decrease that policymakers may have expected. The National Pregnancy and Health Survey reported that approximately 5.5% or nearly 221,000 pregnant women were using illicit substances between November 1992 and August 1993 (Lester, Andreozzi & Appiah, 2004). Thomas et al. (2018) found that this rate has stayed rather steady based on the self-reported rate of usage collected by the Substance Abuse and Mental Health Services Administration. It was reported that among pregnant women ages 15-44 the average rate of illicit drug use was 5.4% between 2012 and 2013 (Thomas et al., 2018). One national survey conducted in 2012 suggests that these rates might be slightly higher however, reporting that 5.9% of pregnant women had used substances (Forray, 2016).

More recently, the rate of licit and illicit substance use among pregnant women is still relatively high, despite harsh drug laws. In fact, 10.2% of pregnant women in the United States ages 18-44 reported having consumed alcohol in the past month of their pregnancy and 3.1% of pregnant women reported “binge drinking” between 2012 and 2013 (Thomas et al., 2018). Rates of illicit substance use among pregnant women saw a somewhat rapid increase between 2015 and 2017. An estimated 78,000 pregnant women reported using marijuana in 2015 and in 2017 this number jumped to 161,000. Roughly 19,000 pregnant women reported using opioids in 2015 and about 32,000 reported using opioids in 2017. Reported use of cocaine among pregnant women rose from about 1,000 cases in 2015 to 8,000 cases in 2017 (NSDUH, 2017).

It is difficult to capture exactly how wide the scope of substance use by pregnant women is however, because the information is self-reported. This strategy of collecting data from substance using pregnant women can lead to under reporting because the women may feel shame about their use (Lester et al., 2004). Under reporting presents a real issue in studies that use it. In fact, several studies found evidence of pregnant women under reporting their substance use. One study found that in a sample of pregnant women only 11% admitted to using illicit substances. However, it was later discovered that 43% of the mothers tested positive for illicit substances (Garg, Garrison, Leeman, Hamidovic, Borrego, Rayburn, & Bakhireva, 2016; Lester et al., 2004).

Substance use during pregnancy is a persistent social and public health problem in this country. Some argue that taking punitive action against pregnant addicts is not an appropriate solution to the problem and can be counterproductive and more harmful to both the fetus and the mother (Lester et al., 2004; Logan, 1999). Due to this belief, public health strategies have also been used as a response to the issue of substance use during pregnancy. The public health perspective views addiction as a disease and rejects the notion that substance use during pregnancy should be dealt with in the criminal justice system (Lester et al., 2004). This perspective considers the health of the woman, as well as the child.

The discussion of whether to address the issue of substance use during pregnancy with punishment or treatment has been an ongoing debate for decades, with scholars and health professionals weighing in on the issue. Yet, the views and opinions of the public regarding this issue have not been examined in detail by researchers. It is important to consider the perspective of the public because public opinion can have an effect on the decisions of policy makers (Payne, Gainey, Triplett, & Danner, 2004). The current study examines the views of undergraduate students at the University of South Carolina regarding the appropriate policy responses to the use of substances by women during their pregnancy. More specifically, this research considers how demographic factors such as sex, race, religion, political affiliation, and being a criminal justice or public health major is associated with their views on this subject. This study will contribute to the public opinion literature on a topic that has previously not been studied from that standpoint and it will provide insight into what the public thinks about how we should respond to substance use during pregnancy.

The remainder of this chapter discusses various criminal justice initiatives to substance use during pregnancy and the criticisms and drawbacks of those initiatives, as well as the public health initiatives utilized to treat pregnant women who use substances and issues with these initiatives. This chapter will also discuss the importance of public opinion on punishment and responding to societal problems and crime. Differences of opinion on punishment based on the aforementioned demographic categories of sex, race, religion, political affiliation, and being a criminal justice major or public health major are also included. At the end of the chapter, the purpose of the current study is fully explored, and the study's hypotheses are presented. The second chapter will lay out the methodology of the proposed study. The third chapter will present the results of the study and the fourth and final chapter will address policy implications and suggestions for further research.

Criminal Justice Initiatives for Maternal Drug Use

The argument in favor of criminalization of illicit substance use during pregnancy is based upon the view that these women are voluntarily partaking in an illegal act that causes harm to the child. Therefore, women who use drugs during pregnancy are willfully committing a criminal act, warranting a legal response (Lester et al., 2004). The rationale said to be behind the implementation of punitive action against pregnant substance users was that the women would be deterred from using substances and that it would safeguard the health of their fetuses (Lester et al., 2004; Logan, 1999). Authorities in at least 45 states have tried to prosecute women for exposing their unborn children to illicit substances (Miranda, Dixon & Reyes, 2015). Tennessee is the only state that has enacted a law that specifically makes the use of illicit substances a crime during pregnancy (Angelotta & Appelbaum, 2017). However, the high courts in Alabama and South Carolina have interpreted existing child endangerment and chemical endangerment statutes to allow for prosecution of substance-using pregnant women and new mothers (Miranda et al., 2015; Stone, 2015).

The Tennessee law that specifically criminalizes substance use during pregnancy was passed through the state legislature in 2014 and explicitly permitted criminal assault charges for the act of illicit substance use during pregnancy. Upon conviction for these charges the woman would be imprisoned, however, the law expired on July 1, 2016 due to a sunset provision in the original bill (Angelotta & Appelbaum, 2017). Tennessee tried to enact the law again in February of 2019. The proposed law stated that an individual could be prosecuted for assault for the illegal use of a narcotic while pregnant if the child were born addicted to or harmed by the narcotic drug. Despite their efforts, this law failed to pass when voted upon by the Tennessee state legislature (Levy-Uyeda, Campbell & Borchardt, 2019).

Instead of using direct laws criminalizing substance use during pregnancy, states have prosecuted women under existing laws that are not specific to pregnancy, as Alabama and South Carolina have done (Angelotta & Appelbaum, 2017). These statutes include child abuse/neglect, assault, manslaughter/murder, drug dealing/distribution laws, civil commitment, and mandatory reporting laws. Prosecuting substance-using pregnant women under child abuse and neglect statutes can be problematic for prosecutors. They face challenges in finding ways to convince courts that an unborn fetus falls under the legal definition of "child" (Angelotta & Appelbaum, 2017; Lester et al., 2004). Whether or not an unborn fetus is considered a child varies by state, therefore prosecutions of women using these statutes could be easier to obtain. For example, in 1997 South Carolina's Supreme Court held that a fetus is a person and that any maternal acts that endanger or are likely to endanger a viable fetus are a form of child abuse (Miranda et al., 2015). It stands to reason that substance use during pregnancy falls under this category of acts that can endanger a viable fetus.

Several convictions have been obtained using child abuse and neglect statutes. In the case of Reyes v. California, Reyes was convicted under child endangerment laws when her newborn twins were born addicted to heroin (Angelotta & Appelbaum, 2017; Lester et al., 2004). Several states have enacted laws that categorize illicit substance use during pregnancy as child abuse. Miranda et al. (2015) found that eighteen states had these kinds of laws. One report published in 2019 found that twenty-three states and the District of Columbia consider substance use during pregnancy to be child abuse under civil child-welfare statutes ("Substance Use During Pregnancy", 2019). Many of these statutes can result in termination of parental rights, however, not in prison sentences (Angelotta & Appelbaum, 2017).

Some women have been charged with manslaughter and murder/homicide charges in the case that their baby is stillborn or does not survive (Angelotta & Appelbaum, 2017). These charges rarely result in convictions and in the case that the woman is convicted, it is more likely that the woman pled guilty to the charge (Angelotta & Appelbaum, 2017; Lester et al., 2004). In February of 1989, Melanie Green's newborn daughter died after just two days. Both mother and daughter tested positive for the presence of cocaine. Pathologists investigated the death of the child and determined that it was due to a prenatal injury related to cocaine used by the mother during pregnancy. Green was charged with involuntary manslaughter as well as delivery of a controlled substance, however she was not convicted on either charge (Logli, 1990).

There have been women charged with and convicted under murder/homicide charges. In South Carolina in 2003, Regina McKnight suffered an unexpected stillbirth. It was alleged that the stillbirth had been caused by McKnight's cocaine use. She was arrested and charged with homicide by child abuse. She was found guilty after just fifteen minutes of jury deliberation and was initially sentenced to twenty-years, which was suspended to twelve-years. It was later shown that the stillbirth was the result of a placental infection. McKnight had served eight years of her sentence when she won postconviction relief at the state supreme court for ineffective assistance of counsel because her lawyer failed to introduce expert testimony about placental infection as a potential cause of fetal death. In the end, McKnight plead guilty in exchange for an agreement that she would be sentenced to time served (Angelotta & Appelbaum, 2017; Paltrow & Flavin, 2013).

Since there are no criminal statutes that directly criminalize maternal substance use during pregnancy, state prosecutors have become creative with the charges they file on these women. One of the more creative methods is to prosecute under laws concerning delivery of a controlled substance to a minor (Lester et al., 2004; Logli, 1990). The premise of this charge in relation to substance use during pregnancy is that the child is still attached to the mother via the umbilical cord and is therefore receiving substances through the blood stream. Jennifer Johnson of Seminole County, Florida was convicted of this charge in 1992 and was sentenced to fifteen years of probation. However, the state supreme court later found that the statute did not apply, and the conviction was overturned (Angelotta & Appelbaum, 2017; Lester et al., 2004).

Civil commitment or involuntary detention has been used to decriminalize substance use during pregnancy (Miranda et al., 2015). As an alternative to incarceration, the women are involuntarily detained in treatment programs. Proponents of this strategy have argued that it is the best way to administer punishment, rehabilitation, and deterrence all at once. This strategy is consistent with the trend in states to move toward reducing the severity of the effects of drug use on the infant (Lester et al., 2004, "Substance Use During Pregnancy", 2019). In Minnesota, South Dakota, and Wisconsin women who use drugs during pregnancy can be involuntarily committed to a treatment program. The Wisconsin law is especially harsh; stating that a woman can be detained against her will for the duration of her pregnancy, her fetus has its own court-appointed lawyer, she can lose custody of her baby after birth, and the proceedings are mostly kept secret (Miranda et al., 2015). Not only does this strategy infringe on the rights of the woman; it puts the needs and the health of the child above those of the mother (Lester et al., 2004).

Every state in the country has mandatory reporting laws when it comes to instances of child abuse and neglect, however not every state has laws concerning testing/reporting/identification of pregnant substance users. These laws range from mandating toxicology tests for infants of mothers suspected of using drugs and toxicology tests for the mother herself, to reporting the findings of any positive toxicology screen to the proper authorities, whether that be the police or child protective services (Lester et al., 2004). Additionally, a federal law known as the Child Abuse Prevention and Treatment Act (CAPTA) requires that state governments have policies and procedures to require health care providers to report any cases of child abuse or neglect to child protection agencies in order to receive federal grants for programs to prevent child abuse and neglect. This requirement includes reporting infants born with or identified as being affected by substance abuse (Jarlenski, Hogan, Bogen, Chang, Bodnar, & Nostrand, 2017).

Laws regarding mandatory reporting of suspected or proven substance use during pregnancy is yet another way that women have been charged. Miranda et al. (2015) reported that fifteen states have laws requiring health care workers to report suspected substance abuse during pregnancy to the appropriate authorities. Additionally, Minnesota and North Dakota require testing if there are any complications at birth that are suspected to be caused by substance use (Miranda et al., 2015). The number of states with these kinds of laws appears to be increasing. A 2019 report concluded that twenty-five states and the District of Columbia now require health care professionals to report suspected prenatal drug use, and that eight states require them to test for prenatal drug exposure if they suspect drug use (“Substance Use During Pregnancy”, 2019).

The hospitals that have these mandatory reporting and testing laws are expected to alert child welfare authorities who then must report to law enforcement (Martin, 2015). Women are then charged according to the laws in place in their state (Lester et al., 2004). It is not uncommon for hospitals to test women involuntarily and without their consent. Furthermore, the women who are tested are not informed of the potential punitive consequences should the result of the test come back positive (Martin, 2015). In addition to potential punitive consequences, sixteen states have enacted laws that allow for the removal of a child upon results of a positive toxicology screen at the time of birth (Lester et al., 2004).

Criticisms and Drawbacks of Criminal Justice Initiatives

There is great opposition to the criminalization of substance use during pregnancy for a myriad of reasons. Professional health care and child welfare organizations are concerned that the criminalization of these women is counterproductive to the goals of criminal justice initiatives: deterring use by the mother and safeguarding the health of the developing fetus (Lester et al., 2004; Logan 1999). For instance, pregnant substance users fear being identified by health care providers and being legally sanctioned. Therefore, they often hide their use and avoid seeking important prenatal care (Bishop, Borkowski, Couillard, Allina, Baruch, & Wood, 2017; Roberts & Pies, 2010).

Fear of Detection

Despite the belief that criminalization of substance use during pregnancy deters the pregnant woman from using and consequently improves infant health, findings from a study by Stone (2015) suggests that women are either simply not seeking out prenatal care or have found ways around being detected if they do attend a prenatal care appointment. Of the sample of pregnant women interviewed by the author, 73.3% reported that they had been afraid of being identified as substance-users during their pregnancies. The fear of detection caused the women to avoid medical care, isolate themselves, and even to deny their pregnancies (Stone, 2015). Pregnant women who did attend prenatal care appointments described how they avoided detection. The strategy is to “chart out” on a calendar which days the women had used and how long it would take before they could have a clean test at their appointment. The women would schedule their appointments around this calendar (Stone, 2015).

Rather than being deterred from substance use, the women in Stone’s (2015) study were deterred from getting the necessary prenatal care for their babies. Perhaps unsurprisingly, pregnant women who use illicit substances and receive prenatal care can generally have better pregnancy outcomes than women using illicit substances who do not receive adequate care (El-Mohandes, Herman, El-Khorazaty, Katta, White, & Grylack, 2003; Roberts& Pies, 2010; Yonkers, Howell, Allen, Ball, Pantalon, & Rounsaville, 2009). Inadequate prenatal care has been found to be associated with some compromising birth outcomes, specifically an increased incidence of prematurity and low birth weight independently of substance use. The use of substances during pregnancy creates additional risk for the occurrence of theses birth outcomes, which is especially concerning because prematurity and low birth weight have been defined as the most important causal association of neonatal mortality (El-Mohandes et al., 2003). Therefore, prenatal care is very important for pregnant substance users.

El-Mohandes and colleagues (2003) conducted a study to demonstrate the impact of prenatal care on reducing the effect of illicit substance use on birth outcomes. The results show that as the level of prenatal care is improved, the impact of low birth weight and prematurity is reduced. A separate study found similar results in that pregnant substance users with poor prenatal care, or less than five visits, run two times the risk of low birth weight incidence than those receiving more care. Similar effects are also observed regarding prematurity (El-Mohandes et al., 2003).

Loss of Child or Children

Many substance using pregnant women fear losing their children if they are discovered and cite this as the reason they do not seek out prenatal care (Lester et al., 2004; Pajulo, Schuman, Kalland & Mayes, 2006; Stone, 2015). Children that have been removed from their mothers due to the criminalization of substance use during pregnancy have contributed greatly to the "boarder baby" problem and the strain on child welfare systems. "Boarder babies" are considered at-risk and typically drug-exposed infants. They have generally either been taken away from the mother or abandoned after birth for other reasons and remain in the hospital in the custody of CPS (Child Protective Services). They will stay in the hospital while they await a placement decision. The U.S. Department of Health and Human Services estimated that in 1991 there were approximately 9,700 “boarder babies” nationwide and in 1998, this number increased to about 13,400 (Lester et al., 2004; Logli, 1990). Unfortunately, statistics from more recent years are not available.

Additionally, some have suggested that the criminalization of maternal substance use has directly impacted the foster care system. In the late 1980’s through the 1990’s the foster care system observed a dramatic increase in the number of children coming in, and this is supposedly due to the increase of substance use among women and subsequently the criminalization of use. The increase in need of foster care services put strain on the system and created a shortage of available foster homes (Lester et al., 2004; Marcellus, 2008). This is only a part of the problem for these infants, as there are several obstacles regarding the care of substance-exposed infants within the foster care system.

Beyond a lack of availability of foster care placements, substance-exposed infants tend to enter the system at a younger age and require services for longer periods of time (Marcellus, 2008). They also have more health and caregiving needs than other children. These factors contribute to the difficulty in placing substance-exposed infants with families and increases strain on the foster care system and foster care caregivers, not to mention that programs such as these are chronically underfunded (Bishop et al., 2017). It also places more demand on caregivers who feel they are ill equipped to provide for the needs of these infants and further, they may not understand the specific needs of infants exposed to illicit substances. Caregivers feeling insecure about their ability to adequately meet the needs of these infants can lead to the child being moved from placement to placement, which can result in negative outcomes for the child (Lester et al., 2004; Marcellus, 2008). Additionally, past studies have found that reunification between the child and their biological family is a long and arduous task. One report noted that only 14% of substance-exposed infants were reunited with their biological parents within seven years (Ryan, Choi, Hong, Hernandez & Larrison, 2008).

Negative Stigma

Another reason pregnant substance users may avoid seeking necessary care is to avoid the negative stigma of being an addicted mother that has been created by the criminalization of substance use during pregnancy (Couvrette, Brochu, & Ploudre, 2016; Roberts & Pies, 2010; Stone, 2015). Women who use substances while pregnant are often seen as lazy, self-centered, and unfit to be parents. They fear being labeled “bad mothers” and would rather not risk the judgment in addition to the other potential consequences (Couvrette et al., 2016). Many women report feeling these negative emotions upon identification (Bishop et al., 2017; Couvrette et al., 2016; Terplan, Kennedy-Hendricks, & Chisolm, 2015).

Perhaps the worst perception of these women to come out of their stigmatization is that they are negligent and are willingly harming their children (Bishop et al., 2017; Lester et al., 2004; Terplan et al., 2015). As mentioned above, this is part of what has driven the criminalization of substance use during pregnancy. It continues to be used when potential legislation is being proposed. In fact, the sponsor of the Tennessee bill passed in 2014 that specifically identified substance use during pregnancy a crime used the stigmatization of these women to help push the bill through. The sponsor depicted them as caring little for the welfare of their future children and as disinterested in prenatal care or anything beyond the pursuit of their next fix (Terplan et al., 2015). To the contrary, the literature suggests that this could not be further from the truth, as many substance-using mothers want their babies to be healthy and do not want to harm them (Couvrette et al., 2016; Terplan et al., 2015).

Race and Class

Yet another problem associated with the criminalization of this issue is that women of color and the lower class are disproportionately affected. Due to the imagery presented in the media during the 1980's, stereotypes formed leading the public to believe that poor minority women use substances more often in their pregnancies than other women. Consequently, these marginalized women have been reported and prosecuted at much higher rates than other women for using drugs or substances during their pregnancy. In fact, empirical evidence shows that rates of prenatal substance use are consistent across race and class lines (Logan, 1999; Logli, 1990; Sexton, 1993; Springer, 2010). In other words, White middle-class women are as likely to engage in illicit substance use during pregnancy as poor minority women (Logan, 1999).

This consistency of substance use among women of varying race and class backgrounds has been observed in several studies. For instance, much of the literature cites a study conducted by Ira Chasnoff in Pinellas County, Florida for the purpose of examining patterns of prenatal substance use and reporting policies. Chasnoff and colleagues collected urine samples from approximately 715 pregnant women and conducted a toxicological screening for alcohol, opiates, cocaine and its metabolites, and cannabinoids. This study found that there was very little difference in the percentage of substance use between Black (14.1%) and White (15.4%) women (Chasnoff, Landress & Barrett, 1990; Logan, 1999). This result suggests that pregnant White women were actually detected slightly more often than pregnant Black women for drug use.

Additionally, the study found that pregnant White women were 1.09 times more likely than pregnant Black women to have used various substances prior to their first visit to the doctor for prenatal care (Sexton, 1993).

Other research has also found evidence that pregnant White women may use substances more than women of color. In 1992, data collected by the National Institute on Drug Abuse reported that 103,000 White pregnant women had used cocaine, compared to 30,000 Black pregnant women and 44,000 Hispanic women. White pregnant women also had higher rates of usage of tobacco than Black or Hispanic women. Finally, the number of babies born to White cocaine, alcohol, and tobacco users is greater than the number of babies born to Black cocaine, alcohol, and tobacco users.[1] The results of this study could have been affected by the researcher's use of a self-reported questionnaire to inquire about the women's substance use, however urine toxicology screenings were also conducted (Springer, 2010). It is unclear though whether the results are consistent across these measures.

Despite these patterns of drug use, the rate at which Black women are reported to health authorities regarding their substance use during pregnancy is ten times that of White women (Adams, 2013; Bishop et al., 2017; Lester et al., 2004, Logan, 1999; Sexton, 1993). One study found that between 1989 and 1993, forty-one pregnant women were arrested for drug abuse in South Carolina. Of that group, all but one woman was Black. This study also found that 70-80% of women prosecuted in 35 states for drug-related offenses while pregnant were minorities (Lester et al., 2004; Springer, 2010).

[1] Usage statistics for women of other races or ethnicities were unavailable.

Minority women in urban communities are also incarcerated at a higher rate than their non-minority suburban counterparts (Adams, 2013).

The discrepancy in reporting and prosecution is largely attributable to the kind of care that a woman can afford, if they attend prenatal care appointments, and the fact that physicians hold a great amount of discretion when it comes to who gets tested and reported. Middle- and upper-class pregnant women are more likely to have the resources to use the services of private physicians. Private hospitals and physicians are less likely to question behavior based on the perception that more affluent, non-minority women are less likely to use or abuse substances. Therefore, they are less likely to be reported (Adams, 2013; Lester et al., 2004, Logan, 1999). Even if the women seen in private facilities present a positive drug toxicology or admit substance use to their physicians, most are not reported to the authorities (Logan, 1999). In contrast, physicians in public hospitals that serve urban communities are more likely to question poor minority women about their substance use and ultimately tell authorities (Adams, 2013; Paltrow, 2002). Similar discriminatory practices are seen when examining prosecutorial discretion in reported cases of prenatal substance use (Logan, 1999).

It has also been argued that the prosecution of pregnant addicts suggests that punitive measures are being enforced to demonstrate opposition towards certain women reproducing, rather than stemming from a concern for the infants (Adams, 2013; Paltrow, 2002; Stone, 2015). Given that poor minority women are prosecuted more often than other groups of women, scholars have proposed that the right to procreate of minority women is not held in such high esteem, like that of upper, middle-class White women. It is as if the punishment of poor minority women who use substances while pregnant is not simply because they may harm the unborn child, but because the combination of their poverty, race, and substance addiction is presumed to make them unworthy of procreating and unfit to become mothers (Adams, 2013; Logan, 1999).

Ferguson v. City of Charleston

In the fall of 1988, staff members of the Charleston public hospital operated by the Medical University of South Carolina (MUSC) were becoming concerned about an observed increase in the use of cocaine by women receiving prenatal treatment. MUSC staff began to cooperate with the city in prosecuting substance-using mothers. A task force of MUSC representatives, police and local officials developed policies to test and identify pregnant patients suspected of substance use (Ferguson v City of Charleston, 2001). In the case of Ferguson v. City of Charleston (2001), ten women receiving routine prenatal care at MUSC were tested for cocaine use without their knowledge and were either arrested or threatened with arrest when the tests came back positive. The women sued on the grounds that the testing violated their Fourth Amendment rights. The U.S. Supreme Court ruled in favor of the women and held that their rights had indeed been violated and that testing and reporting of positive test results to police were unreasonable searches absent a patients' consent (Ferguson v. City of Charleston, 2001).

This case exemplifies several of the negative effects of the criminalization of maternal substance use. First, the tests were conducted without the consent of the women, which as the Supreme Court decided, was unconstitutional and a breach of their Fourth Amendment rights (Ferguson v. City of Charleston, 2001). This testing and reporting of pregnant substance users neglects their basic rights and places the rights and needs of the unborn child above those of the woman. The women in this case were also treated poorly and inhumanely after having been identified. Some of the women were taken from their hospital beds, handcuffed, and sent to jail within days or hours after delivery. One woman was taken into custody so quickly that she was still bleeding from the delivery when she arrived at the jail. Another woman was reportedly detained for three weeks, put into a chokehold, shackled by the police during her final month of pregnancy, and placed in a psychiatric hospital against her will (Logan, 1999). These actions demonstrate the disdain that is held against pregnant women who use substances.

Of the ten women arrested in this case, nine were women of color. This outcome could be attributed to the discretion of MUSC staff. The procedure set forth to be followed by hospital staff to identify pregnant patients suspected of drug abuse included nine criteria. A patient would be tested if she met one or more of these criteria. The list of criteria includes (Ferguson v. City of Charleston, 2001):

1. No prenatal care
2. Late prenatal care after 24 weeks gestation
3. Incomplete prenatal care
4. Abruptio placentae
5. Intrauterine fetal death
6. Preterm labor ‘of no obvious cause’
7. Intrauterine growth retardation ‘of no obvious cause’
8. Previously known drug or alcohol abuse
9. Unexplained congenital anomalies.

Some of the criteria on this list leaves a great amount of discretion to medical staff in deciding who gets tested and reported. It is plausible that in this case, racial discrimination and bias played a role in making the choice to test.

Public Health Initiatives for Maternal Drug Use

The public health perspective of this issue views addiction as a disease that should not be handled within the criminal justice system. Proponents of this perspective call on people to look at substance use as a public health problem requiring compassion and understanding, especially in the case of substance use during pregnancy. To deal with this issue in a harsh way would be unconstitutional, misogynistic, and ineffective (Adams, 2013; Lester et al., 2004; Logan, 1999; Paltrow, 2002). Viewing substance use during pregnancy through a public health lens is particularly important, as some believe that pregnancy can be a “window of opportunity” for substance treatment intervention. Maternal concern for the pregnancy can motivate the woman to seek out treatment (Terplan, Ramanadhan, Locke, Longinaker, & Lui, 2015). Government agencies, such as the National Institute on Drug Abuse, the Center for Substance Abuse Treatment and others, have supported treatment programs for pregnant or mothering substance users since the 1980’s. Since then, several different programs and services have been offered in response to this issue (Bishop et al., 2017; Lester et al., 2004).

Available Treatment

There are several behavioral interventions available for substance users in treatment. Forray (2016) finds that contingency management (CM) shows the most potential for treating cocaine-using pregnant women. CM utilizes positive reinforcement to modify behaviors in a positive and supportive manner. Generally monetary vouchers and similar tokens are used. A randomized trial found that the implementation of CM was associated with a much longer duration of cocaine abstinence, a higher number of cocaine-negative urine tests, and a greater proportion of documented abstinence when compared to other strategies (Forray, 2016). Additionally, in a systematic review of randomized controlled trials of psychosocial interventions for pregnant women enrolled in treatment programs for illicit substance use (i.e. contingency management involving use of positive reinforcement and motivational interviewing interventions in which counseling helps participants improve their readiness to change), researchers found that neonates born to women participating in contingency management spent fewer days in the hospital (Bishop et al., 2017).

Methadone maintenance has become the standard care for pregnant women with opiate use disorders (Forray, 2016). Methadone is a compound used in Medication Assisted Treatment (MAT) that suppresses and reduces cravings for opioids while preventing withdrawal symptoms (Bishop et al., 2017). The conversion from illicit opioid use to opioid maintenance therapy in a medically supervised setting has been shown to decrease maternal and neonatal morbidity. Methadone maintenance offers greater relapse prevention with a steady opioid dosing regimen, reduces risk-taking behavior, enhances compliance with prenatal care, and leads to better neonatal outcomes (Forray, 2016; Jones, O'Grady, Malfi, & Tuten, 2008).

Buprenorphine, a compound similar to methadone, has also been proven effective in the treatment of pregnant women who use opioids. In fact, the results of studies into its effectiveness show that it may even be more useful than methadone in treating these women. Comparison studies found that infants born to women who took buprenorphine were larger at birth and were also less likely to need to be treated for NAS (Neonatal Abstinence Syndrome), than infants born to women who took methadone (Bishop et al., 2017). In a separate study, similar results were found. Infants born to women who took buprenorphine required less treatment for NAS and had shorter hospital stays than infants born to women who took methadone (Bishop et al., 2017).

Other services that seek to treat substance using pregnant women help to treat the mothers' addiction, as well as improving mother-child relationships and providing women with access to necessary resources. These are residential treatment programs, and they are benefitting substance using pregnant women by providing them with access to medical care, room and board for them and their children, arranging for legal psychological, and social services, vocational assistance, parenting classes, childcare and transportation (Pajulo et al, 2006). Investigations into the effectiveness of residential treatment programs have found positive outcomes. In one such study, a group of 170 pregnant and parenting substance dependent women placed in residential treatment programs showed positive outcomes for both mother and child. The results suggest that participants improved their parenting knowledge considerably and that their self-esteem as parents had increased. The infants of mothers engaged in these programs exhibited few poor birth outcomes and upon completion of the program, longer periods of abstinence from substance use were observed (Camp & Finkelstein, 1997).

Residential treatment programs can be an especially attractive option because they allow women to bring their children with them. By doing this, a barrier to treatment is removed, as the women do not have to worry about being away from their children. Keeping mothers and children together leads to positive retention and recovery (Bishop et al., 2017). One residential treatment program examined treatment retention for participants who entered the program with their children versus those participants who did not. Women admitted to the program with their children had better treatment retention rates and higher rates of successful treatment completion (Lester et al., 2004). Residential treatment programs have also been proven to be more impactful than general outpatient programs in aiding substance dependent pregnant women (Pajulo et al., 2006). Finally, it has been found that investment in residential treatment programs for addicted pregnant women are economically justified based on their effectiveness and benefits (French, McCollister, Cacciola, Durell & Stephens, 2002).

Another resource aimed at helping substance using pregnant women and their children are family drug courts. Also referred to as family treatment drug courts, they were created to address more efficaciously the needs of substance-using parents with CWS (child welfare system) involvement (Twomey, Miller-Loncar, Hinckley & Lester, 2010). Family drug courts, although they involve a criminal justice element, divert the substance user to treatment instead of handing down a sentencing decision. If the individual agrees to treatment, she receives inpatient detoxification services and medical treatment to provide for the care of the fetus during the withdrawal stage of recovery. Children of parents in these programs may be temporarily removed from them, however while the parent undergoes the treatment (Choi, 2012; Lester et al., 2004; Twomey et al., 2010).

Evaluations of family drug courts suggest that they can significantly decrease substance use in participants (Lester et al., 2004). Marlowe & Carey (2012) found that treatment completion rates among participants in family drug courts were 20-30% higher than for participants in other treatment programs. Family reunification rates are also promising. In 2004, it was reported that since the first family drug court began in 1994, 1,000 participants across that nation had graduated and either retained or regained custody of, or visitation with their children (Lester et al., 2004). Later research found that family reunification rates were approximately 20-40% higher among family drug court participants than in other treatment programs (Marlowe & Carey, 2012). Other studies also report that families involved in family drug courts experienced positive child welfare outcomes (Twomey et al., 2010).

Public Health Initiatives Problems

The treatment responses discussed in the previous section are promising. These methods are helping pregnant women who use substances, even if only on a small scale. However, despite the many people in favor of treatment and the praise it has received, there are several problems that plague treatment and make it difficult to implement on a large scale. These problems include a shortage of drug treatment programs for women in general and pregnant women specifically, the resistance of drug treatment programs to include pregnant women, a lack of consensus as to the most effective method of treatment, and the cost (Lester et al., 2004).

Gender-Responsive Treatment

Literature regarding chemical dependency reveals that female users as a group have been overlooked. Historically, drug treatment programs have exhibited a reluctance and insensitivity to addicted women in general and have relied on male-based recovery models (Grella, Polinsky, Hser & Perry, 1999; Lester et al., 2004). Traditional treatment programs have inadequately addressed the needs of female addicts and have not taken into consideration women’s experiences when attempting to treat them. For instance, women’s experiences of dependency and low self-esteem, sexual and physical victimization, and psychiatric comorbidity have all been identified as factors that must be addressed when treating substance abuse. Treatment programs also need to consider the fact that women are often the primary caregivers for their children and that this can complicate the effects of their substance use as well as their ability to access and participate in treatment (Grella et al., 1999).

In the early 1970's, the National Institute on Drug Abuse began research targeting female addicts. Several treatment programs were surveyed, and researchers found that male staff and participants were openly hostile to female clients (Lester et al., 2004). The programs employed a confrontational "therapeutic" style that was uncomfortable for women and directed them into gender-stereotyped tasks and training offering minimal chance for success after completion of the program. These programs failed to address the numerous issues that play a strong role in female drug addiction, did not include provisions for the care of the women's children or contraceptive and prenatal medical services. Needless to say, this ensured a lack of participation by pregnant women (Chavkin, Breitbart, Elman & Wise, 1998; Lester et al., 2004).

However, in the 1980's after evidence regarding cocaine exposure was found, government agencies such as the National Institute on Drug Abuse (NIDA) and the Center for Substance Abuse Treatment (CSAT), began to support treatment programs specifically designed for the pregnant or mothering substance user. In the late 1980's and early 1990's, the NIDA supported twenty research demonstration projects focusing on the treatment of substance-using pregnant women (Lester et al., 2004). Still, a review of studies in the 1990's determined that less than 11% of pregnant women in need of drug treatment were actually receiving treatment. One study found that of seventy-eight drug treatment programs in New York city, 44% of the programs refused treatment to women claiming to be pregnant and addicted and some programs would expel women upon finding out that they were pregnant (Sexton, 1993). Getting appropriate substance abuse treatment was very difficult for pregnant women at this time and even when resources were available, they could be denied access by providers.

Decades later there are more options for substance using pregnant women and they are more likely to be accepted into treatment programs. However, there is still a noticeable lack of treatment programs for pregnant women. In 2014, the National Survey of Substance Abuse Treatment Services reported that only 20% of treatment facilities offered programs targeted to pregnant or postpartum women. Additionally, the facilities that offer programs for pregnant women may or may not be the same facilities offering the many other services that help to meet women's needs (Bishop et al., 2017). Even more recently, the National Association of State Alcohol and Drug Abuse reported that only 19 states have drug treatment programs specifically targeted to pregnant women. Twelve of these states give pregnant women priority admission to general drug treatment programs (Bishop et al., 2017).

Exclusion from Treatment Programs

Treatment facilities and programs may be resistant to include pregnant women for a few reasons. First, medical and treatment staff are concerned over how to medically manage this population of women. There is a recognized lack of resources designed for pregnant addicts and their children. Therefore, staff often lack proper training and knowledge regarding issues of pregnancy and addiction (Grella et al., 1999; Lester et al., 2004). It has also been noted that treatment personnel may be insensitive to the needs of this population due to the heightened negative stigma involving substance using pregnant women (Couvrette et al., 2016; Roberts & Pies, 2010). The uncertainty of how to treat pregnant substance users also creates a fear of liability on the part of the treatment provider. This fear of liability involves the treatment centers' concerns that treatment, or withdrawal symptoms associated with treatment, will harm the fetus, exposing the centers to litigation (Lester et al., 2004; Sexton, 1993).

Much of the fear of liability felt by treatment providers comes from a lack of consensus as to the most effective method of treatment for substance using pregnant women. For example, there is the struggle to determine the safest and most effective treatment method for the health of the mother and the baby as alluded to above (Lester et al., 2004; Sexton, 1993). One example of this conflict comes from the treatment of opioid dependency. Medication-assisted withdrawal, or detoxification by gradually reducing the dose of an opioid substitute, such as methadone or buprenorphine, is associated with higher fetal morbidity and mortality rates. Thus, treatment providers are hesitant to use this method (Forray, 2016).

Lack of Knowledge of Effective Treatment

There is no clear empirical evidence to indicate the most effective treatment modality for substance using pregnant women. The research on treatment programs for these women is limited in part due to small sample sizes and the lack of rigorous research designs. Additional research involving treatment programs for substance using pregnant women is greatly needed. Researchers must determine what methods work to benefit both the woman and her unborn child (Lester et al., 2004). This includes psychosocial and pharmacological treatments for pregnant women who use different substances or substance combinations. In addition, research addressing the long-term effects of certain treatments on the developing fetuses can allow women and healthcare providers to make better-informed decisions about appropriate treatment options (Bishop et al., 2017).

Cost of Treatment

Finally, the cost of treatment is markedly high and although there are laws intended to make it easier to get substance use disorder treatment, pregnant women still experience obstacles. In 1997, it was estimated that states spent about $2 billion on treatment programs and that the federal government contributed about $1.5 billion more. Some of this funding came from a source such as The Substance Abuse Prevention and Treatment Block Grant. It was mandated that 5% of the grant be allocated for pregnant women (Lester et al., 2004). Some state Medicaid programs are easing access into programs for pregnant women by including treatment medications, such as methadone and buprenorphine, on their preferred drug lists (Bishop et al., 2017).

These policies have their limitations. A 2014 report on Medicaid policies in the 50 states and District of Columbia reported that only 31 states include methadone on their preferred drug list (SAMHSA, 2014). Some states also require prior authorization that can create barriers to use and some limit the quantity that beneficiaries can obtain. Medicare offers to pay for the treatment of pregnant women, though the coverage is also limited. To make matters worse, even with coverage from these policies, many substance use disorder treatment programs do not accept those payment options (Bishop et al., 2017). Therefore, substance using pregnant women are rather limited financially when it comes to treatment.

Punitiveness and Public Opinion

The previous sections outline both criminal justice and public health initiatives to substance use during pregnancy, as well as criticisms and concerns of these initiatives. A review of the literature in this area indicates an active effort to criminalize women who use drugs during pregnancy. Nevertheless, treatment options seem to be slowly increasing. This effect in part can be explained by examining the literature regarding public opinion views towards punitiveness.

In the decades following Robert Martinson's report that "nothing works" to rehabilitate offenders in 1974, there was strong endorsement of harsh penalties (Martinson, 1974). There also stood the position that retribution and deterrence should be the main goals of punishment. Following this, the public has shown considerable support for harsh penalties and punitive crime control policies such as, the death penalty, life imprisonment without parole, and "three strikes" laws (Vuk, Applegate, Ouellette, Bolin, and Aizpurua, 2019).

Between the years 1968 and 1982, public support for rehabilitation declined 40%, while support for punishment as retribution increased 171%. Then, in a survey of American citizens conducted in the late 1990's, 90% said that they believe it is important for people who break the law to get what is coming to them (retribution), with similar findings for deterrence and incapacitation (Sims & Johnston, 2004). Payne and colleagues (2004) also note this strong support by the public for retribution as an important goal of prison.

Given that the public seems to back retribution as an important goal of prison, it is unsurprising that they support the death penalty more often than not. For instance, public opinion polls suggest that two-thirds of all Americans (64%) support the death penalty with almost half (47%) favoring the death penalty even when life in prison without the possibility of parole is offered as an alternative (Frost, 2010). Recently, as of 2018, 56% of Americans said that they favored the death penalty, while only 41% opposed it (Vuk et al., 2019). Americans were also found to be punitive across several categories of crime. One study found that respondents expressed strong punishment orientations towards all six common crimes presented to them, including: robbery, rape, molestation, burglary, drug sale, and drug possession (McCorkle, 1993).

Despite the apparent endorsement of punitive means by the public, it has also been concluded that the public supports rehabilitative strategies and methods as well. In fact, much of the literature describes the public as wanting the "best of both worlds": they want individuals who commit crime to be both punished and rehabilitated (Applegate, Cullen & Fisher, 1997; Mackey &Courtwright, 2000; Payne et al., 2004; Sims & Johnston, 2004; Vuk et al., 2019). While the public supports various punitive means, opinion polls have shown that they are also in favor of rehabilitation as the most important goal of prison, intervention programming, and several other rehabilitative policies (Sims & Johnston, 2004; Vuk et al., 2019).

Sims and Johnston (2004) sought to capture public opinion about the most important goal of prison. They discovered that 42% of respondents chose rehabilitation over retribution (11%), deterrence (20%), and incapacitation (20%). The authors note that this finding is somewhat surprising given that in a 1995 national study, only 21% of Americans identified rehabilitation as the most important goal of prison. They also found 81% of respondents would prefer to spend tax dollars on early interventions programs for troubled youths than on prison construction (Sims & Johnston, 2004). Researchers have concluded that the public also endorses various policies that would address social and economic issues that lead to crime. The public is becoming more supportive of community-based sanctions for non-violent offenders, reduced prison sentences, offender rehabilitation, and services to support people transitioning from prison to the free community (Vuk et al., 2019). However, research does suggest that the public is less likely to support rehabilitative approaches such as the ones listed above for individuals convicted of violent crimes or sex offenses (Frost, 2010).

In sum, the public is not strictly punitive or rehabilitative, yet policy makers still enact overly punitive crime control policies. This may be due to the fact that policy makers often look to public opinion as a guide in their decision-making. Therefore, if they see evidence that points to a punitive public, they will be more likely to adhere to punitive crime control policies (Payne et al., 2004). It would seem to follow, given that the public has been showing support for less punitive means, that policies would have begun to shift more so than they have. Applegate and colleagues (1997) attribute continual punitive policies to the fact that policymakers have consistently overestimated public punitiveness and consistently underestimated public support for rehabilitation.

One report found in a survey conducted of Maryland citizens and correctional elites, that policy makers believed that less than 40% of the public would support community rehabilitation centers for adults. They also believed that over 60% of citizens would favor abolishing parole (Applegate et al., 1997). When citizens were polled, it was discovered that more than 70% of the citizen respondents approved of the rehabilitation centers and less than 30% wanted to see an end to paroling offenders. In a similar analysis, legislators thought that less than one fourth of the public would choose “changing their behavior” as the purpose of imprisonment for first-time incarcerated individuals, when the actual support was 75% (Applegate et al., 1997). Policymakers are seemingly unaware of what the public really wants when it comes to crime control policies and corrections.

Demographic Differences

Demographic differences in punitive attitudes have been observed in several studies of public opinion (Applegate, Cullen & Fisher, 2002; Dowler, 2003; Frost, 2010; King & Maruna, 2009; O'Hear & Wheelock, 2019; Payne et al., 2004; Shelley, Waid & Dobbs, 2011; Sims & Johnston, 2004; Unnever, Cullen & Fisher, 2007). For the purposes of the current study, the literature on public opinion and punitiveness in relation to sex, race, religion, political affiliation and being a criminal justice major was reviewed. With regards to sex differences, past literature has generally concluded that women are less punitive in their attitudes than men, although some results are mixed (Applegate et al., 2002; Frost, 2010; Sims & Johnston, 2004). Applegate et al. (2002) and Sims and Johnston (2004) found that women are less likely to endorse more punitive measures, such as the death penalty. Applegate and his colleagues (2002) determined that 64% of women favored the death penalty compared to 82% of men. Sims and Johnston (2004) noted similar statistics, finding that 60% of women in their study supported the death penalty compared to 76% of men.

It is generally thought that women tend to be more compassionate than men. In fact, women are often more supportive of a variety of policies that assist the disadvantaged, provide protection for the environment, and avoid use of force (Applegate et al., 2002). Some studies find that women may subscribe to a more rehabilitative mindset. In one investigation, women showed more favorable attitudes toward rehabilitative policies and rehabilitation of the offender. They also thought that rehabilitation was a more important goal of prison and were more likely to choose rehabilitation as the main goal of prison (Applegate et al., 2002). Applegate and colleagues (2002) point out that women seem to hold a general view that the government should not simply be an instrument of punishment and accountability, but it should also provide assistance to people with needs.

Still, research has indicated that women are more fearful of crime than are men, and as such, may be more punitive depending on certain scenarios (Payne et al., 2004). For instance, a recent study found that women were less supportive of early release for perpetrators of violent crime than men (O'Hear & Wheelock, 2019). This may be due to concerns for keeping an offender from committing future offenses or from concerns for deterring prospective offenders from committing similar offenses. Additionally, women were also found to be more punitive in cases where there were apparent negative consequences to the victims of the offense (Payne et al., 2004). This category of victims could include unborn children in the case of substance use during pregnancy.

In the extant literature, researchers have found racial minorities, especially Black individuals, to be less punitive than their White counterparts (Dowler, 2003). Some scholars have attributed the tendency for Black Americans to hold less punitive attitudes to the inequalities experienced by minorities within the justice system. Dowler (2003) posited that Black citizens might feel threatened by a punitive justice model due to their overrepresentation in prisons. They might feel as if a punitive justice model reinforces discrimination and persecution of people like themselves (Dowler, 2003). The overrepresentation of Black individuals within the criminal justice system and the apparent discrimination against them has led to the perceptions of significantly more injustice. Researchers have in fact identified a racial divide in perceptions of injustice among racial groups. In one test of this divide, Black individuals perceived the most injustice, followed by Hispanics. White individuals perceived the least amount of injustice (Buckler & Unnever, 2008).

Race has also been a significant predictor of general rehabilitative support. For instance, non-White participants in one study tended to be more optimistic and supportive of programs designed to correct personal or economic disadvantages of offenders. This effect was present for all but one type of offense (McCorkle, 1993). Providing additional support for this effect, Sims and Johnston (2004) found that an extremely significant proportion of Black respondents (98%) preferred that tax dollars be spent on early intervention programs for youths rather than on the construction of more prisons so that more criminals could be locked up for longer periods of time. This is in comparison to both White and other racial groups who supported early intervention programs 81% and 82% respectively (Sims & Johnston, 2004).

Black individuals are much less supportive of harsh punishments like the death penalty (Frost, 2010). Sims and Johnston (2004) found a large percentage margin between White respondents and Black respondents, wherein 70% of White respondents supported the death penalty and 33% of Black respondents supported it. Surprisingly, Hispanics were almost as supportive of the death penalty as White individuals (68%) and a majority of individuals (58%) from other racial groups were supportive (Sims & Johnston, 2004).

Despite consistent evidence that Black individuals are generally less punitive, a few studies have found that they are sometimes more punitive. These findings are similar to what was concluded in studies of women and their punitive attitudes. Both women and Black individuals have been found to be more fearful of crime due to their higher victimization rates. Consequently, they may be more punitive concerning certain types of crime (Frost, 2010; Payne et al., 2004). For instance, it was noted that Black individuals were particularly punitive in cases involving guns (Payne et al., 2004).

Research on punitive attitudes and religion is mixed. Religious fundamentalism has generally been predictive of punitiveness (Frost, 2010), however like many of the other demographic factors, the relationship is complex and not particularly well understood. Past research on this topic has been conducted with several limitations. For instance, a great deal of early research based in the U.S. concerning religiosity and punishment attitudes has been conducted in the Southern part of the country where Christian fundamentalism flourishes. This leaves unresolved whether researchers would find the same results in geographic places where these beliefs are less concentrated (Frost, 2010). However, more recent research has utilized more geographically diverse data. There are also many different types of religious beliefs as well as a wide variation in degrees of involvement in religion. This makes measuring religion and punitive beliefs difficult and leads to inconsistent findings. Despite these limitations, religion has been shown to be related to harsher views in some studies (King & Maruna, 2009).

An inverse effect has also been observed between religiosity and punitiveness though. King and Maruna (2009) found in their study that those who considered themselves to be religious were less likely to support more criminal justice initiatives to crime. Unnever and Cullen (2006) disclose similar findings, reporting that Christian fundamentalists were significantly more likely to express forgiving and compassionate beliefs. Additionally, they found that the stronger an individual's religious practice was, the less likely they were to support capital punishment (Unnever & Cullen, 2006).

Political beliefs often influence an individuals' opinions and viewpoints. Individuals who hold conservative political beliefs or identify with more conservative political parties tend to hold more punitive attitudes. Research on this subject has consistently supported this idea (Sims & Johnston, 2004; Sundt, Cullen, Applegate & Turner, 1998; Timberlake, Rasinski & Lock, 2001; Unnever et al., 2007). Political ideology has a substantial impact on support for punitive correctional policies and Americans who identify themselves as political conservatives are considerably more likely to support punitive crime-control policies, such as the death penalty (Unnever et al., 2007). Sims and Johnston (2004) found that Republicans (76%) were more likely to be in favor of the death penalty than were Democrats (57%).

Those individuals who hold conservative beliefs are also less likely to view rehabilitation as an important goal of prison. Conservatives have opposed rehabilitation because of the idea that it supposedly undermines crime control. It has been argued that rehabilitation gives offenders lenient punishments, which robs the system of its deterrent and incapacitative powers (Sundt et al., 1998). In one study Republicans were less likely to choose rehabilitation than other groups. Republicans also chose incapacitation as the most important goal of prison more often than other political groups. Additionally, Republicans were less likely to favor having their tax dollars go toward early intervention programs than Democrats (Sims & Johnston, 2004). In a separate study, conservatives indicated significantly less support for drug rehabilitation versus general drug control spending than their more liberal counterparts (Timberlake et al., 2001).

In fact, Unnever, Cullen and Fisher (2007) describe punitiveness and political conservatism as being “two peas in the same pod” (p. 313), meaning that supporting the harsh treatment of offenders is one of the constellations of beliefs that comprises conservative political ideology or that makes someone identify as a “conservative” (Unnever et al., 2007). Studies have found that conservatives are more likely to support more severe responses to crime regardless of how punitiveness is measured. Some have attributed this to the tendency of conservatives to relate the commission of crime to an individual’s rational decision to break the law. On the other hand, liberals are more likely to relate the commission of crime to deficits in the individual’s environment, with an emphasis on the social causes of crime (Frost, 2010).

Finally, several studies throughout the past few decades have sought to determine if students studying criminal justice are more punitive in their views and beliefs than students from other majors or concentrations. It is believed that students studying criminal justice or criminology are exposed to more detailed and accurate knowledge about crime and criminal justice than other students and that this influences their perceptions about punishment, crime, and the criminal justice system (Shelley et al., 2011). However, it may be that more conservative individuals gravitate towards this major. The results of these studies are somewhat mixed, however several of them found that criminal justice students held more punitive views than students from any other major (Farnworth, Longmire & West, 1998; Lambert, 2004; Mackey & Courtwright, 2000; Shelley et al., 2011). Farnworth et al (1998) found weak support for their hypothesis that criminal justice majors would hold more punitive views than majors in any other field. However, criminal justice students were slightly more likely to support the death penalty and criminal justice seniors were found to be more punitive than criminal justice freshman (Farnworth et al., 1998).

Mackey and Courtright (2000) reached similar conclusions, finding that criminal justice students ended their academic careers with higher levels of punitiveness than other students. Their research also found that criminal justice students' attitudes toward criminal sanctioning were more punitive than their peers (Mackey & Courtright, 2000). More recent research has found even more support for this finding. Shelley, Waid and Dobbs (2011) conducted their study of criminal justice students' punitive attitudes across three college campuses in three different geographical regions of the United States. They found that criminal justice students in the combined sample were significantly more punitive than non-criminal justice students (Shelley et al., 2011).

CHAPTER 2

METHODS

There has been a fierce debate surrounding the best response to the social issue of substance use during pregnancy. Some argue the pregnant women should be punished for potentially harming their developing fetuses, but others maintain that these women have substance use disorders that should be treated. While the previous literature on public opinion and the criminal justice system has gauged views on appropriate punishment for various types of offenders and offenses, it has not considered views on this issue. The public seems to be supportive of both punitive and rehabilitative crime policies, however the reaction to this specific social issue is complex. The current study examines the views of Criminal Justice and Public Health students as to what are the most appropriate ways to respond to substance use during pregnancy. These student populations were purposively chosen to determine if those that study the legal system and those that study the public health system hold different views. Differences by demographics are also assessed. The current study addresses the following research hypotheses:

> H1: Male students will be more supportive of criminal justice initiatives to substance use during pregnancy than will female students.
>
> H2: Female students will be more supportive of public health initiatives to substance use during pregnancy than will male students.
>
> H3: White students will be more supportive of criminal justice initiatives to substance use during pregnancy than will non-White students.

> H4: Non-White students will be more supportive of public health initiatives to substance use during pregnancy than will White students.
>
> H5: Criminal Justice students will be more supportive of criminal justice initiatives to substance use during pregnancy than public health students.
>
> H6: Public Health students will be more supportive of public health initiatives to substance use during pregnancy than criminal justice students.
>
> H7: Students who identify as being more religious will be more supportive of criminal justice initiatives to substance use during pregnancy than will students who are less religious.
>
> H8: Students with more conservative political beliefs will be more supportive of criminal justice initiatives to substance use during pregnancy than students with less conservative beliefs.

In the following sections, the research setting and sample used in this study will be discussed. The methods used to collect data for this study will be explained as well as the independent and dependent variables and the analytic plan.

Research Setting and Sample

This study uses data collected by means of an email survey distributed to both undergraduate students majoring in criminal justice and public health at the University of South Carolina. The University of South Carolina was founded in 1801 and the main campus is in Columbia, SC. The university has 56 nationally ranked academic programs and a student enrollment rate including students from all 46 South Carolina counties, all 50 states, and more than 100 foreign countries. The university has a total enrollment of approximately 52,000 students, with over 35,000 on the main Columbia campus as of Fall 2019. The male-female ratio of enrolled students is 45:55 and the university's ethnic diversity is on par with the national average. The percentage of transfer-in undergraduate students is 7.13% amounting to approximately 1,906 students. There is also a wide age range of enrolled undergraduate students (Student Population at University of South Carolina-Columbia (South Carolina), n.d.).

Data were collected via REDCap, a secure web application for building and managing online surveys and databases. Prospective participants were identified through their membership on separate Listservs for each department, Criminal Justice and Public Health. The respective listservs are used by each unit to communicate with their undergraduate majors. Both departments have a sizable number of students who are declared majors in their undergraduate programs. At the time of the study, the Department of Criminology and Criminal Justice at the University of South Carolina had approximately 700 undergraduate students enrolled, and the Arnold School of Public Health at the University of South Carolina had approximately 2,000 undergraduate students enrolled. Use of a Listserv allowed the researcher to easily distribute an email to large groups of recipients in a direct and secure manner.

Survey Methods

Surveys have been a remarkably useful and efficient tool for learning about people’s opinions and behaviors for over 75 years. Characteristics of the larger population can be estimated by collecting information from a sample of a defined population (Dillman, Smyth, & Christian, 2008). In the early days of survey research an in-person interview was the generally accepted mode for conducting surveys. Over time however, several changes have occurred in how surveys are conducted and in the modes that are available to researchers. As time has moved on and technology has advanced, researchers began sending surveys to respondents through the mail, conducting then on the phone, and most recently, sending them in e-mails (Dillman et al., 2008).

Conducting in-person interviews can provide researchers with in-depth, insightful data about the research topic, however this method requires complex sampling methods, very long periods of data collection and is costly. Telephone and mail survey methods allowed researchers to overcome distance, reduce survey costs, and collect data more quickly (Dillman, 1978). However, researchers have run into issues with these methods as well. Postal addresses became less available making it harder to send out surveys via the mail. People also have become less likely to answer unsolicited phone calls and often avoid unwanted calls with the help of caller identification and call blocking. With the emergence of the Internet however, researchers were provided another mode of surveying respondents, through using emails (Dillman et al., 2008). This is the survey method that is used in the current study as participants are contacted via email and recruited to use a link to complete the survey online.

Email surveys are the fastest growing form of surveying occurring in the United States (Dillman, Smyth & Christian, 2014). Data collection through email is particularly attractive because it allows for speedy surveying and is low cost. Email surveys are effective at reaching people because so many now prefer to conduct their business electronically as opposed to on the phone, writing letters, or in person (Dillman et al., 2014). The ever-expanding use of the Internet and the increasing use of mobile devices has fueled the growth in online behavior and mobile devices have become the primary way that some people connect to the Internet (Dillman et al., 2014). This method of data collection is particularly ideal for this study because of the population used. College students are frequently using laptops and smartphones arguably more so than other groups. Additionally, the increased use of the Internet and mobile devices can help reduce what Dillman and colleagues (2008) refer to as coverage error. Coverage error occurs when not all members of the population are able to respond due to the survey method. This can occur, for example, when a sample is drawn only from households with listed telephone numbers or when a list is not current because it excludes people who have moved (Dillman et al., 2008). Email surveys provide participants with another method of completing a survey and researchers with another way of reaching individuals within the desired population.

People becoming increasingly accustomed to completing various daily activities online could be beneficial for survey researchers who are interested in conducting web surveys. However, this also means that web surveys are constantly changing as the myriad ways in which people interact with computers and mobile devices continues to evolve (Dillman et al., 2014). The increase in use of mobile devices requires survey designers to reconsider aspects of questionnaire design to account for smaller screens. It is also noteworthy that many people, upon receiving e-mails and texts on their phones, will scan them quickly and then wait to follow-up on requests that require more attention until they have access to a desktop computer or laptop. People have access to a wide range of devices, operating systems and browsers, and customized settings, making designing and implementing web surveys more challenging that it was even a few short years ago (Dillman et al., 2014).

Data Collection

Prospective participants were contacted three times. The initial contact was comprised of an email, sent to all students who were members of the criminology and public health listservs during the fall semester of the 2020 academic year. This email described the importance of the study and invited the recipient to participate in the study (see Appendix A for a copy of the communication). The invitation email also included information on voluntary participation, consent, and about the protection of the information collected from each participant. All informed consent and data collection procedures were approved by the University of South Carolina IRB. A link to the survey was provided in the email. Two subsequent email communications continued to invite those undergraduate criminology and public health majors who had yet to participate in the study and thank those who had already completed the online survey. The second and third email invitations were distributed to both listservs approximately 1 and 2 weeks after the initial communication (see Appendix B).

This distribution method follows suggestions offered by Schaefer & Dillman (1998). They stress the need for multiple contacts for e-mail surveys to be successful. Multiple contacts have been found to increase response rates and decrease nonresponse error. In an evaluation of e-mail surveys, one single contact produced an average response rate of 28.5%, two contacts produced an average response rate of 41% and three or more contacts produced an average response rate of 57% (Schaefer & Dillman, 1998).

Survey Instrument

The survey consisted of four sections designed to address the stated hypotheses of the current research (see Appendix C for a copy of the survey). The first section of questions focused on the degree to which respondents think that the use of various substances during pregnancy is currently a problem in the United States. The next section examined respondents' support for or opposition to criminal justice and public health initiatives that have been used by various jurisdictions to address substance use during pregnancy. The third section of the survey considered respondent's support for or opposition to expanding the use of certain initiatives or increasing funding for initiatives addressing the issue of women using substances during their pregnancy. The fourth and final section of the survey collected respondent background information, including demographics such as gender, race, academic program (Criminal Justice or Public Health), religion, and political affiliation.

Independent Variables

Independent variables included the following demographic measures: gender, race, academic program, religion, and political ideology. Gender, race, and academic program are measured categorically. Respondents were asked to indicate their preferred gender and race. Gender was measured as male (1), female (2), gender nonconforming (3) and other (4). Race is measured as African American (1), Caucasian (2), Native American (3), Asian (4) Pacific Islander (5), Hispanic (6), and other (7). Respondents were asked to indicate whether they belong to either the Bachelor of Arts program in Criminology and Criminal Justice (1), the Bachelor of Arts/Bachelor of Science program in Public Health (0) or other (2). A filter question was included at the top of the survey to remove any individuals who were not enrolled in classes during the current semester. This question asked the individual if they were enrolled in at least one credit hour during the 2020 Fall Semester by answering No (0) or Yes (1).

Religion was measured using three questions. The first question asked respondents if they consider themselves to be religious. This is measured categorically as yes (2), somewhat (1), and no (0). The second question asked respondents the frequency that they attend religious services measured categorically as never (0), rarely (1), once or twice a month (2), once a week (3), more than once a week (4). The third question asked about the importance that religion has in the person's life measured categorically as not important (0), somewhat important (1), important (2), very important (3). Finally, political ideology was measured using two questions. Respondents were asked to describe their political beliefs as very conservative (5), conservative (4), moderate (3), liberal (2) and very liberal (1). They were also asked to indicate what political party they identify with as Democratic Party (4), Republican Party (3), Libertarian Party (2) independent (1) or none (0).

Dependent Variables

All dependent variables were assessed using a 4-point Likert scale and responses were coded from 0 to 3 or 1 to 4 (with no neutral response category). The first section, while not directly connected to the study hypotheses, allowed the researcher to examine to what extent drug use in this specific population is a perceived problem in the U.S. As discussed in the previous chapter, the use of various substances during pregnancy is rather consistent across racial backgrounds. However, minority women are far more often tested and prosecuted for substance use while pregnant. Furthermore, certain types of substances tend to be associated with certain demographic groups due to created stereotypes, so this section of the survey asked respondents about several different types of substances. Respondent's perceptions of drug use as a problem may also be related to the type of response they support. The items in this section asked respondents to indicate whether use of a specific substance is no problem (0), a slight problem (1), a problem (2), or a significant problem (3). Respondents were asked about several different drug categories.

The second section of the survey assesses support for or opposition to criminal justice and public health initiatives and provides insight into how the public thinks substance use during pregnancy should be addressed by society. The Likert scale includes the following response options: strongly oppose (1), oppose (2), support (3) and strongly support (4). Respondents were asked to indicate their level of support or opposition to a series of criminal justice and public health initiatives including:

1. Civilly committing substance-using pregnant women to mandatory inpatient treatment programs or protective custody of the State as an alternative to incarceration.
2. Charging a woman with child abuse or neglect for using substances during pregnancy.
3. Charging a woman with manslaughter, or the unintentional killing of an individual when their substance use during pregnancy has led to the delivery of a stillborn baby.
4. Using Medication Assisted Treatment (MAT) (i.e., replacement of an illicit drug in a medically supervised setting).
5. Making use of family drug courts wherein the woman receives inpatient detoxification services and medical treatment for the fetus.

6. Passing a law that would allow criminal prosecution of women who use drugs during their pregnancy where the baby is harmed or born with an addiction.
7. Relying on various behavioral interventions that use positive reinforcement to modify behaviors such as drug use.
8. Prosecuting maternal substance use under laws pertaining to the delivery of a controlled substance to a minor (i.e., delivered via the umbilical cord and receiving substances through the blood stream).
9. Using residential treatment programs that provide wrap-around services (i.e., programs that provide services to both women and their children).
10. Requiring health care workers to report substance use during pregnancy to the appropriate authorities, such as law enforcement (i.e., mandatory reporting policies).

The third section of the survey examined respondents' support for or opposition to *expanding the use of* certain initiatives or *increasing funding for* initiatives and could provide even more insight into how respondents feel substance use during pregnancy should be handled. The responses to this section of the survey could also indicate the future direction of legislation regarding this topic. The Likert scale includes the following response options: strongly oppose (1), oppose (2), support (3) and strongly support (4). Respondents were asked to indicate their level of support or opposition to a series of initiatives in addressing the social issue including:

1. Increasing the use of mandatory reporting policies.
2. Increasing funding for residential treatment programs.
3. Increasing the use of family drug court interventions.

4. Creating more laws to prosecute substance use during pregnancy.
5. Increasing funding for treatment programs.
6. Increasing the use of civil commitment or mandatory treatment.

Analysis Plan

To investigate the present study's hypotheses, several analytical techniques were used including a focus on univariate measures and bivariate relationships. First, descriptive statistics were obtained to create a profile of the respondents. This includes providing descriptive results using frequencies, percentages, appropriate measures of central tendency and measures of variability for the independent and dependent variables. Measures of central tendency are often referred to as "averages" and indicate the distribution of the data focusing on the central portion. Measures of central tendency include the mode, median and mean (Williams, 2009). Measures of variability include range, variance, and standard deviation. In examining the distribution of data, measures of variability tell us the relative spread of the scores (Williams, 2009). The percentages of student responses as to whether or not women using various substances during their pregnancies in the US is a problem were recorded, as was the mean and standard deviation of these responses. The percentage of responses to either criminal justice or public health initiatives were recorded. The mean and standard deviation of these responses were noted as well. The percentage of responses to expanding resources for or prevalence of certain responses were also included along with the mean and standard deviation.

Aggregate scores were calculated to create a Criminal Justice Policy Initiative Index, a Public Health Policy Initiative Index, an Expanded Criminal Justice

Resources/Services Index, and an Expanded Public Health Resources/Services Index. These aggregate scores were created by summing the number of items in each respective category and then dividing by the number of items for which data is available. The aggregate scores were used to test the study hypotheses.

A crosstabulation and chi-square test of significance were used to examine whether there is a significant difference in opinion of substance use as a problem during pregnancy in the U.S. between students who completed the survey and those who stopped responding after this section of the survey. Conducting these tests is a standard way to analyze differences between these groups because a crosstabulation shows the relationship between two or more variables by providing the frequency of observations and a chi-square test determines whether this relationship is statistically significant.

An independent samples t-test was used to examine Hypotheses 1 through 6 to determine whether there is a significant difference in opinion between the demographic groups within the sample. This is an appropriate test to analyze differences between these groups because an independent samples t-test determines whether there is a statistically significant difference between the means of only two groups, or independent variables (Fox & Levin, 2004). To examine Hypotheses 7 and 8 an ANOVA (analysis of variance) was conducted. An ANOVA was used to determine whether there are significant differences between the means of three or more groups or independent variables (Fox & Levin, 2004). This test is ideal to analyze Hypotheses 7 and 8 because there are three or more levels for each independent variable of these hypotheses (Fox & Levin, 2004). For example, religiousness is an independent variable including three groups: no, somewhat, and yes.

CHAPTER 3

RESULTS

Data collection occurred over several weeks in October 2020. The email containing the survey link was sent out to students in the Criminal Justice department via their listserv three times and students in the Public Health department via their listserv three times. To increase response rate, a second data collection period was carried out and the email invitation with the survey link was sent out to all Criminology and Criminal Justice Instructors. The instructors were asked to circulate the invitation email and survey link to all of their undergraduate courses on November 18, 2020.

A total of 236 surveys were initiated by students majoring in either Criminal Justice or Public Health at the University of South Carolina. Some students completed the first series of questions measuring their views on how problematic drug use is among pregnant women in the U.S., but then failed to complete the remainder of the survey. Missing data ranges from 21% to 25% for survey items and is presented in descriptive tables for the sample.

Sample Descriptives

The results for sample descriptives of independent variables are presented in Table 3.1. Public Health majors comprised a larger portion (43.3%) of the sample compared to Criminal Justice majors (31.8%). The sample consisted predominantly of female students (60.6% vs. 14.8% for male students) and White students (61.9% vs. 14.4% for Non-White students). The respondents' levels of religiousness varied with

28% indicating that they are not religious, 26.3% indicating that they are somewhat religious and 22% indicating that they are religious. Finally, more students report being liberal (32.6%) and moderate (31.4%) in their political beliefs than conservative (11.9%).

Table 3.1. Sample Descriptive for Demographic Measures (n = 236)

	Frequency	Percent
Major		
BA/BS Public Health	102	43.2
BA Criminology & CJ	75	31.8
Missing	59	25.0
Gender		
Male	35	14.8
Female	143	60.6
Missing	58	24.5
Race		
White	146	61.9
Non-White	34	14.4
Missing	56	23.7
Religiousness		
No	66	28.0
Somewhat	62	26.3
Yes	52	22.0
Missing	56	23.7
Political Beliefs		
Liberal	77	32.6
Moderate	74	31.4
Conservative	28	11.9
Missing	57	24.2

Table 3.2 presents the descriptive results for degree to which respondents feel that the use of various substances during pregnancy is a problem in the U.S.[2] Response

[2] This study included a section in the survey asking respondents to indicate how much of a problem various substances are when they are used during pregnancy as their perceptions of substances as a problem may be correlated to their support for certain initiatives. To examine this, bivariate correlations were conducted between each substance category and the criminal justice/public health aggregate measures. The only significant correlation to be found was between the criminal justice aggregate measure and marijuana, although the correlation is somewhat weak, $r(176) = .23$, $p < .05$.

options ranged from 0 for "not a problem" to 3 for "significant problem". Students perceived cigarettes, vaping devices, and chewing tobacco as being the most problematic in their use during pregnancy (M = 2.52, SD = .674). Heroin (M = 2.32, SD = .924) and methamphetamine (M = 2.32, .904) were also perceived as being more of a problem in their use during pregnancy. Students perceived crack cocaine (M = 2.24, SD = .972) and powder cocaine (M = 2.17, SD = .987) as being less of a problem when used by pregnant women. This finding is particularly interesting given the literature about crack cocaine and its' exaggerated effects on a developing fetus. Finally, marijuana (M = 2.06, SD = .943) was found to be viewed as the least problematic substance among students.

Table 3.2. Sample Descriptive Results for Views on Extent to which Women Using Drugs during Pregnancy is a Problem (n= 236)

Using Viewed as a Problem	Mean	sd	Range
Use of Cigarettes, Vape, Chewing Tobacco	2.52	.674	0 – 3
Use of Alcohol	2.36	.751	0 – 3
Use of Heroin	2.32	.924	0 – 3
Use of Methamphetamine	2.32	.904	0 – 3
Use of Crack Cocaine	2.24	.972	0 – 3
Use of Powder Cocaine	2.17	.987	0 – 3
Use of other drugs	2.17	.928	0 – 3
Use of LSD	2.08	1.059	0 – 3
Use of Marijuana	2.06	.943	0 – 3

Possible responses range from 0 for "no problem" to 3 for "significant problem."

As previously mentioned, several students completed this section regarding opinion of substance use during pregnancy in the U.S., but then failed to complete the survey in its' entirety. This led to concerns that those students who decided not to continue in the survey held different views of substance use during pregnancy and that those who did complete the survey could hold some bias towards the use of substances during pregnancy. For instance, it is possible that students who believe substance use during pregnancy is not a problem broke off at this point in the survey because they perceive the survey to be unimportant. To examine this, the responses given to this section of the survey by those who did not continue the survey and those who did were compared. A crosstabulation and chi-square test of significance were conducted. However, no significant associations were found between students who did not continue the survey and those who did in their opinions of women using substances during their pregnancy. Therefore, students who did not finish the survey were not different in their opinions of this issue than those who did finish the survey. Additionally, this addresses concerns of bias among those who finished the survey.

Table 3.3 presents the results for the degree to which respondents support or oppose various criminal justice and public health initiatives that have been used in response to substance use during pregnancy. Response options ranged from 1 for "strongly oppose" to 4 for "strongly support". There are approximately 50 missing cases (~21%) for each item in this section of responses. A Criminal Justice Policy Initiative Index score was created by summing the six criminal justice items and dividing by the number of items for which data was available. An aggregate score was calculated for each respondent when there was a minimum of four items containing data. A Public Health Policy Initiative Index was also created using the same process; however, an aggregate score was calculated for each respondent when there was a minimum of three items with data.

Students were generally more supportive of public health initiatives (M = 3.33, SD = .477) than criminal justice initiatives (M = 2.76, SD = .620). Students indicated the strongest support for residential treatment programs (M = 3.51, SD = .590), followed by behavioral intervention using positive reinforcement (M= 3.38, SD = .641) and the use of family drug courts (M = 3.36, SD = .620). Students were the least supportive of Medication Assisted Treatment (MAT) for pregnant women (M = 3.07, SD = .694) among the public health initiatives, although the average score for this approach still reflects more support than most of the criminal justice initiatives.

There is noticeably less support for criminal justice initiatives. Students indicated the strongest support for civilly committing pregnant women who use substances to inpatient treatment or protective custody of the state (M = 3.12, SD = .718), followed by requiring health care workers to report substance use to authorities (M = 3.02, SD = .862) charging a woman with child abuse and neglect for using during pregnancy (M = 2.77, SD = .818), passing a law to allow criminal prosecution of women who use during pregnancy (M = 2.75, SD = .866), and prosecuting the use of substances while pregnant under laws concerning the delivery of a controlled substance to a minor (M = 2.55, SD = .872). Students indicated the least support for charging a woman with manslaughter when her substance use results in the delivery of a stillborn baby (M = 2.36, SD = .926).

Table 3.3. Sample Descriptive Results for Views on How to Best Respond to Women who use Drugs during Pregnancy (n = 236)

	Mean	sd	Range
Criminal Justice Policy Initiatives Index	**2.76**	**.620**	**1 – 4**
Civil commitment inpatient tx, or protective custody	3.12	.718	1 – 4
Mandatory reporting by health care workers	3.02	.862	1 – 4
Charge with child abuse or neglect for drug use	2.77	.818	1 – 4
Pass a law to criminally prosecute women who use	2.75	.866	1 – 4
Prosecute under laws, delivery of a controlled substance	2.55	.872	1 – 4
Charge manslaughter for stillborn delivery	2.36	.926	1 – 4
Public Health Policy Initiatives Index	**3.33**	**.477**	**1 – 4**
Use of residential tx programs, wrap-around services	3.51	.590	1 – 4
Behavioral interventions that use positive reinforcement	3.38	.641	1 – 4
Use of family drug courts for inpatient detox and tx	3.36	.620	1 – 4
Use of Medication Assisted Treatment (MAT)	3.07	.694	1 – 4

Possible responses range from 1 for “strongly oppose” to 4 for “strongly support.”

Table 3.4 presents descriptive results for survey items measuring the degree to which respondents support or oppose expanding the use of or increasing funding for certain initiatives. Response options ranged from 1 for “strongly oppose” to 4 for “strongly support”. There are approximately 60 cases missing (25%) for each item in this section of responses. An Expanded Criminal Justice Resources/Services Index score was created by summing the three criminal justice items and dividing by the number of items for which data was available. An aggregate score was calculated for each respondent when all three survey items contained data. An Expanded Public Health Resources/Services Index was also created using the same process.

Table 3.4. Sample Descriptive Results for Views on Expanded Resources and Services (n = 236)

	Mean	sd	Range
Expanded Criminal Justice Resources/Services Index	**2.90**	**.651**	**1 - 4**
Increase the use of civil commitment, mandatory tx	3.21	.716	1 – 4
Increase the use of mandatory reporting policies	2.89	.804	1 – 4
Create more laws to prosecute incidents of drug use	2.62	.893	1 – 4
Expanded Public Health Resources/Services Index	**3.40**	**.491**	**1 - 4**
Increase funding for treatment programs	3.56	.552	1 – 4
Increase funding for residential treatment programs	3.50	.594	1 – 4
Increase use of family drug court interventions	3.14	.673	1 – 4

Possible responses range from 1 for “strongly oppose” to 4 for “strongly support.”

Consistent with the results on response initiatives, students indicated more general support for expanding public health resources and services (M = 3.40, SD = .491) than criminal justice resources and services (M = 2.90, SD = .651). Students were most supportive of increasing funding for general treatment programs (M = 3.56, SD = .552), followed by increasing funding for residential treatment programs (M = 3.50, SD = .594). Students were least supportive of increasing the use of family drug court interventions (M = 3.14, SD = .673) among the expanded public health options. On the criminal justice side, students were most supportive of increasing the use of civil commitment or mandatory treatment ($M = 3.21$, $SD = .716$), followed by increasing the use of mandatory reporting ($M = 2.89$, $SD = .804$). Creating more laws to prosecute incidents of drug use received the least support from students ($M = 2.62$, $SD = .893$).

T-test Results

An independent samples t-test was used to examine Hypotheses 1 through 6. The first two hypotheses examine gender and support for either criminal justice or public health policy initiatives and expanding resources for each type of initiative. On the survey there were four gender options provided to respondents: male, female, gender non-conforming and other. However, very few respondents indicated that they identified as gender non-conforming or other, therefore these categories were excluded from the analysis using a select cases filter in SPSS. The results are reported in Table 3.5. Hypothesis 1 states that “male students will be more supportive of criminal justice initiatives to substance use by women during pregnancy than will female students.” No significant differences were found between the average level of support for criminal justice initiatives between male students ($M= 2.63$) and female students ($M= 2.81$), $t(175) = -1.53$, $p > .05$.

In terms of support for expanding criminal justice resources or services for women using drugs during their pregnancy, there were significant differences found between the average level of support by female students ($M= 2.96$) when compared with male students ($M= 2.72$), $t(172) = -1.96$, $p < .05$. The results however are in the opposite direction of what was hypothesized; thus, Hypothesis 1 is not supported. Male students were not significantly more supportive of criminal justice initiatives to address substance use during pregnancy or more supportive of expanding criminal justice resources or services than female students.

Hypothesis 2 states that "female students will be more supportive of public health initiatives to substance use by pregnant women than will male students." Female students (M= 3.38) had significantly higher support for public health policy initiatives compared to male students (M= 3.17), t(41.59)= -1.87, p < .05. However, the findings differed when support for expanding public health resources or options was considered. No significant difference was found for female students (M= 3.44) and male students (M= 3.25), t(38.78)= -1.54, p > .05. Given these mixed findings, there is partial support for Hypothesis 2. Female students exhibit more support than male students for public health initiatives to women using drugs during pregnancy but are no different in their support for expanding public health responses or resources to address the issue.

Table 3.5. Men's and Women's Views toward Criminal Justice and Public Health Policies and Expanding Resources/Services in Response to Drug Use During Pregnancy

	Female mean	Male mean	*t*	Significance (one-tailed)
CJ Policy Index	2.81	2.63	-1.53	.064
Expanded CJ Index	2.96	2.72	-1.96	.026
PH Policy Index	3.38	3.17	-1.87	.035
Expanded PH Index	3.44	3.25	-1.54	.065

Hypotheses 3 and 4 examine race and support for either criminal justice or public health policy initiatives and expanding resources for each type of initiative. The results are reported in Table 3.6. Hypothesis 3 states that "White students will be more supportive of criminal justice initiatives to substance use by women during pregnancy than will non-White students." No significant differences were found between the average level of support for criminal justice initiatives between White students (M= 2.76) and non-White students (M= 2.83), t(175) = -616, p > .05. There were also no significant differences found between White (M = 2.90) students and non-White students (M = 2.92) in level of support for expanding criminal justice resources or services for women using drugs during their pregnancy, t(37.79) = -.116, p > .05. Therefore, Hypothesis 3 is not supported. White students were not significantly more supportive of criminal justice initiatives to address substance use during pregnancy or more supportive of expanding criminal justice resources or services than non-White students.

Table 3.6. White Student's and Non-White Student's Views toward Criminal Justice and Public Health Policies and Expanding Resources/Services in Response to Drug Use During Pregnancy

	White mean	Non-White mean	*t*	Significance (one-tailed)
CJ Policy Index	2.76	2.83	-.616	.269
Expanded CJ Index	2.90	2.92	-.116	.454
PH Policy Index	3.37	3.20	1.46	.076
Expanded PH Index	3.41	3.36	.492	.312

Hypothesis 4 states that "Non-White students will be more supportive of public health initiatives to substance use during pregnancy than will White students." No significant differences were found between the average level of support for public health initiatives between non-White students (M= 3.20) and White students (M= 3.37), t(38.33) = 1.46, p > .05. There were also no significant differences found between White (M = 3.41) students and non-White students (M = 3.36) in level of support for expanding public health resources or services for women using drugs during their pregnancy, t(170) = .492, p > .05. Therefore, Hypothesis 4 is not supported. Non-White students were not significantly more supportive of public health initiatives to address substance use during pregnancy or more supportive of expanding public health resources or services than White students.

Hypotheses 5 and 6 examine program major and support for either criminal justice or public health policy initiatives and expanding resources for each type of initiative. The results are reported in Table 3.7. Hypothesis 5 states that “criminal justice students will be more supportive of criminal justice initiatives to substance use during pregnancy than will public health students.” There were no significant differences found between the average level of support for criminal justice initiatives between criminal justice students ($M = 2.82$) and public health students ($M = 2.75$), $t(172) = .735$, $p > .05$. No significant differences were found in level of support for expanding criminal justice resources or services for women using drugs during their pregnancy between criminal justice students ($M = 2.95$) and public health students ($M = 2.89$) either, $t(169) = .627$, $p > .05$. This means that Hypothesis 5 is not supported and that criminal justice students were not significantly more supportive of criminal justice initiatives to address substance use during pregnancy or more supportive of expanding criminal justice resources or services than public health students.

Hypothesis 6 states that “public health students will be more supportive of public health initiatives to substance use during pregnancy than will criminal justice students.” There were no significant differences found between the average level of support for public health initiatives between public health students ($M = 3.35$) and criminal justice students ($M = 3.34$), $t(131.87) = -.105$, $p >. 05$. There were also no significant differences found between level of support for expanding public health resources or services for women using drugs during their pregnancy between public health students ($M = 3.38$)

and criminal justice students (M = 3.44), t(167) = .740, p > .05. Consequently, Hypothesis 6 is not supported. Public health students were not significantly more supportive of public health initiatives to address substance use during pregnancy or more supportive of expanding public health resources or services than criminal justice students.

Table 3.7. Criminal Justice Major's and Public Health Major's Views toward Criminal Justice and Public Health Policies and Expanding Resources/Services in Response to Drug Use During Pregnancy

	CJ Major mean	PH Major mean	*t*	Significance (one-tailed)
CJ Policy Index	2.82	2.75	.735	.232
Expanded CJ Index	2.95	2.89	.627	.266
PH Policy Index	3.34	3.35	-.105	.459
Expanded PH Index	3.44	3.38	.740	.230

ANOVA Results

An ANOVA was used to examine Hypotheses 7 and 8. Hypothesis 7 examines religiousness and support for criminal justice initiatives and expanding criminal justice resources or services. Only the first question measuring religion was used in this analysis because this measure was deemed more representative of a respondents' level of religiousness than the others. This question filtered out those respondents who indicated that they were not religious from answering the other two survey questions inquiring about religion, therefore it was most effective to use the first question during analysis. The results are reported in Table 3.8. Hypothesis 7 states that "students who identify as being more religious will be more supportive of criminal justice initiatives to substance use during pregnancy than will students who are less religious." There is evidence of statistically significant differences in level of support for criminal justice initiatives across respondents' level of religiousness (no, somewhat and yes), $F(2,174) = 3.58$, p =

.030. A Bonferroni post hoc test was conducted to determine if there were statistically significant differences between levels of religiousness when it comes to support for criminal justice initiatives. However, no significant differences were found.

In terms of support for expanding criminal justice resources or services for women using drugs during their pregnancy, there was no evidence of statistically significant differences across level of religiousness, $F(2,171) = 1.83$, $p = .163$. Therefore, Hypothesis 7 is not supported. Students who identify as being more religious were not significantly more supportive of criminal justice initiatives to address substance use during pregnancy or more supportive of expanding criminal justice resources or services than students who are not religious.

Table 3.8. Religiousness and Views toward Criminal Justice Policies and Expanding Resources/Services in Response to Drug Use During Pregnancy

	Religious Mean	Somewhat Religious Mean	Not Religious Mean	*f*	Significance
CJ Policy Index	2.67	2.94	2.70	3.58	.030
Expanded CJ Index	2.83	3.04	2.85	1.83	.163

Hypothesis 8 examines political beliefs and support for criminal justice initiatives and expanding criminal justice resources or services. The survey item includes five response options for political ideology: very liberal, liberal, moderate, conservative, and very conservative. These categories were collapsed into three categories: liberal, moderate and conservative. The results are reported in Table 3.9. Hypothesis 8 states that "students with more conservative political beliefs will be more supportive of criminal justice initiatives to substance use during pregnancy than will students with less conservative beliefs." There was evidence of statistically significant differences in level of support for criminal justice initiatives across respondent political identity (liberal, moderate and conservative), $F(2,92.62) = 12.75$, p = <.001.

Table 3.9. Political Beliefs and Views toward Criminal Justice Policies and Expanding Resources/Services in Response to Drug Use During Pregnancy

	Liberal Mean	Moderate Mean	Conservative Mean	*f*	Significance
CJ Policy Index	2.57	2.86	3.10	12.75	<.001
Expanded CJ Index	2.72	3.03	3.12	7.69	<.001

A Games-Howell post hoc test was conducted to determine if there were statistically significant differences between each of the categories of political belief when it comes to support for criminal justice initiatives. This test revealed that students who hold moderate (M = 2.86, p = .014) or conservative (M = 3.10, p = <.001) political beliefs were significantly more supportive of criminal justice initiatives than those who hold liberal (M = 2.57) political beliefs. There was no statistically significant difference between the moderate and conservative groups (p = .062).

Similar to the above findings, there was evidence of statistically significant differences in level of support for expanding criminal justice resources or services across respondent political ideology, $F(2,91.44) = 7.69$, p = <.001. Using a Games-Howell post hoc test it was found that students who hold moderate (M = 3.03, p = .014) or conservative (M = 3.12, p = .001) political beliefs were significantly more supportive of expanding criminal justice resources or services than those who hold liberal (M = 2.72) political beliefs. There was no statistically significant difference between the moderate and conservative groups (p = .727). Given the above findings, Hypothesis 8 is supported. Students with more conservative political beliefs were significantly more supportive of criminal justice initiatives to address substance use during pregnancy and more supportive of expanding criminal justice resources or services than students with less conservative political beliefs.

CHAPTER 4

DISCUSSION

The purpose of this study was to examine public perceptions of the most appropriate way to respond to the societal issue of substance use during pregnancy. Substance use during pregnancy is a persistent social issue and there has been much debate for several decades about how to best respond to this problem: punitive action or public health strategies. The views and opinions of the public regarding this issue have previously not been examined by researchers. Yet, it is important to understand public perspectives on this issue because public opinion can influence the decisions of policy makers (Payne et al., 2004). The current study examined public opinion using a sample of undergraduate students at the University of South Carolina by assessing their level of support for differing policy responses to the use of substances by women during their pregnancy. This study also considered how demographic factors such as sex, race, religion, political affiliation, and being a criminal justice or public health major is associated with views on this subject. Specifically, students were asked to indicate their support for a variety of criminal justice initiatives and public health initiatives, as well as expanding resources or services for these initiatives.

Key Findings

Students generally supported public health initiatives more than criminal justice initiatives. They indicated the strongest support for residential treatment programs, followed by behavioral intervention using positive reinforcement and the use of family drug courts. Students supported Medication Assisted Treatment (MAT) the least of the public health initiative options. There was considerably less support for criminal justice initiatives. Students most strongly supported civilly committing pregnant women who use substances to inpatient treatment or protective custody of the state, followed by requiring health case workers to report substance use to authorities, charging a woman with child abuse and neglect, passing a law to allow criminal prosecution of women using substances during pregnancy, and prosecuting the use of substances while pregnant under laws concerning the delivery of a controlled substance to a minor. Charging a woman with manslaughter when her substance use results in the delivery of a stillborn baby had the least support of the criminal justice initiatives.

Regarding support for expanding the use of or funding for certain initiatives, students were more supportive in general of expanding public health resources and services than expanding criminal justice resources and services. They were most supportive of increasing funding for general treatment programs, followed by increasing funding for residential treatment programs. Of the expanded public health initiative options, students were the least supportive of increasing the use of family drug court interventions. Of the expanded criminal justice initiative options, students were the most supportive of increasing the use of civil commitment or mandatory treatment, followed by increasing the use of mandatory reporting. Students were the least supportive of creating more laws to prosecute incidents of drug use during pregnancy.

This study found statistically significant results for two of the five demographic categories that were tested: gender and political beliefs. There were no statistically significant results found for the demographic categories of race, religion or major. These findings are inconsistent with the previous literature on punitiveness and demographics outlined in Chapter 1, which has found several differences between demographic groups. Much of the past literature has found that Black citizens are less punitive in their beliefs, oppose harsh punishments and are more supportive of rehabilitation than White citizens (Dowler, 2003; Frost, 2010; Sims & Johnston, 2004). Differences have also previously been found between religiousness and punitiveness. For the most part, past research has found that being religious is predictive of punitiveness, meaning the more religious a person is, the more they will support punitive policies (Frost, 2010; King & Maruna, 2009). Although, the opposite effect has been observed as well; those who were religious believed in less harsh punishment and were against the use of criminal justice initiatives (King & Maruna, 2009; Unnever & Cullen, 2006). Finally, criminal justice students have generally been found to hold more punitive beliefs than students of other majors in past studies (Farnworth, Longmire & West, 1998; Lambert, 2004; Mackey & Courtwright, 2000; Shelley et al., 2011). This study surveyed Criminal Justice and Public Health majors for the purpose of investigating whether those who study the legal system and those who study the public health system hold different views. However, this was not the case as they were found to be no different in the way they view this issue.

Regarding sex, males were not found to be more supportive of criminal justice initiatives or expanding criminal justice initiatives than females. In fact, women were more supportive of expanding criminal justice resources or services for women using drugs during their pregnancy than men. Females also exhibited more support for public health initiatives to substance use during pregnancy than males but were not more supportive of expanding public health resources or services. These findings are somewhat consistent with existing public opinion literature. Payne et al. (2004) concluded that women tend to be more punitive when there are apparent negative consequences for the victim. In the context of this study, women may feel that there are apparent negative consequences for the child due to the mothers' substance use. However, women tend to be more compassionate and supportive of rehabilitation (Applegate et al., 2002). This could explain women's support for public health initiatives.

A students' political beliefs were found to have significant effects on their support or opposition to criminal justice or public health initiatives and expanding resources or services for these initiatives. Those students with conservative or moderate political beliefs were more supportive of criminal justice initiatives and expanding resources or services for these initiatives than students with liberal political beliefs. It was also found that students holding liberal or moderate political beliefs were more supportive of public health initiatives and expanding resources or services for these initiatives. These findings are consistent with the previously outlined literature that individuals holding conservative political ideologies will be more likely to favor punitive punishments and individuals holding more liberal ideologies will be more likely to favor rehabilitation (Frost, 2010; Timberlake et al., 2001).

Policy Implications, Limitations and Future Research

The results of this study indicate that the public is somewhat mixed in what methods are appropriate in response to substance use during pregnancy. There was support found for both criminal justice and public health initiatives as well as for expanding resources or services for each of these initiatives. In terms of policy, lawmakers and those in power should incorporate both criminal justice and public health approaches into the policies put in place to respond to substance use during pregnancy. Some policy initiatives in place currently do this to some degree such as family drug courts and civil commitment. These policy initiatives endeavor to take punitive action, while also providing rehabilitative options for the woman who is using substances (Lester et al., 2004; Twomey et al., 2010).

While the results of this study are somewhat impactful, it was limited in a few ways. First, the sample size was considerably smaller than expected based on the number of students that were initially contacted to participate in the survey, thus leading to a small response rate. This could be due in part to the COVID-19 pandemic that emerged in March 2020. It is possible that due to the pandemic students were focused on other things and therefore less likely to participate. The study sample was also rather homogenous. The survey was sent out to University of South Carolina students, consequently much of the sample was younger in age. There was also noticeably less racial diversity among respondents. In addition, as stated previously in this chapter, the publics' views on appropriate methods to respond to substance use during pregnancy is a subject that has not been researched. Therefore, the foundation of the current study was built on research based on the issue of using criminal justice initiatives vs. public health initiatives to respond to substance use during pregnancy instead of having the advantage of prior research on public opinion and appropriate methods to respond to the issue.

Future research into this subject would benefit from using a much larger and more diverse sample of participants. This would increase the validity of any findings. Future research should also examine the viewpoints of lawmakers on this topic. Gaining insight into how current lawmakers view responses to substance use during pregnancy could provide a better understanding of where the direction of policy on this subject is headed. Finally, for the purpose of understanding how the public believes we should respond to substance use during pregnancy, future research should utilize qualitative research methods. This would include conducting focus groups to explore the nuances of policies and programs meant to address the issue of substance use during pregnancy.

Conclusion

Despite the limitations outlined above, this study contributes research to a topic that has not previously been examined. The debate about whether it is more effective to use criminal justice initiatives or public health initiatives in response to this issue has been the subject of much discussion for decades. This study provides insight into public opinion on how society should respond to the issue of substance use during pregnancy. The results of this study indicate that the public supports both criminal justice and public health initiatives. However, further research into this subject is necessary to gain a better understanding of public views towards how to appropriately respond to substance use during pregnancy. Research into how the public feels we as a society should respond to this issue is important because it could affect the laws and policies that lawmakers put in place.

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APPENDIX A

INVITATION LETTER

Dear Student,

My name is Taylor Ruddy, and I am a masters' student with the Department of Criminology and Criminal Justice at the University of South Carolina (UofSC). I am conducting a research study examining student views on how to respond to women using substances while pregnant. You are receiving this communication from me because you are being asked to participate in this study. Your participation in this study will help researchers learn more about how people feel this issue should be addressed.

To participate in this study, you are asked to complete an on-line survey. Completing the survey will take approximately 10-15 minutes. The survey includes questions about your background and your opinions about possible responses to substance use during pregnancy. Participation in this survey is entirely voluntary, and you can decide to skip any questions that you feel uncomfortable answering. If you decide not to participate you will not be penalized in any way. We are not collecting any identifying information (i.e., names, addresses) on the survey and any responses that you give will be anonymous. Only UofSC research staff will have access to your answers. All reports or papers that are produced as part of the study will not identify any individual participant or their responses.

If you consent to participating in this study, please use the link provided below to complete the survey. If you have any questions or concerns regarding this study, please contact me at ruddyt@email.uscb.edu. You can also contact my faculty advisor, Dr. Barbara Koons-Witt at bakoons@mailbox.sc.edu. You may also contact the University of South Carolina's Office of Research Compliance at (803) 777-6670 regarding your rights as a research subject.

Thank you for your consideration to participate in this study.

Sincerely,

Taylor Ruddy
Master of Arts Candidate
Responding to Substance Use During Pregnancy Study
Department of Criminology & Criminal Justice
University of South Carolina
ruddyt@email.uscb.edu

APPENDIX B

SECOND AND THIRD EMAIL COMMUNICATIONS

Dear Student,

My name is Taylor Ruddy, and I am a master's student with the Department of Criminology and Criminal Justice at the University of South Carolina (UofSC). Last week I emailed you inviting you to participate in a research study that I am conducting that focuses on examining student views on how to respond to women using substances while pregnant. As a student, you are eligible to participate in this important project. Thank you for participating if you have already done so. If you have not, you still have the opportunity to participate. I want to remind you that your involvement in the study is crucial for developing a better understanding of how people feel this issue should be addressed.

Remember that to participate in this project, you are asked to complete an online survey. The survey should take approximately 10-15 minutes. The survey includes questions about your background and your opinions about possible responses to substance use during pregnancy. I want to remind you that participation in the survey is completely voluntary, and you can decide to skip any questions that you do not feel comfortable answering. If you decide not to participate you will not be penalized in any way. We are not collecting any identifying information (i.e., names, addresses) on the survey and any responses that you give will be anonymous. Only UofSC research staff will have access to your answers. All reports or papers that are produced as part of the study will not identify any individual participant or their responses.

If you consent to participating in this study, please use the link provided below to complete the survey. If you have any questions or concerns regarding this study, please contact me at ruddyt@email.uscb.edu. You can also contact my faculty advisor, Dr. Barbara Koons-Witt at bakoons@mailbox.sc.edu. You may also contact the University of South Carolina's Office of Research Compliance at (803) 777-6670 regarding your rights as a research subject.

Thank you for your consideration to participate in this study.

Sincerely,

Taylor Ruddy
Master of Arts Candidate
Responding to Substance Use During Pregnancy Study
Department of Criminology & Criminal Justice
University of South Carolina
ruddyt@email.uscb.edu

Dear Student,

My name is Taylor Ruddy, and I am a master's student with the Department of Criminology and Criminal Justice at the University of South Carolina (UofSC). Last week I emailed you inviting you to participate in a research study that I am conducting that focuses on examining student views on how to respond to women using substances while pregnant. As a student, you are eligible to participate in this important project. Thank you for participating if you have already done so. If you have not, you still have the opportunity to participate. I want to remind you that your involvement in the study is crucial for developing a better understanding of how people feel this issue should be addressed.

Remember that to participate in this project, you are asked to complete an online survey. The survey should take approximately 10-15 minutes. The survey includes questions about your background and your opinions about possible responses to substance use during pregnancy. I want to remind you that participation in the survey is completely voluntary, and you can decide to skip any questions that you do not feel comfortable answering. If you decide not to participate you will not be penalized in any way. We are not collecting any identifying information (i.e., names, addresses) on the survey and any responses that you give will be anonymous. Only UofSC research staff will have access to your answers. All reports or papers that are produced as part of the study will not identify any individual participant or their responses.

If you consent to participating in this study, please use the link provided below to complete the survey. If you have any questions or concerns regarding this study, please contact me at ruddyt@email.uscb.edu. You can also contact my faculty advisor, Dr. Barbara Koons-Witt at bakoons@mailbox.sc.edu. You may also contact the University of South Carolina's Office of Research Compliance at (803) 777-6670 regarding your rights as a research subject.

Thank you for your consideration to participate in this study.

Sincerely,

Taylor Ruddy
Master of Arts Candidate
Responding to Substance Use During Pregnancy Study
Department of Criminology & Criminal Justice
University of South Carolina
ruddyt@email.uscb.edu

APPENDIX C

SURVEY

Views on Substance Use During Pregnancy Survey

Thank you for your willingness to participate in the current study. Please answer the follow questions as accurately as possible. You may skip a question if you do not feel comfortable answering it. The survey will take approximately 10-15 minutes to finish and must be completed in one sitting (you cannot save your answers and return to the survey).

Thank you for your time!

1. Women sometimes use substances during their pregnancy. We would like to learn your views about the extent to which women using the following substances during their pregnancy is currently a problem in the United States. How much of a problem is:

	No Problem	Slight Problem	Problem	Significant Problem
Alcohol (beer, wine, liquor)	☐	☐	☐	☐
Marijuana	☐	☐	☐	☐
Cigarettes or E-cigarettes (vape)	☐	☐	☐	☐
Powder Cocaine	☐	☐	☐	☐
Crack Cocaine	☐	☐	☐	☐
LSD	☐	☐	☐	☐
Heroin	☐	☐	☐	☐
Methamphetamine	☐	☐	☐	☐
Other Drugs	☐	☐	☐	☐

2. States have addressed the issue of substance use during pregnancy in different ways. In the next part of the survey, we ask you about your views regarding how to best respond to women who use drugs during their pregnancy. Consider the following statements and indicate how much you support or oppose the proposed response to this issue.

	Strongly Oppose	Oppose	Support	Strongly Support
Civilly committing substance-using pregnant women to mandatory inpatient treatment programs or protective custody of the State as an alternative to incarceration.	☐	☐	☐	☐
Charging a woman with child abuse or neglect for using substances during pregnancy.	☐	☐	☐	☐
Charging a woman with manslaughter, or the unintentional killing of an individual when their substance use during pregnancy has led to the delivery of a stillborn baby.	☐	☐	☐	☐
Using Medication Assisted Treatment (MAT) (i.e., replacement of an illicit drug in a medically supervised setting).	☐	☐	☐	☐
Making use of family drug courts wherein the woman receives inpatient detoxification services and medical treatment for the fetus.	☐	☐	☐	☐

Passing a law that would allow criminal prosecution of women who use drugs during their pregnancy where the baby is harmed or born with an addiction.	☐	☐	☐	☐
Relying on various behavioral interventions that use positive reinforcement to modify behaviors such as drug use.	☐	☐	☐	☐
Prosecuting maternal substance use under laws pertaining to the delivery of a controlled substance to a minor (i.e., delivered via the umbilical cord and receiving substances through the blood stream).	☐	☐	☐	☐
Using residential treatment programs that provide wrap-around services (i.e., programs that provide services to both women and their children).	☐	☐	☐	☐
Requiring health care workers to report substance use during pregnancy to the appropriate authorities, such as law enforcement (i.e., mandatory reporting policies).	☐	☐	☐	☐

3. States have also thought about whether more resources are needed and whether certain services or programs need expanding to address the issue of women using substances during their pregnancy. In the next part of the survey, we ask you whether more resources should be committed to this issue and whether we ought to expand certain strategies to assist more women in these circumstances. Consider each of the following statements and indicate how much you oppose or support increasing the use of certain approaches or funding for approaches addressing the issue of women using substances during their pregnancy.

	Strongly Oppose	Oppose	Support	Strongly Support
Increasing the use of mandatory reporting policies.	☐	☐	☐	☐
Increasing funding for residential treatment programs.	☐	☐	☐	☐
Increasing the use of family drug court interventions.	☐	☐	☐	☐
Creating more laws to prosecute substance use during pregnancy.	☐	☐	☐	☐
Increasing funding for treatment programs.	☐	☐	☐	☐
Increasing the use of civil commitment or mandatory treatment.	☐	☐	☐	☐

4. We would like to conclude by asking you some general background questions about yourself. Please remember that your answers are completely confidential.

Are you enrolled in at least 1 credit hour during the Fall 2020 semester?

☐ Yes	☐ No	☐ Other

[If no, the participants responses will not be used.]

What is your major?

☐ BA Criminology and Criminal Justice	☐ BA/BS Public Health	☐ Other

What is your gender?

☐ Female	☐ Male	☐ Gender Non-Conforming	☐ Other

What is your age?

Age:

What is your race/ethnicity?

☐ African American	☐ Caucasian	☐ Native American	☐ Asian	☐ Pacific Islander	☐ Hispanic	☐ Other

If a participant chooses other, they will be able to write in their race/ethnicity.

Do you consider yourself religious?

☐ Yes	☐ Somewhat	☐ No

Skip pattern if no

How often do you attend religious services?

☐ Never	☐ Rarely	☐ Once or twice a month	☐ Once a week	☐ More than once a week

How important is religion in your life?

☐ Not Important	☐ Somewhat Important	☐ Important	☐ Very Important

How would you describe your political beliefs?

☐ Very Conservative	☐ Conservative	☐ Moderate	☐ Liberal	☐ Very Liberal

To what political party do you belong?

☐ Democratic Party	☐ Republican Party	☐ Libertarian Party	☐ Independent	☐ None

Thank you for participating in this study.